

**NOVEMBER 93/ FEBRUARY 94
MAY 94**

RUC RECOMMENDATIONS

November 93/ February 94/ May 94
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Grant V. Rodkey, MD
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May 24, 1994

Mr. Thomas Ault
Director
Bureau of Policy Development
Health Care Financing Administration
Room 100 East High Rise Building
6325 Security Blvd.
Baltimore, MD 21207

Dear Mr. Ault:

I am pleased to provide you with the relative value recommendations adopted by the American Medical Association/Specialty Society RVS Update Committee (RUC) for new and revised codes to be published in CPT 1995, as well as recommendations on several issues from CPT 1994 for which the RUC was unable to submit recommendations last year. The attached recommendations also address those few additional carrier-priced and noncovered services listed in the July 14 Proposed Rule that were not considered by the RUC during the first two meetings of this cycle. In addition, in response to your March 1994 letter to me, the RUC has developed interim recommendations for the monthly end stage renal disease codes which are attached.

The total number of RUC recommendations for new and revised CPT codes is 338. Of this total, the RUC is recommending new values for 140 codes. For 198 codes, the RUC has determined that the changes in CPT are editorial and recommends no change in their relative values. Table 1 (attached) lists those codes which were determined after initial review by the RUC Advisory Committee to be editorial and which did not, therefore, need to be directly reviewed by the RUC. The total number of changes adopted for CPT 1995 is 456, of which 75 are deletions. This number represents a substantial reduction from the 796 changes in CPT 1994, of which 140 were deletions. There were 533 RUC recommendations submitted last year for these new and revised codes.

Included in the recommendations for CPT 1995 coding changes are the first recommendations developed with participation by the Health Care Professionals Advisory Committee (HCPAC). Nine organizations representing audiologists, nurses, occupational therapists,

optometrists, physical therapists, physician assistants, podiatrists, psychologists, social workers, and speech pathologists are seated on the HCPAC. These nine Advisors and three RUC members comprise the RUC HCPAC Review Board, which is responsible for developing recommendations for services provided principally by non-MD/DOs and for facilitating joint development of recommendations by medical specialty societies and non-MD/DO organizations for services provided by both MD/DOs and non-MD/DOs. At its February meeting, the CPT Editorial Panel substantially revised the Physical Medicine section of CPT. At its first meeting, which was held in conjunction with the May RUC meeting, the RUC HCPAC Review Board developed recommendations for 26 codes based on surveys conducted by the physical and occupational therapists. This first meeting was very positive and we anticipate that the Review Board process will prove to be a major enhancement to the RUC process.

This submission brings to 208 the total number of RUC recommendations for codes listed in the July 1994 Proposed Rule. There are still 50 codes from the July Rule being considered by the RUC, many of which have been referred by specialty societies to the CPT Editorial Panel. The RUC was also asked by Doctor Barton McCann to consider at its May meeting the appropriateness of adopting the Harvard proposed values for these codes until the pending CPT or RUC questions are resolved. The RUC agreed that the Harvard values could be used in the interim. Table 2 lists the relevant codes in this category, as well as a few codes from the July Rule for which RUC recommendations will be considered at the September RUC meeting.

One problem that has arisen repeatedly at RUC meetings in considering relative values for new codes is the appropriateness of the global periods. We are particularly concerned about global period assignments for new procedures that are therapeutic, but that may be added to families of codes that have traditionally been provided for diagnostic purposes. Some combination of these diagnostic and therapeutic procedures may be provided over the course of treatment, and there is also likely to be postoperative and/or posthospital care. When all of these services have global periods of 000 or XXX, the total number of relative value units for the entire course of care may greatly and inappropriately exceed the value for a major surgical procedure with an 90-day global period for which the postoperative care and treatment of complications are wrapped into a global relative value package. The RUC would like to address this issue comprehensively as part of the five-year review of the RBRVS.

As she did at the February RUC meeting, Doctor Kay Jewell made excellent contributions to the RUC's deliberations in May, and we look forward to her continued participation in the RUC. I also want to invite you to attend the RUC meeting of your choice during the next cycle. These meetings are scheduled as follows:

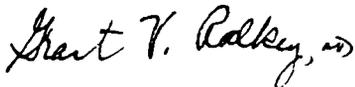
September 29-October 2, 1994
February 9-12, 1995
April 27-30, 1995

Seattle, Washington
Scottsdale, Arizona
Chicago, Illinois

We very much appreciate the Health Care Financing Administration's positive reaction to the proposal for a cooperative approach to the five-year review of the RBRVS. The RUC will be meeting in mid-July to discuss this proposal in greater detail and looks forward to further discussions with you on this subject.

Thank you for your consideration of the enclosed recommendations. If you have any questions, please contact Ms. Sandra Sherman at the AMA.

Sincerely,

A handwritten signature in cursive script that reads "Grant V. Rodkey, MD".

Grant V. Rodkey, MD

Encl.

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February 10, 1994

Mr. Thomas Ault
Director
Bureau of Policy Development
Health Care Financing Administration
Room 100 East High Rise Building
6325 Security Blvd.
Baltimore, MD 21207

Dear Mr. Ault:

I am pleased to provide you with the recommendations adopted by the American Medical Association/Specialty Society RVS Update Committee (RUC) for additional carrier-priced and noncovered services that were listed in the July 14 Proposed Rule but were not considered by the RUC in November. At the recent RUC meeting, there were two Facilitation Committees formed to evaluate the specialty recommendations for transplant surgery and microsurgery. Each of these committees developed innovative approaches to valuation of these highly specialized and complex services and we urge you to give serious consideration to the RUC's recommendations for them.

We also appreciated the contributions that Doctors Kay Jewell and Jerry Stone made to the Facilitation Committee deliberations, as well as the meeting of the full RUC. Their comments and questions were very helpful.

I have attached for your information a copy of the cover letter I sent to Ms. Kathleen Buto with the recommendations adopted by the RUC in November. This letter outlines the RUC's objections to use of the relative values developed in Phase IV of the Harvard study. Consideration of the recommendations presented at the February RUC meeting underscores the inadequacy of the work done by Harvard in this Phase. For example, the Harvard proposed values for microsurgery were based on a study involving five orthopaedic surgeons who have never done these procedures.

Thank you for your consideration of the enclosed recommendations. If you have any questions, please contact Ms. Sandra Sherman at the AMA.

Sincerely,

A handwritten signature in cursive script that reads "Grant V. Rodkey, MD".

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December 15, 1993

Kathleen A. Buto
Associate Administrator for Program Development
Health Care Financing Administration
Room 325H - Hubert H. Humphrey Building
200 Independence Avenue SW
Washington, DC 20201-0001

Dear Ms. Buto:

I am pleased to provide you with the first set of recommendations developed by the American Medical Association/Specialty Society RVS Update Committee (RUC) in response to the Proposed Rule published in the July 14, 1993 Federal Register. The RUC has assigned a high priority to completion of the RBRVS for services that are carrier-priced or noncovered by Medicare. We have been particularly concerned about the number of pediatric services that have not had published relative values despite the accelerating adoption of RBRVS-based payment schedules by state Medicaid programs and other health programs serving large pediatric populations.

The enclosed recommendations address many of the services listed in Addenda A and B of the Proposed Rule. They include recommendations for preventive medicine and counseling services, pediatric neurosurgery, plastic and reconstructive surgery, and maxillofacial surgery to correct congenital anomalies that were adopted at the RUC's November meeting. Additional recommendations for codes listed in the Proposed Rule will be provided to you immediately following the RUC's February 1994 meeting.

We were very pleased that Mr. Bernie Patashnik from your staff and Dr. Gerald Zelinger from the Medicaid Bureau were able to attend this meeting. They both provided informative reports to the Committee and made a number of helpful comments and suggestions.

After the RUC adopted its recommendations for the preventive medicine and counseling codes, we had an exchange with Dr. Zelinger about the importance of disseminating this information to state Medicaid programs as quickly as possible. At that time, Dr. Zelinger did not think the relative values for these services would be published until the 1995 RVS update. More recently, we have learned that an effort will be made to review the RUC's recommendations for carrier-priced and noncovered services in time to publish them in the spring of 1994. This is very good news and I hope you will be able to meet that schedule.

The enclosed recommendations are in the same form as those provided to you in July with one exception. Since the RUC's surveys were conducted and its meeting was held prior to publication of the 1994 Medicare RBRVS, the reference services and recommendations have

been developed using the 1993 RVS. To adjust for this in the recommendations, we have provided the recommendations in two columns: the first is the actual value adopted by the RUC; a second column is this value reduced by 1.3% to reflect the rescaling for 1994. We have not made any adjustments in the reference services, though, so the recommendations are discussed relative to the 1993 key reference services that were used to develop them.

For a number of the services included in these recommendations, a proposed Harvard value was listed in the Federal Register. The RUC's recommendations do not include individual comparisons between RUC-recommended values and Harvard proposed values for each code. We believe that all of the RUC values have been developed with a better methodology and have greater validity than those developed in Phase IV of the Harvard study.

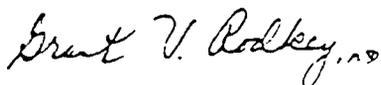
Many of the services listed in the Proposed Rule are infrequently or very rarely provided. The specialties and subspecialties participating in the RUC process have made a major effort in each case to identify those physicians who actually provide these services to their patients and to survey them regarding the relative work involved. No such effort was made by Harvard. Harvard values for rarely provided pediatric neurosurgery services, for example, are based on information gathered from a small group of general adult neurosurgeons.

Likewise, the RUC recommendations for preventive medicine were based a survey jointly conducted by the American Academy of Pediatrics, the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, the American College of Physicians, and the American College of Preventive Medicine involving a large sample of practicing physicians. This survey and the RUC review process which followed represent a considerably greater effort than was expended by Harvard and produced more appropriate relative values than those proposed by Harvard.

The RUC requires specialties to conduct a survey of thirty practicing physicians about the work involved in each service using appropriate vignettes and reference services. The recommendations developed by the specialties are subjected to a rigorous multidisciplinary review process at the RUC meeting. The RUC's consideration of those codes discussed in November for which Harvard proposed values were provided leads us to question the validity of any of the Harvard proposed values listed in Addenda A and B of the Proposed Rule. We encourage you to adopt the RUC recommendations, but we would also discourage any use of the Harvard proposed values as the basis for interim physician work relative values for other services that the RUC may not yet have considered.

I understand you are planning to attend the February RUC meeting and I look forward to seeing you in Arizona. Until then, if you have any questions about the enclosed materials, please contact Ms. Sandra Sherman at the AMA.

Sincerely,



Grant V. Rodkey, MD

Encl.

**MAY 1994 RUC RECOMMENDATIONS
PREVENTIVE MEDICINE - TAB 26**

The RUC adopted the specialties' recommendations for the revised preventive medicine codes. These codes have been revised to incorporate counseling and risk factor reduction into the visit service. In surveying physicians about the relative work of these services, the specialties found that it was not possible for them to separate these two integral elements of the service in developing the initial RUC recommendations last November. The recommended values, therefore, are not substantially higher than those recommended after the November 1993 RUC meeting when the codes did not include counseling and risk factor reduction. The RUC was provided with suggested recommendations for these codes without the counseling element that were developed by the CMDs. Comparison of the new values with the CMD suggestions indicates that the new RUC recommendations approximate the CMD suggested values with an additional .50 for 15 minutes of counseling and risk factor reduction, as shown below:

Code	CMDs 11/93	CMDs plus Counseling	RUC 5/94	Code	CMDs 11/93	CMDs plus Counseling	RUC 5/94
99381	0.70	1.20	1.12	99391	0.53	1.03	0.90
99382	0.88	1.38	1.30	99392	0.63	1.13	0.95
99383	0.88	1.38	1.30	99393	0.70	1.20	0.95
99384	1.05	1.55	1.49	99394	0.88	1.38	1.20
99385	1.05	1.55	1.47	99395	0.88	1.38	1.18
99386	1.40	1.90	1.65	99396	1.05	1.55	1.38
99387	1.58	2.08	1.95	99397	1.23	1.73	1.50
Average		1.58	1.47	Average		1.34	1.15

The recent survey also suggests that it is this counseling component which may be the most intense aspect of the preventive medicine services; it is essentially the management component of evaluation and management services. The specialty advisors and RUC members from primary care specialties noted some important differences between "regular" office visit services and

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
<p>PREVENTIVE MEDICINE SERVICES</p>				
<p>The following codes are used to report the <u>routine preventive medicine evaluation and management of infants, children, adolescents and adults, when these services are performed in the absence of patient complaints.</u> The extent and focus of the services will largely depend on the age of the patient, <u>the circumstances of the examination and the abnormalities encountered.</u> <u>(If an abnormality/ies is encountered or a preexisting problem is addressed in the process of performing this preventive medicine evaluation and management service and if the problem/abnormality is significant enough to require additional work to perform the key components of a problem-oriented E & M service, then the appropriate Office/Outpatient code 99201-99215 should also be reported. Modifier -25 should be added to the Office/Outpatient code to indicate that a significant, separately identifiable Evaluation and Management service was provided by the same physician on the same day as the preventive medicine service. An insignificant or trivial problem/abnormality that is encountered in the process of performing the preventive medicine evaluation and management service and which does not require additional work and the performance of the key components of a problem-oriented E & M service, should not be reported.)</u></p>				
<p>Codes 99381-99397 <u>do not include counseling/anticipatory guidance/risk factor reduction interventions or immunizations which are provided at the time of the initial or periodic, comprehensive preventive medicine examination.</u> (Refer to codes 99401-99412 for reporting those counseling/anticipatory guidance/risk factor reduction interventions that are provided at an encounter separate from the preventive medicine examination).</p>				
<p><u>If risk management services are provided at the same session as a preventive medicine visit, both codes should be reported. For counseling and/or risk factor reduction interventions, see 99401-99412. For immunizations see 90700-90749.</u></p>				
<p><u>Immunizations and ancillary studies involving laboratory, radiology, or other procedures are reported separately. For immunizations, see 90701-90749.</u></p>				
<p>NEW PATIENT</p>				
BB1	99381	Initial <u>preventive medicine</u> evaluation and management of an <u>healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, the identification of risk factors, and the ordering of appropriate laboratory/diagnostic procedures, new patient; infant (age under 1 year)</u>	XXX	1.12
BB2	99382	early childhood (age 1 through 4 years)	XXX	1.30
BB3	99383	late childhood (age 5 through 11 years)	XXX	1.30
BB4	99384	adolescent (age 12 through 17 years)	XXX	1.49
BB5	99385	18-39 years	XXX	1.47
BB6	99386	40-64 years	XXX	1.65

BB16	99402	approximately 30 minutes	XXX	1.00 (November RUC meeting)
BB17	99403	approximately 45 minutes	XXX	1.50 (November RUC meeting)
BB18	99404	approximately 60 minutes	XXX	2.00 (November RUC meeting)
PREVENTIVE MEDICINE, GROUP COUNSELING				
BB19	99411	<u>Preventive medicine</u> counseling and/or risk factor reduction intervention(s) provided to <u>healthy</u> individuals in a group setting (<u>separate procedure</u>); approximately 30 minutes	XXX	To be presented at the September RUC Meeting
BB20	99412	approximately 60 minutes	XXX	To be presented at the September RUC Meeting

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: BBI Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors,~~ and the ordering of appropriate laboratory/diagnostic procedures. new patient: infant (age under 1 year)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A six month old female is brought in by her mother for the first time for health supervision and evaluation. Her complete past medical, family, social, religious, and cultural history is reviewed. A complete review of systems is done. A complete physical is performed. Growth, development and behavior are assessed. Immunizations are reviewed. Anticipatory guidance is given to parents regarding the prevention of injuries, good parenting practices, nutrition, and sleep practices. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work: Review of chart if available.

Description of Intra-Service Work: Comprehensive history; comprehensive exam; growth measurements; sensory screening; developmental/behavioral assessment; identify risk factors and discuss interventions; anticipatory guidance is given; order medically necessary lab tests and immunizations.

Description of Post-Service Work: Complete forms as necessary; update medical record; update patient record. indicate next appointment date.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99202	Office or other outpatient visit for the evaluation and management of a new patient, which requires these three key components: an expanded problem focused history; an expanded problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Physicians typically spend 20 minutes face-to-face with the patient and/or family.	0.76
99203	Office or other outpatient visit for the evaluation and management of a new which requires these three key components: a detailed history; a detailed examination; and medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.15

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: BB2 Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors~~, and the ordering of appropriate laboratory/diagnostic procedures, new patient; early childhood (age 1 through 4 years)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A woman brings her healthy three year old son to your office for the first time for health supervision and evaluation. His complete past medical, family, social, religious, and cultural history is reviewed. A complete review of systems is done. A complete physical is performed. Speech and blood pressure are checked. Growth, development and behavior are assessed. Immunizations are reviewed. Anticipatory guidance is given to parents regarding prevention of injuries in this age group, good parenting practices, nutrition, discipline and dental care. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work: Review of chart if available.

Description of Intra-Service Work: Comprehensive history; comprehensive exam; growth measurements; sensory screening; developmental/behavioral assessment; identify risk factors and discuss interventions; anticipatory guidance is given; order medically necessary lab tests and immunizations.

Description of Post-Service Work: Complete forms as necessary; update medical record; update patient record; indicate next appointment date.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99202	Office or other outpatient visit for the evaluation and management of a new patient, which requires these three key components: an expanded problem focused history; an expanded problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Physicians typically spend 20 minutes face-to-face with the patient and/or family.	0.76
99203	Office or other outpatient visit for the evaluation and management of a new which requires these three key components: a detailed history; a detailed examination; and medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.15

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: BB3 Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors~~, and the ordering of appropriate laboratory/diagnostic procedures, new patient; late childhood (age 5 through 11 years)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A nine year old male presents for the first time to your office for health supervision and evaluation. His complete past medical, family, social, religious, and cultural history is reviewed. A complete review of systems is done. A complete physical is performed. Speech and blood pressure are checked. Growth, development and behavior are assessed. Immunizations are reviewed. Anticipatory guidance is given to the child regarding good health habits and self-care. Anticipatory guidance is given to the parents about good parenting practices. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work: Review of chart if available.

Description of Intra-Service Work: Comprehensive history; comprehensive exam; growth measurements; sensory screening; developmental/behavioral assessment; identify risk factors and discuss interventions; anticipatory guidance is given; order medically necessary lab tests and immunizations.

Description of Post-Service Work: Complete forms as necessary; update medical record; update patient record; indicate next appointment date.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99203	Office or other outpatient visit for the evaluation and management of a new patient which requires these three key components: a detailed history; a detailed examination; and medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.15
99204	Office or other outpatient visit for the evaluation and management of a new patient, which requires these three key components: a comprehensive history; a comprehensive examination; and medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 45 minutes face-to-face with the patient and/or family.	1.73

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Consensus Recommendations

Tracking Number: BB4 Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual ~~requiring including~~ a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors~~, and the ordering of appropriate laboratory/diagnostic procedures, new patient; adolescent (age 12 through 17 years)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A sixteen year old girl presents to your office for the first time for health supervision and evaluation. Her complete past medical, family, social, religious and cultural history is reviewed. A complete review of systems is done. A complete physical is performed. Speech, blood pressure and fitness are checked. Scoliosis screen and pelvic examination are performed. Growth, development and behavior are assessed. Immunizations are reviewed. Anticipatory guidance given to the adolescent regarding good health habits and self-care including problems with drugs, alcohol and tobacco and driving responsibly. Guidance also given about sexual activity and the importance of educational activities and social interaction. Anticipatory guidance given to parents regarding good parenting practices. Risk factor problems are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99203	Level 3 Office Visit, New Patient	1.15
99204	Level 4 Office Visit, New Patient	1.73

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The services provided during an initial preventive medicine evaluation and management are similar to those provided during an office visit with a new patient. The level 3 new patient office visit (99203) was selected as a key reference service by the largest number of physicians who were surveyed, followed by the level 4 new patient office visit.

The median intra-service time is the same for BB4 and reference service 99203. The consensus RVS committee concluded, however, that a typical time of 35 minutes more accurately reflected the typical time spent by the physicians who most frequently would report this service. The technical skill of BB4 is greater than for 99203. The vignette described a complete exam—including a pelvic examination for a sixteen year old girl—which requires a greater level of technical skill than the examination that is

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA: BB4

Specialty: Internal Medicine, Pediatrics, Family Practice, Preventive Medicine, Obstetrics/Gynecology

Median Intra-Service Time: 30 Low: 10 High: 85

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

somewhat less than for 99203.

Several respondents chose 99243, level 3 office consultation, as a key reference service. The recommended RVW of 1.47 is almost the same as the 1994 RVW of 1.49 for 99243. The estimated intra-service time for BB5 is somewhat higher than the typical time for 99243. Because the preventive service examination is more extensive than is usual for a level 3 consultation, the technical skill of BB5 is greater than for 99243. The mental effort of the preventive service is less than for an office consultation with a patient with a presenting problem or problems of moderate severity. The physician stress is the same.

The recommended RVW of 1.47 appropriately values the work of BB5 at considerably more than the level 3 office visit, at slightly less than the median RVW, at less than the level 4 office visit, and at approximately the same work as the level 3 office consultation.

The intensity (recommended RVW/estimated time) for BB5 is .042, compared to .038 for 99203 and 99204, and .037 for the level 3 office consultation.

The recommended RVW for the preventive examination on a 18-39 year-old adult (BB5) is slightly less than for the preventive service on an adolescent (BB4). The judgment, communication skills, and stress of conducting a health evaluation on, and providing guidance and counselling, to a teenager is somewhat greater than for more mature adults.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Consensus Recommendations

Tracking Number: BB6 Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, the identification of risk factors, and the ordering of appropriate laboratory/diagnostic procedures, new patient; 40-64 years

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 52 year-old woman presents to your office for the first time for a complete health evaluation and physical exam. Her complete past medical, family and social history is reviewed. A complete review of systems is done. A complete physical is performed including pelvic exam, Pap smear, breast exam, digital rectal exam and blood pressure check. Counseling is provided regarding diet and exercise, sexual activity and dental health. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99204	Level 4 Office Visit, New Patient	1.73
99203	Level 3 Office Visit, New Patient	1.15

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The largest number of respondents selected 99204 as a key reference service. The median intra-service time for BB6 is slightly less than the typical time of 99204. The technical skill of the preventive examination on an adult of 40-64 years is approximately the same as for a "comprehensive" examination on a patient with moderate to severe problems. The mental judgment is somewhat less for the preventive examination, since it requires somewhat more judgment to evaluate a patient with a moderate to severe medical presenting problem than one who appears to be without a medical problem. The stress is approximately the same. The recommended RVW, which is slightly less than the median RVW from the survey responses, appropriately places the relative work at close to, but somewhat less than, the RVW for 99204.

Compared to 99203, the median intra-service time for BB6 is 33 percent more than the typical time for this reference service; and the technical, mental effort and judgment, and stress are all considerably greater than a "detailed" history and examination with medical decision-making of "low complexity" on a patient with presenting problems of "moderate" severity (the CPT description for 99203).

The intensity (work over time) for BB6 is .041, compared to .038 for 99203 and 99204.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Consensus Recommendations

Tracking Number: BB7 Global Period: XXX

CPT Descriptor: Initial preventive medicine evaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors~~, and the ordering of appropriate laboratory/diagnostic procedures, new patient; 65 years and over

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 70 year-old woman presents to your office for the first time for a complete health evaluation and physical exam. Her complete past medical, family and social history is reviewed. A complete review of systems is done. A complete physical is performed including pelvic exam, Pap smear, breast exam, digital rectal exam and blood pressure check. Counseling is provided regarding diet and exercise, injury prevention and dental health. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered.

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99204	Level 4 Office Visit, New Patient	1.73
99205	Level 5 Office Visit, New Patient	2.31

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

A level 4 new patient office visit, 99204, was selected as a key reference service by the greatest number of respondents. The median intra-service time of 45 minutes is the same as the typical time of 45 minutes for a 99204. With the exception of the representative from the American College of Obstetrics and Gynecology, the consensus RVS committee concluded, however, that the median intra-service time of 45 minutes somewhat under-estimated the face-to-face time required to provide preventive evaluation and management on patients over the age of 65 years.* It believes that for the physicians who would report this service most frequently, the typical time for a preventive examination on a geriatric patient is more often to be in the range of 50-55 minutes. The technical skills for BB7 are comparable to that of 99204; the mental effort is greater for the preventive examination than for "medical decision-making at moderate complexity" involved in the level 4 new patient office visit; and the stress is comparable.

A level 5 new patient office visit, 99205, was the next most frequent reference service selected by the respondents to the survey. The intra-service time, as estimated by the consensus committee for BB7 is the same or somewhat less than for a 99205 office visit. The technical skill, mental effort and

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA: BB7

Specialty: Internal Medicine, Family Practice, Preventive Medicine, Obstetrics/Gynecology

Median Intra-Service Time: 45 Low: 10 High: 105

Median Pre-Service Time: 5 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 40

Other Data: _____

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99214	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: a detailed history; a detailed examination; and medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 25 minutes face-to-face with the patient and/or family.	0.95

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The reference service chosen most often was 99213 (17 times). Therefore the respondents were comparing the work of this established patient preventive medicine service which includes a comprehensive history, comprehensive examination, and appropriate counseling to the work of an established patient, level three office visit which includes two of the following three key elements: an expanded problem focused history, an expanded problem focused examination, and medical decision making of low complexity. The reference service chosen almost as often as 99213 was 99214 (16 times) which is an established patient, level four office visit which includes two of the three key elements: a detailed history, a detailed examination, and medical decision making of moderate complexity. Since the RVW for the preventive medicine service falls between the RVWs of the two office visits (but much closer to 99204), it would appear that the physician work of this preventive medicine service is greater than an established patient, level three office visit, but not quite as great as the physician work of an established patient, level four office visit.

The recommended RVW is the same as the median RVW from the survey.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Family Practice/Pediatrics

Median Intra-Service Time: 20 minutes Low: 10 minutes High: 45 minutes

Median Pre-Service Time: 2 minutes Median Post-Service Time: 3.5 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 200

Other Data: _____

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99242	Office consultation for a new or established patient, which requires these three key components: an expanded problem focused history; an expanded problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.12

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The reference service chosen most often was 99214 (22 times). Therefore the respondents were comparing the work of this established patient preventive medicine service which includes a comprehensive history, comprehensive examination, and appropriate counseling to the work of an established patient, level four office visit which includes two of the three key elements, a detailed history, a detailed examination, and medical decision making of moderate complexity. Since the RVW for the preventive medicine service is the same as the RVW of the office visit, it would appear that the physician work of this preventive medicine service is approximately equivalent to the physician work of an established patient, level four office visit.

The recommended RVW is the same as the median RVW from the survey.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Family Practice/Pediatrics

Median Intra-Service Time: 20 minutes Low: 10 minutes High: 30 minutes

Median Pre-Service Time: 3 minutes Median Post-Service Time: 4.50 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 200

Other Data: _____

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99214	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: a detailed history; a detailed examination; and medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 25 minutes face-to-face with the patient and/or family.	0.95
99242	Office consultation for a new or established patient, which requires these three key components: an expanded problem focused history; an expanded problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.12

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The reference service chosen most often was 99214 (20 times). Therefore the respondents were comparing the work of this established patient preventive medicine service which includes a comprehensive history, comprehensive examination, and appropriate counseling to the work of an established patient, level four office visit which includes two of the three key elements: a detailed history, a detailed examination, and medical decision making of moderate complexity. Since the RVW for the preventive medicine service is the same as the RVW of the office visit, it would appear that the physician work of this preventive medicine service is approximately equivalent to the physician work of an established patient, level four office visit.

The recommended RVW is the same as the median RVW from the survey.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Family Practice/Pediatrics

Median Intra-Service Time: 20 minutes Low: 10 minutes High: 30 minutes

Median Pre-Service Time: 3 minutes Median Post-Service Time: 5 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 181.5

Other Data: _____

complexity' involved in a 99213. The stress of counselling a patient on sensitive subjects, and of providing guidance to parents on good parenting practices, is greater than what is typically involved in a level 3 established patient office visit.

Compared to a level 4 established patient office visit, 99214, the time for BB11 is the same or greater, the technical skills are somewhat more, and the stress involved in counselling the patient and providing anticipatory guidance to the parents is also somewhat greater. The mental effort and judgment in providing anticipatory guidance to a teenage patient is much greater than the medical decision-making of moderate complexity involved in 99214.

Compared to a level 3 office consultation, the time of BB11 is less, the technical effort is greater, the mental effort and judgment is the same or greater, and the stress is somewhat less.

The recommended RVW of 1.20 places the work at substantially more than a level 3 established patient office visit, and between the level 4 office visit and the level 3 office consultation. The recommended RVW is somewhat higher than the median RVW of 1.13 from the survey responses. The consensus RVW committee concluded that the median RVW underestimated the work required for a period preventive re-evaluation on a teenage patient. Given that the 75th percentile RVW was 1.47, the committee concluded that a recommended RVW of 1.20 provided a more representative estimate of the work associated with BB11.

Using the recommended RVW of 1.20 and the consensus committee's intra-service time estimate of 90 minutes, the intensity (work/time) of BB11 is .040, which is roughly comparable to .038 for 99203 and .037 for the level 3 office consultation.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Consensus Recommendations

Tracking Number: BB12 Global Period: XXX

CPT Descriptor: Periodic preventive medicine reevaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors~~, and the ordering of appropriate laboratory/diagnostic procedures, established patient; 18-39 years

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 28 year-old woman, established patient, presents to your office for a complete health evaluation and physical exam. Her interval past medical, family and social history is reviewed. A complete review of systems is done. A complete physical is performed including pelvic exam, Pap smear, breast exam, and blood pressure check. Counseling is provided regarding diet and exercise, substance use, sexual activity and dental health. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered. (Note: *anticipatory guidance/counseling/risk factor reduction interventions are covered to the extent that they haven't been covered during the previous preventive medicine examinations of the patient.*)

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99214	Level 4 Office Visit, Established Patient	0.95
99213	Level 3 Office Visit, Established Patient	0.56

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Most respondents selected a level 4 established patient office visit (99214) as the key reference service. The median intra-service time of BB12 is the same as the typical time for a 99214. The consensus RVS committee concluded, however, that the median intra-service time underestimated the typical time spent in providing a preventive re-evaluation on an 18-39 year old adult. Face-to-face time of 30 minutes is more representative of the typical time spent by those physicians who most frequently would provide this service. The technical skills required to provide the extensive examination—including a pelvic exam, pap smear, breast exam, and blood pressure check for a female patient—and the counselling skills that are needed to provide guidance on "diet and exercise, substance use, sexual activity, and dental health"—are somewhat greater than the "detailed history and examination" involved in a level 4 established patient office visit. Other typical vignettes for the service would require comparable technical skill. The stress is comparable.

Compared to a level 3 established patient office visit, the face-to-face time of BB12, as estimated by the consensus committee is twice as much. The technical skill required to perform the complete preventive

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA: BB12

Specialty: Internal Medicine, Family Practice, Preventive Medicine, Obstetrics/Gynecology

Median Intra-Service Time: 25 Low: 10 High: 60

Median Pre-Service Time: 5 * Median Post-Service Time: 5 *

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 50

Other Data: _____

to high severity* presenting problems involved in the level 5 established patient office visit. The stress of the preventive examination is lower than a level 5 visit.

The recommended RVW of 1.38 is higher than the median RVW of 1.30. It places the work associated with BB13 between a level 4 and level 5 established patient office visit, but appropriately closer to the level 5 visit. With the recommended RVW of 1.38, and an estimated intra-service time of 35 minutes, the intensity (work/time) of BB13 is .039, compared to intensity of .038 for the level 4 and level 5 office visits.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Consensus Recommendations

Tracking Number: BB14 Global Period: XXX

CPT Descriptor: Periodic preventive medicine reevaluation and management of an healthy individual requiring including a comprehensive history, comprehensive examination, counseling/anticipatory guidance/risk factor reduction interventions, ~~the identification of risk factors,~~ and the ordering of appropriate laboratory/diagnostic procedures, established patient; 65 years and over

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 70 year-old woman, established patient, presents to your office for a complete health evaluation and physical exam. Her interval past medical, family and social history is reviewed. A complete review of systems is done. A complete physical is performed including pelvic exam, Pap smear, breast exam, digital rectal exam and blood pressure check. Counseling is provided regarding diet and exercise, injury prevention and dental health. Risk factors are identified and interventions discussed. Medically appropriate lab tests are ordered. (Note: *anticipatory guidance/counseling/risk factor reduction interventions are covered to the extent that they haven't been covered during the previous preventive medicine examinations of the patient.*)

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99215	Level 5 Office Visit, Established Patient	1.53
99214	Level 4 Office Visit, Established Patient	0.95

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

99215 and 99214 were selected as a key reference services by the largest number of respondents. The median intra-service time of BB14 was reported to be 35 minutes. The consensus RVS committee concluded, however, that the typical face-to-face time required to provide a periodic preventive re-evaluation on an elderly patient is 40 minutes or more, or comparable to the typical time for a level 5 established patient office visit. Compared to the reference service 99215, the technical skills required to provide a complete preventive physical examination is comparable to the skills required to provide a "comprehensive history and examination." The mental effort is somewhat less than the "medical decision-making of high complexity" required for a level 5 visit. The stress is comparable.

Compared to a level 4 established patient office visit, the median and estimated intra-service time of BB14 is greater. The technical skills required to provide the complete preventive history and physical examination on an elderly patient are considerably greater than what are required to provide the "detailed history and examination" involved in 99214. The mental effort and judgment for BB14 are greater than the "medical decision making of moderate complexity" involved in a level 4 established patient office visit. The stress associated with the periodic preventive re-evaluation on an elderly patient is somewhat less than a level 4 office visit involving a presenting problem of "moderate to high severity."

The recommended RVW, which is the same as the median RVW, is slightly lower than the RVW for a

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IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA: BB14

Specialty: Internal Medicine, Family Practice, Preventive Medicine, Obstetrics/Gynecology

Median Intra-Service Time: 35 Low: 10 High: 80

Median Pre-Service Time: 5 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 60

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

COUNSELING AND/OR RISK FACTOR REDUCTION

The RUC survey for the individual preventive counseling codes 99401-99404 [Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; 15-60 minutes] included the same specialties as the preventive medicine codes and also involved a large sample (N=162) of physicians. The specialties evaluated the distribution of results from the surveys for the codes as a whole. These results suggested that physicians based their responses on the manner in which evaluation and management services are valued when more than 50% of the time is spent in counseling. The RUC recommendations have been developed, therefore, by assigning .50 RVW to each 15-minutes of counseling. RUC recommendations for group counseling codes 99411 and 99412 and health risk assessment code 99420 will be provided at a future date.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
99401	Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 15 minutes	XXX	.50	0.49
99402	Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 30 minutes	XXX	1.00	0.99
99403	Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 45 minutes	XXX	1.50	1.48
99404	Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 60 minutes	XXX	2.00	1.97
99411	Counseling and/or risk factor reduction intervention(s) provided to healthy individuals in a group setting; approximately 30 minutes	XXX	No Recommendation at this time	No Recommendation at this time
99412	Counseling and/or risk factor reduction intervention(s) provided to healthy individuals in a group setting; approximately 60 minutes	XXX	No Recommendation at this time	No Recommendation at this time
99420	Administration and interpretation of health risk assessment instrument (eg, health hazard appraisal)	XXX	No Recommendation at this time	No Recommendation at this time

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 99401 Global Period: XXX

CPT Descriptor: Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Anticipatory guidance counseling at a health supervision and evaluation visit for a ten year old. Issues discussed include immunization, accident prevention, allergies, nutrition, parenting, self-care, good health habits, dental care, development, behavior, discipline, academic activities and social interaction.

Counseling session with 45 year old patient to assess and reinforce progress toward smoking cessation

Description of Pre-Service Work:

Pre-service work consists of identification of risk factors. This is accomplished during the preventive visit (99381-99397) and is not part of the work for this service.

Description of Intra-Service Work:

Physician reviews with the patient any pertinent lab and clinical findings from the preventive visit, the risk factors identified and their impact on health, and discusses options for reducing risk. The discussion with the 10 year old patient could include, for example, discussion of accident prevention, nutrition, family and peer relationships, and immunizations. The discussion with the 45 year old patient trying to quit smoking could include reviewing the health risks of smoking and the benefits of stopping, the pros and cons of various options for quitting (e.g., use of a nicotine patch or nicotine gum, smoking cessation classes), and strategies for obtaining support from family and friends.

Description of Post-Service Work:

No post-service work associated with this code.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

In evaluating the survey results for the four individual counseling codes (99401-99404), the joint ACOG/AAFP/AAP/ACP/ACPM committee determined that respondents had used as a basis for selecting reference services the CPT guideline stating that when counseling dominates the visit, time is the controlling factor for selecting the appropriate evaluation and management code. This resulted in a distribution of RVW estimates that roughly allocated .50 RVW to each 15 minute increment of counseling. The committee thought that it was reasonable to assume that the intensity of work involved in counseling of this type is constant with increasing amounts of time. On the basis of time, 99213 is the appropriate reference service for the 15 minute increment. The committee determined that while the technical/physical effort associated with 99401 was less than that for 99213, the mental effort and judgement and stress entailed in an effective risk factor reduction intervention was at least as great. Therefore, it seemed appropriate to lower the survey median of .59 to .50 and use this as the base RVW for this series of codes.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Frequency data are not available from either Medicare or private payors.

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed values are derived from Phase 4 of the Harvard study which has not been published. These values result from an unknown methodology, so the committee did not think that it was appropriate to use them in its deliberations.

SURVEY DATA:

Median Intra-Service Time: 15 minutes Low: 5 minutes High: 70 minutes

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 50

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99402

Global Period: XXX

CPT Descriptor: Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 30 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Counseling session with the parents of a newborn regarding breast feeding.

Counseling session with a 50 year old patient to select and exercise program.

Counseling session with 25 year old healthy woman desiring pregnancy to discuss diet, family history, medication use, and lifestyle changes for a healthy pregnancy

Description of Pre-Service Work:

Pre-service work consists of identification of risk factors. This is accomplished during the preventive visit (99381-99397) and is not part of the work for this service.

Description of Intra-Service Work:

Physician reviews with the patient any pertinent lab and clinical findings from the preventive visit, the risk factors identified and their impact on health, and discusses options for reducing risk. The session with the parents of the newborn might include a review of the benefits of breast feeding and reinforcement of the decision to breast feed, discussion of breast feeding techniques, the mother's need for rest and father's opportunity for involvement and assistance with breast feeding. The discussion with the 50 year old patient selecting an exercise program could involve a review the patient's current level of fitness, patient interest in different forms of exercise, and the benefits and risks of various exercise programs. The session with the 25 year old woman who wants to become pregnant could include a review of the biological aspects of conception, discussion of any concerns about family history of genetic or obstetric problems, the importance of good nutrition, and stopping smoking, alcohol consumption and drug use.

Description of Post-Service Work:

No post-service work associated with this code.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

See Relationship to Key Reference Service(s) for 99401. 99402 represents twice as much time as 99213 and therefore twice as much work as 99401. Therefore, the committee assigned it a value of 1.00, the survey median.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Frequency data are not available from either Medicare or private payors.

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed values are derived from Phase 4 of the Harvard study which has not been published. These values result from an unknown methodology, so the committee did not think that it was appropriate to use them in its deliberations.

SURVEY DATA:

Median Intra-Service Time: 30 minutes Low: 10 minutes High: 60 minutes

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 27

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99403 Global Period: XXX

CPT Descriptor: Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 45 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Counseling session with a sixteen year old female to discuss sexuality, sexually transmitted diseases, and birth control.

Counseling session with 25 year old healthy patient to discuss reducing the risk of sexually transmitted diseases, including HIV

Description of Pre-Service Work:

Pre-service work consists of identification of risk factors. This is accomplished during the preventive visit (99381-99397) and is not part of the work for this service.

Description of Intra-Service Work:

Physician reviews with the patient any pertinent lab and clinical findings from the preventive visit, the risk factors identified and their impact on health, and discusses options for reducing risk. The counseling session with the 16 year old girl would include discussion of the biological aspects of conception, the benefits and risks of various contraceptive options, and the importance of consistent use of condoms for prevention of sexually transmitted diseases. The discussion with the 25 year old patient would involve discussion of sexual practices that increase the risk of contracting HIV and other STDs, strategies for negotiating safer sex practices, and the option of being tested for HIV.

Description of Post-Service Work:

No post-service work associated with this service.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

See Relationship to Key Reference Service(s) for 99401. 99403 represents three times as much time as 99213 and three times as much work as 99401. Therefore the committee assigned 99403 1.50 RVW which is slightly higher than the survey median of 1.3.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Frequency data are not available from Medicare or private payors.

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed values are derived from Phase 4 of the Harvard study which has not been published. These values result from an unknown methodology, so the committee did not think that it was appropriate to use them in its deliberations.

SURVEY DATA:

Median Intra-Service Time: 45 minutes Low: 10 High: 60

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 24

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 99404

Global Period: XXX

CPT Descriptor: Counseling and/or risk factor reduction intervention(s) provided to a healthy individual; approximately 60 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Counseling session with parents and their diabetic child regarding insulin therapy, nutrition, and risk factors.

Counseling session with 35 year old healthy patient with multiple risk factors including smoking, obesity, hypercholesterolemia, sedentary lifestyle, and family history of heart disease discuss changes in diet and lifestyle to reduce risk of heart disease

Description of Pre-Service Work:

Pre-service work consists of identification of risk factors. This is accomplished during the preventive visit (99381-99397) and is not part of the work for this service.

Description of Intra-Service Work:

Physician reviews with the patient any pertinent lab and clinical findings from the preventive visit, the risk factors identified and their impact on health, and discusses options for reducing risk. The counseling session with a diabetic child and his or her parents could involve a review of the risk factors for diabetic complications, the short- and long-term benefits of preventing complications, optimal control of the child's diabetes, and strategies for limiting the impact of diabetes on family life. The discussion with the 35 year old patient would focus on the risk of heart disease based on the patient's current condition and family history, discussion of the potential benefits of losing weight, quitting smoking, and reducing cholesterol, review options for smoking cessation, diet change and weight loss, and assisting the patient in prioritizing among the multiple goals.

Description of Post-Service Work:

No post-service work associated with this code.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

See Relationship to Key Reference Service(s) for 99401. 99403 represents four times as much time as 99213 and four times as much work as 99401. Therefore the committee assigned 99403 2.00 RVW which is the survey median.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Frequency data are not available from Medicare or private payors.

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed values are derived from Phase 4 of the Harvard study which has not been published. These values result from an unknown methodology, so the committee did not think that it was appropriate to use them in its deliberations.

SURVEY DATA:

Median Intra-Service Time: 60 minutes Low: 5 minutes High: 90 minutes

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

NEWBORN CARE

The RUC accepted the specialties' recommendations for the newborn care codes 99431-99433 [99431 - History and examination of the normal newborn infant, initiation of diagnostic and treatment programs and preparation of hospital records.] These recommendations were based on a survey of pediatricians and family physicians. The in-hospital or birthing room services were considered to be somewhat more work than a level 1 hospital admission (code 99221, 1.10 RVW) and subsequent hospital visit (code 99231, 0.56 RVW). For the non-hospital service, a comparison was also made to a level 3 new patient office visit (code 99203, 1.19 RVW).

For the newborn resuscitation code 99440 [Newborn resuscitation: care of the high risk newborn at delivery, including, for example, inhalation therapy, aspiration, administration of medication for initial stabilization], there was considerable discussion of the relationship between this service and the first hour of critical care (code 99291, 3.76 RVW). Although the service is often as intense as critical care, the median intra-service time was 45 minutes instead of 1 hour, so the survey median of 3.00 was considered appropriate.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
99431	History and examination of the normal newborn infant, initiation of diagnostic and treatment programs and preparation of hospital records. (This code should also be used for birthing room deliveries.)	XXX	1.25	1.23
99432	Normal newborn care in other than hospital or birthing room setting, including physical examination of baby and conference(s) with parent(s)	XXX	1.30	1.28
99433	Subsequent hospital care, for the evaluation and management of a normal newborn, per day	XXX	.65	0.64
99440	Newborn resuscitation: care of the high risk newborn at delivery, including, for example, inhalation therapy, aspiration, administration of medication for initial stabilization	XXX	3.00	2.96

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99431

Global Period: XXX

CPT Descriptor: History and examination of the normal newborn infant, initiation of diagnostic and treatment programs and preparation of hospital records. (This code should also be used for birthing room deliveries.)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A full term newborn male is delivered to a twenty-three year old primigravida mother. The mother's and infant's charts are reviewed, and a complete examination of the infant is performed. The findings are reviewed with both parents. Issues discussed with the parents include feeding, circumcision, immunizations, car safety, early discharge, and utilization of the health care system.

Description of Pre-Service Work: Review of the charts of both the mother and infant.

Description of Intra-Service Work: Comprehensive history; comprehensive examination; measurements; sensory screening; order medically necessary lab tests; review utilization of health care system.

Description of Post-Service Work: Complete forms as necessary; update medical record; initiate patient record; indicate next appointment date.

KEY REFERENCE SERVICE(S):

CPT Code 99221 CPT Descriptor Initial hospital care, per day, for the evaluation and management of a patient which requires these three key components: a comprehensive history; a comprehensive examination; and medical decision making that is straightforward or of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) an the patient's and/or family's needs. Usually, the problem(s) requiring admission are of low severity. Physicians typically spend 30 minutes at the bedside and on the patient's hospital floor or unit. RVW 1.10

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The work performed is the same. Less technical skill and physical effort may be needed, but more mental effort and judgment are needed.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA: (Combined)

Median Intra-Service Time: _____ 25.00 Low: _____ 10.00 High: 45.00 _____

Median Pre-Service Time: _____ 5.00 Median Post-Service Time: _____ 4.50 _____

Length of Hospital Stay: _____ NA _____ Number & Level of Post-Hospital Visits: _____ NA _____

Number of Times Provided in Past 12 months (Median): 60.0 _____

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99432

Global Period: XXX

CPT Descriptor: Normal newborn care in other than hospital or birthing room setting, including physical examination of baby and conference(s) with parent(s)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A full term newborn female is delivered by a nurse midwife at home to a twenty year old gravida three mother. Later that day, the mother presents the infant at your office for her first check-up. Prenatal, family, and social histories are reviewed, and a complete examination of the infant is performed. Issues discussed include routine feeding, circumcision, immunizations, car safety, and utilization of the health care system.

Description of Pre-Service Work: Review of chart if available.

Description of Intra-Service Work: Comprehensive history; comprehensive examination; measurements; sensory screening; order medically necessary lab tests; relevant counseling with the parents; review utilization of health care system.

Description of Post-Service Work: Complete forms as necessary; update medical record; initiate patient record; indicate next appointment date.

KEY REFERENCE SERVICE(S):

CPT Code 99221 CPT Descriptor Initial hospital care, per day, for the evaluation and management of a patient which requires these three key components: a comprehensive history; a comprehensive examination; and medical decision making that is straightforward or of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) on the patient's and/or family's needs. Usually, the problem(s) requiring admission are of low severity. Physicians typically spend 30 minutes at the bedside and on the patient's hospital floor or unit. RVW 1.10

CPT Code 99203 CPT Descriptor Office or other outpatient visit for the evaluation and management of a new patient, which requires these three key components: a detailed history; a detailed examination; and medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family. RVW 1.19

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The work performed is the same. Less technical skill and physical effort may be needed, but more mental effort and judgment are needed.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA: (Combined)

Median Intra-Service Time: _____ 27.50 _____ Low: _____ 10.00 _____ High: _____ 50.00 _____

Median Pre-Service Time: _____ 1.50 _____ Median Post-Service Time: _____ 3.00 _____

Length of Hospital Stay: _____ NA _____ Number & Level of Post-Hospital Visits: _____ NA _____

Number of Times Provided in Past 12 months (Median): 0 _____

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99433 Global Period: XXX

CPT Descriptor: Subsequent hospital care, for the evaluation and management of a normal newborn, per day

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A full term newborn male is in the second day of his hospital stay. His general health status is assessed and a physical exam is performed. The findings are reviewed with the parents. Issues discussed with the parents include feeding, jaundice, circumcision, cord care, sleep pattern, newborn behavior, peeling of skin, bowel movements, crying, response to tactile stimulation, safety issues, and parents' needs for rest.

Description of Pre-Service Work: Review of chart.

Description of Intra-Service Work: Comprehensive interval history; comprehensive examination; measurements; sensory screening; order medically necessary lab tests; relevant counseling with the parents.

Description of Post-Service Work: Complete forms as necessary; update medical record; initiate patient record; indicate next appointment date.

KEY REFERENCE SERVICE(S):

CPT Code 99231 CPT Descriptor Subsequent hospital care, per day, for the evaluation and management of a patient, which requires at least two of these three key components: a problem focused interval history; a problem focused examination; medical decision making that is straightforward or of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the patient is stable, recovering, or improving. Physicians typically spend 15 minutes at the bedside and on the patient's hospital floor or unit.
RVW 0.56

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The work performed is the same. Less technical skill and physical effort may be needed, but more mental effort and judgment are needed.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA: (Combined)

Median Intra-Service Time: 15.00 Low: 5.00 High: 25.00

Median Pre-Service Time: 2.50 Median Post-Service Time: 2.00

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 62.5

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 99440

Global Period: XXX

CPT Descriptor: Newborn resuscitation: care of the high risk newborn at delivery, including, for example, inhalation therapy, aspiration, administration of medication for initial stabilization

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: You are called in to attend a C-section delivery of a full term multiparous female with fetal bradycardia recorded on the monitors and meconium found in the amniotic fluid. An infant female is delivered with an APGAR score of two at one minute. Meconium is suctioned from the cords. Bag and mask resuscitation is applied with external cardiac compressions. At three minutes, the heart rate is 120/minute and spontaneous respirations begin with a vigorous cry. The five minute APGAR score is nine. No further resuscitative efforts are required, and the infant is take to the nursery in good condition.

Description of Pre-Service Work: Review of chart if available. Update of situation.

Description of Intra-Service Work: Attend C-section delivery; resuscitate newborn; direct care of newborn until stabilization.

Description of Post-Service Work: Update medical record; discussion with parents.

KEY REFERENCE SERVICE(S):

CPT Code 99291 CPT Descriptor Critical care, including the diagnostic and therapeutic services and direction of care of the critically ill or multiply injured or comatose patient, requiring the prolonged presence of the physician; first hour. RVW 3.76

CPT Code 99285 CPT Descriptor Emergency department visit for the evaluation and management of a new patient, which requires these three key components within the constraints imposed by the urgency of the patient's clinical condition and mental status: a comprehensive history; a comprehensive examination; and medical decision making of high complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of high severity and pose an immediate significant threat to life or physiologic function. RVW 2.71

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The work is the same.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA: (Combined)

Median Intra-Service Time: _____ 45.00 Low: _____ 10.00 High: 75.00 _____

Median Pre-Service Time: _____ 5.00 Median Post-Service Time: _____ 10.00 _____

Length of Hospital Stay: _____ NA _____ Number & Level of Post-Hospital Visits: _____ NA _____

Number of Times Provided in Past 12 months (Median): 4 _____

Other Data: _____



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AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

RECONSTRUCTIVE AND COSMETIC SURGERY

The codes listed in the July 14 Proposed Rule involving plastic and reconstructive surgery included a mixture of codes that are sometimes or always medically necessary procedures covered by health insurance policies and other codes that would always be done solely for cosmetic purposes and are not covered by health insurance. In discussing the latter, the RUC found that the bundling and other standardization policies used in the development of the RBRVS now used by Medicare might not be applicable to these services. In addition, there is some question regarding whether the variation in patient needs and preferences makes these services appropriate for or amenable to inclusion in an RVS. These services were not considered by the RUC in November and the issue has been referred to the RUC's Research Subcommittee for further discussion.

Therapy for Contour Defects:

Subcutaneous injection of filling material (codes 11950 - 11954) is often used for cosmetic reasons but can also be used to contour birth defects or trauma injuries. The "filling material" can either be collagen or fat. The harvesting and processing of fat would be included as a separate procedure. The RUC compared the services with injection into skin lesions (codes 11900 and 11901) and concluded that the collagen or fat injections were more difficult because they include contouring. It was also noted that 1 cc of filling material (code 11950) covers a lot of area and a physician may spend up to 20 minutes injecting into multiple areas. The RUC lowered the values for these services from survey medians.

Hair Transplant Punch Grafts:

The work involved in hair transplant punch grafts is almost twice that of skin pinch grafts. The procedure tends to be labor intensive and time consuming in that individual cleaning and trimming of grafts is performed under magnification. The intra-service time for code 15775 "more than 15 punch grafts" suggests that on average 30 hair punch grafts are performed. The work involved in 15776 is therefore twice the amount of 15775. The survey median of 7.54 for code 15776 also appeared reasonable when compared to the multiple surgery payment policy calculated value of 8.07 RVW ($5.38 \text{ (code 15575)} + 5.38 \times 50\% = 8.07$). In addition to its more common use for cosmetic reasons, the service is also provided for patients with scalp injuries.

Removal of Sutures:

This code describes a very rare procedure [Removal of sutures under anesthesia (other than local), same surgeon] that is most often performed on small children who require general anesthesia to remove sutures some period after surgery by the same surgeon. This service is slightly less work than removal of sutures under anesthesia when performed by a different surgeon (code 15851, .88 RVW).

Design Custom Breast Implant:

The RUC accepted the specialty's rationale that the work involved in this service was comparable to a 90-minute office consultation. The specialty calculated a value of 3.42 for such a consultation, multiplying the value for a level 1 consultation lasting 15 minutes by 6. The plastic surgeon would sculpt a mouldage in their office. The mouldage is then sent to a manufacturer to produce the final implantable device.

Rhinoplasty:

Although rhinoplasties are often done for cosmetic reasons, the procedures are also used for reconstruction following trauma, cleft lip, and other birth defects. Although the area is small, the surgery is very intense and time-consuming. Code 30400 describes a tip rhinoplasty which requires less work than a full rhinoplasty. The service is more time-consuming and requires more judgement than full thickness skin graft procedures (code 15260, 9.80 RVW). The survey median for the complete primary rhinoplasty (code 30410) appeared reasonable as the service is slightly less complex than open treatment of complicated fracture(s) (code 21365, 14.32 RVW).

For code 30420 [Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft], the RUC based its recommendation on multiple surgery rules in addition to the survey. This code is equivalent to a complete primary rhinoplasty (code 30410 = 14.00) plus a septoplasty (code 30520 = 2.84 X 50% for intra-service work). The survey median for the minor secondary rhinoplasty (code 30430) appeared reasonable as the service is less intense than 15260, but involves more time and skill than 30520. The pre-, intra-, and post-service work of an intermediate secondary rhinoplasty is approximately the same as a complete primary rhinoplasty (code 30410). A recommendation for major secondary rhinoplasty (code 30450) will be provided at a later date.

Otoplasty:

Code 69300 describes a surgical procedure to correct a protruding ear, with or without size reduction. This procedure can be cosmetic or reconstructive. The work of this service is more complex than the work of reconstruction of external auditory canal (code 69310) due to the additional cartilage dissection and manipulation. It is somewhat less complex, however, than treatment of an orbital floor "blowout" fracture

(code 21395, 12.14 RVW). In addition to considering the RVW, the RUC recommended that the global period, published as XXX, be changed to 90 days.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
Correction of Skin Color Defects				
11920	Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; 6.0 sq cm or less	000	No Recommendation at this time	No Recommendation at this time
11921	6.1 to 20.0 sq cm	000	No Recommendation at this time	No Recommendation at this time
11922	each additional 20.0 sq cm	000	No Recommendation at this time	No Recommendation at this time
Therapy for Contour Defects				
11950	Subcutaneous injection of "filling" material (eg, collagen); 1 cc or less	000	1.25	1.23
11951	1.1 to 5.0 cc	000	1.75	1.73
11952	5.1 to 10.0 cc	000	2.50	2.47
11954	over 10.0 cc	XXX (000 - recommended)	2.75	2.71
Hair Transplant Punch Grafts				
15775	Punch graft for hair transplant; 1 to 15 punch grafts	000	5.38	5.31
15776	more than 15 punch grafts	000	7.54	7.44
Rhytidectomy (Wrinkle Removal)				
15824	Rhytidectomy; forehead	XXX	No Recommendation at this time	No Recommendation at this time

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
15825	neck with platysmal tightening (platysmal flap, "P-flap")	XXX	No Recommendation at this time	No Recommendation at this time
15826	glabellar frown lines	XXX	No Recommendation at this time	No Recommendation at this time
15828	cheek, chin, and neck	XXX	No Recommendation at this time	No Recommendation at this time
15829	superficial musculoaponeurotic system (SMAS) flap	XXX	No Recommendation at this time	No Recommendation at this time
Removal of Sutures				
15850	Removal of sutures under anesthesia (other than local), same surgeon	XXX (000 - recommended)	.80	0.79
Suction Assisted Lipectomy				
15876	Suction assisted lipectomy; head and neck	XXX	No Recommendation at this time	No Recommendation at this time
15877	trunk	XXX	No Recommendation at this time	No Recommendation at this time
15878	upper extremity	XXX	No Recommendation at this time	No Recommendation at this time
15879	lower extremity	XXX	No Recommendation at this time	No Recommendation at this time
Design Custom Breast Implant				
19396	Preparation of moulage for custom breast implant	000	3.00	2.96
Rhinoplasty				

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
30400	Rhinoplasty, primary; lateral and alar cartilages and/or elevation of nasal tip	090	10.00	9.87
30410	complete, external parts including bony pyramid, lateral and alar cartilages, and/or elevation of nasal tip	090	14.00	13.82
30420	including major septal repair	090	16.84	16.62
30430	Rhinoplasty, secondary; minor revision (small amount of nasal tip work)	090	7.50	7.40
30435	intermediate revision (bony work with osteotomies)	090	13.75	13.57
30450	major revision (nasal tip work and osteotomies)	090	No Recommendation at this time	No Recommendation at this time
Injection; Spider Veins				
36468	Single or multiple injections of sclerosing solutions, spider veins (telangiectasia); limb or trunk	XXX (000 - recommended)	No Recommendation at this time	No Recommendation at this time
36469	face	XXX (000 - recommended)	No Recommendation at this time	No Recommendation at this time
Suture of Nerve				
64872	Suture of nerve; requiring secondary or delayed suture (list separately in addition to code for primary neurorrhaphy)	YYY (090 - recommended)	No Recommendation at this time	No Recommendation at this time
64874	requiring extensive mobilization, or transposition of nerve (list separately in addition to code for nerve suture)	YYY (000 - recommended)	No Recommendation at this time	No Recommendation at this time

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
Otoplasty				
69300	Otoplasty, protruding ear, with or without size reduction	XXX (010 - recommended)	11.00	10.86

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 11950 Global Period: 000

CPT Descriptor: Subcutaneous injection of "filling" material (eg, collagen); 1 cc or less

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 45-year old female who desires improvement of scar or wrinkles. Patient receives injections approximately 4 to 5 injections to distribute the material in the dermis or subcutaneous area under sterile conditions.

Description of Pre-Service Work: Includes talking to the patient, cleaning the area, marking the skin for injection is necessary.

Description of Intra-Service Work: Injection of the fill material to the various locations.

Description of Post-Service Work: Dictating, talking to patient on the day of the service

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 11951

Global Period: 000

CPT Descriptor: Subcutaneous injection of "filling" material (eg, collagen); 1.1 to 5.0 cc

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Same as 11950, except that more areas are treated, adding additional injections. If, for example, chicken pox scars are involved, multiple areas are injected. A patient with larger deformity would receive a single large volume injection.

Description of Pre-Service Work: Same as 11950.

Description of Intra-Service Work: Same as 11950, except treating a larger area.

Description of Post-Service Work: Same as 11950.

Key REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

0.82	11901	Added skin lesion injections
2.34	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
1.62	11441	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 To 1.0 Cm

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work overall is approximately two to five times more than that of 11950, on average. Noting "added skin lesion injections" at 0.82, the committee accepted the survey median.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 1 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency of 41,623* for "collagen injection" patients series: lip 32%, glabellar frown lines 39%, nasolabial 52%, other 16%. Patients ≥ 65 y.o. 4%.
- 1992 national frequency of 7,865* for "fat injection" patients/series: lip 24%, glabellar frown lines 23%, nasolabial 41%, other 31%. Patients ≥ 65 y.o. 6%.
- 1992 national frequency of 357* for "fibrel injection" patients/series: lip 27%, glabellar frown lines 32%, nasolabial 42%, other 34%. Patients ≥ 65 y.o. 0%.

*(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: These frequencies may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No The service is provided nationally by certain specialties, primarily dermatology and plastic surgery.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes are unknown.

SURVEY DATA:

Median Intra-Service Time: 30 Low: 5 High: 60

Median Pre-Service Time: 15 Median Post-Service Time: 10

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 3; range = 0-60

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 11952

Global Period: 000

CPT Descriptor: Subcutaneous injection of "filling" material (eg, collagen); 5.1 to 10.0 cc

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Same as 11950/11951 but additional locations of deformity are involved or greater magnitude of filling material is injected.

Description of Pre-Service Work: Same as 11950 and 11951. For this size area, a local anesthesia may be needed at the discretion of the surgeon.

Description of Intra-Service Work: Same as 11950 and 11951, but to a greater area.

Description of Post-Service Work: Same as 11950 and 11951.

Key REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

0.82	11901	Added skin lesion injections
1.62	11441	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 To 1.0 Cm

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
Work in 11952 varies from approximately 50% to 100% additional work in 11951. The larger may require the provision of local anesthesia.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 41,623* for "collagen injection" patients series: lip 32%, glabellar frown lines 39%, nasolabial 52%, other 16%. Patients ≥ 65 y.o. 4%.
 - 1992 national frequency of 7,865* for "fat injection" patients/series: lip 24%, glabellar frown lines 23%, nasolabial 41%, other 31%. Patients ≥ 65 y.o. 6%.
 - 1992 national frequency of 357* for "fibrel injection" patients/series: lip 27%, glabellar frown lines 32%, nasolabial 42%, other 34%. Patients ≥ 65 y.o. 0%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette are unknown.

SURVEY DATA:

Median Intra-Service Time: 40 Low: 10 High: 90

Median Pre-Service Time: 20 Median Post-Service Time: 15

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 0; range 0-40

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 11954 Global Period: ~~XXX~~ **Recommended Global Period: 000**

CPT Descriptor: Subcutaneous injection of "filling" material (eg, collagen); over 10.0 cc

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 45-year old female with facial deformity requiring implantation, i.e. lipofilling.

Description of Pre-Service Work: Pre-work included in prior codes.

Description of Intra-Service Work: Intra work is incrementally increased in terms of time for injection.

Description of Post-Service Work: Post-work is included in prior codes.

Key REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

2.34	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
1.62	11441	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 To 1.0 Cm

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
 The service is an incremental increase of 11952. Working with the survey median of 2.50 for 11953, the survey median for 11954 is accepted as a 0.57 additional RVW.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 8 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 41,623* for "collagen injection" patients series: lip 32%, glabellar frown lines 39%, nasolabial 52%, other 16%. Patients ≥ 65 y.o. 4%.
 - 1992 national frequency of 7,865* for "fat injection" patients/series: lip 24%, glabellar frown lines 23%, nasolabial 41%, other 31%. Patients ≥ 65 y.o. 6%.
 - 1992 national frequency of 357* for "fibrel injection" patients/series: lip 27%, glabellar frown lines 32%, nasolabial 42%, other 34%. Patients ≥ 65 y.o. 0%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette are unknown.

SURVEY DATA:

Median Intra-Service Time: 53 Low: 10 High: 90

Median Pre-Service Time: 20 Median Post-Service Time: 15

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 0; range = 0-24

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 15775

Global Period: 000

CPT Descriptor: Punch graft for hair transplant; 1 to 15 punch grafts

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 40-year old male with male pattern baldness. Patient undergoes placement of autologous hair plugs to location of baldness. Service involves planning location for graft placement to optimize correction and minimize notice of donor location. Spaces must be created in recipient area by removing "plugs" of non-hairbearing scalp, then donor plugs are harvested and individually transplanted, orienting the hair shafts in the proper direction.

Description of Pre-Service Work: The proposed hairline is marked. The donor site is marked. Hair is trimmed. The donor and recipient sites are prepped and the patient is positioned for the service. Local anesthesia is provided to both the donor and the recipient sites.

Description of Intra-Service Work: The recipient site is excised. Harvesting of hair grafts from the donor site. Conducting layered closure of the donor site. Prepare the hair plugs under magnification. Insert hair plugs in the recipient site with attention to the hair growth orientation.

Description of Post-Service Work: Cleansing of donor and recipient sites and application dressing. Dictations, discussion with patient follow-up, prescription is necessary. All post-service work performed on the day of the service.

Key REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

3.99	15050	Skin pinch graft, single or multiple procedure
8.25	15100	Split graft, trunk, scalp, arms, legs, hand and/or feet, 100 sq.cm. or less.

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Punch grafts for one to 15 hair plug grafts would be easily twice the work of 15050 (3.99 RVWs). The intensity of the work, however, is less than that of 15100 (8.25 RVWs). The procedure tends to be labor intensive in that individual cleaning and trimming of grafts is performed under magnification.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency of 1,349 for "male-pattern baldness" patients receiving plug or strip grafts. Patients \geq 65 y.o. 0% (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No The service is provided by surgeons across the nation, but by a limited number of surgical specialists.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes is unknown.

SURVEY DATA:

Median Intra-Service Time: 60 Low: 15 High: 120

Median Pre-Service Time: 30 Median Post-Service Time: 20

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 0; range 0-13

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 15776 Global Period: 000

CPT Descriptor: Punch graft for hair transplant; more than 15 punch grafts

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Service includes work of 15775 with more extensive planning of location of punch grafts.

Description of Pre-Service Work: Pre-work is the same as that described for 15776. Additional time is required for additional areas of preparation.

Description of Intra-Service Work: Due to the variation for "more than 15 punch grafts," which could be from 16 up to 50, the intra time is computed for an average of 30 hair plugs, that being twice the time needed for 15775.

Description of Post-Service Work: Post-service work in cleansing the sites increases incrementally for the area being treated. All post-service work performed on the day of the service.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
3.99	15050	Skin pinch graft, single or multiple procedure
8.25	15100	Split graft, trunk, scalp, arms, legs, hand and/or feet, 100 sq.cm. or less.

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Consider work twice that of 15775 on average, 50% of the work value for 15776, is 2.69. Added to 5.38, the value would be 8.07 RVWs. The survey provided a mean of 7.54 which is being recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency of 1,349 for "male-pattern baldness" patients receiving plug or strip grafts. Patients \geq 65 y.o. 0% (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No **The service is provided across the United States but by a limited number of surgical subspecialists.**

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes is unknown.

SURVEY DATA:

Median Intra-Service Time: 90 Low: 25 High: 180

Median Pre-Service Time: 30 Median Post-Service Time: 20

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 0; range 0-20

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 15850 Global Period: ~~XXX~~ **Recommended Global Period: 000**

CPT Descriptor: Removal of sutures under anesthesia (other than local), same surgeon

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Patient is a 3-month old infant who has had repair of a cleft lip and a few days later needs to have the small skin sutures removed under general anesthesia.

Description of Pre-Service Work: Physician talks with parents, derives consent, provides brief check of patient, talks with patient, and waits for general anesthesia.

Description of Intra-Service Work: Sutures are removed.

Description of Post-Service Work: Dictation, talking with parents, checking child before discharge.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
1.62	11441	Excision, other benign lesion(unless elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 to 1.0 cm.
1.15	99242	Office consultation for a new or established patient, which requires these three key components: an expanded problem focused history; an expanded problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The service involves more time and intensity than 99242, but less than 11441.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 980 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? X Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 0.87

Harvard methodology and vignette is unknown.

SURVEY DATA:

Median Intra-Service Time: 18 Low: 5 High: 45

Median Pre-Service Time: 15 Median Post-Service Time: 10

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 0; range = 0-4

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 19396 Global Period: 000

CPT Descriptor: Preparation of moulage for custom breast implant

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Patient is an 18-year old female that has developmental asymmetry of her chest wall and breasts. She had a thoracotomy as an infant. In the office a moulage of the chest wall/breast deformity is prepared so a custom implant can be made by the manufacturer.

Description of Pre-Service Work: Pre-service work involves explaining the process to the patient and marking the area of defect.

Description of Intra-Service Work: Mold is made from moulage material and applied to the defect area. Judgement as to appropriate conformity is made.

Description of Post-Service Work: Post-service work involves sending the moulage to the manufacturer with any special instruction.

Key REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

0.57	99241	office consultation for a new or established patient, which requires these three key components: a problem focused history; a problem focused examination; and straightforward medical decision making. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are self limited or minor. Physicians typically spend 15 minutes face-to-face with the patient and/or family.
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Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The service is comparable to a 90-minute office consult at .57 RVWs per 15-minute increment.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service?

___ Commonly ___ Sometimes ___ Rarely X Unknown.

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes ___ No X Unknown

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette is unknown.

SURVEY DATA:

Median Intra-Service Time: 45 Low: 20 High: 90

Median Pre-Service Time: 30 Median Post-Service Time: 13

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: global period 000

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 30400

Global Period: 090

CPT Descriptor: Rhinoplasty, primary; lateral and alar cartilages and/or elevation of nasal tip

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Patient is a 25-year old female who does not like the tip of her nose. She would like it refined and elevated. She likes the rest of her nose and does not want any bony alterations. Service includes exposure of the nasal tip cartilages with resection, possibly addressing caudal septum and the possible insertion of a tip graft.

Description of Pre-Service Work: Pre-service work includes talking with the patient about reasonable outcome, and deriving consent for the service. Face is marked and skin is prepped. Topical anesthesia is applied internasally and local anesthesia is infiltrated.

Description of Intra-Service Work: Incisions are made (internal or external) to expose lower lateral nasal cartilages. Surgeon resects and/or modifies lower lateral cartilages. Possibly place cartilage tip grafts. Close internasal and skin incisions. Insert nasal packs. Nasal splint is applied.

Description of Post-Service Work: Apply nasal dressing. Discuss follow-up with patient and family. Prescribe medication. Dictate. In 90-day global period, remove nasal packing, remove sutures and nasal dressing.

Key REFERENCE SERVICE(S):

RVW	CPT Code	CPT Descriptor
9.80	15260	Full thickness graft, free, including direct closure of donor site, nose, ears, eyelids, and/or lips; 20 sq cm or less
12.14	21395	Open treatment of orbital floor "blowout" fracture; periorbital approach with bone graft (includes obtaining graft)
5.68	30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
The work involved is more intensified than 15260 by patient anxiety. Time and thought process is more intensified because of sculpting requirement.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 116 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 17,143* for "rhinoplasty (primary)" patients--open. Patients ≥ 65 y.o. 2%.
 - 1992 national frequency of 22,724* for "rhinoplasty (primary)" patients--closed. Patients ≥ 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No **Service is provided nationally by a specific surgical specialists.**

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes is unknown.

SURVEY DATA:

Median Intra-Service Time: 90 Low: 30 High: 180

Median Pre-Service Time: 33 Median Post-Service Time: 45

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 7; range = 0-100

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 30410 Global Period: 090

CPT Descriptor: Rhinoplasty, primary; complete, external parts including bony pyramid, lateral and alar cartilages, and/or elevation of nasal tip

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Patient is a 25-year old male who has a large hump on the dorsum of his nose with a droopy tip. He has class 1 occlusion. Service includes intra or intercartilaginous incisions, removing any dorsal hump, lateral osteotomies, alar cartilage resection and possibly resection of the caudal septum, plus the possible insertion of a tip graft.

Description of Pre-Service Work: Pre-service work is approximately the same as that of 30400.

Description of Intra-Service Work: Intra-service work is more intensified than that of 30400 due to the time needed for osteotomies and dissection.

Description of Post-Service Work: Post-service work is approximately the same as that of 30400.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
14.32	21365	Open treatment of complicated, (eg, comminuted or involving cranial nerve foramina) fracture(s) of malar area, including zygomatic arch and malar tripod; with internal fixation and multiple surgical approaches
12.14	21395	Open treatment of orbital floor "blowout" fracture; periorbital approach with bone graft (includes obtaining graft)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The service is slightly less complex than 21369, but more complex than 21395. As such, the panel agreed to accept the median of the survey.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 67 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 17,143* for "rhinoplasty (primary)" patients--open. Patients ≥ 65 y.o. 2%.
 - 1992 national frequency of 22,724* for "rhinoplasty (primary)" patients--closed. Patients ≥ 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No **The service is performed across the nation by a limited number of specialists.**

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes is unknown.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 40 High: 210

Median Pre-Service Time: 45 Median Post-Service Time: 53

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 12; range = 2-150

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 30420 Global Period: 090

CPT Descriptor: Rhinoplasty, primary; including major septal repair

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Patient is an 18-year old male that has fractured his nose several times playing football. It is crooked and he cannot breathe out of one side of his nose. Service includes exposure of the nasal septum to correct the nasal obstruction as well as exposure of the nasal skeleton to allow removal of a dorsal hump, lateral osteotomies and resection of the alar cartilages, and may include a possible augmentation graft.

Description of Pre-Service Work: The pre-service work is similar to that of 30400.

Description of Intra-Service Work: Intra-work includes the service of 30410 plus additional time and intensity related to the provision of septoreconstruction.

Description of Post-Service Work: The post-service work is similar to that of 30400.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
na	30410	Rhinoplasty, primary; complete, external parts including bony pyramid, lateral and alar cartilages, and/or elevation of nasal tip
5.68	30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work is at the level of 30410 (recommended at the survey median of 14.0) plus a septoplasty (2.84 at 50% for intra work). The recommendation of 16.84 results.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 552 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 17,143* for "rhinoplasty (primary)" patients--open. Patients \geq 65 y.o. 2%.
 - 1992 national frequency of 22,724* for "rhinoplasty (primary)" patients--closed. Patients \geq 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No **The service is provided across the nation by a specific surgical subspecialty.**

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette is unknown.

SURVEY DATA:

Median Intra-Service Time: 150 Low: 60 High: 240

Median Pre-Service Time: 45 Median Post-Service Time: 60

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 12; range = 1-140

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 30430 Global Period: 090

CPT Descriptor: Rhinoplasty, secondary; minor revision (small amount of nasal tip work)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A young female having had a primary rhinoplasty has complaints about tip appearance needing minor revision. The patient undergoes brief surgery involving modification of the cartilaginous elements in the tip through either suture plication or small cartilage tip grafts.

Description of Pre-Service Work: Pre-service work is similar to that of 30400.

Description of Intra-Service Work: Intra-service work is less complex than 30400 because, by definition, the surgeon is doing limited nasal tip work with limited dissection involved.

Description of Post-Service Work: Post-service work is similar to that of 30400.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
9.80	15260	full thickness graft, free, including direct closure of donor site, nose, ears, eyelids, and/or lips; 20 sq cm or less
5.68	30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
The service is less intense than 15260, but involves more time and skill than 30520. The survey median of 7.50 was accepted.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 60 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 4,435* for "rhinoplasty (secondary)" patients--open. Patients ≥ 65 y.o. 2%.
 - 1992 national frequency of 5,879* for "rhinoplasty (secondary)" patients--closed. Patients ≥ 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? X Yes ___ No

The service is provided across the nation by a specific surgical subspecialty.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette are unknown.

SURVEY DATA:

Median Intra-Service Time: 60 Low: 20 High: 180

Median Pre-Service Time: 40 Median Post-Service Time: 30

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 4; range 0-30

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 30435

Global Period: 090

CPT Descriptor: Rhinoplasty, secondary; intermediate revision (bony work with osteotomies)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A young female patient returns after primary rhinoplasty with persistent widening of the bony dorsum and/or persistent hump requesting revision. The patient requires an internal approach with osteotomies and possibly some tip rework.

Description of Pre-Service Work: Pre-service work is approximately the same as 30410.

Description of Intra-Service Work: Intra-service work is comparable to 30410.

Description of Post-Service Work: Post-service work is comparable to 30410.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
14.32	21365	Open treatment of complicated, (eg, comminuted or involving cranial nerve foramina) fracture(s) of malar area, including zygomatic arch and malar tripod; with internal fixation and multiple surgical approaches
12.14	21395	Open treatment of orbital floor "blowout" fracture; periorbital approach with bone graft (includes obtaining graft)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work intensity and time falls between the services provided for 21365 and 21395. As such, the panel recommends acceptance of the survey median.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 27 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 4,435* for "rhinoplasty (secondary)" patients--open. Patients \geq 65 y.o. 2%.
 - 1992 national frequency of 5,879* for "rhinoplasty (secondary)" patients--closed. Patients \geq 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No

The service is provided across the nation by a specific surgical subspecialty.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 7.76
Harvard methodology and vignette are unknown.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 30 High: 240

Median Pre-Service Time: 45 Median Post-Service Time: 45

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 3; range; 0-40

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 69300 Global Period: ~~XXX~~ Recommended Global Period: 010

CPT Descriptor: Otoplasty, protruding ear, with or without size reduction

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A six year old white male presents with a complaint of protuberant ears and problems with peer interaction. A postauricular approach is used to elevate an/or remove a vertical ellipse of skin followed by plication, excision, and/or some form of manipulation of the cartilage structure to achieve a more flush approximation of the ears to the head followed by primary closure of the skin.

Description of Pre-Service Work: Pre-service work includes marking of the incision, measuring the cephalo-auricular angle of the ear, injection of anesthesia, and preparation of skin for surgery.

Description of Intra-Service Work: Incision is made, skin is removed, cartilage is resected, and or manipulated, followed by suture fixation. The ear is measured to assure symmetry. Wound closure is provided.

Description of Post-Service Work: Post-service work includes providing compression dressing, dictation, visit with parents and child, removal of bandages and sutures and removal of drains.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
9.80	15260	Full thickness graft, free, including direct closure of donor site, nose, ears, eyelids, and/or lips; 20 sq cm or less
11.35	19318	Reduction mammoplasty
12.14	21395	Open treatment of orbital floor "blowout" fracture; periorbital approach with bone graft (includes obtaining graft)
9.80	15260	Full thickness graft
10.85	69310	Reconstruction of external auditory canal (meatoplasty)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
The work of 69300 is more complex than the work of 69310 due to the additional cartilage dissection and manipulation.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 4 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency of 6,371 for "otoplasty" patients. Patients \geq 65 y.o. 0%. (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignettes is unknown.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 45 High: 240

Median Pre-Service Time: 30 Median Post-Service Time: 35

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 1 x 99211

Number of Times Provided in Past 12 months (Median): 4; range 0-30

MAY 1994 RUC RECOMMENDATIONS
TATTOOING - TAB E

The RUC recommendations for the tattooing codes were based on a survey of plastic surgeons. At the November, 1993 RUC meeting the specialty society initially proposed values for the tattooing codes which were referred back to the specialty society by the RUC. Tattooing is performed on patients that have experienced skin depigmentation due to disease or scarring.

11920 [Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; 6.0 sq cm or less] is similar to excising benign lesions as described by CPT code 11423 (2.14 RVW), in terms of the surface area that the physician is working. The intensity of physician work is higher in 11920 because of pigment mixing for consistent skin color. The recommended RVW is 1.63, which is the same as the Harvard proposed value.

11922 [Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; each additional 20.0 sq cm] requires essentially the same work as 11920 except that the physician is working in a larger surface area. The nomenclature of this code "each additional" requires that it be reported in addition to CPT code 11921, those codes are usually assigned a global period of ZZZ. The recommended value for 11922 is 1.95 RVW, which is the same as the Harvard proposed value.

The recommended work values are based on those that were published in the July Rule and have not been re-scaled to the 1994 RVS.

CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
11920	Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; 6.0 sq cm or less	000 (010 - recommended)	1.63
11921	6.1 to 20.00 sq cm	000 (010 - recommended)	1.95
11922	each additional 20.0 sq cm	000 (ZZZ - recommended)	0.50 (approved at Nov93 RUC meeting)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Proposed Harvard Value: 1.63

CPT Code: 11920 Global Period: 000 **Recommended global period: 010**

CPT Descriptor: Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; 6.0 sq cm or less

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 20-year-old female who has a 6 sq cm area, or less, of depigmented or irregularly pigmented skin as a result of scarring or disease, presents for intradermal introduction of insoluble opaque pigments (tattooing).

Pre-service work: includes communication with the patient to discuss the risks and benefits of the procedure, obtaining the surgical consent; scrubbing for the operation; matching and mixing the pigments to be used for the procedure; marking the surgical site; positioning, prepping and draping the patient.

Intra-service work: includes infiltrating the area with a local anesthetic and performing the actual tattoo procedure.

Post-service work: includes application of a sterile dressing and communication with the patient, family, and other health care professionals, including dictating the operative report, writing prescriptions orders, and postoperative orders. Additionally, office visit(s) to remove the dressing and check for infection within 10 days after the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
1.89	11403	Excision, benign lesion, except skin tag (unless listed elsewhere), trunk, arms or legs; lesion diameter 2.1 to 3.0 cm
2.14	11423	Excision, benign lesion, except skin tag (unless listed elsewhere), scalp, neck, hands, feet, genitalia; lesion diameter 2.1 to 3.0 cm
3.18	65600	Multiple punctures of anterior cornea (eg, for corneal erosion, tattoo)
2.47	11443	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 2.1 to 3.0 cm
1.58	11441	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 to 1.0 cm

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
 11920 is similar to the excision codes presented above in terms of the surface work area (i.e., diameter less than 2.5 cm equates to an area less than 6 sq cm). The intensity of the intra-service work and time of 11920 is similar, however, the pre-service time for 11920 is greater than the excision codes because of pigment mixing. Reference service 65600 is also similar to 11920 (same intra-service time), however the intensity of 65600 is greater because it is work on the cornea. Therefore, the consensus panel recommends the survey median RVW of 2.50.

FREQUENCY INFORMATION

- This procedure is performed by surgeons across the nation, but not by a significant number.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 11920 was 0* (*1992 NCH File, HCFA, 6/30/93).

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed relative value of 1.63 for code 11920 is based on a single response from a dermatology technical expert panel during Phase III of the Harvard study.

SURVEY DATA: Plastic Surgery

Note: The survey indicated a "recommended" global period of 10 days. Consequently, the following summary responses are based on this global period.

Median Intra-Service Time: 30 Low: 15 High: 60

Median Pre-Service Time: 20 Median Post-Service Time: 15

Length of Hospital Stay: 0

Office Visits on Post-Discharge Day(s) : 99212 on day 7

Median Number of Times Provided in Past 12 months: 2 (range: 0-20)

Median Number of Times Provided in Career: 5 (range: 0-200)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Proposed Harvard Value: 1.95

CPT Code: 11921

Global Period: 000

Recommended global period: 010

CPT Descriptor: Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; 6.1 to 20.0 sq cm

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 50-year-old female, with a history of breast carcinoma that was treated with a mastectomy, breast reconstruction, and chemotherapy, presents for unilateral nipple/areolar reconstruction by tattooing. [Please note that the typical area of a single nipple/areolar reconstruction is 11-13 cm sq.]

Pre-service work: includes communication with the patient to discuss the risks and benefits of the procedure; obtaining the surgical consent; scrubbing for the operation; matching and mixing the pigments to be used for the procedure; marking the surgical site; and positioning, prepping and draping the patient.

Intra-service work: includes infiltrating the area with a local anesthetic and performing the actual tattoo procedure.

Post-service work: includes application of a sterile dressing and communication with the patient, family, and other health care professionals, including dictating the operative report, writing prescriptions orders, and postoperative orders. Additionally, office visit(s) to remove the dressing and check for infection within 10 days after the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.74	11406	Excision, benign lesion, except skin tag (unless listed elsewhere), trunk, arms or legs; lesion diameter over 4.0 cm
3.77	11426	Excision, benign lesion, except skin tag (unless listed elsewhere), scalp, neck, hands, feet, genitalia; lesion diameter over 4.0 cm
4.49	11446	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter over 4.0 cm
1.58	11441	Excision, other benign lesion (unless listed elsewhere), face, ears, eyelids, nose, lips, mucous membrane; lesion diameter 0.6 to 1.0 cm
3.18	65600	Multiple punctures of anterior cornea (eg, for corneal erosion, tattoo)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

11921 is similar to the excision codes 11406, 11426, and 11446 in terms of the surface work area (i.e., diameter over 4.0 cm equates to an area greater than 12 sq cm). Although the vignette describes areolar tattooing secondary to breast reconstruction, this procedure can also be used for pigmentation of scars on the face or other visible anatomical area. The intensity of the intra-service work of 11921 is not as great as the excision codes, but the intra-service time is similar. Additionally, the pre-service time for 11921 is greater than the excision codes because of pigment mixing. With respect to the reference service 65600, the intra-service time is less than 11921, however, the higher RVW for 65600 reflects the intensity of the work on the eye. Therefore, the consensus panel recommends the survey median RVW of 3.00, which is consistent with the range of RVWs for the key reference services.

FREQUENCY INFORMATION

- This procedure is performed by surgeons across the nation, but not by a significant number.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 11921 was 4* (*1992 NCH File, HCFA, 6/30/93).

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The Harvard proposed relative value of 1.95 for code 11921 is based on a single response from a dermatology technical expert panel during Phase III of the Harvard study.

SURVEY DATA:

Plastic Surgery

Note: The survey indicated a "recommended" global period of 10 days. Consequently, the following summary responses are based on this global period.

Median Intra-Service Time: 45 Low: 20 High: 110

Median Pre-Service Time: 20 Median Post-Service Time: 15

Length of Hospital Stay: 0

Office Visits on Post-Discharge Day(s) : 99212 on day 7

Median Number of Times Provided in Past 12 months: 5 (range: 0-35)

Median Number of Times Provided in Career: 13 (range: 0-150)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 11922

Global Period: ZZZ

CPT Descriptor: Tattooing, intradermal introduction of insoluble opaque pigments to correct color defects of skin, including micropigmentation; each additional 20.0 sq cm

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 30-year old male with vitiligo, hands and face, requires extensive tattooing

Description of Pre-Service Work: Pre-service is provided in conjunction with 11921. Local anesthesia is required for larger area.

Description of Intra-Service Work: The work is the add-on to 11921 for each additional 20.0 sq.cm area.

Description of Post-Service Work: Post-service work is provided in conjunction with 11921.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
0.88	11400	Removal of skin lesion, .05 cm or less
2.34	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
4.32	13132	Repair, complex, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; 2.6 Cm to 7.5 Cm

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Very few survey respondents understood that this is an add-on code

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? **The service is performed by surgeons across the nation, but few in absolute number.**

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Harvard methodology and vignette are unknown.

SURVEY DATA:

Median Intra-Service Time: 60 Low: 20 High: 120

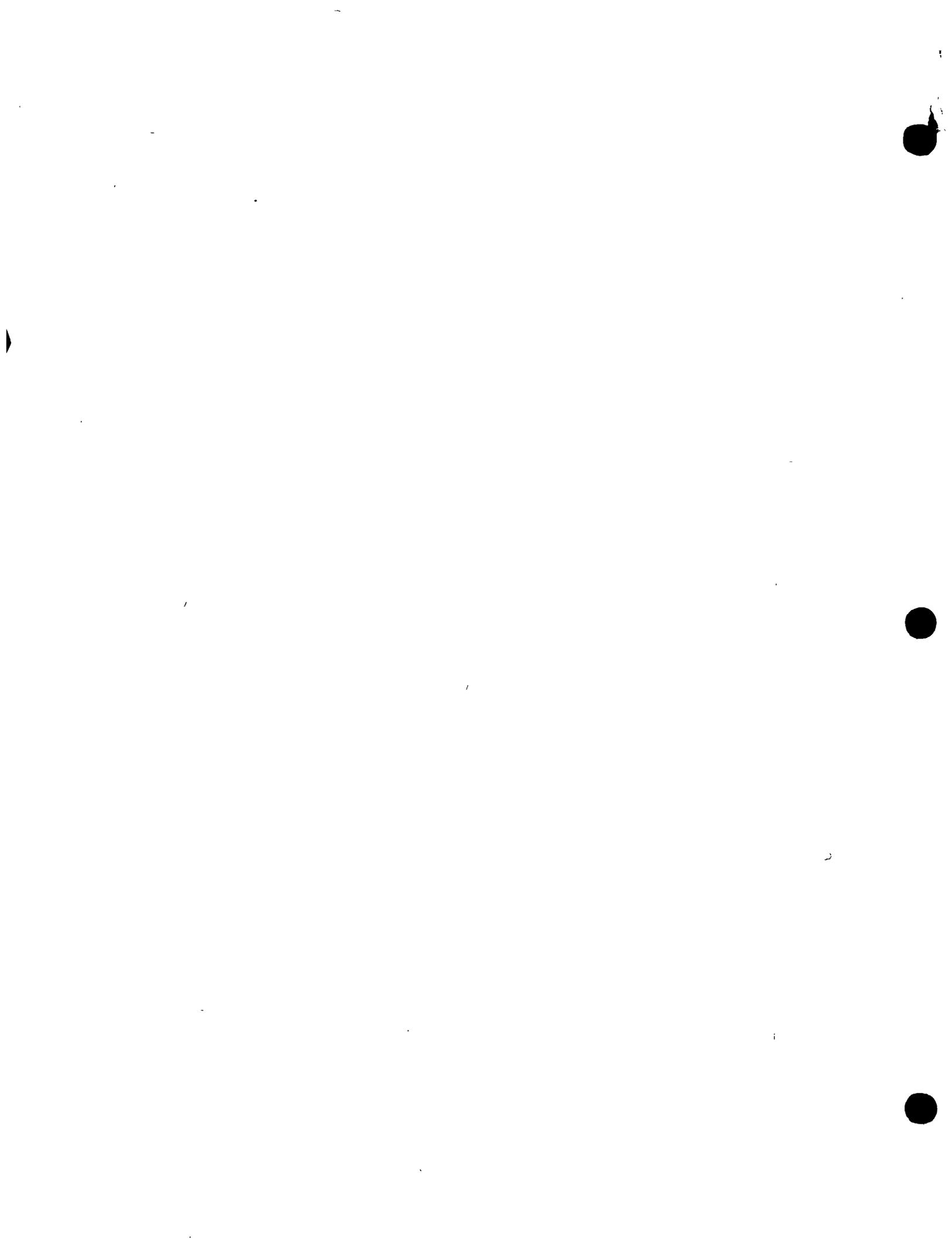
Median Pre-Service Time: 20 Median Post-Service Time: 15

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 0; range = 0-0

Other Data:



MAY 1994 RUC RECOMMENDATIONS
TRAM FLAP - TAB E

The RUC recommendations for TRAM flaps are based on a survey of plastic surgeons. Both of the procedures 193X1 and 193X2 are new procedure codes, split out of the deleted code 19362. 193X3 is a new stand-alone code. The recommended values of all three codes maintain work neutrality. The use of TRAM flaps in breast reconstruction is a complex service that is performed less frequently than other types of breast reconstruction such as free flaps.

193X1 [Breast reconstruction with transverse rectus abdominus myocutaneous flap (TRAM), single pedicle, including closure of donor site;] is performed on post mastectomy patients and involves the transfer of the flap from the lower abdominal wall to the chest area, and formation of the breast. A great deal of physician time is spent ensuring that blood flow from the recipient area is not disrupted once the flap is placed in the chest area. The intraoperative time for 193X1 (300 minutes) is twice that of the key reference service 15946 (20.03 RVW) [Excision, ischial pressure ulcer, with ostectomy, with muscle or myocutaneous flap closure] at 160 minutes. Although the intra-operative work is approximately twice than the key reference service, the recommended RVW for 193X1 is 25.00 to maintain work neutrality.

The physician work for 193X2 [Breast reconstruction with transverse rectus abdominus myocutaneous flap (TRAM), single pedicle, including closure of donor site; with microvascular anastomosis (supercharging)] is almost 50% greater than that of 193X1 (420 minutes versus 300 minutes) with an increased intensity in physician work. In addition to essentially performing the work of 193X1, the physician must perform an anastomosis of the epigastric vessels to the thoracoabdominal vessels to augment vascularization or "turbocharge" the flap. The recommended value for 193X2 is 31.50 RVW.

193X3 [Breast reconstruction with transverse rectus abdominus myocutaneous flap (TRAM), double pedicle, including closure of donor site] involves physician work similar to 193X1. Additional physician time is required for the formation of a double pedicle flap. Patients that require double pedicle flaps usually have other co-morbid conditions such as; diabetes and obesity. The recommended value for 193X3 is 29.00 RVW, which was the median RVW from the physician survey.

Tracking Number	CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
AJ1	19362	Breast reconstruction with transverse rectus abdominis flap (TRAM), including closure of donor site, single or double pedicle, with or without microvascular anastomosis (19362 has been deleted. To report, see 193X1-193X3)	090	N/A

AJ2	•193X1	Breast reconstruction with transverse rectus abdominis myocutaneous flap (TRAM), single pedicle, including closure of donor site;	090	25.00
AJ3	•193X2	with microvascular anastomosis (supercharging)	090	31.50
AJ4	•193X3	Breast reconstruction with transverse rectus abdominis myocutaneous flap (TRAM), double pedicle, including closure of donor site	090	29.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AJ2

Global Period: 090

CPT Descriptor: Breast reconstruction with transverse rectus abdominis myocutaneous flap (TRAM), single pedicle, including closure of donor site;

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 45-year-old white female presents with newly diagnosed breast carcinoma and requests breast reconstruction using autogenous tissue. She is 5 feet 6 inches tall, weighs 140 pounds, and wears a 34B bra. She is a non-smoker in good health and without previous abdominal surgery or other risk factors. Unilateral breast reconstruction, using a single pedicle TRAM flap, is performed after her mastectomy (immediate or delayed). In addition, the donor site is closed.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, including a review of the patient's tumor type; communicating with the referring physician and other health care professionals; and communicating with the patient to explain operative risks and benefits and to obtain informed consent. (If the operation is to be performed immediately after a mastectomy, then communication with the surgeon performing the mastectomy is necessary to discuss the type of incisions to be made, along with a discussion of the need for future local therapy.) Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Intra-service work: includes measuring the breast and marking the flap on the abdominal wall (if this is a delayed procedure, it would be necessary to recreate the mastectomy defect); elevation of the abdominal skin flap; dissection of the lower abdominal skin and subcutaneous fat; elevation of the rectus abdominus muscle; transfer of the flap to the recipient site; fascial and abdominal wall closure; and formation of the breast on the chest wall.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring of abdominal wound and flap circulation; monitoring of drainage tubes; instruction of patient in drain care; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of drains and sutures and evaluating laboratory reports and adjusting medication.

Key REFERENCE SERVICE(S):

RVW	CPT Code	CPT Descriptor
20.03	15946	Excision, ischial pressure ulcer, with ostectomy, with muscle or myocutaneous flap closure
26.89	19362	Breast reconstruction with transverse rectus abdominis flap (tram), including closure of donor site, single or double pedicle, with or without microvascular anastomosis
28.65	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Three different procedures, previously reported using one code (19362), now have separate descriptors (codes AJ2, AJ3, and AJ4). Taking into consideration an estimated case ratio of 55:5:40 for AJ2:AJ3:AJ4 (see discussion under frequency information, page 3), the consensus committee developed the composite rationale presented below. This rationale attempts to maintain both relativity between these three procedures and budget neutrality.

AJ2 (single pedicle): The pre- and post-operative work of AJ2 is similar to 15946. However, the intra-operative work of AJ2 is fifty percent greater than 15946 because the excision in 15946 is easier than shaping the breast flap in AJ2 and shaping the flap is only one of the components of the entire TRAM flap procedure. Additionally, the survey median intra-operative time of AJ2 (300 minutes) is almost twice as much as the Harvard study intra-operative time for 15946 (160 minutes). Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ2 is 50% greater than the intra-operative work in 15946; then a calculated RVW for AJ2 would be 25.04. $[(20.03 \times 50\% \times 50\%) + (20.03)]$. To maintain relativity and budget neutrality, the consensus panel recommends this RVW of 25.04, rather than the survey median RVW.

AJ3 (single pedicle with supercharging): The pre-operative work for AJ3 is similar to AJ2. However, the intra-operative work of AJ3 is approximately fifty percent greater than AJ2 due to: (1) forty percent more intra-operative time (420 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a single pedicle TRAM flap that necessitates supercharging is considered a higher-risk patient because of a history of heavy smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ3 is 55% greater than the intra-operative work in AJ2; then the calculated RVW for AJ3 should be 31.92. $[(25.04 \times 50\% \times 55\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 31.50, which is very similar to the calculate RVW of 31.92.

AJ4 (double pedicle): The pre- and post-operative work of AJ4 is similar to AJ2. However, the intra-operative work of AJ4 is approximately thirty percent greater than AJ2 due to: (1) twenty percent more intra-operative time (360 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a double pedicle TRAM flap is considered a higher-risk patient because of a history of low-to-moderate smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ4 is 35% greater than the intra-operative work in AJ2; then a calculated RVW for AJ4 would be 29.42. $[(25.04 \times 50\% \times 35\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 29.00, which is very similar to the calculate RVW of 29.42.

CODE	Case Mix	1994 RVW	Recommended RVW
AJ2	55	26.89	25.04
AJ3	5	26.89	31.50
AJ4	40	26.89	29.00
RVWs per 100 cases:		26.89	26.95

FREQUENCY INFORMATION

- One in nine women will have breast cancer in their lifetime. Fifty percent will have a mastectomy and thirty five percent will undergo a breast reconstruction. According to ASPRSs 1992 procedure statistics, 19% of breast reconstructions were TRAM flaps.
- 29,607 breast reconstructions were provided by plastic surgeons in 1992, of which 19% used a TRAM flap (ASPRS Procedural Statistics, 1992)
- It is estimated that the ratio of AJ2:AJ3:AJ4 is 55:5:40 of the previously reported cases for code 19362. This is a compromise of various perspectives* which vary between a 75/25 split to a 50/50 split of single pedicle to double pedicle TRAMs (*literature, surgeons who perform TRAMs, and the consensus panel).
- 1992 Medicare Part B allowed frequency by all physician specialties for code 19362 was 278.* (*1992 NCH File, HCFA, 6/30/93).

SURVEY DATA: Plastic Surgery

Median Intra-Service Time: 300 Low: 200 High: 390

Median Pre-Service Time: 60 Median Post-Service Time: 90

Length of Hospital Stay: 5

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 14, 28; 99212 on day 60

Median Number of Times Provided in Past 12 months: 5 (range: 0-35)

Median Number of Times Provided in Career: 20 (range: 0-130)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AJ3

Global Period: 090

CPT Descriptor: Breast reconstruction with transverse rectus abdominis myocutaneous flap (TRAM), single pedicle, including closure of donor site; with microvascular anastomosis (supercharging)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 58-year-old white female presents with newly diagnosed breast carcinoma and requests breast reconstruction using autogenous tissue. She is 5 feet 6 inches tall, weighs 140 pounds, and wears a 34B bra. She has a history of smoking one pack of cigarettes a day, but does not have other risk factors and has not had previous abdominal surgery. Delayed breast reconstruction, using a single pedicle TRAM flap, is performed three months after her mastectomy. At the time of flap inset, there is vascular compromise that necessitates an arterial microvascular anastomosis ("supercharging") to boost blood flow to the TRAM flap and preserve its viability. In addition, the donor site is closed.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, along with a review of the patient's tumor type; communicating with the referring physician and other health care professionals; and communicating with the patient to explain operative risks and benefits and to obtain informed consent. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Intra-service work: includes measuring the breast and marking the flap on the abdominal wall; recreating the mastectomy defect; elevation of the abdominal skin flap; dissection of the lower abdominal skin and subcutaneous fat; elevation of the rectus abdominous muscle; transfer of the flap to the recipient site; fascial and abdominal wall closure; and formation of the breast on the chest wall. During the surgery, the circulation becomes compromised, and it is necessary to dissect the vessels in the axilla and create a microvascular anastomosis to augment the vascularization of the flap.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring of abdominal wound and flap circulation; monitoring of drainage tubes; instruction of patient in drain care; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of drains and sutures and evaluating laboratory reports and adjusting medication.

Key REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

20.03	15946	Excision, ischial pressure ulcer, with ostectomy, with muscle or myocutaneous flap closure
26.89	19362	Breast reconstruction with transverse rectus abdominis flap (tram), including closure of donor site, single or double pedicle, with or without microvascular anastomosis
28.65	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Three different procedures, previously reported using one code (19362), now have separate descriptors (codes AJ2; AJ3, and AJ4). Taking into consideration an estimated case ratio of 55:5:40 for AJ2:AJ3:AJ4 (see discussion under frequency information, page 3), the consensus committee developed the composite rationale presented below. This rationale attempts to maintain both relativity between these three procedures and budget neutrality.

AJ2 (single pedicle): The pre- and post-operative work of AJ2 is similar to 15946. However, the intra-operative work of AJ2 is fifty percent greater than 15946 because the excision in 15946 is easier than shaping the breast flap in AJ2 and shaping the flap is only one of the components of the entire TRAM flap procedure. Additionally, the survey median intra-operative time of AJ2 (300 minutes) is almost twice as much as the Harvard study intra-operative time for 15946 (160 minutes). Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ2 is 50% greater than the intra-operative work in 15946; then a calculated RVW for AJ2 would be 25.04. $[(20.03 \times 50\% \times 50\%) + (20.03)]$. To maintain relativity and budget neutrality, the consensus panel recommends this RVW of 25.04, rather than the survey median RVW.

AJ3 (single pedicle with supercharging): The pre-operative work for AJ3 is similar to AJ2. However, the intra-operative work of AJ3 is approximately fifty percent greater than AJ2 due to: (1) forty percent more intra-operative time (420 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a single pedicle TRAM flap that necessitates supercharging is considered a higher-risk patient because of a history of heavy smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ3 is 55% greater than the intra-operative work in AJ2; then the calculated RVW for AJ3 should be 31.92. $[(25.04 \times 50\% \times 55\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 31.50, which is very similar to the calculate RVW of 31.92.

AJ4 (double pedicle): The pre- and post-operative work of AJ4 is similar to AJ2. However, the intra-operative work of AJ4 is approximately thirty percent greater than AJ2 due to: (1) twenty percent more intra-operative time (360 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a double pedicle TRAM flap is considered a higher-risk patient because of a history of low-to-moderate smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ4 is 35% greater than the intra-operative work in AJ2; then a calculated RVW for AJ4 would be 29.42. $[(25.04 \times 50\% \times 35\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 29.00, which is very similar to the calculate RVW of 29.42.

CODE	Case Mix	1994 RVW	Recommended RVW
AJ2	55	26.89	25.04
AJ3	5	26.89	31.50
AJ4	40	26.89	29.00
RVWs per 100 cases:		26.89	26.95

FREQUENCY INFORMATION

- One in nine women will have breast cancer in their lifetime. Fifty percent will have a mastectomy and thirty five percent will undergo a breast reconstruction. According to ASPRSs 1992 procedure statistics, 19% of breast reconstructions were TRAM flaps.
- 29,607 breast reconstructions were provided by plastic surgeons in 1992, of which 19% used a TRAM flap (ASPRS Procedural Statistics, 1992)
- It is estimated that the ratio of AJ2:AJ3:AJ4 is 55:5:40 of the previously reported cases for code 19362. This is a compromise of various perspectives* which vary between a 75/25 split to a 50/50 split of single pedicle to double pedicle TRAMs (*literature, surgeons who perform TRAMs, and the consensus panel).
- 1992 Medicare Part B allowed frequency by all physician specialties for code 19362 was 278.* (*1992 NCH File, HCFA, 6/30/93).

SURVEY DATA: Plastic Surgery

Median Intra-Service Time: 420 Low: 300 High: 600

Median Pre-Service Time: 60 Median Post-Service Time: 90

Length of Hospital Stay: 6

Office Visits on Post-Discharge Day(s) : 99214 on days 3, 7; 99213 on days 14, 28; 99212 on day 60

Median Number of Times Provided in Past 12 months: 0 (range 0-20)

Median Number of Times Provided in Career: 2 (range 0-125)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AJ4

Global Period: 090

CPT Descriptor: Breast reconstruction with transverse rectus abdominis myocutaneous flap (TRAM), double pedicle, including closure of donor site

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 45-year-old white female presents with newly diagnosed breast carcinoma and requests breast reconstruction using autogenous tissue. She is 5 feet 6 inches tall, weighs 150 pounds, and wears a 34C bra. She is a moderate smoker, but in good health, and has a previous lower midline abdominal incision. Unilateral breast reconstruction, using a double pedicle TRAM flap, is performed after her mastectomy (immediate or delayed). In addition, the donor site is closed, using mesh.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, including a review of the patient's tumor type; communicating with the referring physician and other health care professionals; and communicating with the patient to explain operative risks and benefits and to obtain informed consent. (If the operation is to be performed immediately after a mastectomy, then communication with the surgeon performing the mastectomy is necessary to discuss the type of incisions to be made, along with a discussion of the need for future local therapy.) Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Intra-service work: includes measuring the breast and marking the flap on the abdominal wall (if this is a delayed procedure it would be necessary to recreate the mastectomy defect); elevation of the abdominal skin flap, dissection of the lower abdominal skin and subcutaneous fat; elevation of both rectus abdominous muscles, with preservation of linea alba between the two muscles; transfer of the flap to the recipient site; fascial closure; abdominal wall closure, using a mesh as reinforcement; and formation of the breast on the chest wall.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring of abdominal wound and flap circulation; monitoring of drainage tubes; instruction of patient in drain care; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of drains and sutures and evaluating laboratory reports and adjusting medication.

Key REFERENCE SERVICE(S):

RVW	CPT Code	CPT Descriptor
20.03	15946	Excision, ischial pressure ulcer, with ostectomy, with muscle or myocutaneous flap closure
26.89	19362	Breast reconstruction with transverse rectus abdominis flap (tram), including closure of donor site, single or double pedicle, with or without microvascular anastomosis
28.65	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Three different procedures, previously reported using one code (19362), now have separate descriptors (codes AJ2, AJ3, and AJ4). Taking into consideration an estimated case ratio of 55:5:40 for AJ2:AJ3:AJ4 (see discussion under frequency information, page 3), the consensus committee developed the composite rationale presented below. This rationale attempts to maintain both relativity between these three procedures and budget neutrality.

AJ2 (single pedicle): The pre- and post-operative work of AJ2 is similar to 15946. However, the intra-operative work of AJ2 is fifty percent greater than 15946 because the excision in 15946 is easier than shaping the breast flap in AJ2 and shaping the flap is only one of the components of the entire TRAM flap procedure. Additionally, the survey median intra-operative time of AJ2 (300 minutes) is almost twice as much as the Harvard study intra-operative time for 15946 (160 minutes). Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ2 is 50% greater than the intra-operative work in 15946; then a calculated RVW for AJ2 would be 25.04. $[(20.03 \times 50\% \times 50\%) + (20.03)]$. To maintain relativity and budget neutrality, the consensus panel recommends this RVW of 25.04, rather than the survey median RVW.

AJ3 (single pedicle with supercharging): The pre-operative work for AJ3 is similar to AJ2. However, the intra-operative work of AJ3 is approximately fifty percent greater than AJ2 due to: (1) forty percent more intra-operative time (420 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a single pedicle TRAM flap that necessitates supercharging is considered a higher-risk patient because of a history of heavy smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ3 is 55% greater than the intra-operative work in AJ2; then the calculated RVW for AJ3 should be 31.92. $[(25.04 \times 50\% \times 55\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 31.50, which is very similar to the calculate RVW of 31.92.

AJ4 (double pedicle): The pre- and post-operative work of AJ4 is similar to AJ2. However, the intra-operative work of AJ4 is approximately thirty percent greater than AJ2 due to: (1) twenty percent more intra-operative time (360 minutes versus 300 minutes); and (2) fifteen percent increase in intensity (stress, judgement, risk, etc.). The patient presenting for a double pedicle TRAM flap is considered a higher-risk patient because of a history of low-to-moderate smoking, previous abdominal incisions, obesity, and/or diabetes. Assuming that: (1) the intra-operative component of a surgical service is approximately 50% of total work (in terms of RVWs); and (2) the intra-operative work in AJ4 is 35% greater than the intra-operative work in AJ2; then a calculated RVW for AJ4 would be 29.42. $[(25.04 \times 50\% \times 35\%) + (25.04)]$. The consensus panel recommends the survey median RVW of 29.00, which is very similar to the calculate RVW of 29.42.

CODE	Case Mix	1994 RVW	Recommended RVW
AJ2	55	26.89	25.04
AJ3	5	26.89	31.50
AJ4	40	26.89	29.00
RVWs per 100 cases:		26.89	26.95

FREQUENCY INFORMATION

- One in nine women will have breast cancer in their lifetime. Fifty percent will have a mastectomy and thirty five percent will undergo a breast reconstruction. According to ASPRSs 1992 procedure statistics, 19% of breast reconstructions were TRAM flaps.
- 29,607 breast reconstructions were provided by plastic surgeons in 1992, of which 19% used a TRAM flap (ASPRS Procedural Statistics, 1992)
- It is estimated that the ratio of AJ2:AJ3:AJ4 is 55:5:40 of the previously reported cases for code 19362. This is a compromise of various perspectives* which vary between a 75/25 split to a 50/50 split of single pedicle to double pedicle TRAMs (*literature, surgeons who perform TRAMs, and the consensus panel).
- 1992 Medicare Part B allowed frequency by all physician specialties for code 19362 was 278.* (*1992 NCH File, HCFA, 6/30/93).

SURVEY DATA: Plastic Surgery

Median Intra-Service Time: 360 Low: 240 High: 600

Median Pre-Service Time: 60 Median Post-Service Time: 95

Length of Hospital Stay: 5

Office Visits on Post-Discharge Day(s) : 99214 on days 3, 7; 99213 on days 14, 28; 99212 on day 60

Median Number of Times Provided in Past 12 months: 1 (range: 0-12)

Median Number of Times Provided in Career: 5 (range: 0-50)

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

MICROSURGERY

Microsurgeons, plastic surgeons, and otolaryngologists developed joint recommendations for these services using three methodologies: survey median of physicians familiar with microsurgery, survey mean of the same group of physicians, and a building block approach using the component services in each surgery. These services are some of the most difficult procedures in medicine and require similar amounts of intensity, skill, and time as the more difficult neurosurgery and transplant surgery. The RUC agreed with the relationships established between the codes in each family of procedures, but referred the issue to a facilitation committee to determine an appropriate value for the base code for each family. The facilitation committee was convinced that the initial relative values proposed by the specialty needed to be appropriately linked to similar neurosurgery and general surgery procedures with existing values in the RVS.

The RUC would like to emphasize the difference between the methodologies used in developing the RUC recommendations and the Harvard Study. The Harvard study included the opinions of only five orthopaedic surgeons, whereas the RUC survey included the insights of over 60 microsurgeons who are very familiar with these services, several had performed these services within the past year.

It should also be noted that several of the existing codes for incomplete replantation, hand surgery, and microvascular flaps need to be either clarified or deleted. The specialty societies involved will be proposing coding revisions to the CPT Editorial Panel in the near future and assignment of relative values for these services should be deferred until after this process is complete.

Replantation (Arm, Forearm, and Hand):

Assuming that the proposed relationship between the three codes (20802, 20805, and 20808) in this family was correct, the facilitation committee evaluated the relationship of the proposed RVW for the base code 20802, replantation, arm, to other reference services. The committee decided that this service should be linked in intensity of other procedures, including the Whipple procedure and transplant surgery, with an intensity of 4.50 RVWs per hour of intra-service time. Assuming this relationship, the RUC recommends a value of 50.00 for replantation of the arm (20802); 70.46 for replantation of the forearm (20805); and 76.08 for replantation of the hand (20808).

Replantation (Digit and Thumb):

Judging the proposed relationship between the four codes (20816, 20822, 20824, and 20827) in this family to be correct, the facilitation committee evaluated the relationship of the proposed RVW for the base code 20816, replantation, digit to other reference services. The committee decided that this services should reflect the intensity of pediatric neurosurgery services that the RUC had recently evaluated. After reviewing the available survey data, the committee found that the intra- and post-service time, as well as the average length of hospital stay and number and level of post-hospital visits were very similar to pediatric neurosurgery service code 61564 for excision, intra and extracranial, benign tumor of cranial bone (eg, fibrous dysplasia); with optic nerve decompression approved by the RUC earlier at 33.00. The RUC recommends, therefore, a value of 33.00 for code 20816; 30.03 for 20822; 35.68 for 20824; and 31.22 for 20827.

Replantation (Foot):

The committee was convinced that the work of replantation of the foot is equivalent to the work of replantation of the arm, therefore an RVW of 50.00 is recommended for code 20838.

Microvascular Flaps:

Judging the proposed relationship between the five codes (20955, 20969, 20970, 20972, and 20973) in this family to be correct, the facilitation committee evaluated the appropriateness of the proposed RVW for the base code 20955, Bone graft with microvascular anastomosis; fibula. The committee felt that the relative value determined by the building block approach (described in the attached summary of specialty society recommendation form for code 20955) was more appropriate than the higher survey median and mean. Based on this assumption, the RUC recommends a value of 38.00 for code 20955; 44.28 for 20969; 44.10 for 20971; 44.22 for 20972; and 47.29 for 20973.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation (in 1994 RVWs)
Replantation			
20802	Replantation, arm (includes surgical neck of humerus through elbow joint); complete amputation	090	50.00
20804	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)

20805	Replantation, forearm (includes radius and ulna to radial carpal joint); complete amputation	090	70.46 (141 % of 20802)
20806	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20808	Replantation, hand (includes hand through metacarpophalangeal joints); complete amputation	090	76.08 (152 % of 20802)
20812	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20816	Replantation, digit, excluding thumb (includes metacarpophalangeal joint to insertion of flexor sublimis tendon); complete amputation	090	33.00
20820	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20822	Replantation, digit, excluding thumb (includes distal tip to sublimis tendon insertion); complete amputation	090	30.03 (91 % of 20816)
20823	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20824	Replantation, thumb (includes carpometacarpal joint to MP joint); complete amputation	090	35.68 (108 % of 20816)
20826	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20827	Replantation, thumb (includes distal tip to MP joint); complete amputation	090	31.22 (95 % of 20816)
20828	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20832	Replantation, leg; complete amputation	090	(proposal to delete code)
20834	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)
20838	Replantation, foot; complete amputation	090	50.00
20840	incomplete amputation (devascularized extremity with soft tissue pedicle)	090	(proposal to delete code)

Hand Surgery			
25915	Krukenberg procedure	090	No Recommendation at this time
26550	Pollicization of a digit	090	No Recommendation at this time
26555	Positional change of other finger	090	No Recommendation at this time
26585	Repair bifid digit	090	No Recommendation at this time
26590	Repair macrodactylia	090	No Recommendation at this time
Microvascular Flaps			
20955	Bone graft with microvascular anastomosis; fibula	090	38.00
20960	rib	090	(proposal to delete code)
20969	Free osteocutaneous flap with microvascular anastomosis; other than iliac crest, rib, metatarsal, or great toe	090	44.28 (117% of 20955)
20970	Free osteocutaneous flap with microvascular anastomosis; iliac crest	090	44.10 (116% of 20955)
20971	rib	090	(proposal to delete code)
20972	metatarsal	090	44.22 (116% of 20955)
20973	great toe with web space	090	47.29 (124% of 20955)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 20802

Global Period: 090

CPT Descriptor: Replantation, arm (includes surgical neck of humerus through elbow joint); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 45-year-old tool-and-die maker, who sustains a sharp amputation of the arm at the humeral diaphysis, presents for replantation of the arm. The patient and the amputated arm are assessed in the emergency unit. At operation, the wounds are debrided, and the humerus of the stump and the amputated arm are shortened as necessary. Dissection and tagging of one artery, two veins, and six nerves is performed on both the stump and the amputated part. Internal or external fixation of the humerus is carried out, along with primary repair of three muscles, and microsurgical repair of one artery, two veins, and six nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated arm in the emergency unit; order and review roentgenograms and laboratory tests, with special attention to hematologic status; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; coordinate and supervise transfusions of blood, if necessary, prior to operation; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated arm on separate operating tables; debride the wound on the amputated arm and shorten the bone as needed; dissect and tag, under loupe magnification, one artery, two veins, and six nerves on the amputated arm; debride the stump on the patient and shorten the humerus as needed; dissect and tag, under loupe magnification, one artery, two veins, and six nerves; perform open reduction and internal or external fixation of the humerus; microsurgically repair one artery, two veins, and six nerves; perform skin grafts, along with local tissue rearrangement and close the wound; apply a sterile bulky dressing, reinforced by a long-arm splint.

Post-Service Work: Stabilize and monitor the patient in ICU for 24 hours; monitor hematologic status, laboratory studies, and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
11.04	24515	Open treatment of humeral shaft fracture with plate/screws, with or without cerclage
7.41	25260	Repair, tendon or muscle, flexor, forearm and/or wrist; primary, single, each tendon or muscle
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
12.95	64856	Suture of major peripheral nerve, arm or leg, except sciatic; including transposition

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of an arm (complete amputation). In addition, several survey respondents noted that a "sharp" complete amputation is uncommon, and instead, there most often is a crushing or avulsive component to the amputation. This type of injury would require additional procedures such as free flaps, skin grafts, and fasciotomies. Also, a "second-look" operation may be necessary 24-48 hours after the primary operation to identify and debride necrotic muscle. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; arm	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830	3.13	6	0.25	4.70
Microdissection/microrepair: artery	37799	3.13	1	0.25	0.78
Microdissection/microrepair: vein	37799	3.13	2	0.25	1.57
Fix; humerus	24515	11.04	1	0.25	2.76
Repair; muscle	25260-20	7.41	3	0.25	5.56
Repair; nerve	64856-20	12.95	1	1.00	12.95
Repair; nerve	64856-20	12.95	1	0.50	6.48
Repair; nerve	64856-20	12.95	4	0.25	12.95
Repair; artery	35207-20	9.16	1	0.25	2.29
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.56
TOTAL NET RVW = 56.34					

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVW gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered, in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative component of microsurgical work, which is from 65% to 70% of the total work for this procedure. The survey median RVW of 55.86, which is based on the responses of 54 microsurgeons familiar with this procedure, approximates the building block value of 56.34 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 4.5.

SURVEY DATA:

Median Intra-Service Time: 600 Low: 360 High: 960

Median Pre-Service Time: 90 Median Post-Service Time: 200

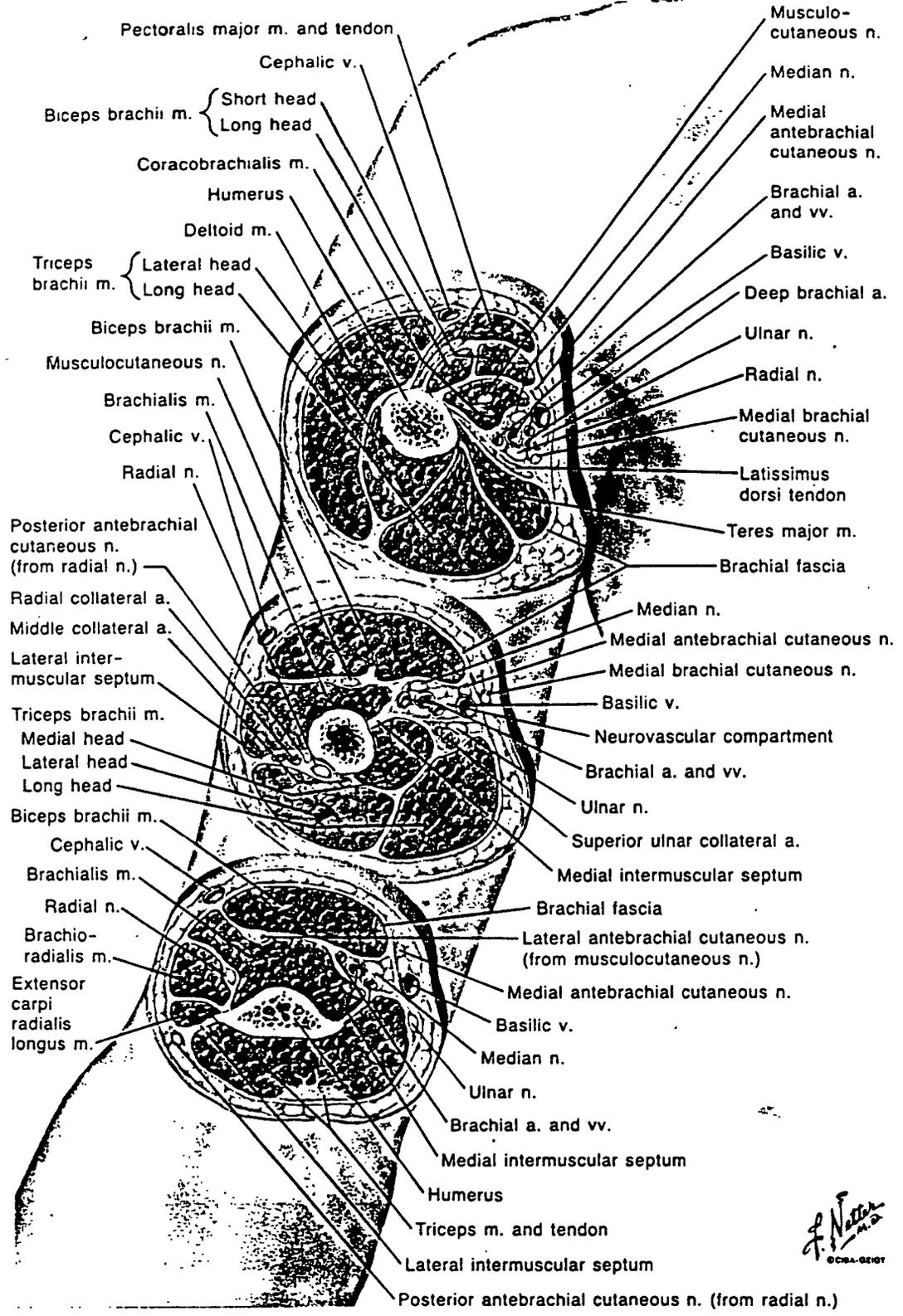
Length of Hospital Stay: 8

Post-Hospital Office Visits: 99214 (day 7); 99213 (days 14, 21, 28); 99212 (days 35, 60, 80)

Median Number of Times Provided in Past 12 months (Range): 0 (0-3)

Median Number of Times Provided in Career (Range): 2 (0-20)

Cross-Sectional Anatomy of Right Arm



ve and lateral to the lateral intermuscular ve and concealing the hial vessels, its fibers of insertion.

from the humerus the radial groove from the teres major muscle fossa of the humerus rigin from the entire muscular septum and elow the radial nerve

Anconeus Muscle. This is a small, triangular muscle, arising from the lateral epicondyle of the humerus. Its fibers diverge from this origin and insert into the side of the olecranon and the adjacent one-fourth of the posterior surface of the ulna. The muscle is deep to the dorsal antebrachial fascia and extends across the elbow and the superior radioulnar joints.

Muscle Actions

active; the biceps brachii muscle becomes active against resistance and is most effective when flexion of the forearm is combined with supination. It is a powerful supinator of the forearm. Extension of the forearm is produced by the triceps brachii muscle, assisted by the anconeus muscle. The medial head of the triceps brachii muscle is usually active, and the lateral and long heads are recruited for extra power.

F. Netter M.D.
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AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20805

Global Period: 090

CPT Descriptor: Replantation, forearm (includes radius and ulna to radial carpal joint) complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old construction worker, who sustains a complete amputation at distal forearm, presents for replantation of the forearm. The patient and the amputated forearm are assessed in the emergency unit. At operation, the wounds are debrided, and the radius and ulna of the stump and the amputated forearm are shortened as needed. Microsurgical dissection and tagging of two arteries, two veins, and four nerves is performed on both the stump and the amputated part. Internal or external fixation of the radius and ulna is performed, along with primary repair of 24 tendons, and microsurgical repair of two arteries, two veins, and four nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated forearm in the emergency unit; order and review roentgenograms and laboratory tests, with special attention to hematologic status; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; coordinate and supervise transfusions of blood, if necessary, prior to operation; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated forearm on separate operating tables; debride the wound on the amputated forearm and shorten the radius and ulna as needed; microsurgically dissect and tag the radial and ulnar arteries, two veins, and four nerves on the amputated forearm; debride the stump on the patient and shorten the radius and ulna as needed; microsurgically dissect and tag two arteries, two veins, and four nerves; perform internal or external fixation of the radius and ulna; repair 24 tendons using a core stitch; microsurgically repair two arteries, two veins, and four nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a long-arm splint.

Post-Service Work: Stabilize and monitor the patient in ICU for 24 hours; monitor hematologic status, laboratory studies, and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
7.41	25260	Repair, tendon or muscle, flexor, forearm and/or wrist; primary, single, each tendon or muscle
5.77	25270	Repair, tendon or muscle, extensor, forearm and/or wrist; primary, single, each tendon or muscle
9.58	25575	Open treatment of radial and ulnar shaft fractures, with internal or external fixation; of radius and ulna
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
12.95	64856	Suture of major peripheral nerve, arm or leg, except sciatic; including transposition

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a forearm (complete amputation). Tendon repair and two bones make replantation of a forearm more labor intensive than replantation of an arm. As before, several survey respondents noted that a "sharp" complete amputation is uncommon, and instead, there most often is a crushing or avulsive component to the amputation requiring additional procedures such as free flaps, skin grafts, and fasciotomies. Also, a "second-look" operation may be necessary 24-48 hours after the primary operation to identify and debride necrotic muscle. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; forearm	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	4	0.25	3.13
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair: vein	37799-20	3.13	2	0.25	1.57
Fix; radius and ulna	25575	9.58	1	0.25	2.40
Repair; tendon, flexor	25260	7.41	12	0.25	22.23
Repair; tendon, extensor	25270	5.77	12	0.25	17.31
Repair; nerve	64856-20	12.95	1	1.00	12.95
Repair; nerve	64856-20	12.95	1	0.50	6.48
Repair; nerve	64856-20	12.95	2	0.25	6.48
Repair; artery	35207-20	9.16	2	0.25	4.58
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.56

TOTAL NET RVW = 85.00

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVW gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative component of microsurgical work, which is from 65% to 70% of the total work for this procedure. The survey mean RVW of 81.37, based on the responses of 59 microsurgeons familiar with this procedure, approximates the building block value of 85 and is recommended by the

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 15.8

SURVEY DATA:

Median Intra-Service Time: 600 Low: 280 High: 900

Median Pre-Service Time: 60 Median Post-Service Time: 200

Length of Hospital Stay: 8

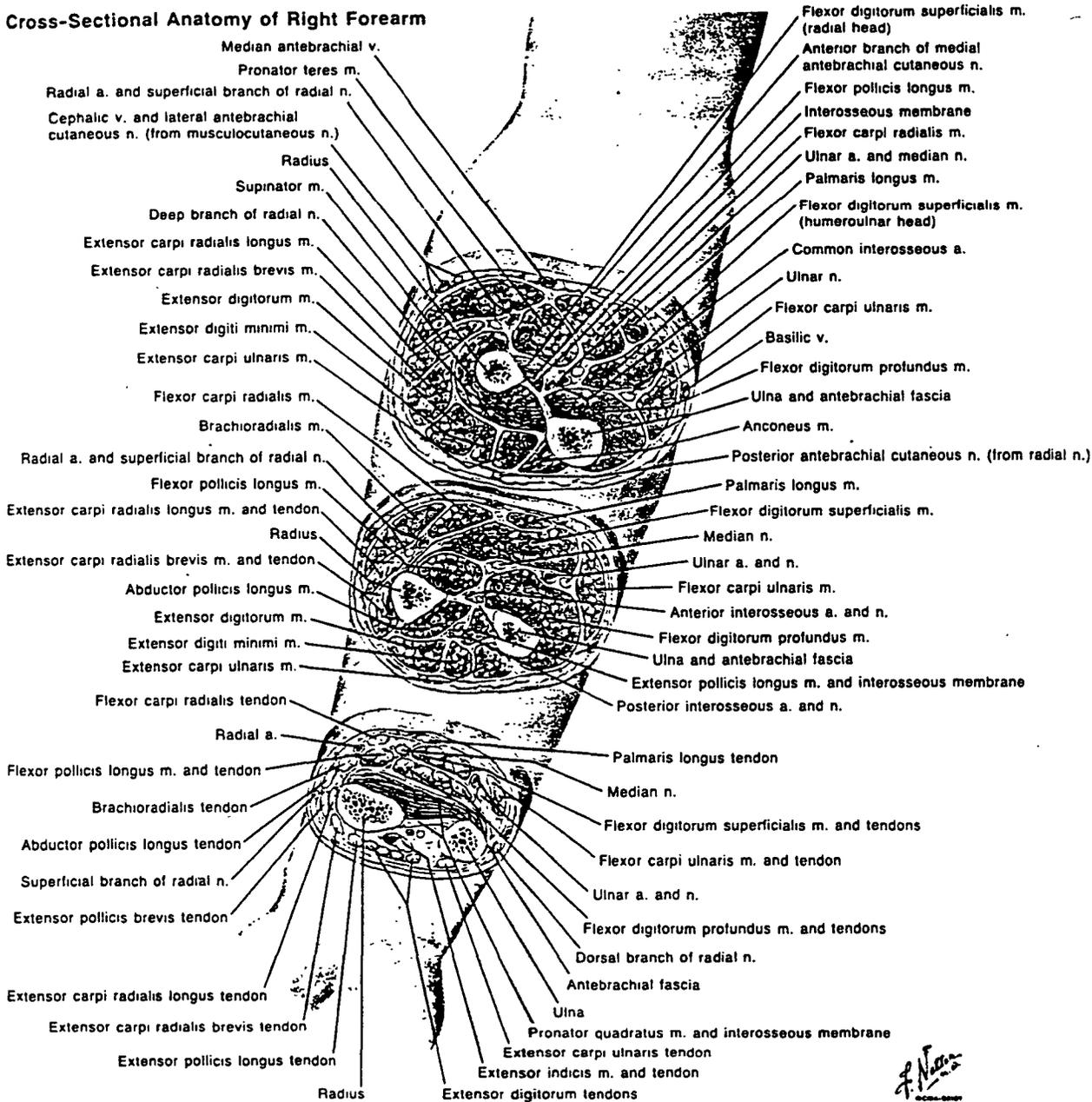
Post-Hospital Office Visits: 99214 (day 7); 99213 (days 14, 21, 28); 99212 (days 35, 60, 80)

Median Number of Times Provided in Past 12 months (Range): 0 (0-2)

Median Number of Times Provided in Career (Range): 2 (0-25)

Code 20805

Cross-Sectional Anatomy of Right Forearm



Upper Limb

Muscles of Forearm

(Continued)

humerus Its tendon appears at about the middle of the forearm and descends to insert into the lateral side of the base of the styloid process of the radius.

The *extensor carpi radialis longus* muscle arises from the lower third of the supracondylar ridge of

the humerus. It has a flat tendon that reaches into the hand to insert on the dorsum of the second metacarpal.

The *extensor carpi radialis brevis* muscle uses the common tendon of origin for the extensors. Its tendon appears in the lower third of the forearm, closely applied to the overlying tendon of the *extensor carpi radialis longus*, and inserts on the dorsum of the base of the third metacarpal.

The *extensor digitorum* muscle also uses the common tendon of origin for the extensors. Above the wrist, it provides four tendons that spread out on the dorsum of the hand, joined side to side in a variable manner by intertendinous connections. Participating in the rather complex "extensor

expansion" described in the section on the wrist and hand, these tendons terminate on the bases of the middle and distal phalanges of digits II to V.

The *extensor digiti minimi* muscle is a slender muscle that is sometimes only incompletely separated from the *extensor digitorum* muscle. Its tendon joins the ulnar side of the tendon of the *extensor digitorum* muscle to the fifth digit. It provides independent extensor action for the fifth digit.

The *extensor carpi ulnaris* muscle arises by the common tendon from the lateral epicondyle but also from the middle two-fourths of the posterior border of the ulna. It inserts on the ulnar side of the base of the fifth metacarpal.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 20808

Global Period: 090

CPT Descriptor: Replantation, hand (includes hand through metacarpophalangeal joints); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 50-year-old baker, who sustains a transmetacarpal complete amputation, presents for replantation of the hand. The patient and the amputated hand are assessed in the emergency unit. At operation, the wounds are debrided, and the five metacarpals of the stump and the amputated hand are shortened as needed. Microsurgical dissection and tagging of five arteries, three veins, and seven nerves is performed on both the stump and the amputated part. Osteosynthesis of the metacarpals, using internal or external fixation, is performed. Primary repair of the periosteum of each metacarpal is carried out. Four thenar muscles, seven interosseous muscles, four lumbrical muscles, nine flexor tendons and eight extensor tendons are repaired, along with microsurgical repair of five arteries, three veins, and seven nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated hand in the emergency unit; order and review roentgenograms and laboratory tests, with special attention to hematologic status; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; coordinate and supervise transfusions of blood, if necessary, prior to operation; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated hand on separate operating tables; debride the wound on the amputated hand and shorten the five metacarpals as needed; microsurgically dissect and tag five arteries, three veins, and seven nerves on the amputated hand; debride the stump on the patient and shorten the five metacarpals as needed; microsurgically dissect and tag five arteries, three veins, and seven nerves; perform internal or external fixation on the five metacarpals; repair the periosteum of each metacarpal; repair four thenar muscles, seven interosseous muscles, and four lumbrical muscles; repair nine flexor tendons in zone III and eight extensor tendons in zone VII; microsurgically repair five arteries, three veins, and seven nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize and monitor the patient in ICU for 24 hours; monitor hematologic status, laboratory studies, and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
	20999	Unlisted procedure, musculoskeletal system, general
5.82	26350	Flexor tendon repair or advancement, single, not in "no man's land"; primary or secondary without free graft, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
5.24	26615	Open treatment of metacarpal fracture, single, with or without internal or external fixation, each bone
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a hand (complete amputation). Muscle repair, tendon repair, and five bones make replantation of a hand more labor intensive than replantation of an arm or forearm.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; hand	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	7	0.25	5.48
Microdissection/microrepair: artery	37799-20	3.13	5	0.25	3.91
Microdissection/microrepair; vein	37799-20	3.13	3	0.25	2.35
Fix; metacarpal	26615	5.24	5	0.25	6.55
Repair; tendon, flexor	26350	5.82	9	0.25	13.10
Repair; tendon, extensor	26418	4.06	8	0.25	8.12
Repair: muscle, thenar	20999	4.00	4	0.25	4.00
Repair; muscle, interosseous	20999	4.00	7	0.25	7.00
Repair; muscle, lumbrical	20999	4.00	4	0.25	4.00
Repair; nerve	64831-20	8.94	1	0.25	2.24
Repair; add'l nerve	64832-20	5.72	6	0.25	8.58
Repair; artery	35207-20	9.16	1	1.00	9.16
Repair; artery	35207-20	9.16	1	0.50	4.58
Repair; artery	35207-20	9.16	3	0.25	6.87
Repair; vein	35207-20	9.16	3	0.25	6.87
Repair; skin	12004	2.21	1	0.25	0.55

TOTAL NET RVW = 94.52

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the

consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative component of microsurgical work, which is from 65% to 70% of the total work for this procedure. Neither the survey median RVW of 85 nor the mean of 98.29, based on the responses of 59 microsurgeons familiar with this procedure, approximates the building block RVW of 94.52. The consensus committee recommends a value of 94 which is less than the mean and more closely approximates the building block value.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 14.9.

SURVEY DATA:

Median Intra-Service Time: 720 Low: 400 High: 1200

Median Pre-Service Time: 60 Median Post-Service Time: 240

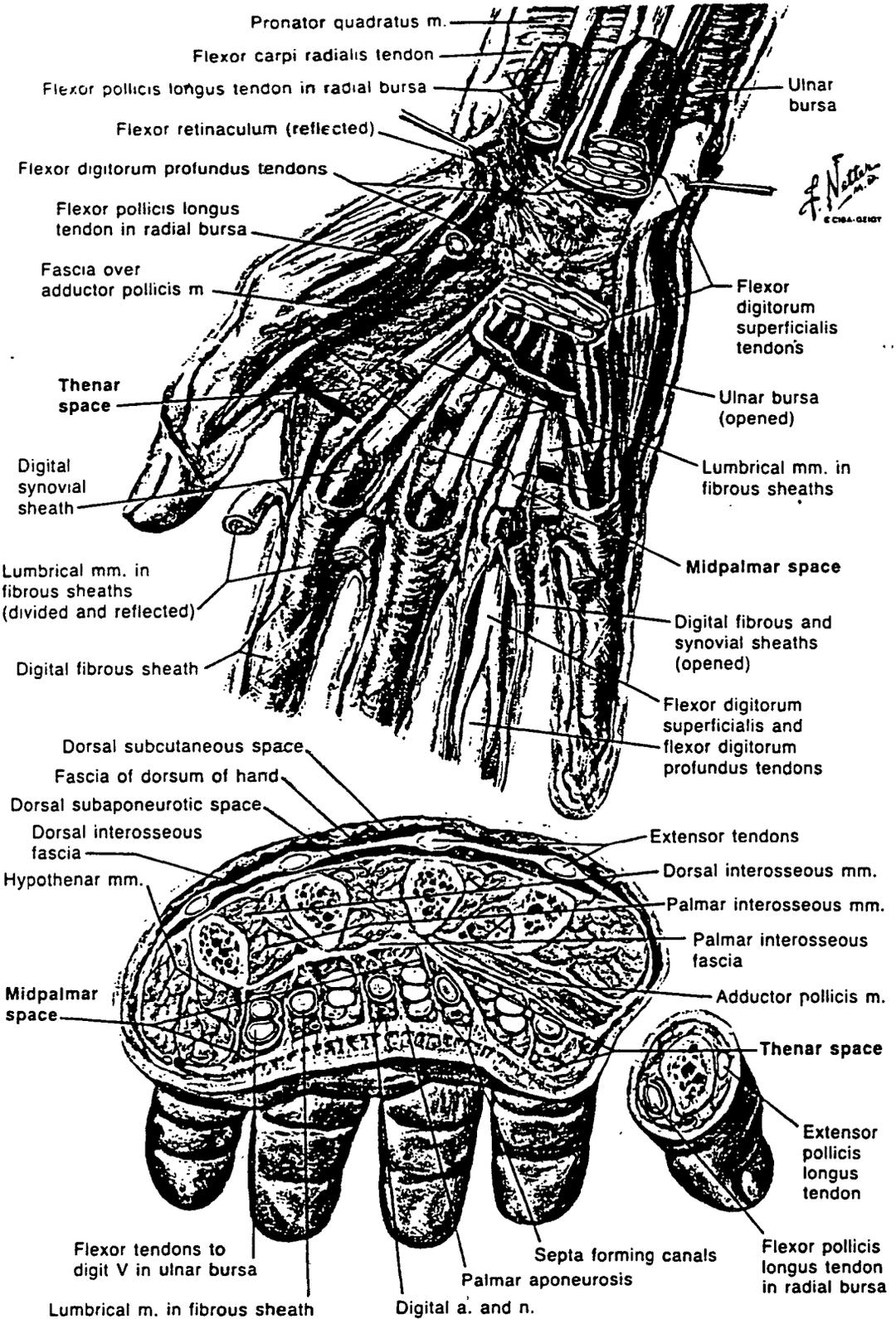
Length of Hospital Stay: 7

Post-Hospital Office Visits: 99214 (day 7); 99213 (days 14, 21, 28); 99212 (days 35, 60, 80)

Median Number of Times Provided in Past 12 months (Range): 0 (0-3)

Median Number of Times Provided in Career (Range): 3 (0-30)

Spaces, Bursae, and Tendon and Lumbrical Sheaths of Hand



d

the palm between its heads. The tendons pass between the heads

The interosseous muscles adduct the second metacarpal bone they arise from the palmar surfaces of the second and fifth metacarpals. The dorsal and the palmar interosseous tendons to the deep transverse ligament between the heads of the metacarpals have two insertions. The first is at the base of the proximal phalanx and with the abduction-adduction second insertion is into the proximal phalanx. The tendon of the extensor pollicis longus produces flexion at the wrist and extension of the thumb. The interphalangeal muscles arise at the interphalangeal spaces and branch of the ulnar nerve

accessories

The flexor digitorum superficialis and flexor digitorum profundus muscles arise from the distal border of the palmar aponeurosis in the interdigital compartments (60). Here, they fan out to the four digits, arranged in pairs, and they are invested by the palmar fascia of the upper part of the palm, which is continuous to the base of the

tendons) are contained within the fibrous sheaths of the digits of the hand.

The fibrous sheaths of the digits are strong coverings of the flexor tendons, which extend from the heads of the metacarpals to the base of the distal phalanges and serve to prevent "bowstringing" of the tendon away from the bones during flexion. They attach along the borders of the proximal and middle phalanges, the capsules of the inter-

thick accumulations of transversely running fibers (sometimes called annular ligaments, or pulleys), whereas opposite the joints, an obliquely crisscrossing arrangement is characteristic (cruciate ligaments). These latter portions of the fibrous sheaths are thin and do not interfere with flexion at the joints. Proximally, the digital slips of the palmar aponeurosis attach to the fibrous digital sheaths.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20816

Global Period: 090

CPT Descriptor: Replantation, digit, excluding thumb (includes metacarpophalangeal joint to insertion of flexor sublimis tendon); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25-year-old garment worker, who sustains a complete amputation of a finger in zone II, presents for replantation of the digit. The patient and the amputated digit are assessed in the emergency unit. At operation, the wounds are debrided, and the bones of the stump and the amputated digit are shortened as needed. Microsurgical dissection and tagging of two arteries, two veins, and two nerves is performed on both the stump and the amputated part. Osteosynthesis is carried out. The periosteum is repaired. The two flexor tendons and the extensor tendon is repaired, along with microsurgical repair of two arteries, two veins, and two nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated finger in the emergency unit; order and review roentgenograms and laboratory tests; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated finger on separate operating tables; debride the wound on the amputated finger, shorten the bone, and prepare the bone for osteosynthesis; microsurgically dissect and tag two digital arteries, two digital veins, and two digital nerves on the amputated finger; debride the stump on the patient, shorten the bone as needed, and prepare the bone for fixation; microsurgically dissect and tag two arteries, two veins, and two nerves; perform osteosynthesis using interosseous wire or a small plate; repair the periosteum; repair two flexor tendons using core and epitenon stitches; repair the extensor tendon; microsurgically repair two digital arteries, two digital veins, and two digital nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
7.13	26356	Flexor tendon repair or advancement, single, in "no man's land"; primary, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
5.78	26735	Open treatment of phalangeal shaft fracture, proximal or middle phalanx, finger or thumb, with or without internal or external fixation, each
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a finger in zone II (complete amputation). Additionally, several survey respondents also noted that vein grafting for revascularization may be necessary. This additional procedure is variable and is not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; finger	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	2	0.25	1.57
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair; vein	37799-20	3.13	2	0.25	1.57
Fix; phalanx	26735	5.78	1	0.25	1.44
Repair; tendon, flexor	26356	7.13	2	0.25	3.57
Repair; tendon, extensor	26418	4.06	1	0.25	1.02
Repair; nerve	64831-20	8.94	1	0.25	2.24
Repair; add'l nerve	64832-20	5.72	1	0.25	1.43
Repair; artery	35207-20	9.16	1	1.00	9.16
Repair; artery	35207-20	9.16	1	0.50	4.58
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.55

TOTAL NET RVW = 34.44

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative components of microsurgical work, which is from 65% to 70% of the total work for this procedure. The median RVW of 37, based on the responses of 61 microsurgeons familiar with this procedure, approximates the building block value of 34.44 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 16 (1992 NCH File, HCFA, 3/31/93)..

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 13.3.

SURVEY DATA:

Median Intra-Service Time: 360 Low: 120 High: 600

Median Pre-Service Time: 60 Median Post-Service Time: 150

Length of Hospital Stay: 7

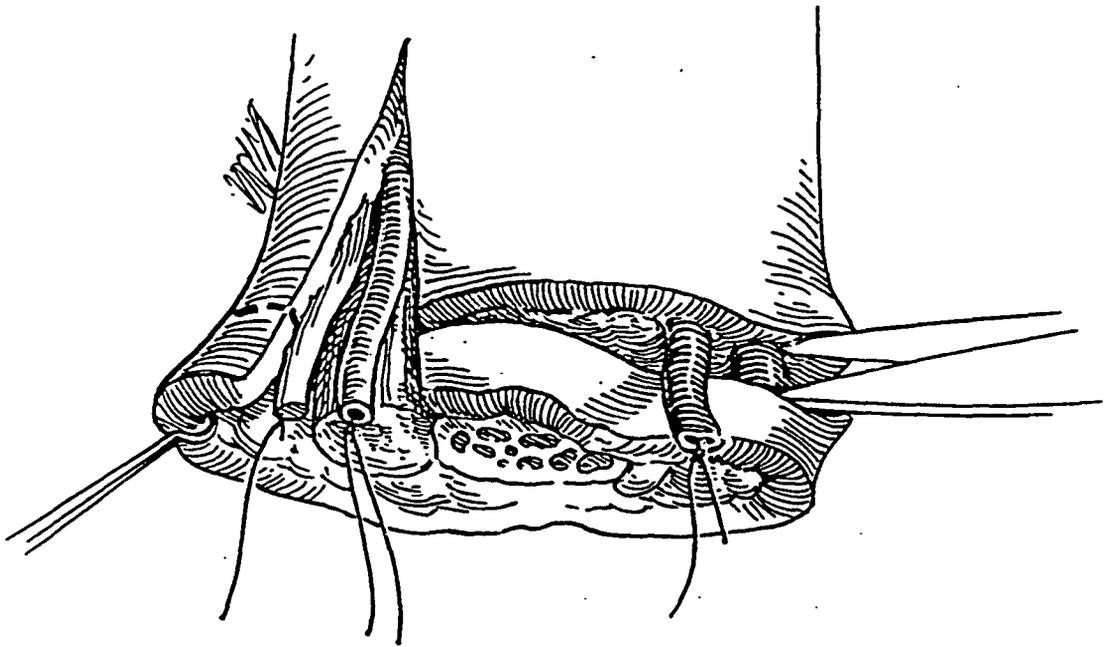
Post-Hospital Office Visits: ~~99~~213 (days 7, 14, 21); 99212 (days 35, 80)

Median Number of Times Provided in Past 12 months (Range): 2 (0-30)

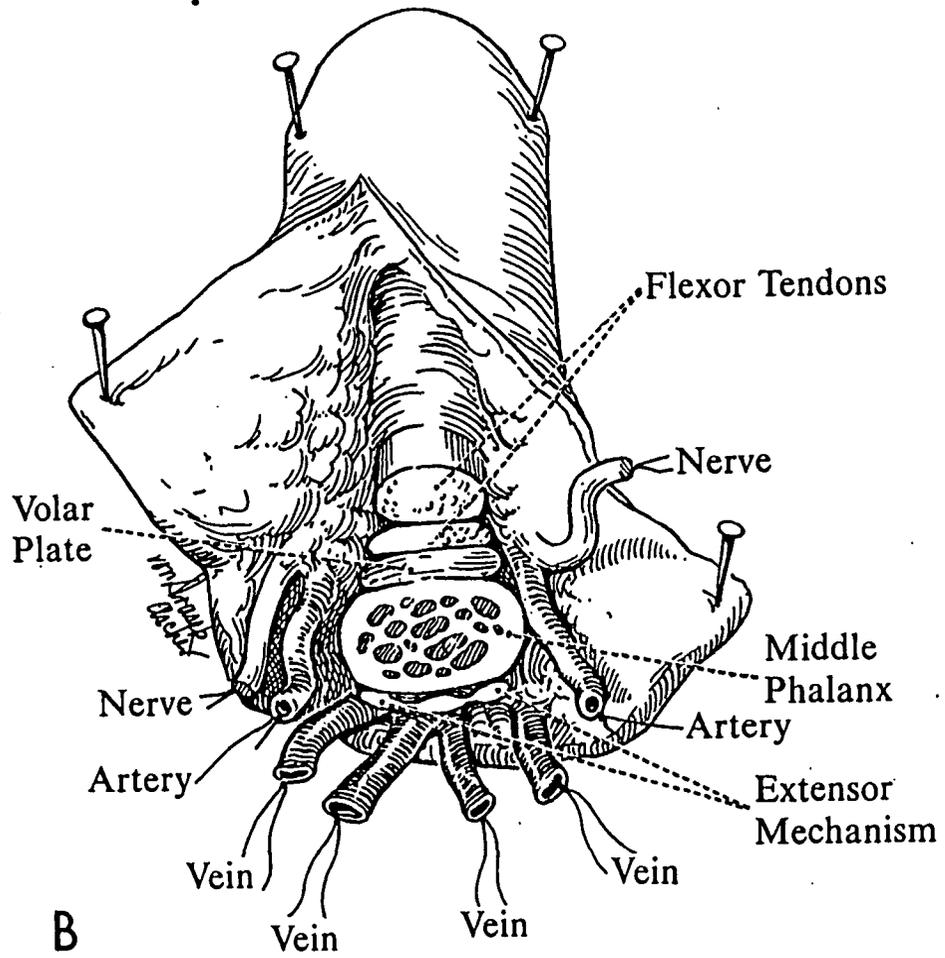
Median Number of Times Provided in Career (Range): 25 (0-200)

Codes 20816, 20822, 20827

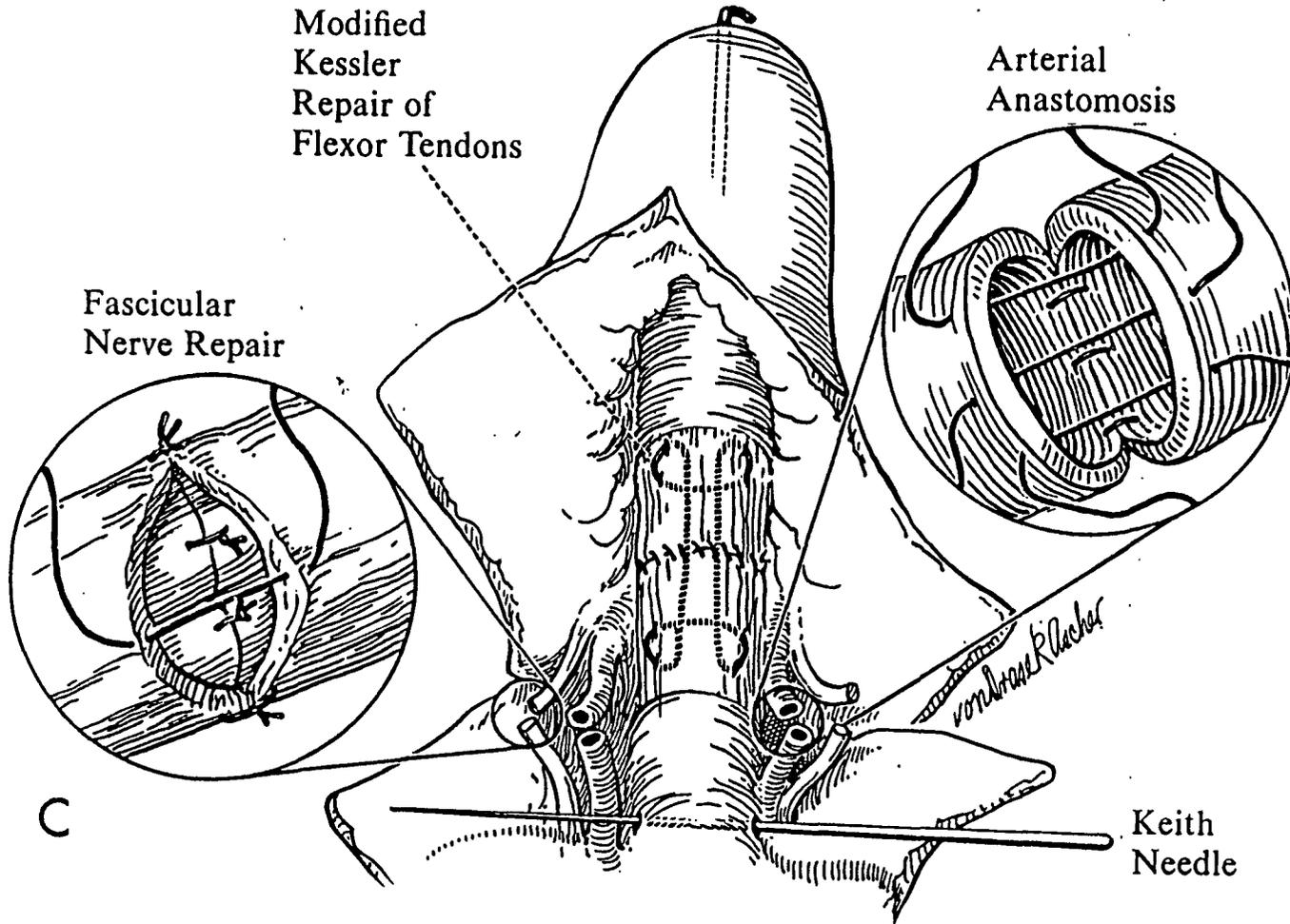
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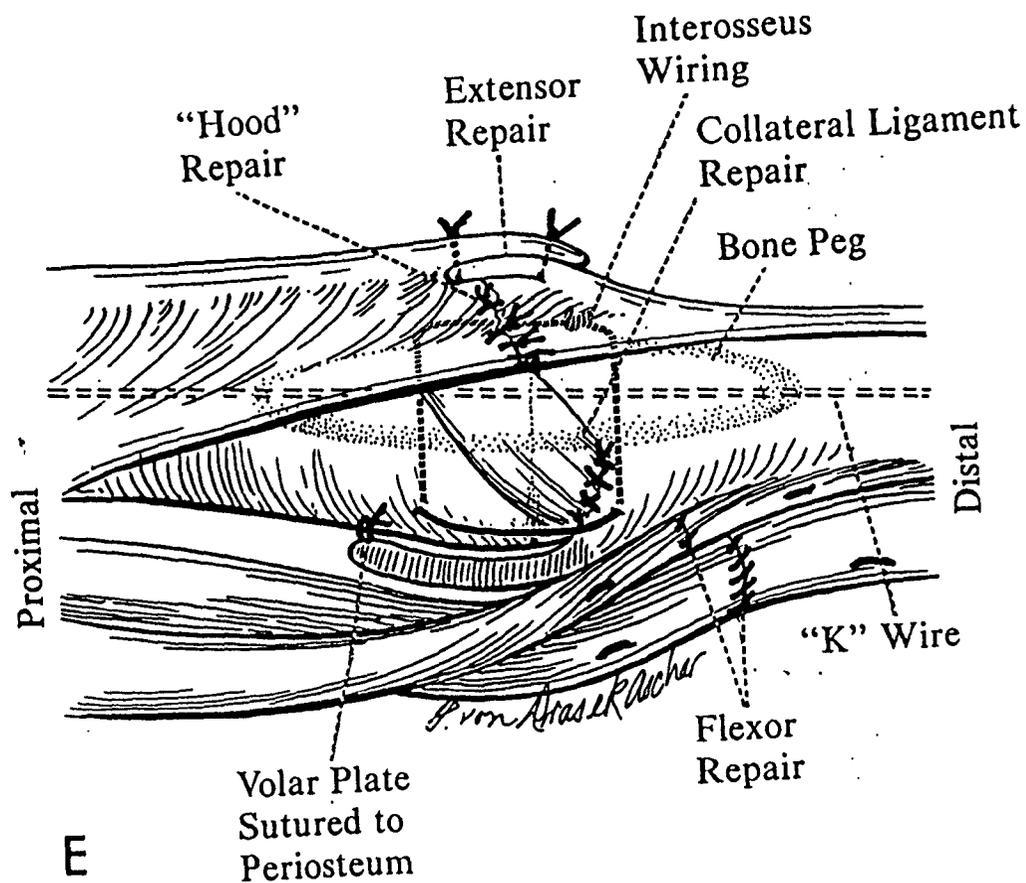
24.6



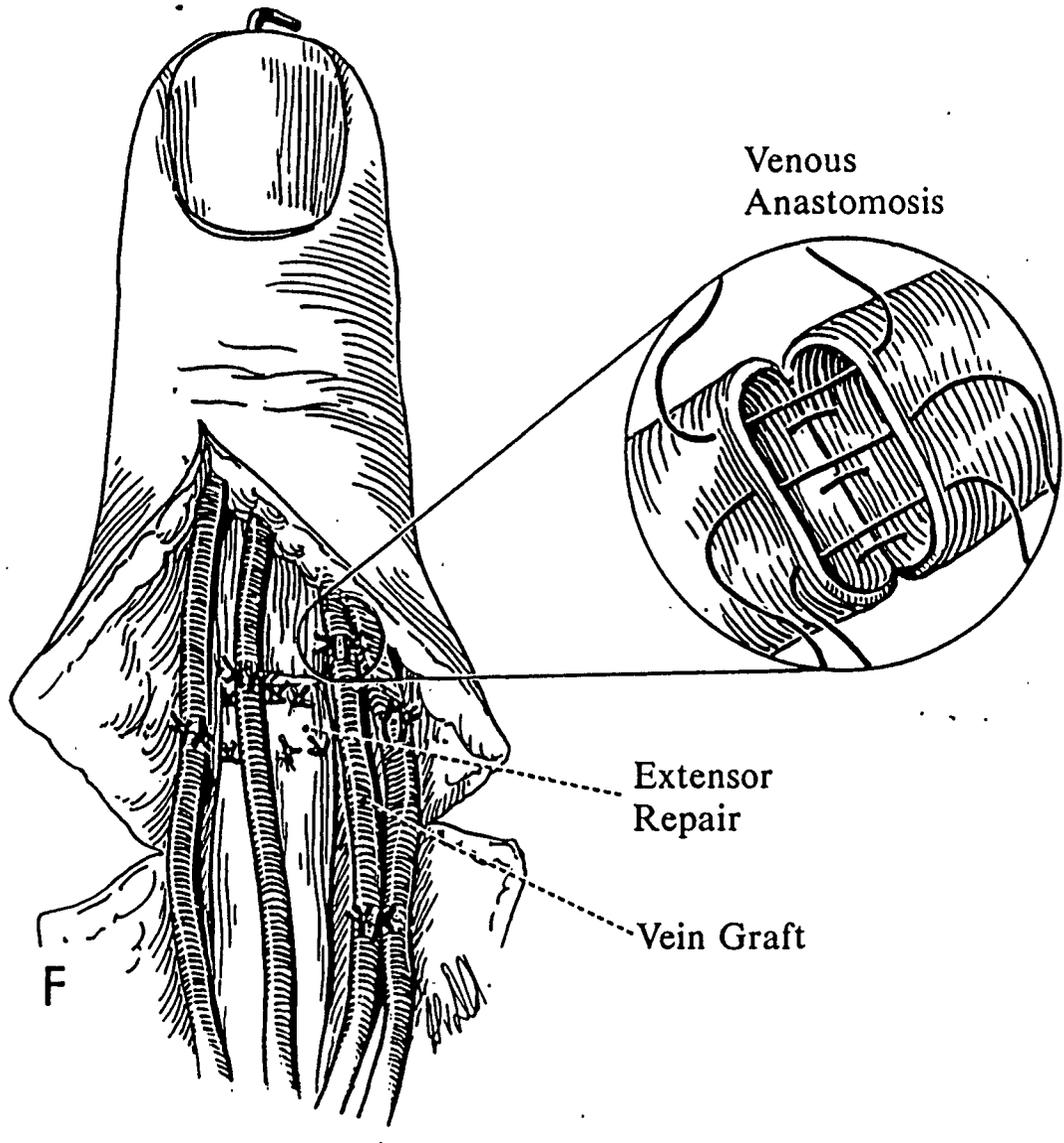
25.7



26.L



27.6



**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 20822

Global Period: 090

CPT Descriptor: Replantation, digit, excluding thumb (includes distal tip to sublimis tendon insertion); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 20-year-old mechanic, who sustains a complete amputation of the index finger in zone I, presents for replantation of the digit. The patient and the amputated digit are assessed in the emergency unit. At operation, the wounds are debrided, and the bones of the stump and the amputated digit are shortened as needed, along with microsurgical dissection and tagging of two arteries, two veins, and two nerves. Osteosynthesis is carried out. Primary repair of the periosteum and the flexor and extensor tendons is carried out, along with microsurgical repair of two arteries, two veins, and two nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated finger in the emergency unit; order and review roentgenograms and laboratory tests; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated index finger on separate operating tables; debride the wound on the amputated finger and shorten the bone as needed; microsurgically dissect and tag two arteries, two veins, and two nerves on the amputated index finger; debride the stump on the patient and shorten the bone as needed; microsurgically dissect and tag two arteries, two veins, and two nerves; perform internal fixation using interosseous wire; repair the periosteum; repair the flexor digitorum profundus using core and epitenon stitches; repair the extensor mechanism; microsurgically repair two digital arteries, two digital veins, and two digital nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
7.13	26356	Flexor tendon repair or advancement, single, in "no man's land"; primary, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
5.78	26735	Open treatment of phalangeal shaft fracture, proximal or middle phalanx, finger or thumb, with or without internal or external fixation, each
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a finger in zone I (complete amputation). Additionally, several survey respondents also noted that fusion may be performed and that vein grafting for revascularization may be necessary. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; finger	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	2	0.25	1.57
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair; vein	37799-20	3.13	2	0.25	1.57
Fix; phalanx	26735	5.78	1	0.25	1.44
Repair; tendon, flexor	26356	7.13	1	0.25	1.78
Repair; tendon, extensor	26418	4.06	1	0.25	1.02
Repair; nerve	64831-20	8.94	1	0.25	2.24
Repair; add'l nerve	64832-20	5.72	1	0.25	1.43
Repair; artery	35207-20	9.16	1	1.00	9.16
Repair; artery	35207-20	9.16	1	0.50	4.58
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.55
TOTAL NET RVW = 32.65					

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative components of microsurgical work, which is from 65% to 70% of the total work for this procedure. The median RVW of 33.67, based on the responses of 61 microsurgeons familiar with this procedure, approximates the building block value of 32.65 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 13 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 12.2.

SURVEY DATA:

Median Intra-Service Time: 300 Low: 120 High: 600

Median Pre-Service Time: 45 Median Post-Service Time: 125

Length of Hospital Stay: 5

Post-Hospital Office Visits: 99213 (days 7, 14, 21); 99212 (days 28, 35, 80)

Median Number of Times Provided in Past 12 months (Range): 2 (0-30)

Median Number of Times Provided in Career (Range): 15 (0-150)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20824

Global Period: 090

CPT Descriptor: Replantation, thumb (includes carpometacarpal joint to MP joint); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old male, who sustains a complete amputation of the thumb through the metacarpal, presents for replantation of the thumb. The patient and the amputated thumb are assessed in the emergency unit. At operation, the wounds are debrided, and the metacarpal of the stump and the amputated thumb are shortened, as needed. Microsurgical dissection and tagging of two arteries, two veins, and three nerves is performed on both the stump and the amputated part. Osteosynthesis is carried out. Primary repair of the periosteum, the flexor and extensor tendons, and the four thenar muscles is carried out, along with microsurgical repair of two arteries, two veins, and three nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated thumb in the emergency unit; order and review roentgenograms and laboratory tests; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated thumb on separate operating tables; debride the wound on the amputated thumb, shorten the metacarpal as needed, and prepare the bone for internal fixation; microsurgically dissect and tag two arteries, two veins, and three nerves on the amputated thumb; debride the stump on the patient and shorten the metacarpal as needed; microsurgically dissect and tag two arteries, two veins, and three nerves; perform osteosynthesis using external fixation or interosseous wire; repair the periosteum; repair the flexor using core and epitenon stitches; repair the two extensor tendons; repair four thenar muscles; microsurgically repair two arteries, two veins, and three nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
	20999	Unlisted procedure, musculoskeletal system, general
7.13	26356	Flexor tendon repair or advancement, single, in "no man's land"; primary, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
5.24	26615	Open treatment of metacarpal fracture, single, with or without internal or external fixation, each bone
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a thumb (complete amputation). Several survey respondents noted that a vein graft is often use to avoid further damage to the web space, and that skin grafts and bone grafts are often required to reconstruct even fairly sharp amputations. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; thumb	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	3	0.25	2.35
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair; vein	37799-20	3.13	2	0.25	1.57
Fix; metacarpal	26615	5.24	1	0.25	1.44
Repair; tendon, flexor	26356	7.13	1	0.25	1.78
Repair; tendon, extensor	26418	4.06	2	0.25	2.03
Repair; muscle, thenar	20999	4.00	4	0.25	4.00
Repair; nerve	64831-20	8.94	1	0.25	2.24
Repair; add'l nerve	64832-20	5.72	2	0.25	2.86
Repair; artery	35207-20	9.16	1	1.00	9.16
Repair; artery	35207-20	9.16	1	0.50	4.58
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.55

TOTAL NET RVW = 39.87

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative components of microsurgical work, which is from 65% to 70% of the total work for this procedure. The median RVW of 40.00, based on the responses of 59 microsurgeons familiar with this procedure, approximates the building block value of 39.87 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 6 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 7.0.

SURVEY DATA:

Median Intra-Service Time: 360 Low: 180 High: 640

Median Pre-Service Time: 60 Median Post-Service Time: 125

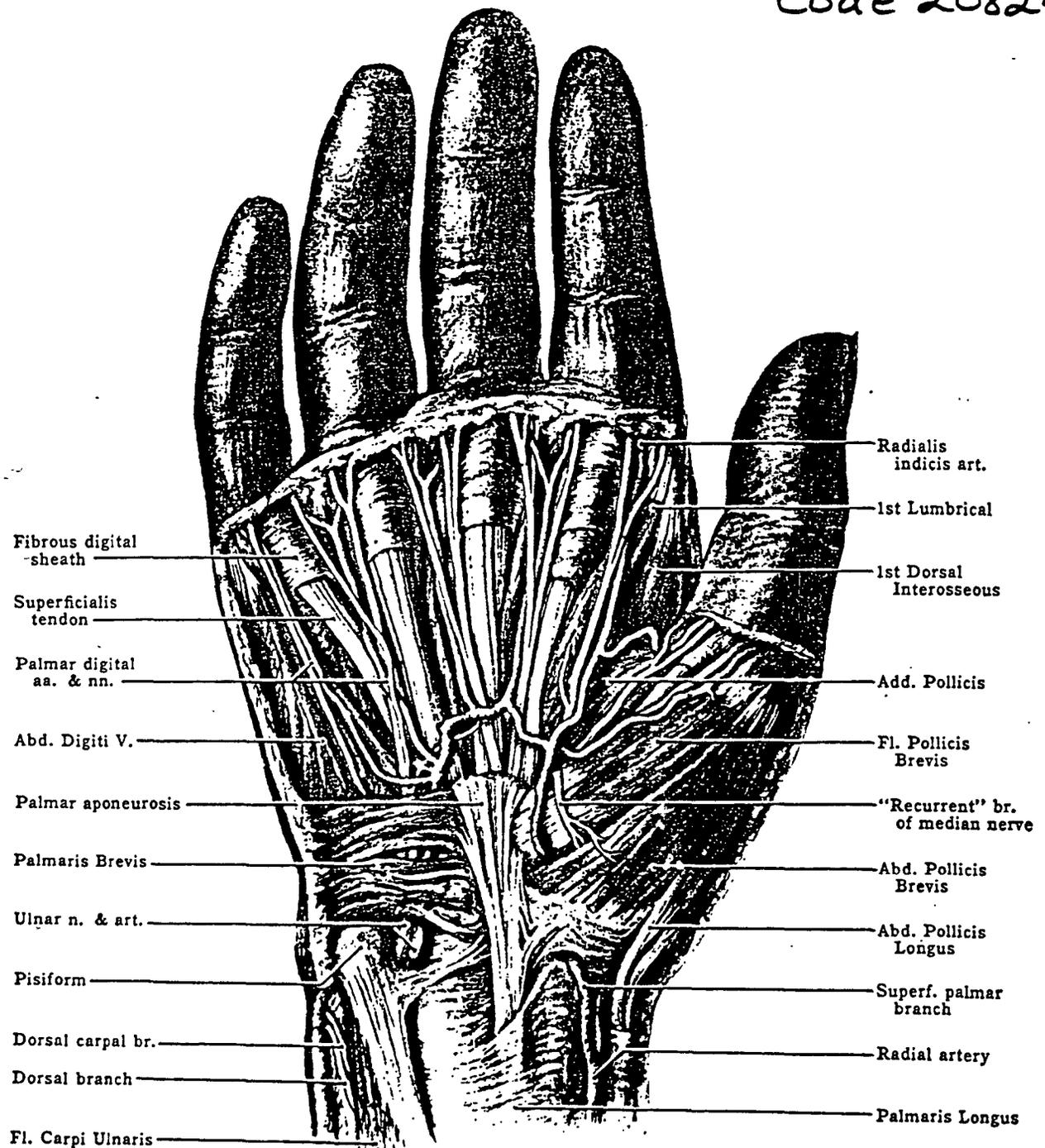
Length of Hospital Stay: 7

Post-Hospital Office Visits: ~~99~~213 (days 7, 14, 21); 99212 (days 35, 80)

Median Number of Times Provided in Past 12 months (Range): 1 (0-30)

Median Number of Times Provided in Career (Range): 5 (0-200)

Code 20824



6-78 SUPERFICIAL DISSECTION OF THE PALM-I

Observe:

1. Dissection has removed skin, superficial fascia, the palmar aponeurosis, and the thenar and hypothenar fasciae (Fig. 6-76).
2. The superficial palmar arch is formed by the ulnar artery and is completed by the superficial palmar branch of the radial artery. Only the foregoing structures and Palmaris Brevis cover the arch. It is truly superficial. So likewise are the digital vessels and nerves and the "recurrent" branch of the median nerve exposed in Figure 6-74.
3. The four Lumbricals lie behind digital vessels and nerves.
4. The prominent pisiform shelters the ulnar nerve and artery as they pass into the palm.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 20827

Global Period: 090

CPT Descriptor: Replantation, thumb (includes distal tip to MP joint); complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25-year-old male, who sustains a complete amputation of the thumb at the mid proximal phalanx, presents for replantation of the thumb. The patient and the amputated thumb are assessed in the emergency unit. At operation, the wounds are debrided, and the metacarpal of the stump and the amputated thumb are shortened, as needed. Microsurgical dissection and tagging of two arteries, two veins, and two nerves is performed on both the stump and the amputated part. Osteosynthesis is carried out. Primary repair of the periosteum and the flexor and extensor tendons is performed, along with microsurgical repair of two arteries, two veins, and two nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated thumb in the emergency unit; order and review roentgenograms and laboratory tests; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated thumb on separate operating tables; debride the wound on the amputated thumb, shorten the metacarpal as needed, and prepare the bone for internal fixation; microsurgically dissect and tag two arteries, two veins, and two nerves on the amputated thumb; debride the stump on the patient and shorten the metacarpal as needed; microsurgically dissect and tag two arteries, two veins, and two nerves; perform osteosynthesis using external fixation or interosseous wire; repair the periosteum; repair the flexor using core and epitenon stitches; repair thenar muscles; repair the extensor tendon; microsurgically repair two arteries, two veins, and two nerves; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
	20999	Unlisted procedure, musculoskeletal system, general
7.13	26356	Flexor tendon repair or advancement, single, in "no man's land"; primary, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
5.78	26735	Open treatment of phalangeal shaft fracture, proximal or middle phalanx, finger or thumb, with or without internal or external fixation, each
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services are the same as those listed for complete amputation of thumb, carpometacarpal joint to MP joint (20824). With this amputation, however, one less nerve and one less tendon require repair. Similar to 20824, several survey respondents noted that a vein grafts, skin grafts, and bone grafts are often required to reconstruct even fairly sharp amputations. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; thumb	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	2	0.25	1.57
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair; vein	37799-20	3.13	2	0.25	1.57
Fix; metacarpal	26615	5.24	1	0.25	1.44
Repair; tendon, flexor	26356	7.13	1	0.25	1.78
Repair; tendon, extensor	26418	4.06	1	0.25	1.02
Repair; muscle, thenar	20999	4.00	4	0.25	4.00
Repair; nerve	64831-20	8.94	1	0.25	2.24
Repair; add'l nerve	64832-20	5.72	1	0.25	1.43
Repair; artery	35207-20	9.16	1	1.00	9.16
Repair; artery	35207-20	9.16	1	0.50	4.58
Repair; vein	35207-20	9.16	2	0.25	4.58
Repair; skin	12004	2.21	1	0.25	0.55
TOTAL NET RVW = 36.65					

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the consensus committee in evaluating the validity of the median and mean RVWs. The building block was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative components of microsurgical work, which is from 65% to 70% of the total work for this procedure. The median RVW of 35, based on the responses of 60 microsurgeons familiar with this procedure, approximates the building block value of 36.65 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 5 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 13.3.

SURVEY DATA:

Median Intra-Service Time: 300 Low: 150 High: 600

Median Pre-Service Time: 60 Median Post-Service Time: 133

Length of Hospital Stay: 6

Post-Hospital Office Visits: 99213 (days 7, 14, 21); 99212 (days 28, 35, 80)

Median Number of Times Provided in Past 12 months (Range): 1 (0-12)

Median Number of Times Provided in Career (Range): 10 (0-60)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 20838

Global Period: 090

CPT Descriptor: Replantation, foot; complete amputation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 40-year-old mechanic, who sustains a complete amputation of the foot through the ankle joint, presents for replantation of the leg. The patient and the amputated leg are assessed in the emergency unit. At operation, the wounds are debrided, and the tibia, fibula, and talus are prepared for fusion. Microsurgical dissection and tagging of two arteries, two veins, and four nerves is performed on both the stump and the amputated part. Fusion of the ankle is carried out using internal or external fixation. Primary repair of 11 myotendinous units is performed, along with microsurgical repair of two arteries, two veins, and four nerves. The skin is closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Assess the patient and the amputated foot in the emergency unit; order and review roentgenograms and laboratory tests, with special attention to hematologic status; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; coordinate and supervise transfusions of blood, if necessary, prior to operation; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work: Position, prep, and drape the patient and the amputated foot on separate operating tables; debride the wound on the amputated foot; microsurgically dissect and tag two arteries, two veins, and four nerves on the amputated foot; debride the stump on the patient; microsurgically dissect and tag two arteries, two veins, and four nerves; prepare the fibula and talus for fusion; perform fusion using internal or external fixation; repair 11 myotendinous units; microsurgically repair the posterior and anterior tibial arteries, the terminal branches of the superficial and deep peroneal nerves, and two veins; perform skin grafts, along with local tissue rearrangement and close the wound; and apply a sterile bulky dressing, reinforced by a splint.

Post-Service Work: Stabilize and monitor the patient in ICU for 24 hours; monitor hematologic status, laboratory studies, and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring the range of motion and nerve recovery at regular intervals.

KEY REFERENCE SERVICE(S): (Presented in ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.31	11044	Debridement; skin, subcutaneous tissue, muscle, and bone
2.21	12004*	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk and/or extremities (including hands and feet); 7.6 Cm to 12.5 Cm
4.66	27658	Repair or suture of flexor tendon of leg; primary, without graft, single, each
4.38	27664	Repair or suture of extensor tendon of leg; primary, without graft, single, each
10.54	27870	Arthrodesis, ankle, any method
8.37	35226	Repair blood vessel, direct; lower extremity
	37799	Unlisted procedure, vascular surgery
3.13	64830	Microdissection and/or microrepair of nerve (list separately in addition to code for nerve repair)
12.95	64856	Suture of major peripheral nerve, arm or leg, except sciatic; including transposition

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The key references services identify, at a minimum, the many procedures performed in the replantation of a foot (complete amputation). In addition, several survey respondents noted that a bone graft, free flap, and placement of wires for elevation may be necessary. These additional necessary procedures are variable and are not included in the building block work table presented below.

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	<u>Net RVW</u>
Debridement; foot	11044	2.31	1	0.25	0.58
Debridement; stump	11044	2.31	1	0.25	0.58
Microdissection/microrepair: nerve	64830-20	3.13	4	0.25	3.13
Microdissection/microrepair: artery	37799-20	3.13	2	0.25	1.57
Microdissection/microrepair; vein	37799-20	3.13	2	0.25	1.57
Ankle fusion	27870	10.54	1	0.25	2.64
Repair; tendon, flexor	27658	4.66	5	0.25	5.83
Repair; tendon, extensor	27664	4.38	6	0.25	6.57
Repair; nerve	64856-20	12.95	1	1.00	12.95
Repair; nerve	64856-20	12.95	1	0.50	6.48
Repair; nerve	64856-20	12.95	2	0.25	6.48
Repair; artery	35226-20	8.37	2	0.25	4.19
Repair; vein	35226-20	8.37	2	0.25	4.19
Repair; skin	12004	2.21	1	0.25	0.55

TOTAL NET RVW = 57.31

The consensus committee discussed the RVW calculations using the building block method versus the median and mean RVWs gleaned from the survey tool. The components of the building block are relatively well defined by the anatomy; for these components RVWs have been assigned and served as a guide to the consensus committee in evaluating the validity of the median and mean RVWs. The building block RVW was considered in spite of the fact that the HCFA multiple procedure payment rule underestimates the full value of the intraoperative components of microsurgical work, which is from 65% to 70% of the total work for this procedure. The median RVW of 58.12 based on the responses of 48 microsurgeons familiar with this procedure, approximates the building block value of 57.31 and is recommended by the consensus committee.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 31.3.

SURVEY DATA:

Median Intra-Service Time: 520 Low: 200 High: 1000

Median Pre-Service Time: 75 Median Post-Service Time: 135

Length of Hospital Stay: 10

Post-Hospital Office Visits: 99214 (day 7); 99213 (days 14, 21, 28); 99212 (days 35, 60, 80)

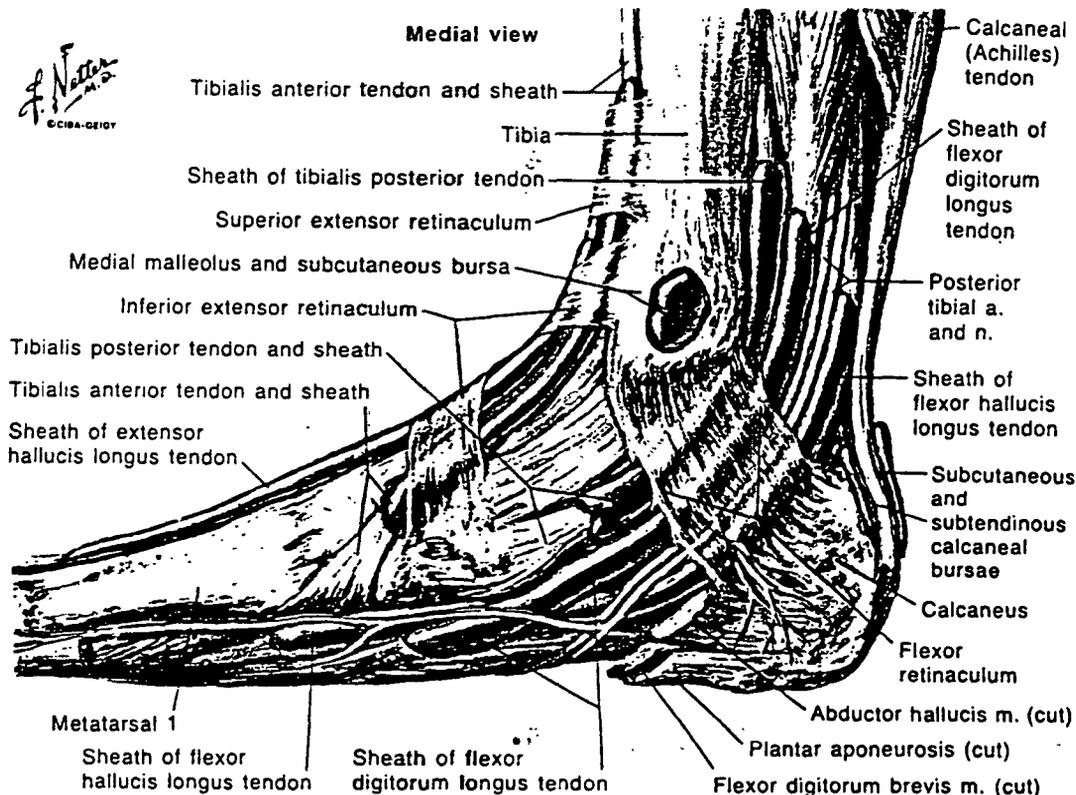
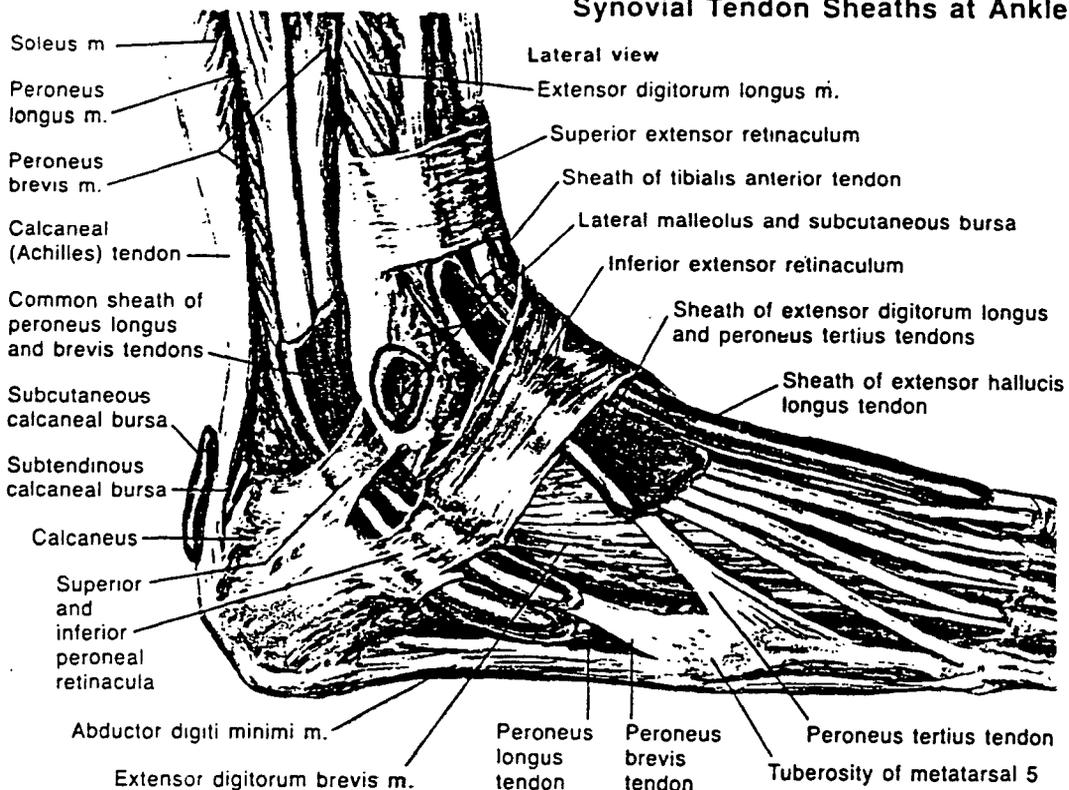
Median Number of Times Provided in Past 12 months (Range): 0 (0-0)

Median Number of Times Provided in Career (Range): 1 (0-20)

Code 20838

Synovial Tendon Sheaths at Ankle

Slide 1666



Organization of the foot tendons, vessels, and nerves is made by such structures and for pressure (Plates 99,

to reinforce the ankle. It is the fibula that covers the front of the leg. The deep surface to the compartment for the muscle from a part of the long

is a well-known dorsum of the stem of the calcaneus, one superior peroneus muscle. In the foot, the two Y begin to divide into medial and lateral. It passes the flexor hallucis longus and the deep peroneal canal muscle. The tendon crosses the deep

on the medial side of the calcaneus. The tendon of the flexor hallucis longus passes the back of the capsule of the ankle. These septa divide the tendon of the flexor digitorum longus into the flexor digitorum longus and the flexor digitorum profundus. The tendon of the flexor digitorum profundus passes the transverse border of the sole and the abductor hallucis

stem of the Y of the inferior extensor retinaculum. Deep to the peroneal retinacula pass the tendons of the peroneus longus and peroneus brevis muscles; the peroneus brevis tendon is the anterior of the two behind the medial malleolus and superior to the tendon of the peroneus longus muscle beneath the inferior peroneal retinaculum.

lateral malleolus, and the triangular facet of the medial surface of the lateral malleolus form the mortise for the trochlea of the body of the talus, which is the tenon. The mortise is deepened behind by the transverse tibiofibular ligament.

The trochlea of the talus is convex from before backward and slightly concave from side to side.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20955

Global Period: 090

CPT Descriptor: Bone graft with microvascular anastomosis; fibula

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 60-year-old male presents for reconstruction of a mandibular defect. At operation, the fibula is dissected free of its adjacent soft tissues and osteotomized and isolated on its vascular pedicle. The recipient vessels in the mandibular region are isolated, using microsurgical technique. The free fibula is then transferred to the recipient site and osteosynthesis completed. Microvascular anastomoses of one artery and two veins are then carried out, and the wound is closed.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and obtain informed consent; and consult with the referring physician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; outline the planned flap in the mandibular region; dissect the fibula free of its adjacent soft tissues; osteotomize and isolate the fibula on its vascular pedicle; microsurgically isolate the recipient vessels in the mandibular region; transfer the harvested fibula to the recipient site and complete osteosynthesis; microsurgically repair one artery and two veins; inset the flap, close the wounds, and apply sterile dressings.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring physician and other health care professionals (including written and telephone reports and orders); manage of tube feedings; monitor for management of possible pneumonia, heart failure, wound dehiscence, and for flap failure, which occurs in 10 to 15 percent of the cases. (This generally occurs during the first 72 hours and the physician is on call during that time.) Dressings are changed. Discharge arrangements are made. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing changes, and additional care in monitoring two operative sites.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
5.17	13300	Repair; complex, trunk; 1.1 cm to 2.5 cm
10.18	15738	Muscle, myocutaneous, or fasciocutaneous flap; lower extremity
8.45	27641	Partial excision (craterization, saucerization, or diaphysectomy) of bone (eg, for osteomyelitis or exostosis); fibula
3.75	27707	Osteotomy, fibula
6.52	27784	Open treatment of proximal fibula or shaft fracture, with or without internal or external fixation
9.00	35201	Repair blood vessel, direct; neck
	37799	Unlisted procedure, vascular surgery

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of 20955 includes the components shown in the reference services. The work involves the dissection of flap (15738); microdissection of two arteries (one donor, one recipient site) and four veins (two donor, two recipient sites (37799); partial excision of the fibula (27641) and four to six osteotomies of the fibula to form the mandible (27707); fixation of the fibula into the residual mandible as well as the fixation of the osteotomy sites (27784); microsurgical repair of one artery and two veins (35201-20); and complex closure (13300).

The consensus panel considered the total work value of the components, as well as the value based on HCFA's multiple procedure payment rule (100-50-25-25 . . .), as indicated in the table:

<u>Work Description</u>	<u>CPT</u>	<u>RVW</u>	<u>Frequency</u>	<u>Payment</u>	At 100% HCFA		<u>Net RVW</u>
					<u>NetRVW</u>	<u>Payment</u>	
Dissection of flap	15738	10.18	1	1.00	10.18	1.00	10.18
Microdissect., artery	37799	3.13	2	1.00	6.26	0.25	1.57
Microdissection, vein	37799	3.13	4	1.00	12.52	.25	3.13
Partial excision, fib.	27641	8.45	1	1.00	8.45	.25	2.11
Incision of fibula	27702	3.75	2	1.00	7.50	.25	1.87
Fixation, fibula	27784	6.52	4	1.00	26.08	.25	6.52
Repair, artery	35201-20	11.25	1	1.00	11.25	.50	5.63
Repair, vein	35201-20	11.25	2	1.00	22.50	.25	5.63
Complex repair	13300	5.17	1	1.00	5.17	.25	1.29
Total Work Values					109.91		37.93

The consensus committee discussed the variation in values and their relationship to the median, based on the usual and customary payment versus HCFA's policies, considering that these procedures are performed more often in the non-Medicare setting, but also to Medicare beneficiaries. The concern was expressed that HCFA's 0.25 payment for the third, fourth, etc., components of the procedure does not accurately reflect the full value of the intra-work that occurs during each component of microsurgery. While pre- and post-service work is not duplicated, each intra-service work component should be valued at 0.50, at the very least, in the opinion of the committee. Furthermore, the committee suggested that the HCFA payment rule does not adequately reflect the incremental increase in complexity, stress, and potential complication that each component of the typical eight-hour surgery adds to the total procedure.

Given these considerations and concerns, and the large response of a national distribution of microsurgeons who do the work, the median value of 45.0 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 38 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 21.99

Harvard derived its values from the response of four orthopaedic surgeons. The intra-service time was 1.9 hours less than our median, with a 10.3% standard deviation.

SURVEY DATA:

Median Intra-Service Time: 480 Low: 300 High: 960

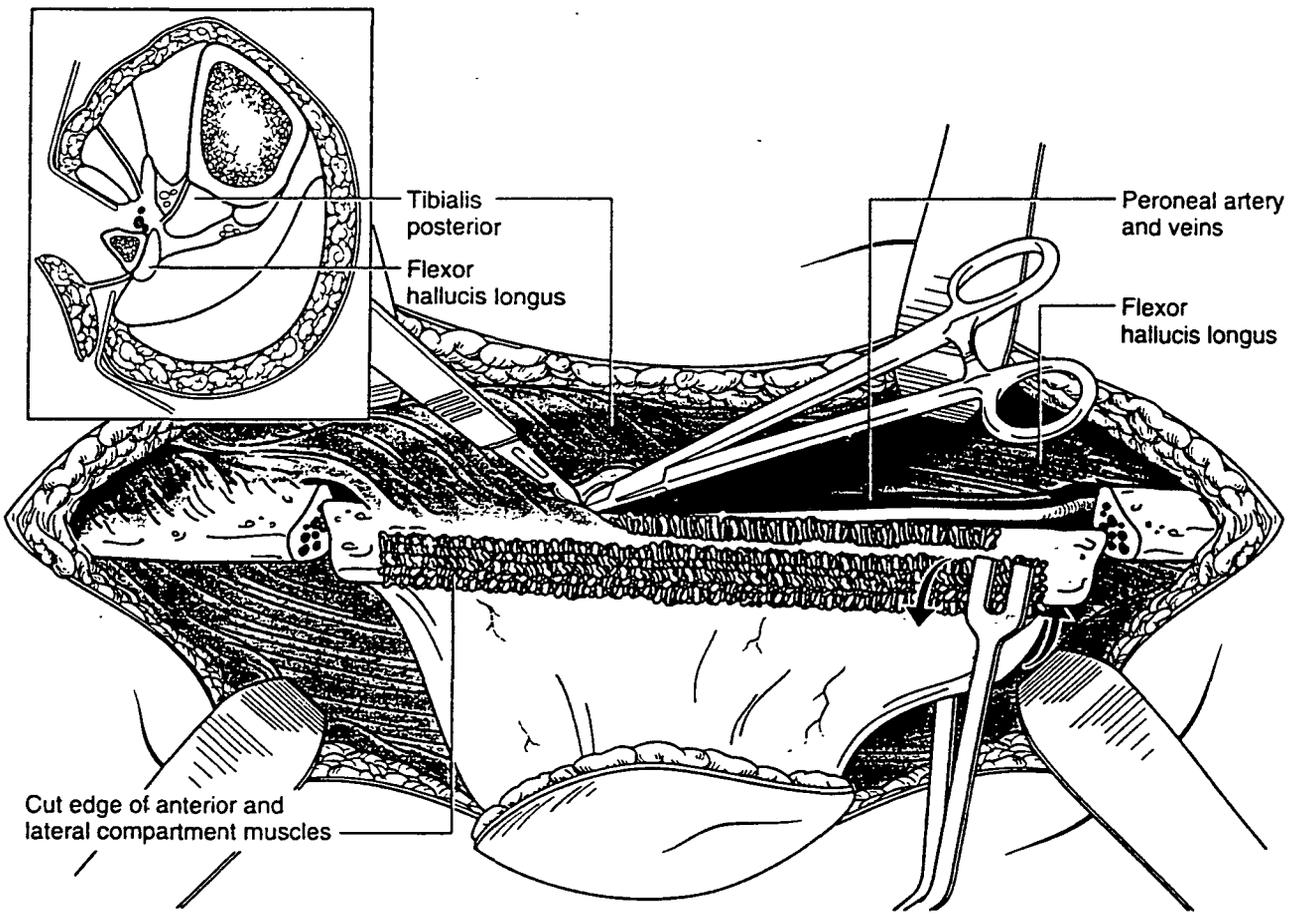
Median Pre-Service Time: 100 Median Post-Service Time: 170

Length of Hospital Stay: 9

Post-Hospital Office Visits: 99213 (days 7, 14, 21); 99212 (days 28, 45, 60)

Median Number of Times Provided in Past 12 months (Range): 1 (0-10)

Median Number of Times Provided in Career (Range): 5 (0-40)



AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20969

Global Period: 090

CPT Descriptor: Free osteocutaneous flap with microvascular anastomosis; other than iliac crest, rib, metatarsal, or great toe

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old patient, who is status post radical orbitomaxillectomy, presents for reconstruction. At operation, the lateral border of the scapula and its overlying skin are isolated on their vascular pedicle after a scapula osteotomy. The recipient vessels are isolated using the microscope. The osteocutaneous flap is transferred to the recipient site. Osteosynthesis is carried out. Microvascular anastomoses of one artery and two veins are performed, and the skin flap is inset. A split thickness skin graft is applied to the donor site.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and obtain informed consent; and consult with the referring physician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; outline the planned flap in the mandibular region; elevate and isolate an osteocutaneous flap including the dorsal thoracic skin and lateral border of the scapula; microsurgically isolate the recipient vessels in the mandibular region; transfer the osteocutaneous flap to the recipient site and complete osteosynthesis; microsurgically repair one artery and two veins; inset the flap and close the wound; apply a split thickness skin graft to the donor site; and apply sterile dressings to both operative sites.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring physician and other health care professionals (including written and telephone reports and orders); management of tube feedings; monitor for management of possible pneumonia, heart failure, wound dehiscence; flap failure, which occurs in 10 to 15 percent of the cases. (This generally occurs during the first 72 hours and the physician is on call during that time.) Dressings are changed. Discharge arrangements are made. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing changes, and additional care in monitoring two operative sites.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
4.26	13132	Repair, complex, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; 2.6 Cm to 7.5 Cm
5.17	13300	Repair, unusual, complicated, over 7.5 cm, any area
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
16.70	15734	Muscle, myocutaneous, or fasciocutaneous flap; trunk
7.52	23182	Partial excision (craterization, saucerization, or diaphysectomy) of bone (eg, for osteomyelitis), scapula
8.50	23585	Open treatment of scapular fracture (body, glenoid or acromion) with or without internal fixation
9.00	35201	Repair blood vessel, direct; neck
	37799	Unlisted procedure, vascular surgery

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The reference codes provided are components of this procedure. This is a free bone flap (20955, 45 RVWs recommended) combined with a free fasciocutaneous flap (15734, 16.7 RVWs @ .50 = 8.35) elevated on one pedicle, equating to a value of 53.35. The consensus committee recommends the survey mean of 52.44 be accepted.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 63 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW=20.99

Harvard derived its value from the responses of two orthopaedic surgeons. The intra-service median was 3.83 hours less than our median.

SURVEY DATA:

Median Intra-Service Time: 540 Low: 300 High: 1000

Median Pre-Service Time: 120 Median Post-Service Time: 200

Length of Hospital Stay: 10

Post-Hospital Office Visits: 99214 (days 7, 14); 99213 (days 21, 28); 99212 (days 45, 60)

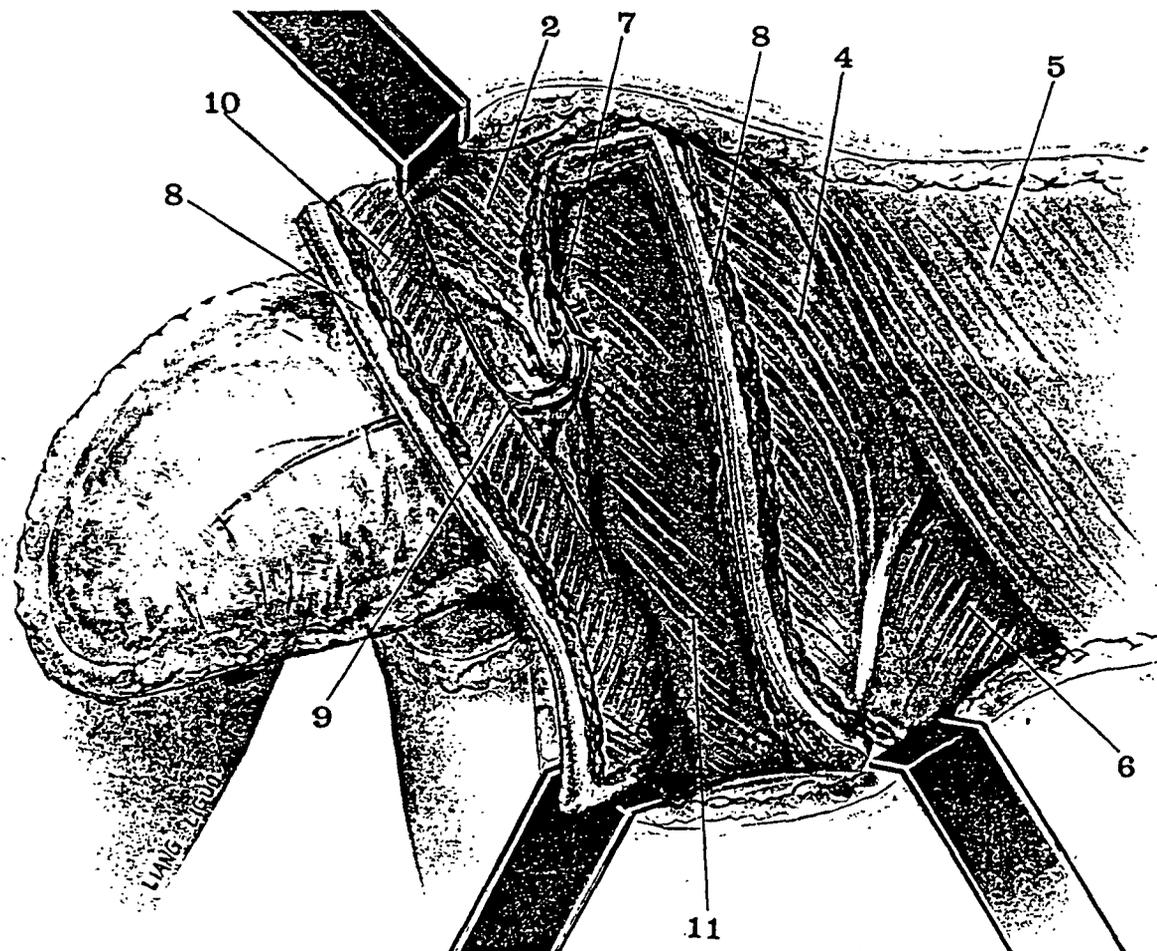
Median Number of Times Provided in Past 12 months (Range): 0 (0-14)

Median Number of Times Provided in Career (Range): 4 (0-60)

(Fig. 11-32) The bone [8] is divided vertically with an oscillating saw along the transition between the thick lateral border and thin blade and transversely just below the glenoid fossa.

The muscular origins of the serratus anterior [11], subscapularis [10], and teres major and minor [2] are detached sharply from the rem-

nants of the lateral border and inferior angle of the scapula [8], leaving a 0.5 cm muscular sleeve. The vascular pedicle [7] is further dissected to its proximal limits either at the junction of the thoracodorsal artery or to the axillary artery, if necessary.



- | | |
|--|-------------------------------|
| 2. Teres minor m. | 8. Scapula bone |
| 4. Infraspinatus m. | 9. Nutrient branch to scapula |
| 5. Trapezius m. | 10. Subscapular m. |
| 6. Rhomboideus major m. | 11. Serratus anterior m. |
| 7. Descending branch of circumflex scapular a. | |

Note for Donor Closure. All muscle origins at the donor site are reattached to the scapula through drill holes while closing the donor site.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20970

Global Period: 090

CPT Descriptor: Free osteocutaneous flap with microvascular anastomosis; iliac crest

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old male, who suffers a grade IIIB open tibial fracture with soft tissue and bone loss, presents for reconstruction. At operation, the iliac crest and its overlying skin are isolated on their vascular pedicle after an iliac crest osteotomy. The recipient vessels in the leg are isolated using the microscope. The osteocutaneous flap is then transferred to the recipient site and osteosynthesis is completed. Microvascular anastomoses of one artery and two veins are completed, and the flap is inset. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and obtain informed consent; and consult with the referring physician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; outline the planned flap on the leg at the recipient site; perform an iliac crest osteotomy, and isolate the iliac crest and its overlying skin on their vascular pedicle; microsurgically isolate the recipient vessels in the leg; transfer the osteocutaneous flap to the recipient site and complete osteosynthesis; microsurgically repair one artery and two veins and inset the flap; close the wounds, apply sterile dressings, and splint/cast as necessary.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring physician and other health care professionals (including written and telephone reports and orders); management of tube feedings; monitor for management of possible pneumonia, heart failure, wound dehiscence; flap failure, which occurs in 10 to 15 percent of the cases. (This generally occurs during the first 72 hours and the physician is on call during that time.) Dressings are changed. Discharge arrangements are made. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing changes, and additional care in monitoring two operative sites.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
4.26	13132	Repair, complex, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; 2.6 Cm to 7.5 Cm
5.17	13300	Repair, unusual, complicated, over 7.5 cm, any area
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
16.70	15734	Muscle, myocutaneous, or fasciocutaneous flap; trunk
7.52	23182	Partial excision (craterization, saucerization, or diaphysectomy) of bone (eg, for osteomyelitis), scapula
8.50	23585	Open treatment of scapular fracture (body, glenoid or acromion) with or without internal fixation
10.63	27758	Open treatment of tibial shaft fracture (with or without fibular fracture) with plate/screws, with or without cerclage
9.00	35201	Repair blood vessel, direct; neck
	37799	Unlisted procedure, vascular surgery
9.59	49560	Repair initial incisional hernia; reducible (separate procedure)

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure is essentially the same as 20969 (recommended at 52.44 RVWs) with abdominal closure (49560, 9.59 RVWs, @ 0.25 = 2.40 RVWs), equaling a value of 55.75. The consensus committee recommends that the survey mean of 52.22.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 31 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 21.35

Harvard derived its value from the responses of four orthopaedic surgeons. The intra-service time was 1.9 hours less than our median with a standard error of 27.4%.

SURVEY DATA:

Median Intra-Service Time: 500 Low: 240 High: 1000

Median Pre-Service Time: 100 Median Post-Service Time: 200

Length of Hospital Stay: 10

Post-Hospital Office Visits: 99214 (days 7, 14); 99213 (days 21, 28); 99212 (days 45, 60)

Median Number of Times Provided in Past 12 months (Range): 0 (0-10)

Median Number of Times Provided in Career (Range): 5 (0-36)



Fig. 5. Patient 5. Left. Postoperative appearance at 6 months. Center. Lateral view demonstrating the transposed cutaneous flap (CF) and the iliac skin paddle (SP) that was used to reconstruct the secondary defect. Right. The position of the iliac skin paddle in the neck ensures a better vascularity and a more camouflaged position following reconstruction of the esthetic unit of the cheek with color-matched skin from the neck.

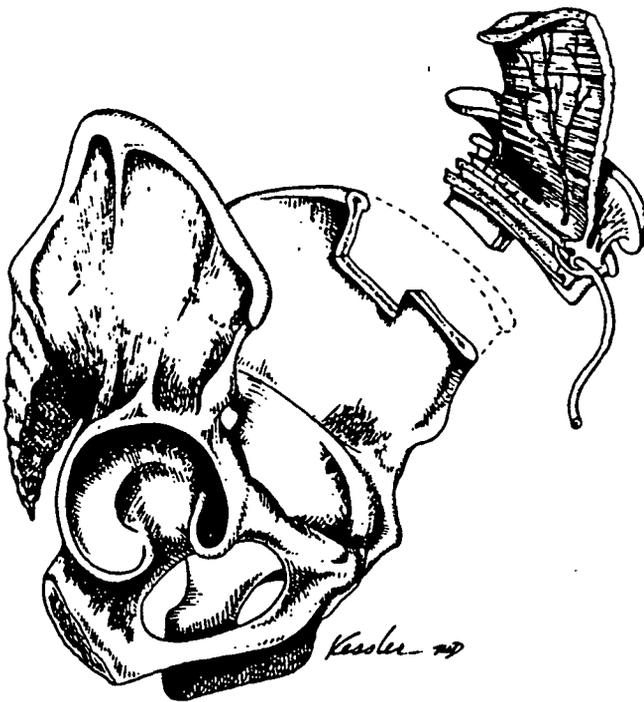


Fig. 6. Harvest of the internal oblique osteomyocutaneous flap from the contralateral hip positions the vascular pedicle in closer proximity to recipient vessels in the contralateral neck.

level of the zygoma. A skin paddle measuring 15 × 25 cm was harvested along with the internal oblique muscle and a bicortical segment of bone. Prior to transfer of the flap from the donor site, all portions of the skin paddle showed excellent dermal bleeding. Insetting of the skin paddle into the defect necessitated turning of a portion of the skin flap almost 180°

relative to its normal anatomic relationship to the bone. Although there were no signs of compromised circulation to the skin at the completion of the procedure, by postoperative day 2 there was a clear demarcation of a rim of skin that had become nonviable. The nonviable tissue was debrided and the remainder of the skin flap was repositioned in the neck.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20972

Global Period: 090

CPT Descriptor: Free osteocutaneous flap with microvascular anastomosis; metatarsal

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old patient, who has suffered a blast injury to the hand with loss of a metacarpal and soft tissue, presents for reconstruction. At operation, the second metatarsal is osteotomized and harvested with its overlying dorsal skin and vascular pedicle. The dissection of the vascular pedicle is performed using microsurgical technique. The recipient vessels are identified and dissected using the microscope. The metatarsal and its overlying soft tissues and vascular pedicle are then transferred to the hand. The metatarsal is stabilized using osteosynthetic techniques and microsurgical anastomoses of one artery and two veins are accomplished. The skin flap is then inset, and a skin graft is applied to the donor site.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and obtain informed consent; and consult with the referring physician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; outline the planned flap on the hand; osteotomize the second metatarsal; harvest the second metatarsal, along with its overlying dorsal skin and vascular pedicle; microsurgically dissect the vascular pedicle; microsurgically isolate and dissect the recipient vessels in the hand; transfer the osteocutaneous flap to the recipient site and complete osteosynthesis; microsurgically repair one artery and two veins; inset the flap and close the wound; apply a split thickness skin graft to the donor site; and apply sterile dressings to both operative sites.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring physician and other health care professionals (including written and telephone reports and orders); management of tube feedings; monitor for management of possible pneumonia, heart failure, wound dehiscence; flap failure, which occurs in 10 to 15 percent of the cases. (This generally occurs during the first 72 hours and the physician is on call during that time.). Dressings are changed. Discharge arrangements are made. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing changes, and additional care in monitoring two operative sites.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
10.18	15738	Muscle, myocutaneous, or fasciocutaneous flap; lower extremity
6.69	28122	Partial excision of metatarsal
5.24	26615	Open treatment of metatarsal fracture, with or without internal or external fixation, each
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure is a 20955 (at 45 RVWs recommended) with the addition of the dissection of the fasciocutaneous flap (15738, 10.18 RVWs, @ .5 = 6.16), equaling a value of 51.16. The consensus committee recommends that the survey median of 50.0 be accepted.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 20.80

Harvard values were derived from the responses of three orthopaedic surgeons. The intra-service median time was 3.25 hours less than our survey median.

SURVEY DATA:

Median Intra-Service Time: 480 Low: 300 High: 940

Median Pre-Service Time: 90 Median Post-Service Time: 190

Length of Hospital Stay: 7

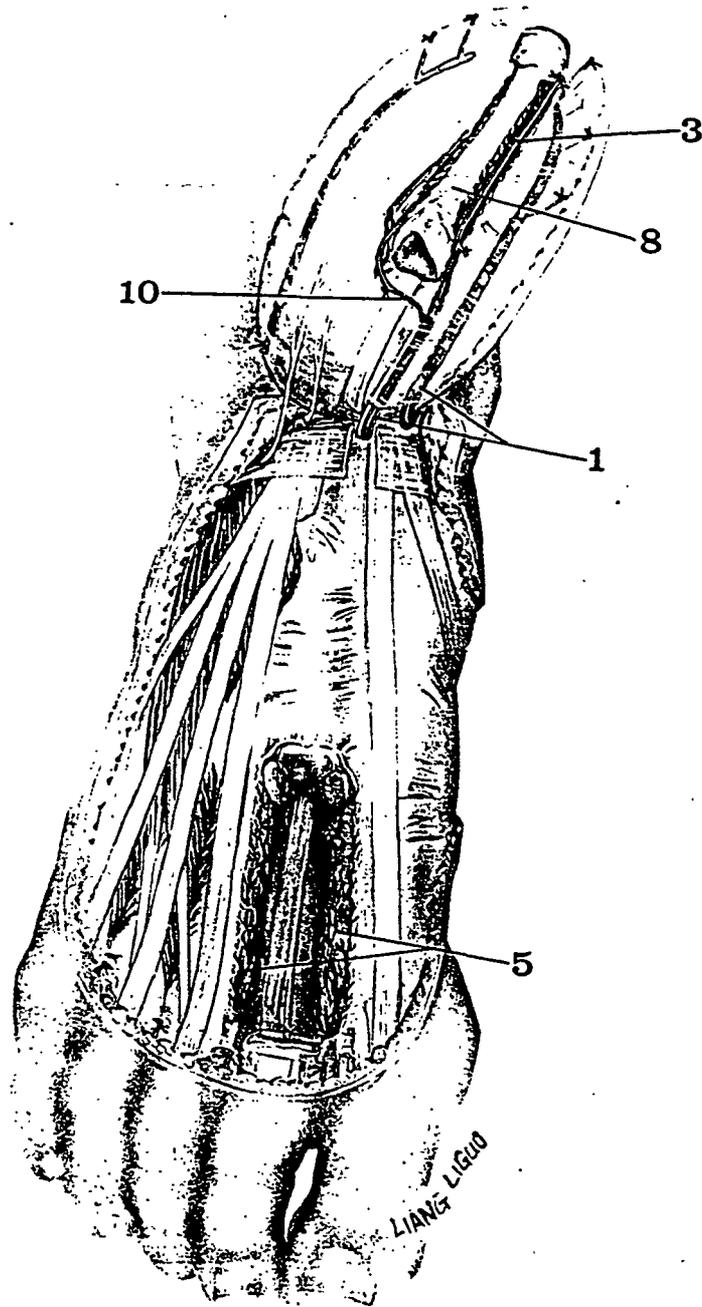
Post-Hospital Office Visits: 99214 (days 7, 14); 99213 (days 21, 28); 99212 (days 45, 60)

Median Number of Times Provided in Past 12 months (Range): 0 (0-3)

Median Number of Times Provided in Career (Range): 2 (0-20)

(Fig. 8-16) Preserving the dorsalis pedis-first dorsal metatarsal arterial system [1,3], the capsule of the joints between the second metatarsal and the cuneiforms and adjacent metatarsals are transected. Then, the dorsalis pedis osteocutaneous-flap, with the second metatarsal bone, is isolated.

- 1. Dorsalis pedis a. and v. and greater saphenous v.
- 3. First dorsal metatarsal a.
- 5. Interosseous m.
- 8. Second metatarsal bone
- 10. Arcuate a.



Donor Site Closure

Using heavy wire or nonabsorbable sutures, the heads of the first and third metatarsals are approximated and the second toe is amputated. The extensor hallucis longus tendon and the extensor digitorum longus tendons to the third

to fifth toes are elevated from the metatarsals; they are approximated with heavy absorbable sutures to cover the residual defect of the second metatarsal. Any rents in the paratenon should be repaired with fine absorbable sutures. The defect bed is then grafted with split-thickness skin, and a tie-over dressing is applied.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 20973

Global Period: 090

CPT Descriptor: Free osteocutaneous flap with microvascular anastomosis; great toe with web space

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25-year-old male suffers an avulsion of the thumb proximal to the metacarpophalangeal joint and presents for reconstruction. At operation, microdissection of the three nerves, one artery, and two veins of the great toe is performed. The toe is disarticulated at the metatarsophalangeal joint and transferred with its tendons, vessels, and nerves to the hand where microdissection of the three nerves, one artery, and two veins has been carried out, along with preparation of the metacarpal and extensor, flexor, and intrinsic tendons. Osteosynthesis is completed and one flexor, one extensor, and the intrinsic tendons are repaired. Microanastomoses of one artery, two veins, and three nerves are completed. The donor site is closed with a split thickness skin graft and recipient sites are closed with grafts as needed. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and obtain informed consent; and consult with the referring physician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; outline the planned flap on the hand; microsurgically dissect the three nerves, one artery, and two veins of the great toe; disarticulate the toe at the metatarsophalangeal joint and transfer it with its tendons, vessels, and nerves to the hand; microsurgically dissect the three nerves, one artery, and two veins of the hand and prepare the metacarpal and extensor, flexor, and intrinsic tendons for osteosynthesis; complete osteosynthesis and repair one flexor, one extensor, and the intrinsic tendons; Microsurgically repair one artery, two veins, and three nerves; close the donor site with a split thickness skin graft and the recipient site with grafts as needed; and apply sterile dressings to both operative sites.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring physician and other health care professionals (including written and telephone reports and orders); management of tube feedings; monitor for management of possible pneumonia, heart failure, wound dehiscence; flap failure, which occurs in 10 to 15 percent of the cases. (This generally occurs during the first 72 hours and the physician is on call during that time.) Dressings are changed. Discharge arrangements are made. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing changes, and additional care in monitoring two operative sites.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
4.26	13132	Repair, complex, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; 2.6 Cm to 7.5 Cm
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
15.43	15736	Muscle, myocutaneous, or fasciocutaneous flap; upper extremity
5.82	26350	Flexor tendon repair or advancement, single, not in "no man's land"; primary or secondary without free graft, each tendon
4.06	26418	Extensor tendon repair, dorsum of finger, single, primary or secondary; without free graft, each tendon
11.11	26615	Open treatment of metacarpal fracture, single, with or without internal or external fixation, each bone
5.77	28306	Osteotomy, metatarsal, base or shaft, single, with or without lengthening, for shortening or angular correction; first metatarsal
9.16	35207	Repair blood vessel, direct; hand, finger
	37799	Unlisted procedure, vascular surgery
3.13	64830	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)
8.94	64831	Suture of digital nerve, hand or foot; one nerve
5.72	64832	Suture of digital nerve, hand or foot; each additional digital nerve

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure is comprised of the components indicated in the reference codes. Dissection of the flap (15736) occurs, microdissection of three donor nerves and three recipient nerves (64830); microdissection of two donor and two recipient veins (37799); and microdissection of one donor artery and one recipient artery (37799); osteotomy of the metatarsal (28306); fixation of the metatarsal (26615), repair of a flexor tendon (26350) and an extensor tendon (26418); repair of three nerves (64831 and 64832), and repair of one artery and two veins (35207). A skin graft of the donor site occurs (15100) with repair of the recipient site (13132).

The median value of 56.00 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 1 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 21.35

Harvard derived its value from responses of four orthopaedic surgeons. The intra-service median time was 2.87 hours less than our survey median, with a standard error of 33.7%.

SURVEY DATA:

Median Intra-Service Time: 540 Low: 300 High: 940

Median Pre-Service Time: 120 Median Post-Service Time: 200

Length of Hospital Stay: 7

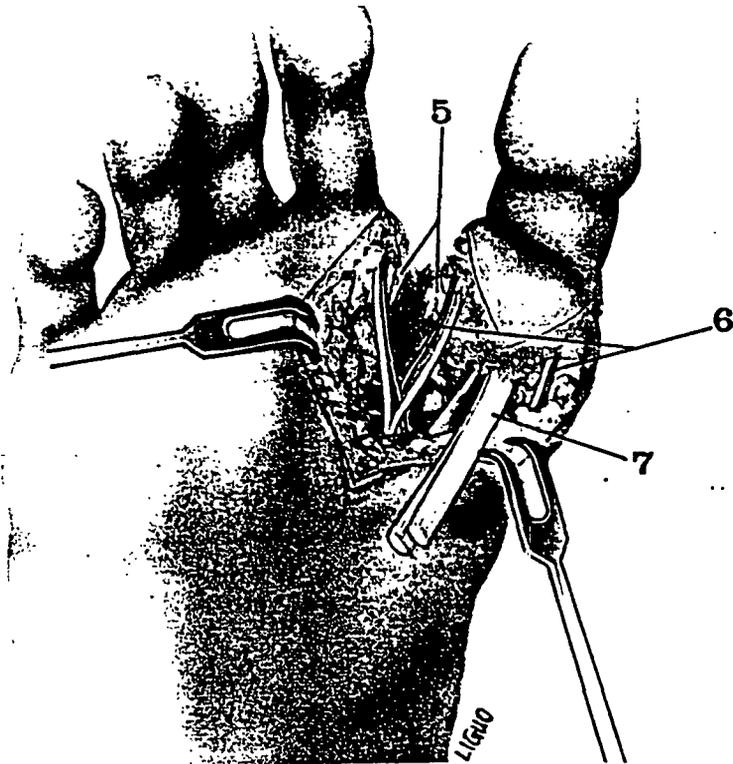
Post-Hospital Office Visits: 99214 (days 7, 14); 99213 (days 21, 28); 99212 (days 45, 60)

Median Number of Times Provided in Past 12 months (Range): 0 (0-8)

Median Number of Times Provided in Career (Range): 4 (0-130)

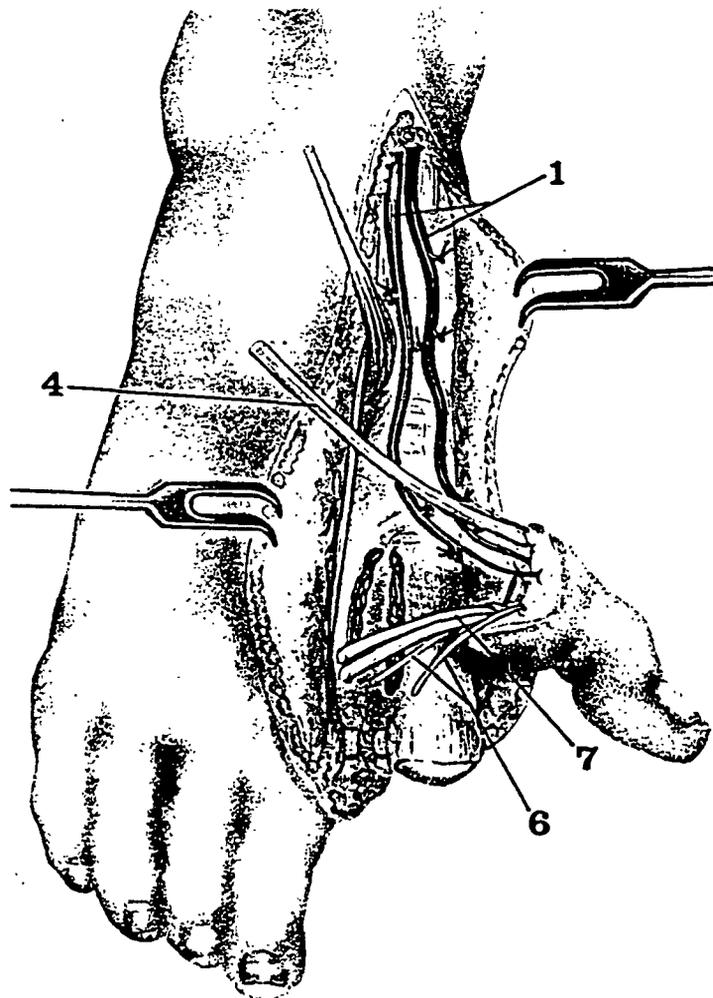
(Fig. 8-40) Through a longitudinal incision on the plantar aspect, the lateral and medial plantar digital nerves [6] and flexor hallucis longus tendon [7] are exposed and dissected for an adequate length, and then divided.

5. Deep transverse metatarsal ligament
6. Plantar digital a. and n.
7. Flexor hallucis tendon



(Fig. 8-41) The metatarsophalangeal joint is disarticulated and, after releasing the tourniquet, its circulation is assessed. The big toe is now ready for transfer.

1. Dorsalis pedis a., greater saphenous v., deep peroneal n.
4. Extensor hallucis longus tendon
6. Plantar digital a. and n.
7. Flexor hallucis tendon



The Internal Oblique—Iliac Crest Free Flap in Composite Defects of the Oral Cavity Involving Bone, Skin, and Mucosa

Mark L. Urken, MD; Hubert Weinberg, MD; Carlin Vickery, MD;
Daniel Buchbinder, DMD; William Lawson, MD, DDS; Hugh F. Biller, MD

The reconstruction of oromandibular defects following ablative surgery is a challenging undertaking. When the defect involves skin as well as mucosa, the challenge becomes even greater. The internal oblique iliac crest osteomyocutaneous free flap is particularly useful for reconstruction of through-and-through composite defects due to the inclusion of two separate soft-tissue flaps on the same vascular pedicle. We report our experience with this flap in the reconstruction of 10 patients with such defects. The utility, and the limitations of this form of reconstruction are discussed in detail.

INTRODUCTION

There are a variety of options available for reconstruction of the oral cavity following a composite resection of bone and mucosa. These include primary closure, skin grafts, local flaps, regional flaps, and free flaps. When the ablation includes external skin along with bone and mucosa, a "through-and-through" defect, then the reconstruction almost always must be performed with either a regional or free flap. Free vascularized bone flaps are the most reliable form of mandibular reconstruction in the primary setting. If the goal of the reconstructive surgeon includes reestablishing mandibular continuity in the through-and-through defect, then a composite free flap is the technique of choice.

The selection of a free flap for a particular patient's defect is based on a variety of factors. The goal of functional mandibular reconstruction requires that the osseous component of a composite flap supply

bone that is of sufficient width, height, and length to accommodate a tissue-borne or implant-borne dental prosthesis. In addition, its natural shape should simulate that of the missing mandible or be easily contoured to fit the defect. The soft-tissue component of the composite flap is of equal or greater importance in achieving the optimum functional and esthetic result. A well-vascularized soft tissue component with freedom of mobility relative to the bone is essential to a successful reconstruction of these defects that involve both skin and mucosa. Either a large skin paddle that can be divided by deepithelialization and placed both intraorally and extraorally or a composite flap with two separate soft-tissue components is needed. The iliac crest osteocutaneous flap based on the deep circumflex iliac artery has had limited use in these large defects due to the inherent restrictions of the skin paddle, which has a tenuous blood supply and limited mobility relative to the bone.^{1,2} In four series of mandibular reconstructions using the iliac crest donor site, soft-tissue coverage of both intraoral and extraoral defects required a variety of additional pedicled and free flaps which included the pectoralis major flap, the radial forearm free flap, the jejunal free flap, and the latissimus dorsi flap.³⁻⁶

Since introducing the internal oblique-iliac crest free flap for oromandibular reconstruction in 1987, we have used this flap in 44 patients.^{1,2} A subset of this group consisting of 10 patients had composite defects of bone, mucosa, and skin. The tripartite design of this flap composed of bone and two separate soft-tissue flaps has expanded the versatility of this donor site (Fig. 1). The internal oblique muscle provides a well-vascularized, mobile, soft-tissue component that is ideal for mucosal defects. The skin paddle is well suited for resurfacing most cutaneous defects. This series of 10 patients is reviewed and the application of this technique to this type of defect is described. The method of flap harvesting has been described in detail in previous publications.^{1,2,7,8} The limitations of this flap for reconstructing the through-and-through defect are delineated.

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TABLE I.
Clinical Data.

Patient	Radiotherapy	Cutaneous Defect		Mucosal Defect	Bone Defect	Complications
		Size	Location			
1	Yes	8 × 10 cm.	Right submental	FOM, ventral tongue		Loss distal muscle
2	Yes	12 × 14 cm.	Anterior neck	FOM, Near total glossectomy		Aspiration requiring total laryngectomy
3	Yes	8 × 14 cm.	Cheek, lateral 1/2 upper/lower lip	Partial glossectomy		
4	Yes	10 × 14 cm.	Anterior neck	FOM		
5	No	6 × 10 cm.	Lower cheek	FOM		
6	Yes	15 × 20 cm.	Right cheek, from zygoma to mid-neck	FOM, buccal, hemiglossectomy		Partial loss of skin paddle
7	Yes	8 × 11 cm.	Lateral neck	FOM		
8	Yes	8 × 12 cm.	Anterior neck, 3/4 lower lip	FOM, lateral tongue		Perforated esophagus, died POD #14
9	Yes	8 × 10 cm.	Submandibular	FOM, Partial glossectomy		
10	Yes	6 × 8 cm.	Submandibular	FOM, Partial glossectomy		

POD = postoperative day; FOM = floor of mouth; STSG = split-thickness skin graft.

MATERIALS AND METHODS

The patients in this series ranged in age from 48 to 72 years (Table I). Nine of the 10 patients had received radiotherapy and 8 had undergone prior surgical resections. Eight of the patients underwent mandibulectomy for squamous cell cancer, and two patients had extensive osteoradionecrosis. The extent of mandibular resection is shown in Table I. The mandibular defect extended to, or past, the symphysis in all cases. Bone contouring necessitated the use of two or more osteotomies in the iliac bone to achieve the proper curvature (Fig. 2). A bicortical segment of iliac bone was harvested in all cases.

The skin resection ranged in size from roughly 60 cm² to 250 cm². A fusiform-shaped skin paddle was harvested in all cases to facilitate closure of the donor defect. The skin was further contoured to fit the defect as needed. The size and location of the cutaneous defects varied between patients, extending from the lower neck to the zygoma. In eight patients the skin overlying the tumor was involved by direct extension. In the remaining two patients the skin of the submandibular region was removed due to radionecrosis and a central orocutaneous fistula. The skin paddle of the osteomyocutaneous flap was used to resurface these defects (Fig. 3). In all cases the abdominal wall donor site defect was closed primarily.

In three patients a second flap was used in closure of the cutaneous defect of the cheek. In one patient, bilateral karapanzic flaps were used to reconstruct part of a defect that involved two thirds of the lower lip. In another patient (5) the defect extended onto the lower cheek, and a cuta-

neous flap from the neck was transposed superiorly to cover the lower cheek defect with color-matched skin while the secondary defect in the neck was resurfaced by the skin paddle of the free flap (Figs. 4, 5). Finally, in one patient (6) with the largest cutaneous defect that extended up to the zygoma, there was a partial loss of the skin paddle that necessitated use of a lower island trapezius myocutaneous flap at a secondary procedure.

In all cases the extent of mucosal resection required a soft-tissue flap to complete the reconstruction of the oral cavity. The internal oblique muscle was used intraorally to resurface mucosal defects that included portions of the tongue, floor of mouth, soft palate, gingiva, buccal, and tonsillar regions. A split-thickness skin graft was used over the muscle to reconstruct the lingual and buccal sulci in 5 of the 10 cases. Our criteria for use of a skin graft over the muscle will be discussed in detail in a later section of this paper.

In eight patients, the ipsilateral hip was used to harvest the free flap. In the remaining two patients the contralateral hip was selected due to prior radical neck dissection. By harvesting the flap from the contralateral hip, the deep circumflex iliac pedicle exits from the neomandible at its interface with the distal segment of the patient's residual mandible. In pure hemimandible reconstruction, this brings the deep circumflex iliac pedicle to the midline of the neck. When the bony reconstruction crosses the symphysis, the pedicle exits in the contralateral submandibular triangle and provides easier access to recipient vessels in the contralateral virgin neck (Fig. 6). In contrast, when the ipsilateral hip is used, the nutrient vascular pedicle exits from the

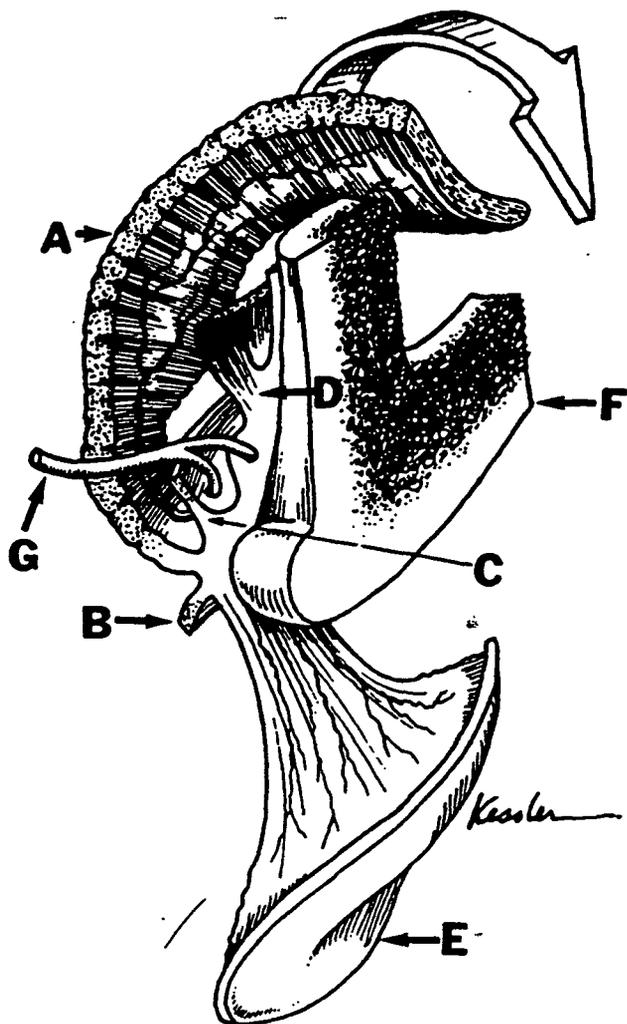


Fig. 1. The internal oblique-iliac crest osteomyocutaneous free flap: the internal oblique muscle (A); cuff of external oblique muscle (B); cuff of transversus abdominis muscle (C); cuff of iliacus muscle (D); skin flap (E); iliac bone (F); and deep circumflex iliac pedicle (G) (reprinted with permission by *Arch Otolaryngol Head Neck Surg*, 115:339-349, 1989).

angle of the neomandible for anastomoses to recipient vessels in the ipsilateral neck (Fig. 7).

In all cases, a three-dimensional, bendable, stainless-steel reconstruction plate was used to fix the bone graft to the residual mandible. Our usual technique of contouring the plate to the outer table of the mandible prior to resection could not be carried out when there was direct extension of tumor through the bone into the soft tissue of the cheek. In these situations, the positions of the residual mandibular segments were maintained by a variety of methods that included maxillomandibular fixation using the patient's teeth, dentures, or gunning splints. Alternatively, an external fixation device was used. In this group of patients, the condyle and a portion of the ramus were preserved. There were no cases requiring reconstruction of the temporomandibular joint.

RESULTS

All 10 free flaps were successfully transferred.



Fig. 2. Iliac bone contoured to the shape of the mandibular arch through multiple osteotomies through the outer cortex.

None of the patients required revision microvascular procedures for flap salvage. There were no postoperative orocutaneous fistulae. The bone scans performed on postoperative day 4 or 5 demonstrated good uptake in all segments of the bone grafts, confirming their vascularity (Fig. 8). Three patients were fitted with full lower, tissue-borne dentures, which they wore in social situations, but were not able to effectively masticate. A fourth patient was fitted with an implant-borne complete lower denture and was able to function very well (Fig. 9). The remaining patients did not undergo dental rehabilitation due to financial reasons or lack of interest.

There was one mortality in this series. Patient 8 died on postoperative day 14 due to a perforated esophagus which communicated with the pericardium, resulting in a purulent pericarditis. The patient's flap remained viable throughout the postoperative period. Nine patients were discharged from the hospital on an oral diet. Patient 2 required a total laryngectomy due to aspiration following near-total glossectomy.

Other complications included loss of the distal tip of the internal oblique muscle in patient 1, which required a tongue flap and a subsequent skin-graft vestibuloplasty. This patient was reconstructed early in our experience when the entire internal oblique muscle was not harvested. Since that time, the internal oblique muscle was transected at the level of the costal margin, which provides the necessary length to easily transpose the muscle over the neomandible permitting a tension-free closure of the oral cavity.

There was one case of partial skin loss of the cutaneous paddle. In this patient the skin defect measured 12 × 20 cm and extended superiorly to the



Fig. 3. Top left. Patient 2 with severe osteoradionecrosis of the mandible. Top right. Area of skin severely damaged by radiation and a central fistula communicating with the floor of mouth (arrow). Bottom left. Following resection of necrotic bone and soft tissue the bone defect extended from angle-to-angle (arrows). The soft-tissue defect was a near-total glossectomy. Bottom right. Postoperative appearance at 6 months. The internal oblique muscle was used intraorally and the skin paddle resurfaced the neck.



Fig. 5. Patient 5. Left. Postoperative appearance at 6 months. Center. Lateral view demonstrating the transposed cutaneous flap (CF) and the iliac skin paddle (SP) that was used to reconstruct the secondary defect. Right. The position of the iliac skin paddle in the neck ensures a better vascularity and a more camouflaged position following reconstruction of the esthetic unit of the cheek with color-matched skin from the neck.



level of the zygoma. A skin paddle measuring 15×25 cm was harvested along with the internal oblique muscle and a bicortical segment of bone. Prior to transfer of the flap from the donor site, all portions of the skin paddle showed excellent dermal bleeding. Insetting of the skin paddle into the defect necessitated turning of a portion of the skin flap almost 180°

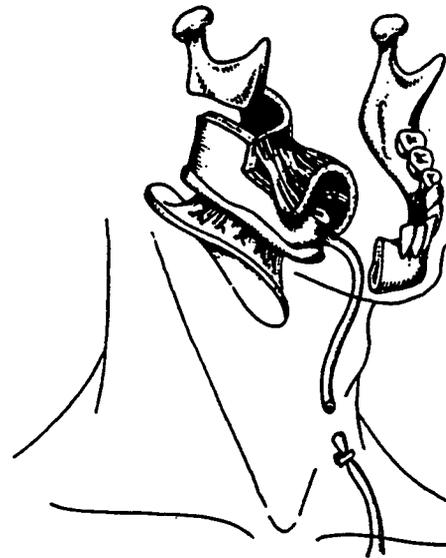


Fig. 6. Harvest of the internal oblique osteomyocutaneous flap from the contralateral hip positions the vascular pedicle in closer proximity to recipient vessels in the contralateral neck.

relative to its normal anatomic relationship to the bone. Although there were no signs of compromised circulation to the skin at the completion of the procedure, by postoperative day 2 there was a clear demarcation of a rim of skin that had become nonviable. The nonviable tissue was debrided and the remainder of the skin flap was repositioned in the neck.

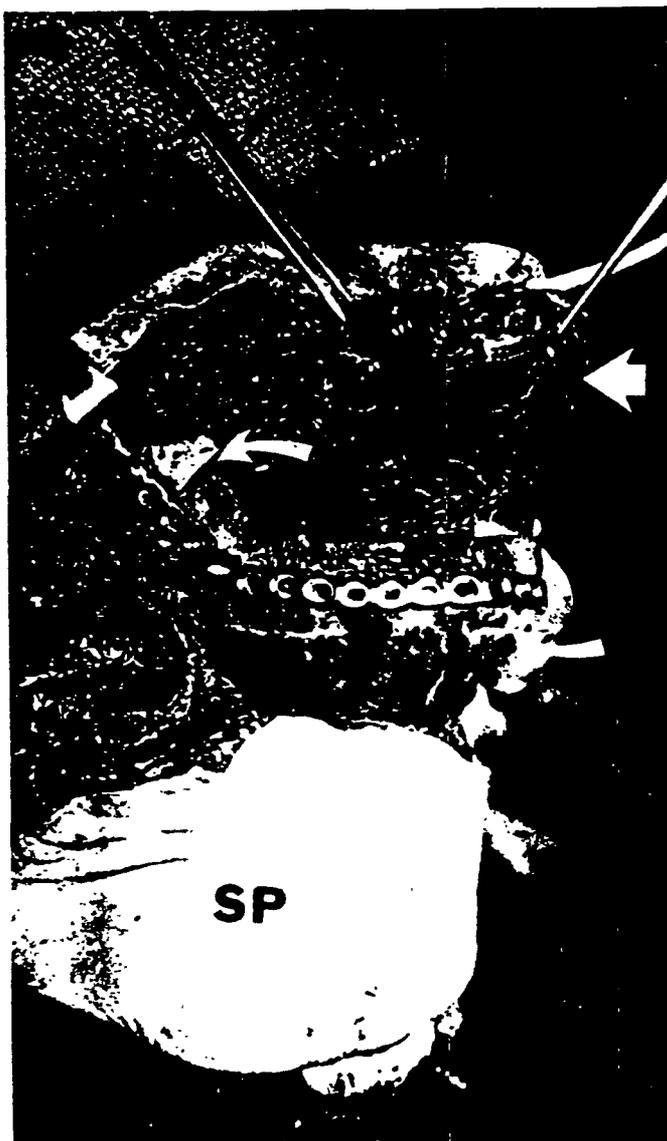
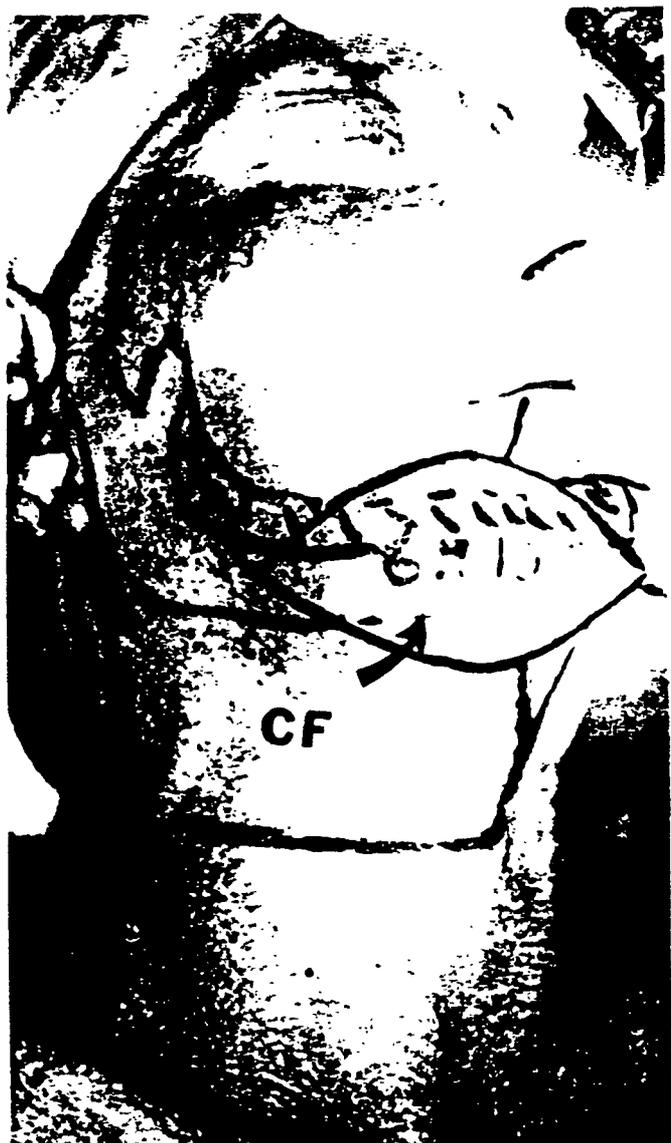


Fig. 4. Patient 5. Top left. Area of skin resection overlying the lower cheek measuring 6 x 10 cm. The cutaneous transposition flap (CF) was used to resurface the ablative defect. Top right. The internal oblique-iliac crest flap following inset. The curved arrows indicate the graft-mandible interfaces. The internal oblique muscle (straight arrow) is positioned intraorally prior to transposition over the neomandible. The skin paddle (SP) of the free flap is situated in the neck. Bottom. Panorex showing extensive bone erosion.

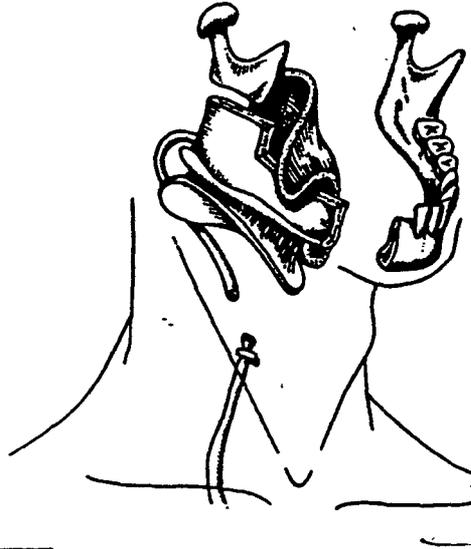


Fig. 7. Harvest of the internal oblique osteomyocutaneous flap from the ipsilateral hip positions the nutrient pedicle at the angle of the neomandible for anastomoses to recipient vessels in the ipsilateral neck.



Fig. 8. Postoperative bone scan of patient 5 on postoperative day 4 demonstrating good uptake in the revascularized bone graft.

The cheek was resurfaced using a lower island trapezius myocutaneous flap (Fig. 10). The remainder of this patient's postoperative course was uneventful.

A revision procedure to debulk and contour the skin flap was needed in patient 3. A large skin paddle was used in order to facilitate placement of the skin in the midportion of the cheek. The revision procedure was performed 6 weeks following the reconstruction and provided a more pleasing contour to the lower face (Fig. 11).

DISCUSSION

The internal oblique-iliac crest free flap has been a very reliable flap for reconstruction of oromandibular defects. The quality of the iliac bone is superior to any other available donor site for vascularized bone. We have been able to successfully rehabilitate a large percentage of reconstructed patients with functional lower dentures using enosseous dental implants placed primarily into the bone grafts at the time of reconstruction.⁹

The major limiting factor in using the iliac crest donor site has been the quality of the soft-tissue component of the osteocutaneous flap. The blood supply to the skin is from an array of musculocutaneous perforators which arise from the deep circumflex iliac pedicle and exit into the skin through the external oblique muscle. This zone of perforators is concentrated in an area that extends approximately 8 or 9 cm



Fig. 9. Left. Patient 5 following completion of dental restoration. Right. The patient was rehabilitated with a fixed, implant-borne lower dental prosthesis.

posterior to the anterior superior iliac spine (ASIS) and approximately 2.5 cm superior to the inner aspect of the crest (Fig. 12). The largest perforator is the terminal branch of the deep circumflex iliac artery which exits approximately 8.5 cm posterior to the ASIS.⁹ The blood supply to the skin is therefore assured by designing the skin paddle so that it incorporates this zone. A well-vascularized skin paddle is usually obtained by centering the paddle along a line drawn from the ASIS toward the inferior border of the scapula. It is apparent from the anatomy of the skin's blood supply that a skin paddle of sufficient dimensions must be designed in order to incorporate this region.

The zone of perforators extends deeper into the muscle layers where a similar-sized cuff of external oblique, internal oblique, and transversus abdominis muscles must be left attached to the inner aspect of the iliac bone. These segments of muscle have been referred to as the "obligatory muscle cuff." They protect the perforators arising from the deep circumflex iliac vessels.³ In addition, a segment of iliacus muscle is harvested to protect the deep circumflex iliac pedicle as it courses along the inner aspect of the crest.

The broad attachment of the mesentery of the skin paddle to the bone must be maintained in order to ensure its vascularity. This attachment limits the freedom of positioning the skin paddle relative to the bone. The very fine musculocutaneous perforators do not tolerate a significant amount of torsion or stretch

that may be imparted by turning the skin paddle in a nonanatomic position relative to the bone. This factor is probably the reason why there was a partial skin loss in patient 6. Although the skin had a sufficient blood supply when it was held in its normal anatomic position, that vascularity became compromised due to a combination of torsion and postoperative edema.

The mesentery of the skin paddle can be lengthened by designing the flap more superiorly on the abdominal wall (Fig. 13). The inferior aspect of the skin must still overlie the zone of musculocutaneous perforators. Although this maneuver increases the degree of mobility, the skin flap is still best used to resurface defects of the neck and lower cheek. In a recent large series of mandibular reconstructions using the iliac crest osteocutaneous flap, Jewer, *et al.*³ concluded the following:

The skin paddle may be used to replace mucosa or skin or both. However, since the skin flap naturally lies on the external surface of the crest, it lends itself more readily to cheek reconstruction than to oral mucosal replacement. This is unfortunate, since the latter is more frequently required. For purely intraoral reconstruction, the skin paddle is rotated over the new mandible, adding considerable bulk to the facial contour. Rotation under the reconstructed mandible is only possible if there has been a massive floor of the mouth resection.

This point is illustrated in Figure 14. We have used the skin paddle intraorally in isolated cases

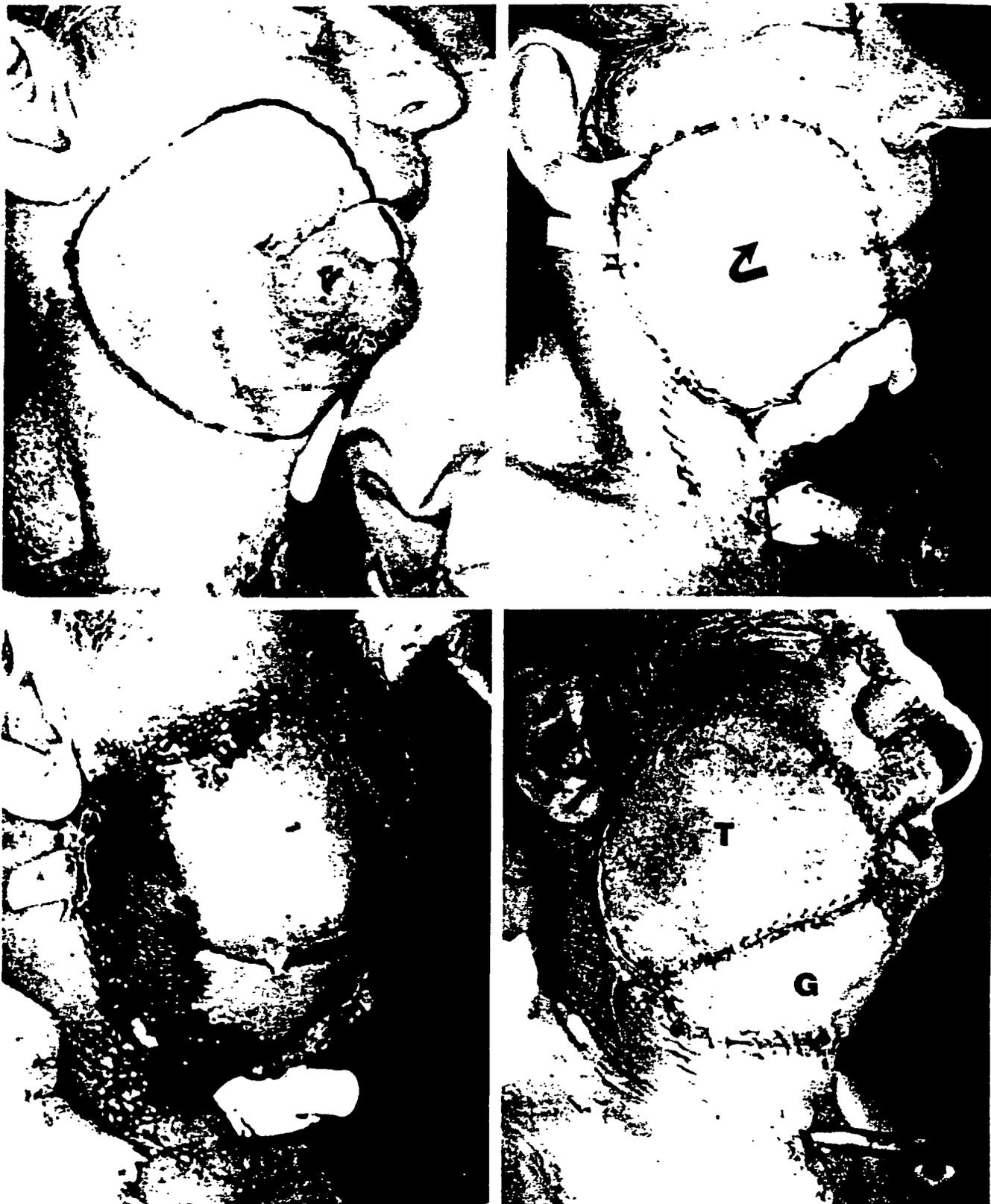


Fig. 10. Top left. Patient 6 with a large area of skin resection that extended superiorly to the level of the zygoma. Top right. The skin paddle of the iliac crest free flap was turned 180° to resurface the ablative defect. This rotation of the skin paddle was necessary due to the relatively fixed relationship of the skin to the bone. Bottom left. On postoperative day 2, there was a clear demarcation of a portion of the skin paddle. Bottom right. The necrotic skin was debrided and the skin of the iliac flap (G) was repositioned in a more anatomic position relative to the bone. The cheek was reconstructed with a lower island trapezius myocutaneous pedicled flap (T).



Fig. 11. Top left. Preoperative appearance of patient 3 with a recurrent oral carcinoma. Top right. Area of cheek skin to be resected does not extend superior to the level of the oral commissure. Bottom left. Postoperative appearance at 6 months following one debulking procedure. Bottom right. This patient's reconstruction demonstrates the cephalad extent that the skin paddle can be reliably placed for cutaneous defects of the cheek (reprinted with permission from *Arch Otolaryngol Head Neck Surg*, 115:339-349, 1989).

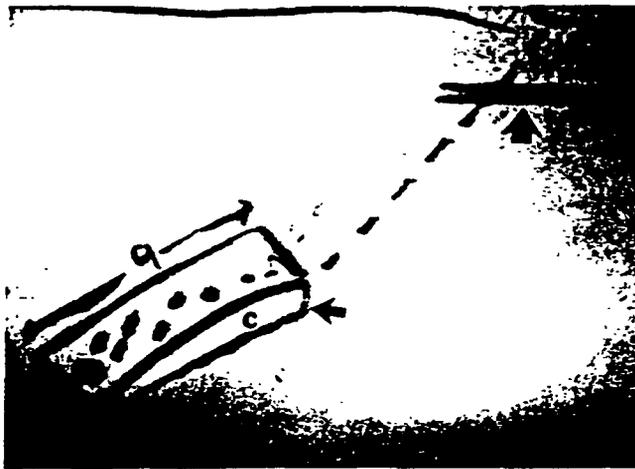


Fig. 12. Approximate zone of musculocutaneous perforators supplying the skin overlying the right iliac crest (C). The palpable pulse of the femoral artery is noted by the large arrow. The anterosuperior iliac spine is indicated by the small arrow. The "zone" extends 9 cm posterior to the spine and 2.5 cm cephalad.

when the internal oblique muscle could not be harvested due to the patient being a female of child-bearing age or the presence of a preexisting ventral hernia. The use of the skin intraorally has provided a satisfactory result, but invariably requires secondary debulking procedures regardless of how thin the patient is. Alternatively, the skin may be placed into the oral cavity by using the crest portion of the bone to reconstruct the ridge of the neomandible. This allows the skin to be placed without changing the normal relationship of the skin to the bone. When this is done the mass of the obligatory muscle cuffs pushes the skin paddle even further into the oral cavity, compounding the problem of excess bulk. In addition,

when the bone is oriented in this manner, the ramus and condyle cannot be reconstructed. Only defects of the body and symphysis are suitable for this technique (Fig. 15).

The problems of the skin paddle in the osteocutaneous flap sparked our interest in using the internal oblique muscle as the intraoral soft-tissue component. The addition of the internal oblique muscle to this flap has provided a soft-tissue flap with a more reliable vascularity and a much greater degree of mobility relative to the bone. In 80% of cases, it is an axial pattern flap based on a dominant ascending branch of the DCIA.^{7,9} The muscle can be freed-up even further by making a back cut along the crest to isolate it on its vascular pedicle (Fig. 16). The internal oblique muscle undergoes atrophy following denervation that provides the ideal tissue thickness for oral lining.

At the time of our original description of the adaptation of this flap to oromandibular reconstruction, the use of a split-thickness skin graft over the muscle with a set of bolsters on the lingual and buccal aspects of the neomandible was advocated.^{1,2} By varying the redundancy of the skin graft, we were able to increase the depth of the lingual and buccal sulci. Our experience with a few patients who lost a portion of their skin grafts demonstrated that the intraoral reconstruction was not adversely affected. Over time the bare muscle atrophied and became mucosalized. We have since modified the technique to use a skin graft only in those situations where there is significant loss of either floor of mouth or buccal mucosa. If there is sufficient mucosa in those two regions, then direct approximation of mucosa to muscle will result in adequate sulcular depth and preserved mobility of



Fig. 13. Left. Skin paddle outlined over the left iliac crest (C). The anterosuperior iliac spine is denoted by the curved arrow. The zone of perforators is denoted by the open arrows. Right. Lengthening of the mesentery of the skin paddle is achieved by designing the flap more cephalad on the abdominal wall. The caudal portion of the skin paddle must overlie the zone of perforators.

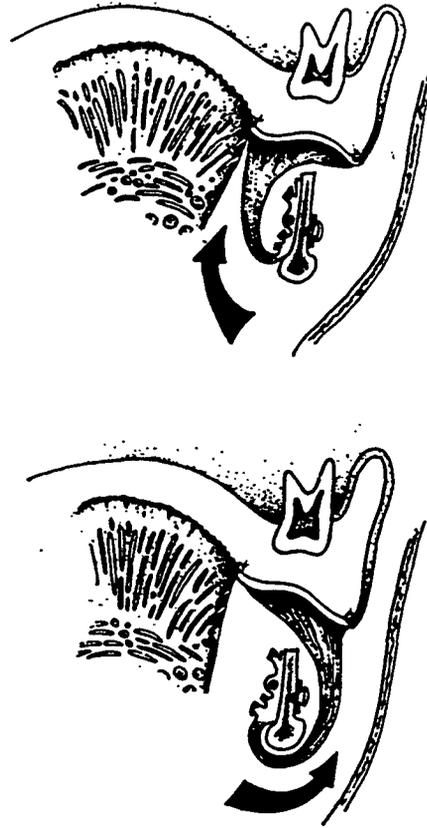
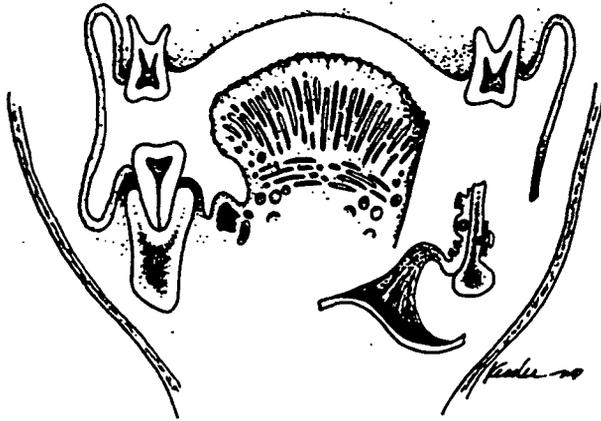


Fig. 14. Iliac crest osteocutaneous flap using the skin for intraoral reconstruction. With the crest forming the inferior border of the neomandible, the skin paddle can be transposed via either a lingual or buccal route.

the tongue. It is the latter factor that is the greatest determinant of postoperative oral function. Following partial glossectomy, there is no available technique at this time to completely restore the lost tongue musculature or the loss of motor and sensory innervation. However, the mobility of the residual tongue may be preserved by preventing it from being tethered to the area of reconstruction.

In all of our reconstructions using the internal oblique-iliac crest osteomyocutaneous flap we have exteriorized the skin paddle in a suture line in the neck to serve as a monitor even when there is no cutaneous defect.¹¹ The skin paddle has proven to be a very reliable indicator of the patency of the vascular pedicle. In these situations the skin is aligned in its normal anatomic position relative to the bone. The redundant skin helps prevent postoperative vascular compression due to edema. This is particularly true in patients who undergo secondary mandibular reconstruction, especially following radiation therapy. Finally, when the skin is removed the subcutaneous tissue can be positioned in the neck to augment the radical neck defect.

The major limitations of this flap for through-and-through defects of the oral cavity are the poor color match of the groin skin to the face and neck and the intolerance of the skin to being positioned above the level of the oral commissure. In patients who have a large defect that involves a significant portion of the

cheek, we advocate one of two options. The bony and mucosal defects can be reconstructed with the internal oblique iliac bone flap in combination with a regional flap to resurface the cutaneous defect of the cheek. Alternatively, the scapular osteocutaneous flap can be used. The rich supply of soft tissue in the scapular, parascapular, and latissimus dorsi flaps, all of which have tremendous mobility relative to the bone of the lateral scapular border, make this the flap of choice in many patients in whom the soft-tissue reconstruction is as demanding as that of the bone.¹² Our reasons for not using the scapular donor site more often are that the bone of the lateral scapular border is less suitable for functional mandibular reconstruction,⁹ and it is difficult to perform the surgery as a simultaneous two-team approach. The addition of a karapanzic flap for reconstruction of the esthetic and sphincteric function of the lips is an ideal method regardless of which free flap is used.

The poor color match of the groin skin makes it preferable to place that skin in a more camouflaged area, such as the neck and submandibular region. In patients with cutaneous defects of the lower cheek, such as in patient 5, the cheek defect can be reconstructed by transposing a cervical cutaneous flap into the defect. In the male, this brings hair-bearing tissue to the cheek for additional camouflage. The secondary defect that is created lower in the neck is easily filled by the iliac crest skin paddle. This reconstruction

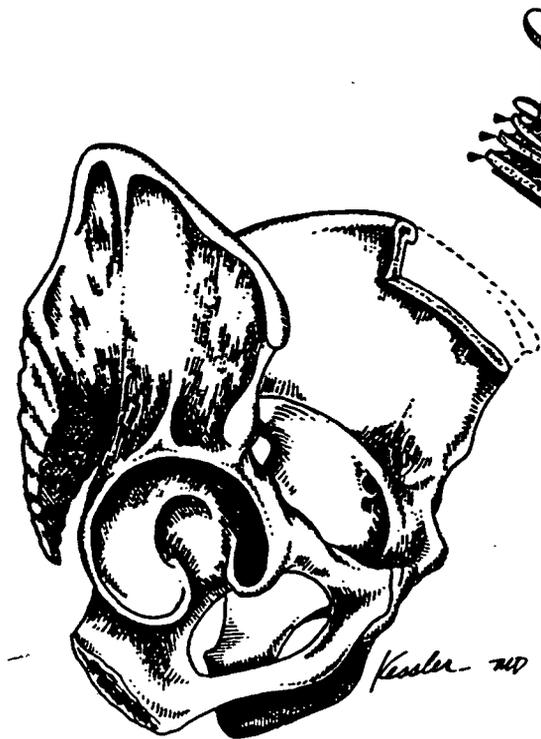
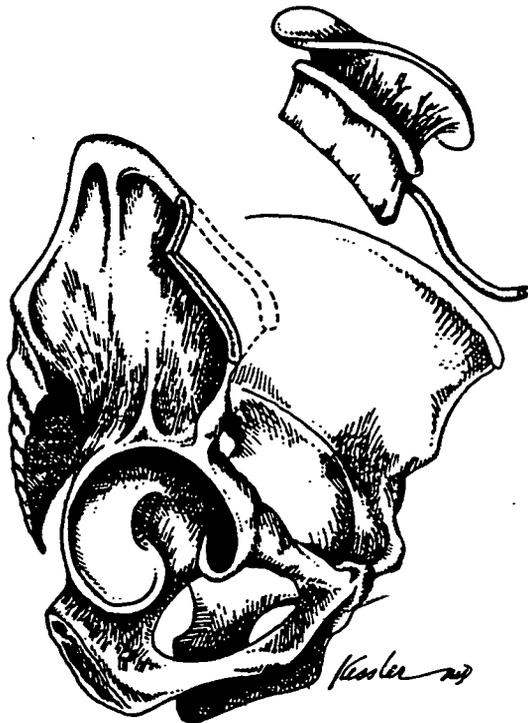


Fig. 15. Top. Reconstruction of the right mandible using the osteocutaneous flap harvested from the left iliac bone. The obligatory muscle cuffs (arrows) add bulk to the skin paddle placed intraorally. This design places the crest at the ridge of the neomandible and the vascular pedicle exits from the angle. Bottom. A segmental defect of the right mandible is reconstructed using an osteocutaneous flap harvested from the right iliac bone. The vascular pedicle exits closer to the midline in closer proximity to recipient vessels in the contralateral neck.



brings color-matched skin to restore the esthetic unit of the cheek and also places the skin paddle in a more camouflaged and better vascularized position in the neck. An alternative method of providing a better color match to the face using the groin skin is to perform a secondary deepithelialization of the skin paddle, which is then covered with a split-thickness skin graft from the supraclavicular region.

CONCLUSION

To date, 44 patients with oromandibular defects have been reconstructed using the iliac crest-internal oblique osteomyocutaneous free flap. A subset of 10 patients with through-and-through defects consisting of mucosa, bone, and skin are reported. This composite free flap is an ideal choice to reconstruct these difficult defects. The tripartite design of the flap

consisting of bone, and separate muscle and skin flaps provides the necessary flexibility to restore the complex geometry of the region. The mobility and color of the skin paddle are the limiting factors in this technique. A number of surgical options are proposed for managing these limitations. In the majority of patients with composite defects of bone, mucosa and skin, the internal oblique-iliac crest flap is the best method of reconstruction.

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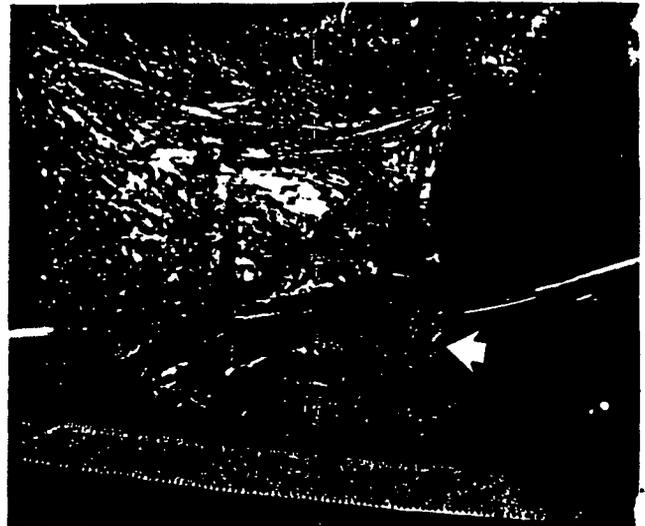


Fig. 16. Cephalad view of the internal oblique muscle. Ascending branch of the DCIA is indicated by dark arrows and the iliac bone by white arrows. Back cut is made from distal to proximal parallel to the iliac crest, but preserving a 3-cm cuff of internal oblique attached to the crest.

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Osteocutaneous Free Scapular Flap for One-Stage Mandibular Reconstruction

Shan R. Baker, MD, Michael J. Sullivan, MD

• Developments in microvascular surgery have overcome much of the problem of inadequate vascularity encountered by more conventional methods of mandibular reconstruction. The advantage of the osteocutaneous scapular flap compared with earlier described revascularized bone grafts or composite flaps is its greater versatility in reconstruction of soft-tissue defects of the oral cavity concomitant with mandibular reconstruction. This is primarily related to the independent vascular pedicles of the cutaneous and osseous portions of the flap. This flap is our preferred method of reconstructing mandibular defects.

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Ablation of extensive oral cavity tumors frequently results in large defects of mandibular bone and soft tissue. In the past, such defects required soft-tissue augmentation before mandibular restoration. Regional flaps were relied on for reconstruction of the soft-tissue deficit and to nourish subsequent bone grafts. Even with the use of pedicled skin flaps, good results were difficult to

obtain because such flaps frequently did not provide adequate vascularity for bone grafts. Also, surgeons frequently made no attempt to reconstruct lateral mandibular defects because the "functional deficit" did not appear to warrant a multiple-stage reconstructive effort often fraught with oral cutaneous fistulas and ultimate failure of the bone graft.

To overcome the problem of inadequate vascularity of soft tissues, pedicled composite flaps containing bone have been used by some clinicians for mandibular reconstruction,^{1,2} but these techniques have also met with limited success. This was primarily related to the need for such bone to be nourished solely on the relatively poor blood supply it received through muscle insertions or a limited periosteal vascular supply.

Developments in microvascular surgery have overcome much of the problem of inadequate vascularity encountered by more conventional methods of mandibular reconstruction following tumor ablation. Microvascular surgery has enabled one-stage transfer of revascularized free bone grafts with or without attached skin flaps.

REVASCULARIZED RIB

The rib was used in the first experiments involving free revascularized bone transplantation³ as well as the

first clinical experience using revascularized bone grafts for reconstruction of mandible defects.^{4,5} Rib may be transferred with the posterior intercostal artery and vein acting as donor vessels providing an endosteal vascular supply. An endosteal blood supply is preferable, but not mandatory for maintaining bone viability. The posterior approach to gain access to the posterior intercostal vessels and nutrient branch to the rib is difficult, time-consuming, and may have the risk of interfering with the blood supply to the spinal cord.⁶ For this reason, most microsurgeons prefer revascularizing rib grafts only on their periosteal blood supply accessing the rib through a lateral or anterior exposure. The anterior approach requires significantly less dissection than the posterior approach and was first described by Mc Kee⁶ and then by Ariyan and Finseth.⁷ Ariyan⁸ documented the viability of rib transferred only on its periosteal blood supply by the use of fluorochrome markers and histologic examination of rib several months after microvascular transfer. In support of this, animal studies have confirmed that revascularized periosteal grafts (without accompanying bone) are osteogenic and have bone-forming properties.⁹ The major objections to the routine use of the revascularized rib for mandibular reconstruction are the limited amount of cortical bone available, the need for an intra-

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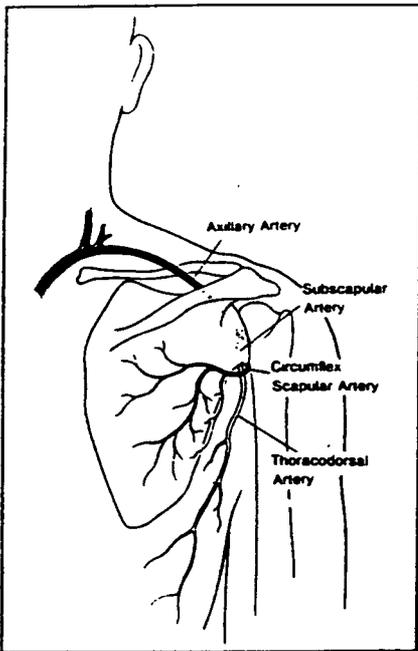


Fig 1.—Vascular anatomy of scapular region.

thoracic procedure, and the short vascular pedicle that can be harvested with the graft.

REVASCULARIZED METATARSAL

The second metatarsal in conjunction with the dorsalis pedis flap has been another source of revascularized bone grafts for mandibular reconstruction. The dorsalis pedis flap is nourished by the dorsalis pedis artery, which is a continuation of the anterior tibial artery beneath the inferior extensor retinaculum onto the dorsum of the foot. This vessel supplies the overlying skin on the foot and the underlying periosteum of the metatarsal bones. Leeb and colleagues¹⁰ first reported the use of the dorsalis pedis free flap (without bone) for intraoral reconstruction. Subsequently, others have used the flap for reconstruction of oral cavity defects.¹¹ More recently, the second metatarsal bone

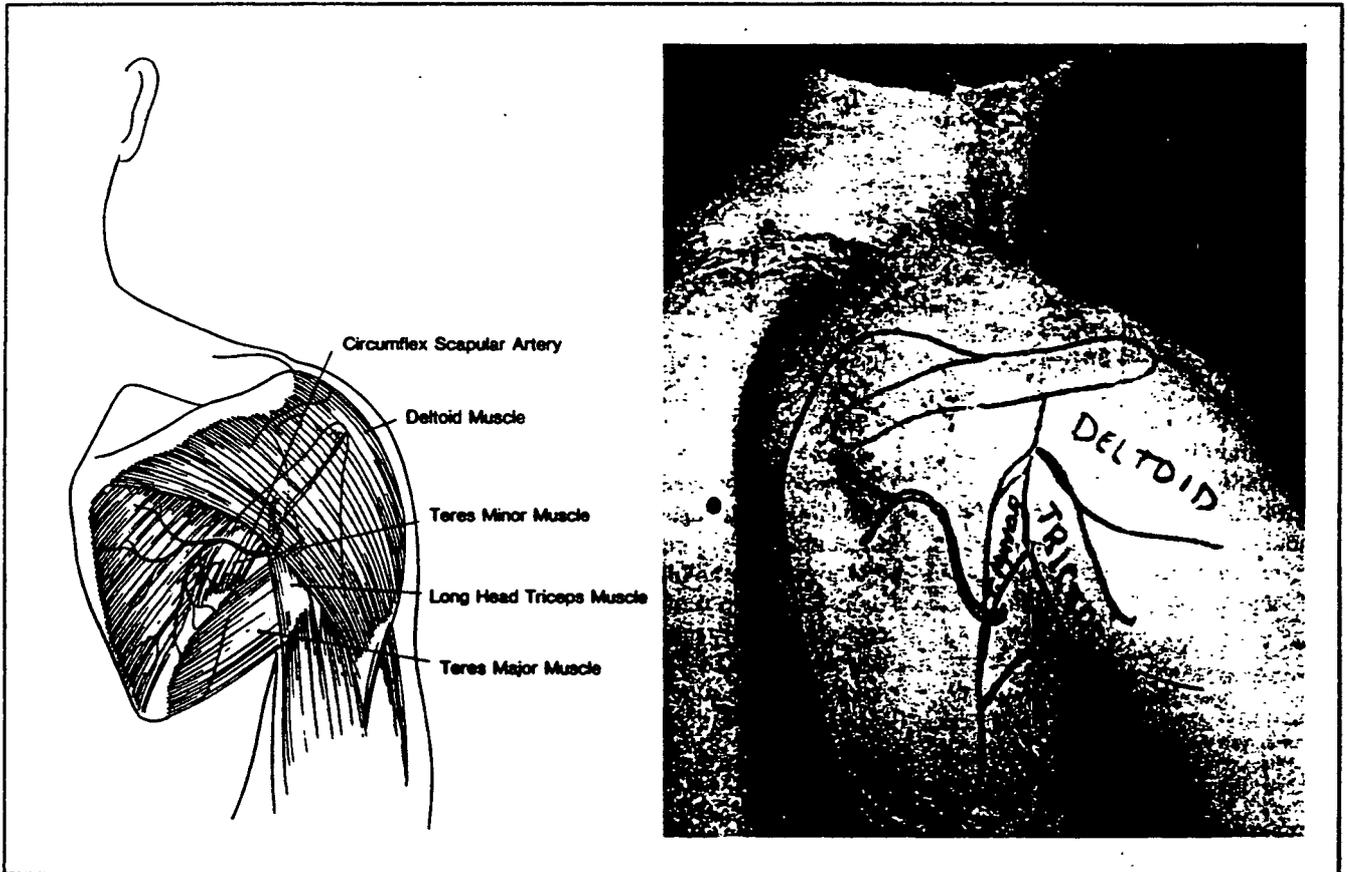
has been transferred accompanied by the skin as a composite flap for one-stage mandibular reconstruction.^{12,13}

The dorsalis pedis osteocutaneous flap provides a thin supple skin flap of reasonable size (6 × 10 cm) to reconstruct most intraoral defects. The length of the vascular pedicle is perhaps the flap's greatest advantage in that the pedicle can be made as long as necessary by extending the dissection of the anterior tibial artery several centimeters up into the lower leg.

The vascular supply to the metatarsal through two or three nutrient vessels is excellent, allowing an osteotomy to be performed without compromising bone survival.

The disadvantages of the dorsalis pedis osteocutaneous flap are numerous and prevent the routine use of this flap for mandibular reconstruction. The average size of the second meta-

Fig 2.—Left, Circumflex scapular artery and vein emerge from lateral aspect of scapula through muscular triangle. Right, This space is usually palpable 2 cm superior to posterior axillary crease.



tarsal is 7 cm; thus, only smaller, more limited mandibular defects can be repaired. The vascular anatomy of the flap can be variable due to arteriosclerotic disease that may jeopardize the viability of the foot should the flap be harvested in instances in which the posterior tibial artery is not patent. The donor site remains the major disadvantage. The site must be skin grafted and the foot placed in a splint and elevated for the first ten to 14 days postoperatively, preventing

early ambulation. Despite this, skin grafts heal poorly on the paratendon and may subsequently break down. Also, patients have permanent loss of sensation to the dorsum of the foot and some have persistent foot edema.

REVASCULARIZED RADIUS

The radial forearm flap without bone has proved to be a reliable free flap for intraoral reconstruction.¹⁴ Recently, the radial forearm flap with a segment of vascularized radius has been used for mandibular reconstruction.¹⁵ The radial forearm flap is supplied by the radial artery that lies subcutaneously for much of its length in the forearm supplying branches to the overlying skin and underlying periosteum of the radius via an intermuscular septum that separates the flexor and extensor compartments of the arm. Soutar and Widdowson¹⁵ have shown that a section of radius 10 to 12 cm in length and up to 40% of the circumference can be harvested with skin of the forearm. The length of bone that can be harvested is limited by the muscular insertions of the pronator teres and the brachioradialis. They have demonstrated histologically viable active bone in the transferred graft up to one year postoperatively. The advantages of the radial forearm osteocutaneous flap include ease of dissection, the long

vascular pedicle consisting of relatively large vessels, and the thin, supple, abundant skin available on the volar aspect of the forearm.

The radial forearm donor site must be skin grafted. Similar to donor sites of the dorsalis pedis flap, delayed healing may be seen (35% of cases)¹⁵ due to poor healing of skin grafts placed on exposed tendons. To enhance healing, the arm must be immobilized in a full-length plaster splint for three to four weeks. Another disadvantage is risk of pathologic fracture of the radius subsequent to harvesting the bone graft. The greatest disadvantage of the radial forearm osteocutaneous flap, however, is the limited amount of bone (10 to 12 cm) available as a graft. Besides, the bone graft is straight and narrow, providing little cancellous bone and the need for multiple osteotomies when restoring the anterior mandibular arch.

REVASCULARIZED ILIUM

The large amount of cortical bone available from the iliac crest affords structural superiority compared with rib grafts that have limited cortical bone, making ilium a desirable donor site for revascularized bone. The ilium is supplied by the following: (1) the ascending branch of the lateral femoral circumflex artery that courses upward under the tensor fascia lata;

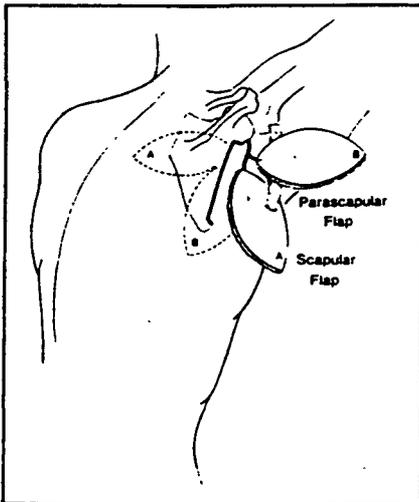


Fig 3.—Horizontal and/or descending branch of circumflex scapular artery can be used to nourish skin flap accompanied by segment of scapular bone.



Fig 4.—Cadaver dissection of scapular cutaneous flap. Left, Topographic anatomy. Note muscular triangle 2 cm above posterior axillary crease. Center, Skin flap and vascular pedicle dissected to muscular triangle. Right, Vascular pedicle of approximately 10 cm in length can be developed.

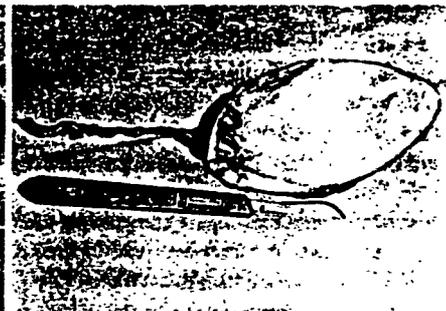




Fig 5.—Left, Unfixated cadaver. Right, Following india ink injection of subscapular artery. Note ink staining of large cutaneous region over posterior aspect of scapula.



Fig 6.—In larger men, bone segment 14 cm in length can be transferred on vascular pedicle from lateral aspect of scapula. Additional 3 to 4 cm of length can be obtained along medial border of scapula near inferior tip. Dotted line indicates approximate site of osteotomy necessary for reconstruction of anterior arch of mandible. Solid line indicates usual sites of bone cuts to harvest bone graft.

(2) the superior division of the deep branch of the superior gluteal artery; and (3) the deep circumflex iliac artery.¹⁶ The superficial circumflex iliac artery also contributes to the ilium by extending superiorly and laterally from the femoral artery to the region of the anterosuperior iliac spine and beyond the spine to supply the skin of the area and the underlying iliac crest through a limited periosteal blood supply. This vessel has been used to reconstruct the mandible

successfully.¹⁷ Cadaver dissections and clinical experience by Taylor and Watson¹⁶ suggest that a segment of iliac crest 8 cm in length can be raised beyond the anterosuperior iliac spine and can be adequately nourished through the periosteal blood supply provided by the superficial circumflex iliac vessels.

One of us (S.R.B.)¹⁸ has had experience with reconstructing the mandible with revascularized iliac crest through the use of the free tensor

fascia lata osteomyocutaneous flap based on the lateral femoral circumflex artery. The artery to the tensor fascia lata muscle branches superiorly and inferiorly, sending perforators to the skin that overlies the muscle. The superior division of the artery supplies the upper one third of the muscle and through the insertions of this muscle, vessels enter the iliac crest.¹⁹ This flap has a consistent vascular pedicle that can be dissected to a length of 10 cm. Large portions of the

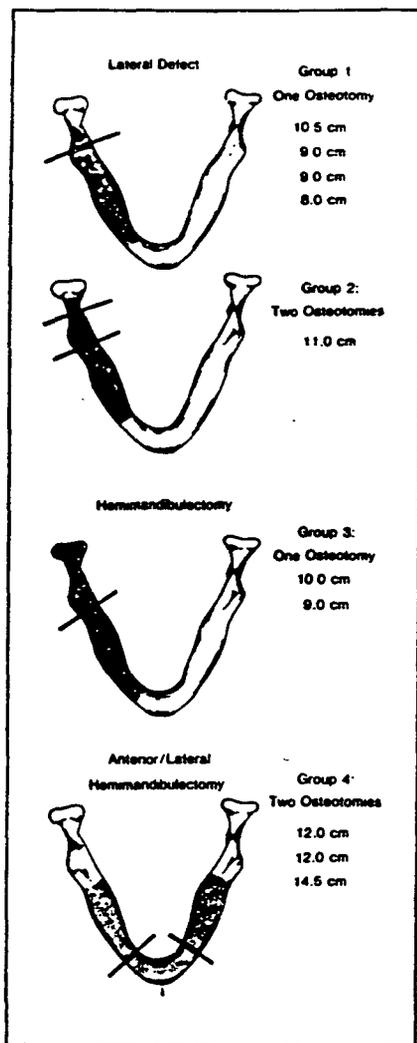


Fig 7.—Mandibular reconstruction.

skin may be included in the flap, when necessary. The tensor fascia lata flap is readily accessible, and the donor defect may be closed primarily. The major objection to this flap, however, is the rather tenuous blood supply offered to the crest through the muscular insertions of the tensor muscle. In addition, the vascular pedicle enters the muscle 8 cm below the iliac crest. The superior branch of the nutrient vessel cannot be isolated from the surrounding muscle; thus a large composite flap 8 cm in length must be harvested if bone is to be transferred with the flap, making it excessively bulky for use intraorally.¹⁸

Taylor et al²⁰ have demonstrated that the deep circumflex iliac artery

supplies a much larger area of the ilium than either the superficial circumflex iliac or lateral femoral circumflex artery and thus provides a better vascular pedicle on which to base free composite flaps containing ilium. Taylor and colleagues²¹ and others²²⁻²⁵ have reconstructed large bone defects (as large as 14.5 cm in length) successfully with revascularized iliac bone grafts based on the deep circumflex system.

One of us (S.R.B.)²⁶ has used groin flaps based on the deep circumflex iliac artery and vein for one-stage mandibular reconstruction and agrees that this system represents the best vascular pedicle on which to base free composite flaps that use iliac bone. The deep circumflex iliac vessels offer several advantages compared with the other vascular pedicles described. The vessels are larger than the superficial groin vessels, permitting greater ease in anastomoses and providing a more reliable blood flow. A 9-cm vascular pedicle can be dissected to permit ease in transferring the flap to recipient areas.

Also, the course of the vessels along the rim of the inner cortical table of the iliac crest allows contouring of the bone graft. This is particularly useful for restoration of the anterior mandibular arch.

There are problems, however, in attempting to use the deep circumflex iliac vessels. Anastomoses with overlying skin vasculature occasionally may be poor, and the vascularized cutaneous zone is often located considerably lateral to the anterosuperior iliac spine. Thus, a standard inguinal flap with the anterosuperior spine as its geometric center may not be supported by the vasculature from the deep system. In addition, extensive dissection is required to harvest the flap, necessitating division of the insertions of a greater part of the lower abdominal muscles and sectioning part or all of the inguinal ligament. Perhaps the greatest objection of the groin flap from the standpoint of mandibular reconstruction, whether based on the deep or superficial systems, is the excessive bulkiness and poor maneuverability of the skin flap relative to the axis of the bone

graft because of the need for direct apposition of the skin island to the underlying bone.

REVASCULARIZED SCAPULA

A recently reported source of revascularized bone for mandibular reconstruction is the scapula.²⁶ Teot et al²⁷ suggested the scapula as a possible source of revascularized bone in 1981 and several clinicians, including us, have successfully transferred cutaneous free flaps from the scapular region without accompanying bone.²⁷⁻³¹ We have found the cutaneous scapular flap to be our preferred free flap for resurfacing large skin and mucosal defects that do not require a large amount of bulk replacement. Swartz et al²⁸ reported the use of a cutaneous flap in combination with a bone segment from the lateral aspect of the scapula for mandibular reconstruction in 1986. This report stimulated us to investigate the use of this composite flap for one-stage mandibular reconstruction. It seemed to us that this flap had advantages similar to the osteomyocutaneous groin flap based on the deep circumflex system in that it provided a long vascular pedicle consisting of relatively large-caliber donor vessels that richly nourish a corticocancellous bone graft. In addition, the scapular flap is without the bulkiness and limited maneuverability of the accompanying skin island observed with groin flaps.

ANATOMY

The anatomy of the scapular flap has been described.³¹ Briefly, the subscapular artery originates from the third portion of the axillary artery at the inferior border of the subscapularis muscle and soon divides into two branches, a descending branch, the thoracodorsal artery, and a posterior branch, the circumflex scapular artery (Fig 1). This posterior branch extends toward the lateral aspect of the scapula deep to the teres minor and teres major muscles. The circumflex scapular artery emerges through a triangular-shaped space formed by the long head of the triceps laterally, the teres major muscle below, and the teres minor muscle above (Fig 2). Before the circumflex scapular artery emerges from this space, it provides

Reconstruction of Ten Patients With Mandibular Defects*						
Patient Age, y	Tumor	Flap Skin Area, cm	Flap Bone Segment, cm	Radiotherapy	Surgical Complications	Follow-up
58	T4, N2b SCC, floor of mouth	10 X 12	12	Postoperative	Seroma	NED 10 mo
31	T4, N0 SCC, floor of mouth	10 X 12	12	Postoperative	None	NED 9 mo
27	Liposarcoma, lower jaw, secondary reconstruction	6 X 6	10	Primary	Delayed wound infection	NED 8 mo
42	Malignant fibrous histiocytoma, mandible, secondary reconstruction	6 X 6	9	Preoperative	Hematoma	NED 5 mo
73	T2, N0 SCC, mandibular alveolus, secondary reconstruction	14 X 6	10.5	None	None	NED 4 mo
73	Ameloblastoma, mandible	12 X 6	11	None	None	NED 4 mo
68	T3, N0 SCC, mandibular alveolus	6 X 6	9	Postoperative	Seroma	NED 3 mo
83	T3, N2 SCC, oral pharynx	6 X 6	9	Primary brachytherapy	Superficial skin necrosis	Died postoperative day 12; pancreatitis
47	T4, N0 SCC, floor of mouth	16 X 8	14.5	Primary	Necrosis distal 3 cm of bone graft	Nonunion sequestration distal graft
70	T3, N0 SCC, mandibular alveolus	10 X 3.5	8	Postoperative	Nonflap skin necrosis	Nonflap skin débridement; NED 1 mo

*Bone scans demonstrated radioactive uptake in the bone grafts of all patients. SCC indicates squamous cell carcinoma; NED, no evidence of disease.

several branches to the lateral border of the scapula (Fig 1). These branches richly supply the periosteum of the scapula and the muscles inserting into this region. As the circumflex scapular artery emerges from the triangular space, it divides into a horizontal and a descending fasciocutaneous branch that supplies the skin on the posterior aspect of the back. The horizontal (transverse) branch runs approximately parallel and 2 cm below the spine of the scapula toward the spinous processes of the vertebrae. The descending branch extends approximately parallel and 2 cm medial to the lateral border of the scapula toward the tip of the scapula (Fig 3). The arteries are always accompanied by one and sometimes two venae comitantes that follow the artery and drain into the axillary vein.

The pedicle length of the scapular flap from the scapular border to the axillary artery is approximately 6 cm and the caliber size of the artery is in the range of 2.0 to 3.0 mm. The pedicle varies from 2 to 3 cm in length from the scapular border to the overlying skin flap.²⁴ This additional length is important because the skin flap has an independent vascular pedicle from that of the bone allowing three-dimensional spatial positioning (Fig 3). When bone is not harvested with the skin flap, a pedicle 9 cm in length can be developed (Fig 4).

To our knowledge, the upper limits in size of the cutaneous portion of the osteocutaneous scapular flap have not been described; however, flaps as large as 14 X 21 cm have been transferred successfully.²² The skin flap can be based on the horizontal (scapular) or descending (parascapular) branch of the circumflex scapular artery or both if a larger skin flap is required. We have performed india ink injections of the circumflex scapular artery in fresh cadavers and have observed staining of large cutaneous areas (Fig 5). In general, the cutaneous regions stained by ink were limited superiorly by the spine of the scapula, medially by the midline, laterally by the posterior axillary line, and inferiorly by the tip of the scapula. Because the scapular flap is a fasciocutaneous flap based on a richly supplied fascial layer located beneath the superficial subcutaneous fat with vertical perforators and a subcutaneous vascular plexus, the flap may be debulked of the deep subcutaneous fascia and fat from the peripheral portions of the flap. Also, a number of skin islands could be developed on their underlying fascial blood supply. This makes the scapular flap more versatile in circumstances in which two or more skin islands are needed, such as inside and outside resurfacing of full-thickness cheek defects. Kim et al¹³ have demonstrated that the dorsal

thoracic fascia supplied by the circumflex scapular artery may be transferred without overlying skin as a thin flap that can be covered by a split-thickness skin graft to avoid bulkiness when this is a particularly important objective.

In harvesting an osteocutaneous scapular flap, the lateral border of the scapula consisting of substantial corticocancellous bone measuring 1.5 X 3 cm in thickness with a length of 10 cm in petite women and 14.0 cm in larger men can be transferred on a vascular pedicle. An additional 3 to 4 cm of length can be obtained along the medial border of the scapula near the inferior tip that may allow for reconstruction of the mandibular angle without an osteotomy (Fig 6).²⁴ The central portion of the scapular blade is thin and can be used for reconstruction of the palate or orbital floor while the lateral border can serve as the orbital rim or maxillary alveolus in instances in which reconstruction of the maxilla is necessary.

TECHNIQUE

For mandibular reconstruction, the patient is positioned slightly rotated to provide access to the midline of the back as well as the neck and face. The torso is supported by a vacuum beanbag mattress and the head by a padded Mayfield headrest. The patient is draped to allow access to the upper part of the chest, arm, back, and entire head and neck region.



Fig 8.—Top left, Preoperative photograph of patient with extensive carcinoma of floor of mouth. Top center, Tumor ablation necessitated near-total glossectomy, resection of mandible from angle to angle, and large section of skin from chin. Top right, Free osteocutaneous scapular flap ready for transfer to oral cavity; Center left, View of patient immediately following completion of surgery. Portion of skin flap was used to replace skin of chin. Remaining skin flap used for intraoral reconstruction. Center and center right, Technetium Tc 99m bone scan of reconstructed mandible 48 hours postoperatively. Bottom, Intraoral flap. Patient six months postoperatively.

It is helpful to mark the scapular spine, lateral border of scapula, and the approximate location of the triangular muscular space. This space represents the separation of the teres major and minor muscles as they diverge and is usually palpable 2 cm superior to the posterior axillary crease (Fig 2). A Doppler flowmeter can pinpoint

the vascular pedicle as it emerges through the muscular triangle; however, it is impossible to trace the artery with the Doppler flowmeter more than a few centimeters beyond this site.

Cutaneous flaps are designed to meet the soft-tissue requirements. Generally, flaps 12 cm wide or less are planned transverse-

ly. When larger flaps are required, a transverse scapular and vertical parascapular flap are designed as separate skin islands or as a single bilobe-shaped flap (Fig 3). The donor site for flaps of 12 cm in width can be closed primarily if adjacent skin is adequately mobilized.

The skin flap is elevated above the deep



Fig 9.—Top left, Preoperative photograph of patient with carcinoma of oral cavity with extension into skin of chin (circle). Top center, Intraoral view of cancer. Top right, Surgical ablation necessitated resection of mandible from angle to angle and near-total glossectomy. Center left, Scapular osteocutaneous flap outlined. Center, Free flap ready for transfer to oral cavity. Center right, Lateral view of anterior arch of mandible reconstructed with scapular bone by performing two osteotomies and securing bone segments with interosseous wiring and K-wire. Bottom, Patient six months postoperatively. Concurrently a portion of cutaneous flap was used to reconstruct skin of chin and second portion for floor of mouth. This was accomplished by developing two independent skin islands based on underlying fascial blood supply.

fascia covering the infraspinatus muscle. Dissection proceeds rapidly from medially to laterally. Dissection is more cautious as the lateral border of the scapula is approached where care is taken not to injure the easily observed circumflex scapular artery as it extends peripherally from the muscular triangle. At this point in the dissection, the teres major, teres minor, and the long head of the triceps are identified. When an osteocutaneous flap is planned, the insertion of the teres major muscle along the inferior lateral border of the scapula is transected, taking care not to injure the small multiple branches to the bone arising from the vascular pedicle. Continued dissection of the circumflex scapular artery and venae comitantes all the way to the axillary artery and vein is accomplished by ligating all muscular branches except the thoracodorsal vessels. We have found that vascular clips are particularly useful for these ligations. Once the vascular pedicle has been skeletonized, a vertical incision is made to bone 3 cm medial to the lateral scapular border through the infraspinous muscle. Using a periosteal elevator, the periosteum is stripped medially sufficiently to enable an osteotomy of the scapular blade. The bone is cut vertically along the transition between the thick lateral border and the thin scapular blade. The osteotomy is modified if the scapular tip is to be included. A transverse osteotomy is placed just below the glenoid fossa taking care not to injure the joint structures (Fig 6). A second transverse osteotomy is placed near the tip of the scapula. The location of this osteotomy is dependent on the length of bone graft necessary for reconstruction. When reconstructing the mandibular arch or angle, an additional 1 cm of bone should be added to the bone graft for each anticipated osteotomy necessary for restoring the normal configuration of the mandible. Following the osteotomies, the bone segment is mobilized solely on its vascular pedicle by transecting close to the bone graft the muscle origins of the teres minor, serratus, and portions of the subscapularis.

The vascular pedicle of the composite flap is left attached and the flap is displaced sufficiently to allow reconstitution of the donor defect by reattaching all muscle origins to the remaining scapular blade. Nonabsorbable sutures are placed through drill holes placed in the remaining scapular blade and tied to the various muscles.

After the recipient site has been prepared, the pedicle of the flap is severed and the flap is transferred to the oral cavity. In most cases, we have ligated the thoracodorsal artery and vein to gain additional

length for the vascular pedicle; however, the pedicle can be transected distal to this junction preserving the blood supply to the latissimus dorsi muscle. A scapular flap can be harvested concomitant with a latissimus dorsi myocutaneous flap by preserving the thoracodorsal vessels to nourish the myocutaneous flap since both flaps are nourished by the same common parent vessels, the subscapular artery and vein. In this case the subscapular artery and vein act as donor vessels for both flaps in instances in which the surgeon requires a "mega flap." End-to-end anastomoses of the donor artery to a branch of the external carotid artery are accomplished. We prefer end-to-side anastomoses of the donor vein to the internal jugular vein when available.

Anterior mandibular arch and angle defects require appropriately located wedge-shaped osteotomies performed with a small reciprocating saw. Osteotomies are preferred over osteotomies because they allow the bone segments to fit together so as to reduplicate the contour of the mandible properly. Care must be taken to preserve the periosteal sleeve for perfusion of the segment distal to the bone cut by creating a small tunnel between the bone and periosteum to accommodate the saw blade. All osteotomies are stabilized by interosseous wiring in addition to short segments of threaded K-wires secured across the junction of the bone segments. Likewise, the bone graft is secured to the remaining mandibular segments by interosseous wiring plus threaded K-wires. External fixation has not been necessary since the bone graft is vascularized and heals rapidly much like a fracture, thus avoiding prolonged external fixation.

POSTOPERATIVE CARE

The postoperative care involves implementing physical therapy soon after surgery. The shoulder is immobilized in an arm sling for two days. On the third postoperative day, the patient is placed on a regimen of range-of-motion exercises that are increased in vigor throughout the remaining hospital stay and on discharge home. Full shoulder range of motion has been achieved by all patients who have followed this regimen.

CLINICAL EXPERIENCE

Overall, our clinical experience to date has included reconstruction of ten patients with mandibular defects (Table). All patients were treated for defects resulting from cancer abla-

tion. Seven of the ten patients had reconstructions primarily at the time of mandibulectomy. Bone and soft-tissue requirements varied dependent on the size of the bone defect and the need for soft-tissue restoration. There were no flap failures. The follow-up period from surgery is short, with the longest follow-up time being ten months. Bone union was achieved in all but one patient followed up for more than three months. Patient ages ranged from 27 to 83 years, with a mean age of 52 years. One patient had received preoperative radiation therapy (42 Gy [4200 rad]). Another patient was a radiation failure one year after brachytherapy. A third patient reconstructed secondarily had received full-course postoperative radiotherapy ten years earlier after a hemimandibulectomy for a liposarcoma.

A positive bone scintigraphy with technetium Tc 99m diphosphonate performed within the first week following transfer of a free flap indicates microvascular patency and probably indicates viable osteocytes and osteoblasts.^{24,25} Scintigraphy is unreliable in evaluating free revascularized bone grafts if they are performed later than one week postoperatively. In our series, all patients underwent bone scans two to four days postoperatively, and in all instances, the scan demonstrated radioactivity within the bone graft.

DONOR DEFECT

Transferred bone grafts ranged from 8 to 14.5 cm. In all but one case, a skin flap was transferred with the bone graft. The one exception occurred when the skin was inadvertently detached from the bone during harvest of the flap. The bone graft was successfully transferred. Fortunately, sufficient local tissue was available for coverage of the bone graft without the need of a skin flap. One flap was trimmed to 3 × 1 cm after transfer in one patient for monitoring the viability of the tissue transfer since this patient required minimal soft-tissue augmentation. The largest skin flap transferred measured 16 × 8 cm. All donor site defects were closed primarily.

Perhaps surprisingly, we have thus

far observed little functional disturbance of the arm or shoulder among patients who were operated on. Patients are started on a regimen of range-of-motion exercises on the third postoperative day and this is continued for one month. Only one patient has some restriction in full abduction of the shoulder, presumably because of failure to continue the prescribed exercises on discharge from the hospital. One additional patient has some persistent discomfort in the shoulder six months postoperatively, although there is no demonstrable limitation in motion.

Figure 7 groups the patients according to location of the mandibular defect and number of osteotomies performed. Three patients underwent restoration of the entire anterior mandibular arch and the body of the mandible from angle to angle. Two of the three patients required near-total glossectomy and resection of a large area of skin of the chin. In both instances, a portion of the cutaneous flap was used to resurface the oral cavity. A second portion of the flap was used to restore the skin loss of the chin (Figs 8 and 9). This was accomplished by creating two independent skin islands made possible by the fact that the scapular flap is a fasciocutaneous flap. Thus, each skin island receives a blood supply from the underlying fascia and is not dependent on a direct cutaneous artery located in the immediate subcutaneous fat.

Five patients had reconstruction of the entire body and portions of the ascending ramus of the mandible. All bone grafts and osteotomies were stabilized with interosseous wiring and reinforced with threaded K-wires with the exception of one patient who had only interosseous wiring. That patient developed nonunion necessitating early surgical exploration and fixation of the loose segments. Systematic roentgenographic analysis has not been performed postoperatively because sufficient time has not elapsed to demonstrate undisputable callus formation in most patients.

COMPLICATIONS

The significant complications encountered in our series are listed in

the Table. All bone transfers have thus far been successful with a limited follow-up of one to seven months. Complications included a postoperative seroma in two patients, a wound hematoma in one patient, and superficial slough of the skin flap without exposure of the bone graft in one patient. This patient died in the early postoperative period of acute pancreatitis. One patient having had radiation therapy to the jaw ten years before free-flap transfer has developed a delayed wound infection three months postoperatively that is being treated conservatively. This infection probably represents osteitis of the bone graft or osteoradionecrosis of the remaining mandible.

COMMENT

The advent of microvascular surgery has ushered in a new approach to immediate reconstruction of the mandible following surgical resection of neoplasms. Our length of follow-up is short; however, despite this, we are impressed with the functional and cosmetic rehabilitation we have been able to achieve with use of the free osteocutaneous scapular flap. Follow-up is insufficient to predict the possibility of allowing patients to be fitted for dentures; however, Swartz et al²⁴ have noted that four patients in their reported series are wearing dentures. We believe this is a likely possibility because the bone successfully transferred by microvascular surgery remains as a living graft and such bone grafts are remarkable in terms of their stability. They appear to form a strong bony union with the remaining mandibular segments within six to eight weeks after transfer and continue to maintain their degree of radiopacity.^{18,25,29}

The scapular osteocutaneous flap has become our preferred source of bone for microvascular reconstruction of mandibular defects measuring 14 cm or less in length. The flap is easy to harvest and has a reliable lengthy vascular pedicle consisting of large-caliber vessels providing ease in anastomoses. In most instances, tissue bulk is not excessive and the donor site morbidity and deformity are acceptable and preferable compared with other donor sites. The upper lim-

it in size of the skin flap has not been defined, but large skin areas can be transferred when both cutaneous branches of the circumflex scapular artery are included with the flap. Also, the scapular flap can be harvested together with a latissimus dorsi myocutaneous flap enabling the capability of transferring a mega flap if the reconstruction needs require a massive quantity of soft tissue. The scapular flap has the same advantages as the groin flap based on the deep circumflex iliac system because it provides an excellent source of highly vascularized bone. In addition, because the scapular skin island and the bone have separate vascular pedicles, a three-dimensional maneuverability of the flap relative to the bone significantly facilitates the ease of reconstruction of the oral cavity.

The minor disadvantages of the flap are the absence of a cutaneous nerve preventing the possibility of transferring an innervated flap, a limited quantity of bone of up to 14 cm in length, and the donor site scar that may widen in some patients. Similar to all bone grafts transferred by microvascular surgery, osteotomies or osteotomies are frequently necessary to simulate the contour of the mandible, especially when reconstructing the arch.

CONCLUSION

The advantage of the osteocutaneous scapular flap compared with earlier described free flaps is its greater versatility in reconstruction of soft-tissue defects of the oral cavity concomitant with mandibular reconstruction. This is primarily related to the independent vascular pedicles of the cutaneous and osseous portions of the flap. The use of the scapular osteocutaneous flap is our preferred method of reconstructing mandibular defects.

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AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

MAXILLOFACIAL SURGERY

Repair, Revision, or Reconstruction - Head:

These codes describe procedures performed on adolescents to correct congenital anomalies. The services are very intense and are proportional to skull base surgery and other neurosurgical procedures in physician work. Elective procedures to treat congenital defects are often more difficult than post-traumatic cases as turning abnormal anatomy into normal anatomy requires more planning than restoring injured normal anatomy to normal anatomy. Specialty Advisors described the work involved in each of these services in detail using diagrams that are included in the attached material. Codes 21137-21155 and 21172-21188 were based upon medians and means of a survey of otolaryngologists, maxillofacial surgeons, and plastic surgeons.

Codes 21159 and 21160 represent the most difficult procedures. These services are infrequently performed as there is a high infection rate which may lead to bone loss. A building block approach was used to determine an RVW for codes 21159 and 21160. Procedure 21159, which is actually a combination of 21154 (Reconstruction midface, LeFort III) and 21175 (Reconstruction orbit/forehead), is also similar to procedures 21436 (Repair craniofacial fracture); 61552 (Release of skull seams), and 15732 (Muscle-skin flap, head/neck) combined. Procedure 21160, which is actually a combination of 21154 (Reconstruction midface, LeFort III), 21175 (Reconstruction orbit/forehead), and 21145 (Reconstruction midface, LeFort I), is also similar to procedures 15755 (Microvascular free flap), 61552 (Release of skull seams), 21145 (Reconstruction midface, LeFort III), and 15732 (Muscle-skin flap, head/neck) combined.

Vestibuloplasty:

Vestibuloplasty is typically performed after tumor resection or in trauma cases. RVW recommendations for codes 40840 - 40845 are based upon medians of a survey of maxillofacial and plastic surgeons. Anterior and posterior vestibuloplasty have identical physician work. These procedures are more complicated than adjacent tissue transfer or rearrangement (code 14060, 8.25 RVW) because a splint is required. Code 40843 (posterior, bilateral) is twice as difficult as 40842 because it is bilateral. Vestibuloplasty, entire arch (code 40844) is essentially codes 40840 and 40843 combined. A complex vestibuloplasty (code 40845) is essentially procedures 40840, 40843, and 40844 combined.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
Repair, Revision, or Reconstruction - Head				
21137	Reduction forehead; contouring only	090	12.00	11.84
21138	contouring and application of prosthetic material or bone graft (includes obtaining autograft)	090	15.00	14.81
21139	contouring and setback of anterior frontal sinus wall	090	18.00	17.77
21150	Reconstruction midface, LeFort II; anterior intrusion (eg, Treacher-Collins Syndrome)	090	25.00	24.68
21151	any direction, requiring bone grafts (includes obtaining autografts)	090	28.00	27.64
21154	Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); without LeFort I	090	30.00	29.61
21155	with LeFort I	090	34.00	33.56
21159	Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (eg, mono bloc), requiring bone grafts (includes obtaining autografts); without LeFort I	090	42.00	41.45
21160	with LeFort I	090	46.00	45.40
21172	Reconstruction superior-lateral orbital rim and lower forehead, advancement or alteration, with or without grafts (includes obtaining autografts)	090	27.50	27.14
21175	Reconstruction, bifrontal, superior-lateral orbital rims and lower forehead, advancement or alteration (eg, plagiocephaly, trigonocephaly, brachycephaly), with or without grafts (includes obtaining autografts)	090	33.00	32.57
21179	Reconstruction, entire or majority of forehead and/or supraorbital rims; with grafts (allograft or prosthetic material)	090	22.00	21.71
21180	with autograft (includes obtaining grafts)	090	25.00	24.68
21181	Reconstruction by contouring of benign tumor of cranial bones (eg, fibrous dysplasia), extracranial	090	15.50	15.30

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
21182	Reconstruction of orbital walls, rims, forehead, nasoethmoid complex following intra and extracranial excision of benign tumor of cranial bone (eg, fibrous dysplasia), with multiple autografts (includes obtaining grafts); total area of bone grafting less than 40 cm2	090	32.00	31.58
21183	total area of bone grafting greater than 40 cm2 but less than 80 cm2	090	35.00	34.55
21184	total area of bone grafting greater than 80 cm2	090	38.00	37.51
21188	Reconstruction midface, osteotomies (other than LeFort type) and bone grafts (includes obtaining autografts)	090	22.00	21.71
Vestibuloplasty				
40840	Vestibuloplasty; anterior	XXX (090 - recommended)	10.00	9.87
40842	posterior, unilateral	XXX (090 - recommended)	10.00	9.87
40843	posterior, bilateral	XXX (090 - recommended)	14.00	13.82
40844	entire arch	XXX (090 - recommended)	18.50	18.26
40845	complex (including ridge extension, muscle repositioning)	XXX (090 - recommended)	21.60	21.32

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
Dentoalveolar Structures				
41822	Excision of fibrous tuberosities, dentoalveolar structures	XXX (010 - recommended)	No Recommendation at this time	No Recommendation at this time
41823	Excision of osseous tuberosities, dentoalveolar structures	XXX (010 - recommended)	No Recommendation at this time	No Recommendation at this time
41828	Excision of hyperplastic alveolar mucosa, each sextant or quadrant (specify)	XXX (010 - recommended)	No Recommendation at this time	No Recommendation at this time
41830	Alveolectomy, including curettage of osteitis or sequestrectomy	XXX (090 - recommended)	No Recommendation at this time	No Recommendation at this time
41872	Gingivoplasty	XXX (090 - recommended)	No Recommendation at this time	No Recommendation at this time
41874	Alveoplasty	XXX (010 - recommended)	No Recommendation at this time	No Recommendation at this time

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21137 Global Period: 090

CPT Descriptor: Reduction forehead; contouring only

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent who underwent correction of plagiocephaly in infancy, presents for contouring of forehead without osteotomies or grafts.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family and obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Reopening the coronal incision and dissection of scarred operative site with protection of the frontal branches of the facial nerves and supraorbital nerves, as well as a possibility of dissection around bone gaps with exposed dura. Exposure of irregular forehead areas with contouring using high speed drills and burrs. Layered closure of coronal incision with possible revision of widened scar.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
12.39	15732	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)
16.01	21255	Reconstruction of zygomatic arch and glenoid fossa with bone and cartilage (includes obtaining autografts)
14.32	21365	Open treatment of complicated, (eg, comminuted or involving cranial nerve foramina) fracture(s) of malar area, including zygomatic arch and malar tripod; with internal fixation and multiple surgical approaches

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Procedure 21137 is very similar in terms of work to 21255, except that autografts are not obtained. The dissection in procedure 21365 is similar, but there is less work once the area is exposed.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties =2 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 45 High: 300

Median Pre-Service Time: 30 Median Post-Service Time: 60

Length of Hospital Stay: 2

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-15

Other Data: Mean RVW was 12.00

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21138

Global Period: 090

CPT Descriptor: Reduction forehead; contouring and application of prosthetic material or bone graft (includes obtaining autograft)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent one year following frontal skull fracture with minor bone loss presents for forehead reconstruction using cranial, rib, or iliac bone grafts.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Reopening the coronal incision and dissection of scarred operative site with protection of the frontal branches of the facial nerves and supraorbital nerves, as well as a possibility of dissection around bone gaps with exposed dura. Exposure of irregular forehead areas with contouring using high speed drills and burrs. Application of prosthetic material or harvesting and placement of bone grafts. Layered closure of coronal incision and donor site incision, with possible revision of widened scar.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure. Visit time is slightly higher than with procedure 21137 because of increased care of two operative sites.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

16.01	21255	Reconstruction of zygomatic arch and glenoid fossa with bone and cartilage (includes obtaining autografts)
14.54	21470	Open treatment of complicated mandibular fracture by multiple surgical approaches including internal fixation, interdental fixation, and/or wiring of dentures or splints

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Although dental fixation is not performed, procedure 21138 is slightly more work than 21470 because of the harvesting of bone grafts. Procedure 21138 is slightly less complicated than 21255.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 180 Low: 80 High: 300

Median Pre-Service Time: 53 Median Post-Service Time: 60

Length of Hospital Stay: 2

Number & Level of Post-Hospital Visits: 2 x 99213; 1 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 1; range 0-10

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21139

Global Period: 090

CPT Descriptor: Reduction forehead; contouring and setback of anterior frontal sinus wall

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent with hyperpneumatization of frontal sinus presents for contouring and setback of anterior frontal sinus wall without bone grafts.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-ray with quantitation of amount of setback required and template preparation; communicating with patient and family and obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Elevation of coronal flap. Protection of frontal branches of facial and supraorbital nerves, medial canthal ligaments, and lacrimal glands. Osteotomy of anterior frontal sinus wall. Dissection of frontal sinus mucosa, recontouring of anterior and posterior walls and setback with rigid fixation. Layer closure of operative site.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

.18.80 21344 Open treatment of complicated (eg, comminuted or involving posterior wall) frontal sinus fracture, via coronal or multiple approaches.

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21139 is slightly more complicated than 21344 because of the planning of setback, and is slightly easier because multiple fragments would not be involved.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 210 Low: 80 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 68

Length of Hospital Stay: 3

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-4

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21150 Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort II; anterior intrusion (eg, Treacher-Collins Syndrome)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Ten year old child with Treacher-Collins Syndrome for LeFort II midface reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; extensive counseling for dental occlusal changes; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Placement of mandibular and maxillary arch bars. Multiple approach by coronal incision and intraoral incisions with protection of frontal branches of facial nerves, supraorbital and infraorbital nerves. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and placement of midface into dental occlusion. Rigid fixation via multiple approaches. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21150a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Possible one night ICU stay involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including adjustment of dental occlusion in the office and separate operative procedure for removal of arch bars as outpatient surgery.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

26.85 21436 Open treatment of craniofacial separation (LeFort III type); complicated, multiple surgical approaches, internal fixation, with bone grafting (includes obtaining graft)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

For 21150, the pre-operative planning and intra-operative osteotomies are more difficult than for 21436, however, grafts are not used.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 5 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 240 Low: 150 High: 480

Median Pre-Service Time: 90 Median Post-Service Time: 120

Length of Hospital Stay: 4

Number & Level of Post-Hospital Visits: 2 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-4

Other Data:

ATTACHMENT 21150a

3046 Craniofacial Anomalies

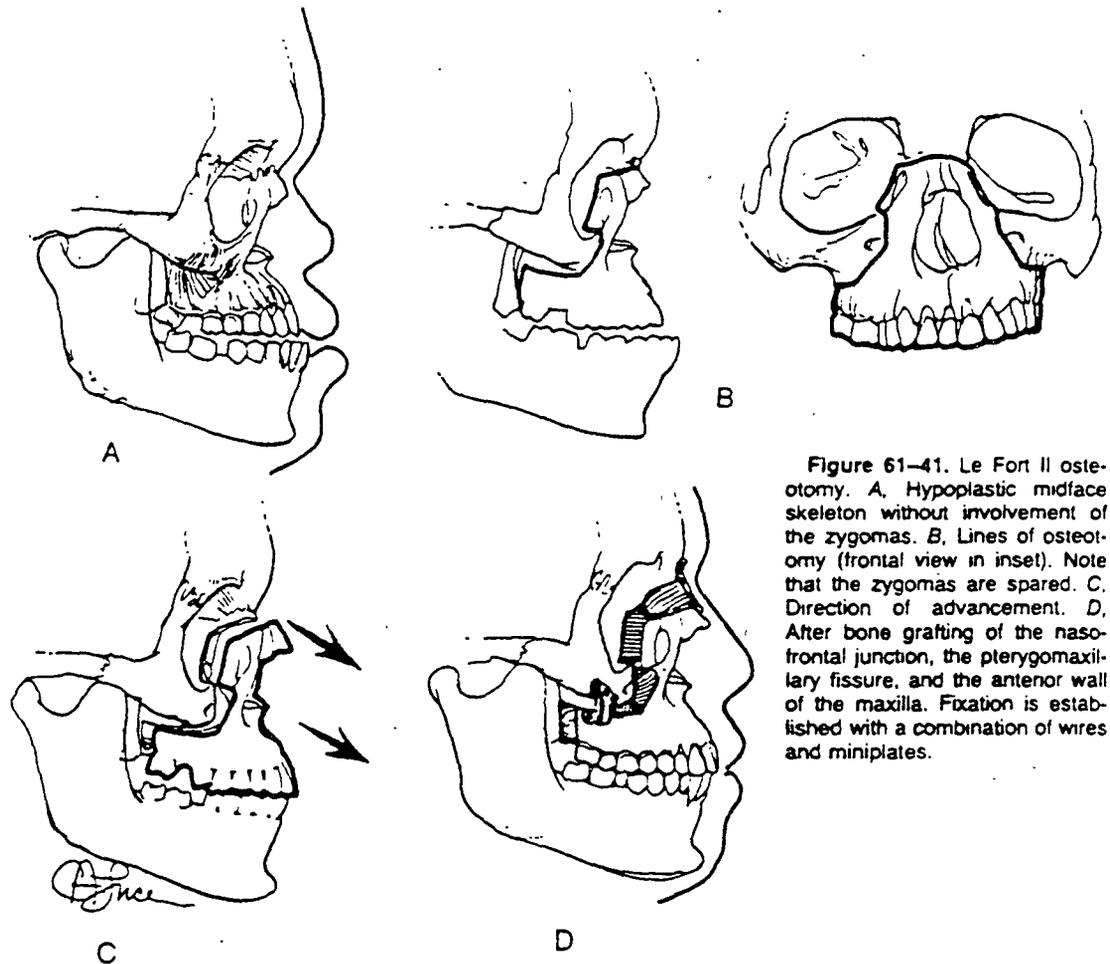


Figure 61-41. Le Fort II osteotomy. A, Hypoplastic midface skeleton without involvement of the zygomas. B, Lines of osteotomy (frontal view in inset). Note that the zygomas are spared. C, Direction of advancement. D, After bone grafting of the nasofrontal junction, the pterygomaxillary fissure, and the anterior wall of the maxilla. Fixation is established with a combination of wires and miniplates.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21151 Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort II; any direction, requiring bone grafts (includes obtaining autografts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Ten year old child with Treacher-Collins Syndrome for LeFort II midface reconstruction with cranial bone grafts.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Placement of mandibular and maxillary arch bars. Multiple approaches by coronal incision and intraoral incisions with protection of frontal branches of facial nerves, supraorbital and infraorbital nerves. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and placement of midface into dental occlusion. Harvesting and placement of bone grafts. Rigid fixation via multiple approaches. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21151a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Possible one night ICU stay involving additional visit time. Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure. Visit time is slightly increased because of the care of two operative sites.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

26.85 21436 Open treatment of craniofacial separation (LeFort III type); complicated, multiple surgical approaches, internal fixation, with bone grafting (includes obtaining graft)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

For 21151, the pre-operative planning and intra-operative osteotomies are more difficult than for 21436.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 280 Low: 180 High: 600

Median Pre-Service Time: 90 Median Post-Service Time: 105

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 2 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

ATTACHMENT 21151a

3046 *Craniofacial Anomalies*

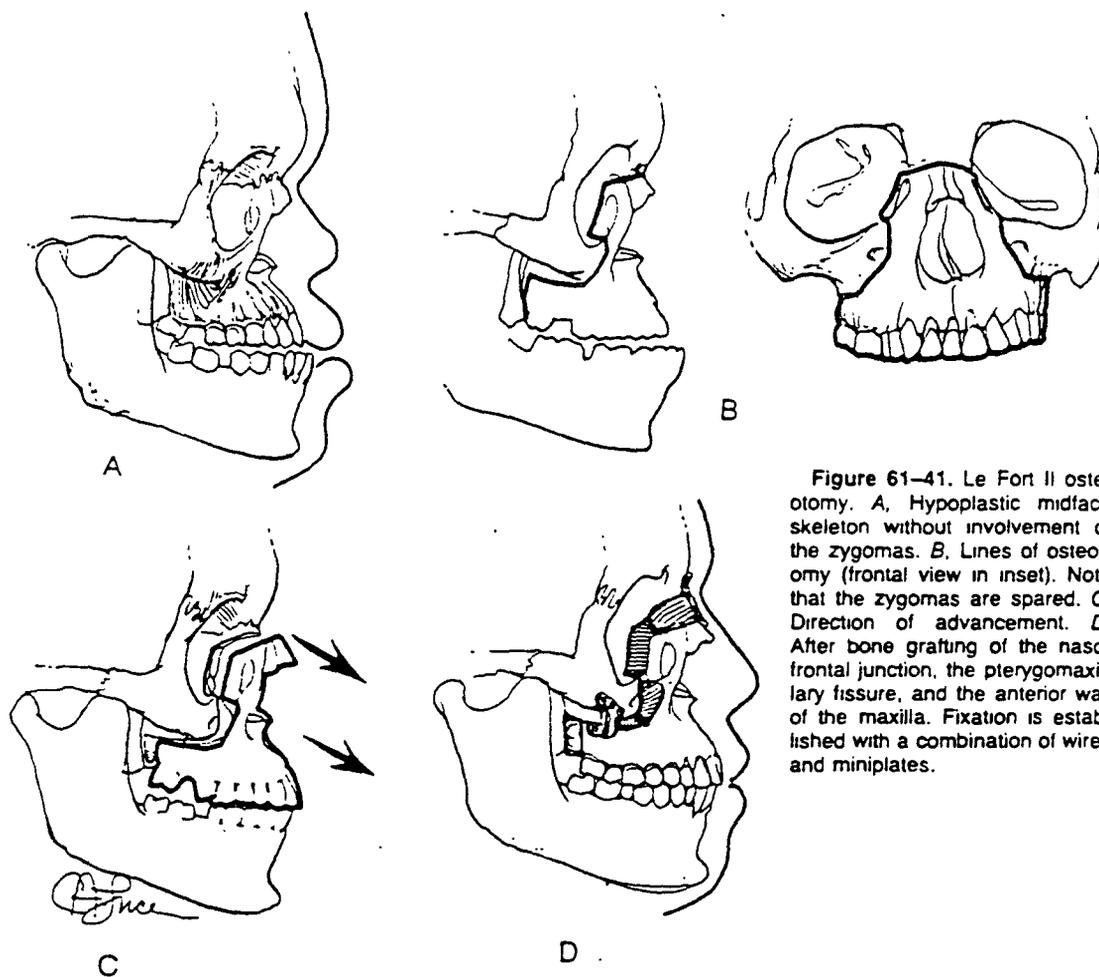


Figure 61-41. Le Fort II osteotomy. A, Hypoplastic midface skeleton without involvement of the zygomas. B, Lines of osteotomy (frontal view in inset). Note that the zygomas are spared. C, Direction of advancement. D, After bone grafting of the nasofrontal junction, the pterygomaxillary fissure, and the anterior wall of the maxilla. Fixation is established with a combination of wires and miniplates.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21154 Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts
(includes obtaining autografts); without LeFort I

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Five year old child with Pfeiffer Syndrome for LeFort III midface advancement (extracranial) with cranial bone graft reconstruction of resulting bone gaps.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Creation of intra-operative splint. Multiple approaches by coronal incision, intraoral incisions and lower eyelid incision with protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, and globe. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and placement of midface into dental occlusion. Harvesting and placement of bone grafts. Rigid fixation via multiple approaches. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21154a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). One or two days in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splint in the office.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.03	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21154 is more difficult because it is performed on a child, requiring increased time and technical ability.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 360 Low: 230 High: 600

Median Pre-Service Time: 90 Median Post-Service Time: 90

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

ATTACHMENT 21154a

3038 *Craniofacial Anomalies*

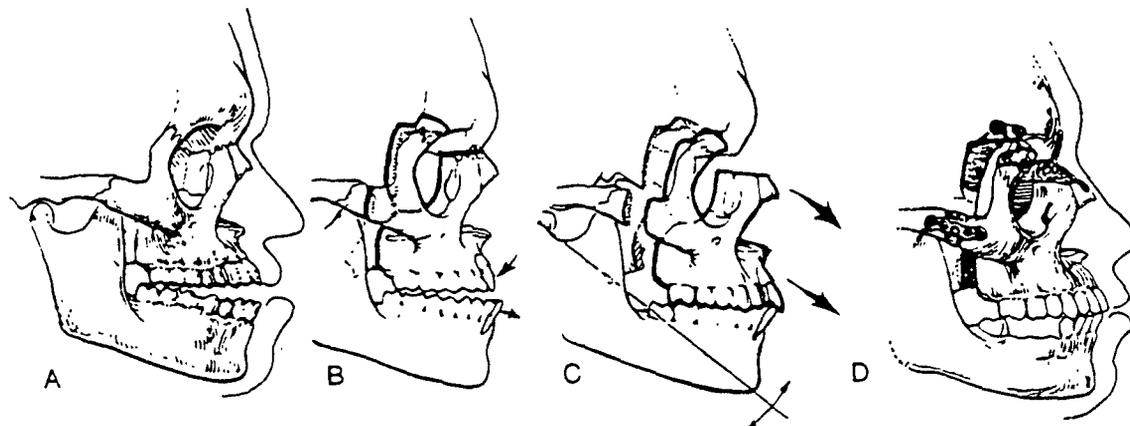


Figure 61-32. Subcranial Le Fort III advancement. A, Hypoplastic midface skeleton. B, Lines of osteotomy. The goals of preoperative orthodontic therapy are indicated by arrows. C, Anteroinferior translation of the osteotomized segment. D, Autogenous bone grafts are placed in the nasofrontal junction, lateral orbital wall, zygomatic arch, and pterygomaxillary fissure defects. Fixation is obtained by miniplates.

and to the medial orbital wall. The subperiosteally raised area can then communicate with the area, which will be exposed through the conjunctival or eyelid incision (optional). The latter incisions give access to the inferior orbital rim, the orbital floor, the lower portion of the medial wall, and the medial surface of the lateral orbital wall. Through a buccal, vestibular incision (at the level of the bicuspids), subperiosteal exposure to the pterygomaxillary fissure is obtained.

After the scalp flap is raised, the periorbita is elevated from the roof, the floor, and the lateral and medial orbital walls. The root of the nose and the medial orbital wall are exposed, the medial canthal tendon is left undisturbed, and the lacrimal sac is elevated from the lacrimal groove.

The bony framework of the nose is divided at the nasofrontal junction, the line of section being continued backward across the medial wall of the orbit on each side, downward (behind the lacrimal groove) to the floor of the orbit (Fig. 61-32B). A narrow, tapered osteotome is the most suitable instrument for the section of the delicate lamina papyracea of the ethmoid, which forms the portion of the medial wall of the orbit posterior to the lacrimal bone. A transverse cut is made across the orbital floor and joins the inferior orbital fissure to the lower end of the medial wall osteotomy.

The lateral wall of the orbit is sectioned transversely in the region of the frontozygomatic suture line or above it (Fig. 61-32B).

After retraction of the orbital contents medially and the temporalis muscle laterally, the lateral orbital wall is divided in a full-thickness fashion at its junction with the cranium (Fig. 61-32B). The zygomatic arch is likewise sectioned.

The line of osteotomy through the lateral orbital wall is continued inferiorly and posteriorly to and through the pterygomaxillary fissure (Fig. 61-32B). The pterygomaxillary disjunction is best accomplished with a curved osteotome after the mucoperiosteum has been raised from the tuberosity of the maxilla. A combination of scissors and osteotome is employed to sever the posterior portion of the nasal septum. After all lines of osteotomy are verified, the midfacial skeleton may be loosened with the Rowe disimpacting forceps. Autogenous bone grafts are placed in the defects of the nasofrontal junction, lateral orbital wall, and pterygomaxillary fissure (Fig. 61-32D). Interosseous wiring or miniplate fixation is used at the nasofrontal junction and frontozygomatic sites. Intermaxillary fixation is established after appropriate anterior advancement and inferior tilt of the midfacial segment (Fig. 61-32C). Cranial fixation by wires looped through the frontal bone and secured to the intermaxillary fixation appliance stabilizes the advanced nasomaxillary segment and maintains the mandibular condyle in the glenoid fossa. Alternatively, miniplate fixation can be employed at the nasofrontal, zygomaticotemporal, and zygomaticofrontal osteotomies. A

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 21155

Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort III (extracranial), any type, requiring bone grafts (includes obtaining autografts); with LeFort I

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Eighteen year old with Crouzon's Syndrome for extracranial LeFort III and simultaneous LeFort I midface advancement with cranial bone grafting.

Description of Pre-Service Work: Includes hospital admission work-up; review of x-rays and lab studies; possible creation of splint; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Placement of mandibular and maxillary arch bars. Multiple approaches by coronal incision, intraoral incisions, and lower eyelid incision with protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, and globe. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and rigid fixation of upper facial segments with bone grafts. LeFort I lower midface osteotomy. Placement of midface into dental occlusion. Harvesting and placement of bone grafts. Rigid fixation of LeFort I segment through intraoral approach. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21155a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Two days in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the arch bars as outpatient surgery in a hospital.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
24.27	21433	Open treatment of craniofacial separation (LeFort III type); complicated (eg, comminuted or involving cranial nerve foramina), multiple surgical approaches
19.38	21145	Reconstruction midface, LeFort I; single piece, any direction, requiring bone grafts (includes obtaining autografts)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedures 21433 and 21145, together, are similar to 21155. [RVWs: 24.27 + .5(19.38) = 33.96]

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 5 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 420 Low: 240 High: 720

Median Pre-Service Time: 90 Median Post-Service Time: 120

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

ATTACHMENT 21155a

3044 *Craniofacial Anomalies*

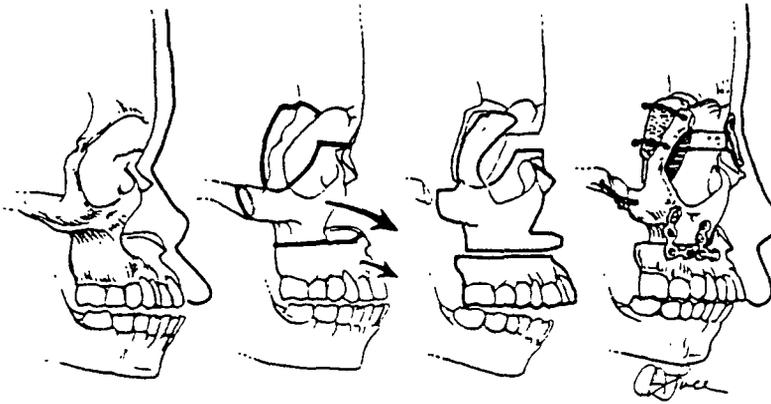


Figure 61-38. The combination Le Fort III-Le Fort I osteotomy offers differential advancement of the mid-face and maxillary segments. Autogenous bone grafts are placed in the defects, and fixation is established with a combination of wires and miniplates.



Figure 61-39. Adolescent female with Crouzon's disease who underwent a combined Le Fort III-Le Fort I osteotomy and genioplasty. A, C, Preoperative views. B, D, Postoperative views.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21159 Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (eg, mono bloc), requiring bone grafts (includes obtaining autografts); without LeFort I

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Six month old with severe Apert's Syndrome for monoblock facial reconstruction including forehead, midface, and cranial bone grafting.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; consultation with neurosurgery team; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Creation of intra-operative splint. Multiple approaches by coronal incision and neurosurgical elevation of frontal bone flap. Intraoral incisions and lower eyelid incision with protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, and globe. Forehead and orbital osteotomies are performed to mobilize the frontal-orbital segment from the intra- and extra-cranial aspects. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and placement of midface into dental occlusion. Harvesting and placement of bone grafts. Rigid fixation via multiple approaches of midface and forehead. Creation of galeal-frontalis flap for separation of nasal and cranial cavities. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21159a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Three days in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splint in the office.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
26.85	21436	Open treatment of craniofacial separation (LeFort III type); complicated, multiple surgical approaches, internal fixation, with bone grafting (includes obtaining graft)
19.48	61552	Craniectomy for craniosynostosis; multiple cranial sutures
12.39	15732	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedures 21436, 61552, and 15732, together, are similar to 21159 in terms of overall work. [RVWs: 26.85 + .5(19.48) + .25(12.39) = 39.69]

Procedure 21159 is actually a combination of 21154 (RVW=30) and 21175 (RVW=33).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 420 Low: 230 High: 900

Median Pre-Service Time: 120 Median Post-Service Time: 120

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

ATTACHMENT 21159a

bone advancement (see Fig. 61-36) except that the nasofrontal junction and frontozygomatic suture are spared of osteotomies (Fig. 61-40).

The technique also has the advantage that a concomitant hypertelorism correction can be done; it suffers the disadvantages of an increased infection rate and limited orbital volume expansion (Firmin, Coccaro, and Converse, 1974).

Le Fort II Advancement. The most common indication for a Le Fort II advancement (Fig. 61-41) is the patient with midface hypoplasia and adequate zygomatic projection. The patient illustrated in Figure 61-42 had craniosynostosis associated with vitamin D resistant rickets.

Zygomatic, Maxillary-Mandibular Osteotomies. As the trend today is toward midface advancements performed in younger patients, it is only logical that jaw surgery will be indicated in adolescent years. As demonstrated in longitudinal studies (McCarthy and associates, 1984b), jaw disharmonies (i.e., anterior crossbite) reflect anticipated mandibular growth after a Le Fort III advancement in a younger child (Fig. 61-43).

In the patient with craniofacial synostosis who has undergone a midface advancement, there is often an obvious microgenia. It has been the authors' experience that most of

these patients also require a genioplasty or advancement osteotomy of the anteroinferior border of the mandible (see Chapter 29).

Another useful technique in the years after a Le Fort III osteotomy is a zygomatic advancement in patients in whom orbital and maxillary positions are satisfactory but zygomatic projection is lacking (Figs. 61-44, 61-45).

New York University Protocol for Surgical Treatment of Craniosynostosis. Early surgery is optimally completed by 6 months of age (see Table 61-2). Depending on the diagnosis and associated pathologic condition of the patient, this could include strip craniectomy with or without frontal bone advancement, or cranial vault remodeling.

If by age 3 or 4 years there is evidence of midface hypoplasia with exorbitism and malocclusion, the child is prepared for Le Fort III midface advancement. The orthodontist takes dental impressions and constructs thin occlusal splints made in acrylic and used for fixation purposes.

It is likely that additional jaw surgery (Le Fort I osteotomy) will be required during the period of adolescence. With the eruption of the permanent maxillary teeth, injury to the apices of the teeth will be avoided (see Fig. 61-43).

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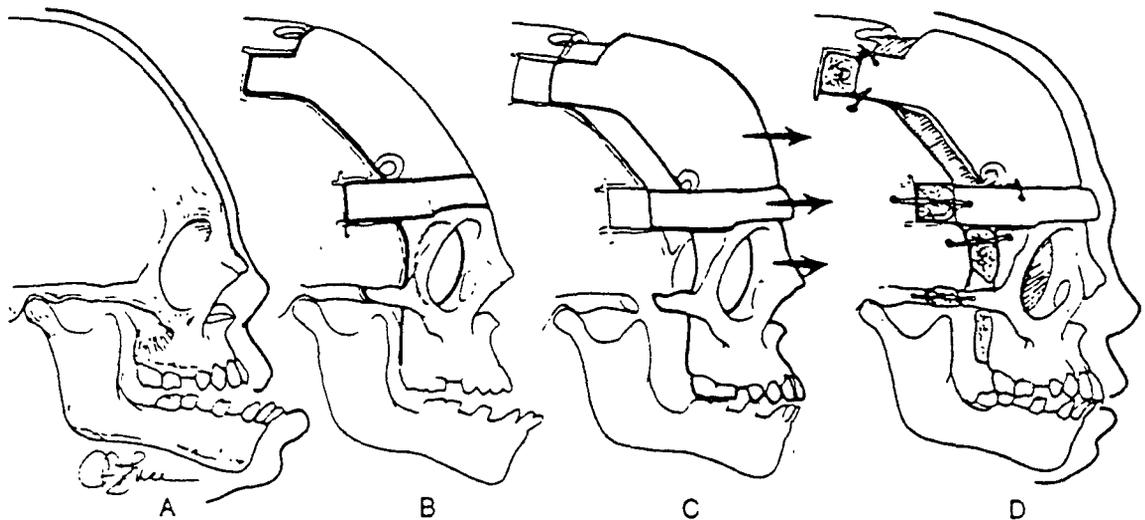


Figure 61-40. Monobloc advancement (after Ortiz-Monasterio and associates, 1978). A, Hypoplastic midface and orbitofrontal region. B, Lines of osteotomy. Note that the Le Fort III segment also incorporates the roof of the orbits. In addition, the frontal bone is remodeled in two segments. C, The three skeletal segments can be advanced to varying degrees. D, Final position with bone grafts in position. Rigid skeletal fixation can also be employed.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21160

Global Period: 090

CPT Descriptor: Reconstruction midface, LeFort III (extra and intracranial) with forehead advancement (eg, mono bloc), requiring bone grafts (includes obtaining autografts); with LeFort I

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Previously untreated 16 year old with Apert's Syndrome for monoblock facial advancement and simultaneous LeFort I maxillary advancement including cranial bone graft reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; consultation with neurosurgery team; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Placement of mandibular and maxillary arch bars. Multiple approaches by coronal incision and neurosurgical elevation of frontal bone flap. Intraoral incisions and lower eyelid incision with protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, and globe. Forehead and orbital osteotomies are performed to mobilize the frontal-orbital segment from the intra- and extra-cranial aspects. Osteotomy by multiple approaches to free midface segment with avoidance of tooth roots and cribriform plate. Mobilization of midface and rigid fixation of upper facial segment and forehead with bone grafts. LeFort I lower midface osteotomy. Placement of midface into dental occlusion. Harvesting and placement of bone grafts. Rigid fixation of LeFort I segment through intraoral approach. Creation of galeal-frontalis flap for separation of nasal and cranial cavities. Layer closure of operative incisions.

[PLEASE REFER TO DIAGRAMS ON ATTACHMENTS 21160a AND 21160b]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Three days in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the arch bars as outpatient surgery in a hospital.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.03	15755	Free flap (microvascular transfer)
19.48	61552	Craniectomy for craniosynostosis; multiple cranial sutures
19.38	21145	Reconstruction midface, LeFort I; single piece, any direction, requiring bone grafts (includes obtaining autografts)
12.39	15732	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedures 15755, 61552, 21145, and 15732, together, are similar to 21160 in terms of overall work. [RVWs: 29.03 + .5(19.48) + .25(19.38) + .25(12.39) = 46.71]

Procedure 21160 is actually a combination of 21154 (RVW=30), 21175 (RVW=33), and 21145 (RVW=19.38).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 2 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 480 Low: 240 High: 960

Median Pre-Service Time: 120 Median Post-Service Time: 120

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

ATTACHMENT 21160a

3044 *Craniofacial Anomalies*

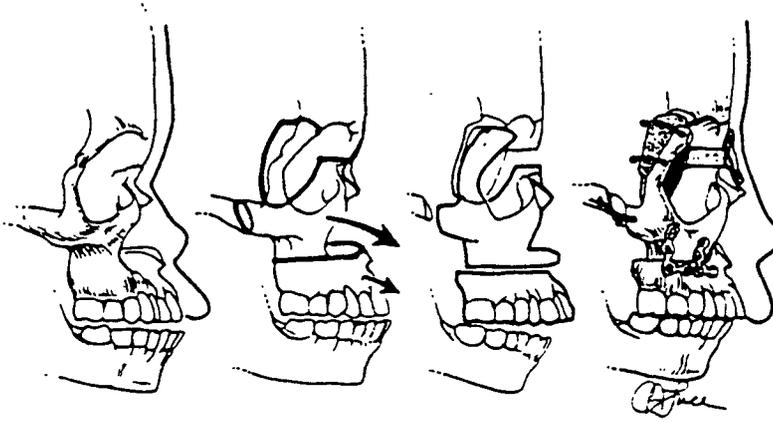


Figure 61-38. The combination Le Fort III-Le Fort I osteotomy offers differential advancement of the mid-face and maxillary segments. Autogenous bone grafts are placed in the defects, and fixation is established with a combination of wires and miniplates.



Figure 61-39. Adolescent female with Crouzon's disease who underwent a combined Le Fort III-Le Fort I osteotomy and genioplasty. A, C. Preoperative views. B, D. Postoperative views.

bone advancement (see Fig. 61-36) except that the nasofrontal junction and frontozygomatic suture are spared of osteotomies (Fig. 61-40).

The technique also has the advantage that a concomitant hypertelorism correction can be done; it suffers the disadvantages of an increased infection rate and limited orbital volume expansion (Firmin, Cocco, and Converse, 1974).

Le Fort II Advancement. The most common indication for a Le Fort II advancement (Fig. 61-41) is the patient with midface hypoplasia and adequate zygomatic projection. The patient illustrated in Figure 61-42 had craniosynostosis associated with vitamin D resistant rickets.

Zygomatic, Maxillary-Mandibular Osteotomies. As the trend today is toward midface advancements performed in younger patients, it is only logical that jaw surgery will be indicated in adolescent years. As demonstrated in longitudinal studies (McCarthy and associates, 1984b), jaw disharmonies (i.e., anterior crossbite) reflect anticipated mandibular growth after a Le Fort III advancement in a younger child (Fig. 61-43).

In the patient with craniofacial synostosis who has undergone a midface advancement, there is often an obvious microgenia. It has been the authors' experience that most of

these patients also require a genioplasty or advancement osteotomy of the anteroinferior border of the mandible (see Chapter 29).

Another useful technique in the years after a Le Fort III osteotomy is a zygomatic advancement in patients in whom orbital and maxillary positions are satisfactory but zygomatic projection is lacking (Figs. 61-44, 61-45).

New York University Protocol for Surgical Treatment of Craniosynostosis. Early surgery is optimally completed by 6 months of age (see Table 61-2). Depending on the diagnosis and associated pathologic condition of the patient, this could include strip craniectomy with or without frontal bone advancement, or cranial vault remodeling.

If by age 3 or 4 years there is evidence of midface hypoplasia with exorbitism and malocclusion, the child is prepared for Le Fort III midface advancement. The orthodontist takes dental impressions and constructs thin occlusal splints made in acrylic and used for fixation purposes.

It is likely that additional jaw surgery (Le Fort I osteotomy) will be required during the period of adolescence. With the eruption of the permanent maxillary teeth, injury to the apices of the teeth will be avoided (see Fig. 61-43).

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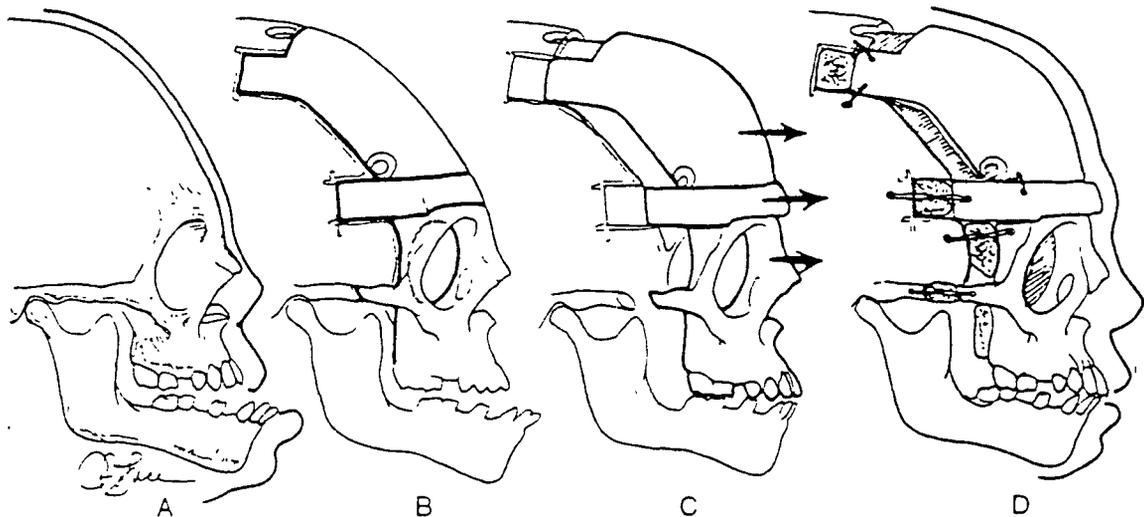


Figure 61-40. Monobloc advancement (after Ortiz-Monasterio and associates, 1978). A. Hypoplastic midface and orbitofrontal region. B. Lines of osteotomy. Note that the Le Fort III segment also incorporates the roof of the orbits. In addition, the frontal bone is remodeled in two segments. C. The three skeletal segments can be advanced to varying degrees. D. Final position with bone grafts in position. Rigid skeletal fixation can also be employed.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21172

Global Period: 090

CPT Descriptor: Reconstruction superior-lateral orbital rim and lower forehead, advancement or alteration, with or without grafts (includes obtaining autografts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Six month old with plagiocephaly undergoing unilateral orbital advancement and forehead reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of CT scan, x-rays, and lab studies; communicating with patient and family about procedure; consultation with neurosurgeon; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Bicoronal incision. Exposure of upper forehead and orbits. Protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, medial canthal ligaments, lacrimal sac, and globes. Frontal craniotomy. Multiple osteotomies through the anterior skull base and upper orbits. Advancement of orbital frontal bar with rigid fixation. Advancement of frontal bone flap with fixation. Re-suspension of lateral canthus and temporal fascia. Layer closure of scalp.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21172a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). One or two days in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.03	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 15755 involves less intra-operative time than 21172, but is similar in all other areas of work. Procedure 21172 is performed on infants, usually about 6 months of age, and therefore is more difficult.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 16 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 240 Low: 120 High: 600

Median Pre-Service Time: 60 Median Post-Service Time: 105

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 1; range 0-20

Other Data: The recommended RVW is an average of the survey mean and median.

ATTACHMENT 21172a

3032 Craniofacial Anomalies

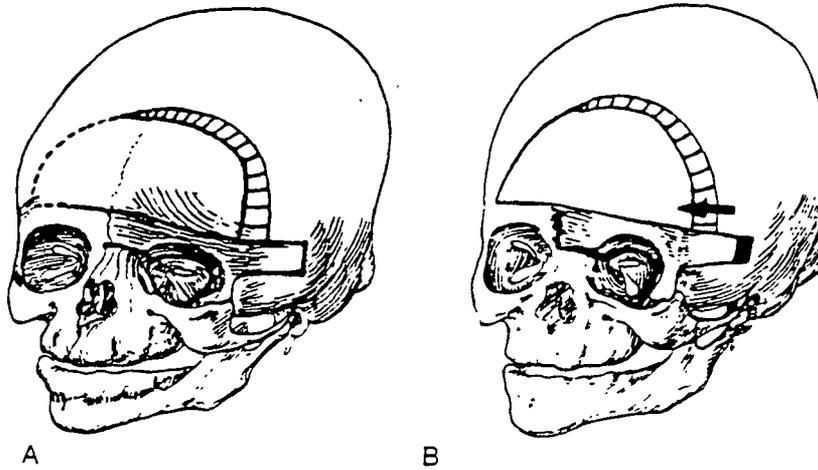


Figure 61-24. Frontal bone advancement or fronto-orbital remodeling for plagiocephaly (left side). A, Lines of osteotomy-osteotomy. In most cases the deformity is treated with bilateral osteotomies (see Figure 61-19) B, After advancement of the fronto-orbital segment (arrow) and replacement of the forehead with a single-piece calvarial (parieto-occipital) graft.

a single piece calvarial bone graft is used to restore the forehead contour (Figs. 61-25, 61-26).

The affected supraorbital arch is usually flat and lacks the desired convexity. Restoration of contour can be accomplished by bending the mobilized bony segment after making posterior cuts or by placing onlay bone grafts (removed from the frontal bone flap) on the anterior aspect of the supraorbital arch. The segment is then wired in a slightly overcorrected position by placing stainless steel wires between the temporal extension and temporal bone. The resulting gap in the orbital roof does not require bone grafting. Other surgical procedures for use in the infant with plagiocephaly have been re-

ported by Montaut and Stricker (1977) and Marchac (1978).

Metopic Synostosis. Metopic synostosis (trigonocephaly) is usually associated with a supraorbital rim that is recessed in the sagittal dimension. The procedure of Marchac (1978) is used. A supraorbital bar with a greenstick fracture at the midline is advanced as needed, and the forehead is reconstructed by a single piece calvarial bone graft removed from the lateral aspect of the frontal bone flap (Figs. 61-27, 61-28). Albin and associates (1985) reported a series of 33 patients with trigonocephaly operated on by a modification of this technique.

It has been the authors' observation that residual frontal bone defects remaining at

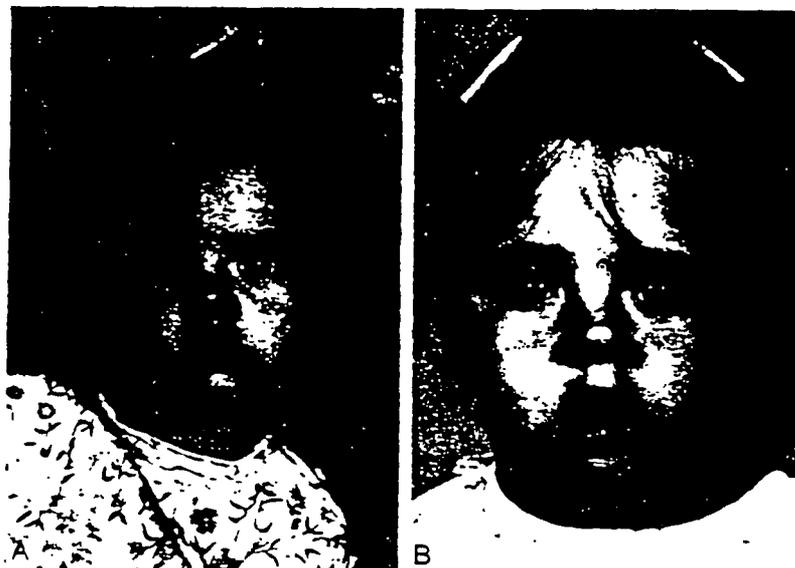


Figure 61-25. Female child with right-sided plagiocephaly and recession of the brow. A, Preoperative view. B, Two years after the technique illustrated in Figure 61-24.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21175 Global Period: 090

CPT Descriptor: Reconstruction, bifrontal, superior-lateral orbital rims and lower forehead, advancement or alteration (eg, plagiocephaly, trigonocephaly, brachycephaly), with or without grafts (includes obtaining autografts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Six month old with trigonocephaly undergoing bilateral superior orbital and forehead reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of CT scan, x-rays, and lab studies; communicating with patient and family about procedure; consultation with neurosurgeon; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Bicoronal incision. Exposure of upper forehead and orbits. Protection of frontal branches of facial nerves, supraorbital nerves, infraorbital nerves, medial canthal ligaments, lacrimal sac, and globes. Bifrontal craniotomy. Multiple osteotomies through the bifrontal skull base and orbital rims. Advancement of orbital frontal bars with rigid fixation. Advancement of frontal bone flaps with fixation. Resuspension of lateral canthus and temporal fascia. Layer closure of scalp.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 21175a]

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.03	15755	Free flap (microvascular transfer)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21175 is more work than 15755 (and previous code 21172) because it is bilateral. Procedure 21175 is performed on infants, usually about 6 months of age, and therefore is more difficult.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 6 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 300 Low: 160 High: 480

Median Pre-Service Time: 75 Median Post-Service Time: 105

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-20

Other Data: The recommended RVW is an average of the survey mean and median.

ATTACHMENT 21175a

3028 Craniofacial Anomalies

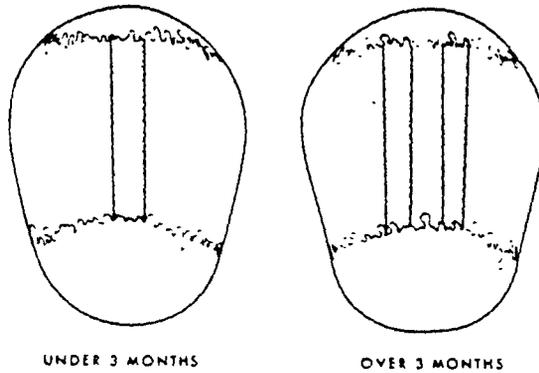


Figure 61-18. Usual position of strip craniectomies for sagittal synostosis, depending on the age of the patient (Munro, 1977).

age of 6 months and triples by 2 years of age (Blinkov and Glezer, 1968). However, longitudinal studies (McCarthy and associates, 1984a; and Marchac and Renier, 1985) after early surgery demonstrated that, while the long-term results in the fronto-orbital area have been satisfactory, midface hypoplasia still developed in the Crouzon and Apert patient.

Strip Craniectomies. Before the turn of the century, several case reports of strip craniectomies were recorded in the literature (Lane, 1892; Lannelongue, 1890). By the 1920's the technique had found wide clinical acceptance in the United States.

The proper time for neurosurgical strip craniectomies has traditionally been advocated as being before the age of 3 months. While adequate cranial decompression has been obtained, the techniques, except in isolated sagittal synostosis, failed to yield satisfactory results in terms of craniofacial form. Shillito and Matson (1968) reviewed 519 patients with craniosynostosis who had undergone strip craniectomies, and noted that only 52 per cent of them had a satisfactory appearance after surgery; the best results in terms of craniofacial appearance were observed in infants with isolated sagittal sutural synostosis.

In *isolated sagittal synostosis*, either sagittal or parasagittal strip craniectomy (Fig. 61-18) is the treatment of choice.

In *bilateral coronal synostosis*, strip craniectomy (bilateral coronal) has been replaced

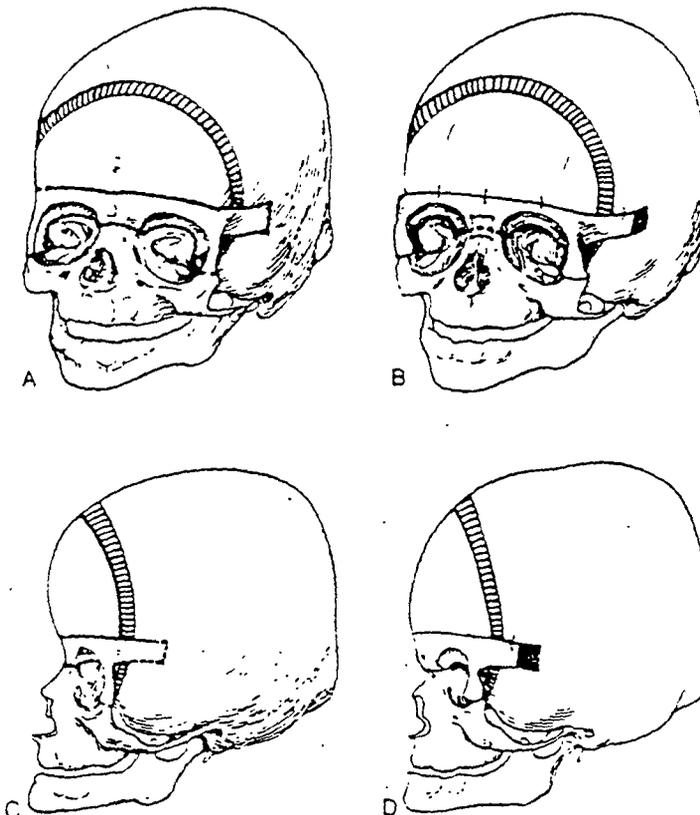


Figure 61-19. Frontal bone advancement or fronto-orbital remodeling. A, C. Lines of osteotomy-osteotomy. B, D. Following advancement and recontouring. The forehead can also be reconstructed with a parietal occipital bone graft.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 21179

Global Period: 090

CPT Descriptor: Reconstruction, entire or majority of forehead and/or supraorbital rims with grafts (allograft or prosthetic material)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent one year following frontal skull fracture with bone loss for reconstruction of most of the forehead and superior orbital rims using methylmethacrylate cranioplasty or bone allograft.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of CT scan, x-rays, and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Re-opening of the coronal incision and dissection of scarred operative site with protection of the frontal branches of the facial nerves and supraorbital nerves, as well as the possibility of dissection around bone gaps with exposed dura. Exposure of frontal and orbital rim defects and reconstructing using methylmethacrylate or bone allograft. Rigid fixation of reconstruction. Layered closure of coronal incision.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
24.27	21433	Open treatment of craniofacial separation (LeFort III type); complicated (eg, comminuted or involving cranial nerve foramina), multiple surgical approaches

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21179 has a slightly less complicated approach than 21433, but requires more technical skill and mental effort because of possible dural injury.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 4 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 215 Low: 80 High: 480

Median Pre-Service Time: 60 Median Post-Service Time: 75

Length of Hospital Stay: 4

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 1; range 0-10

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21180

Global Period: 090

CPT Descriptor: Reconstruction, entire or majority of forehead and/or supraorbital rims with autograft (includes obtaining grafts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Same patient as 21179 for reconstruction using cranial, iliac or rib bone grafts (autogenous).

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Re-opening of the coronal incision and dissection of scarred operative site with protection of the frontal branches of the facial nerves and supraorbital nerves, as well as the possibility of dissection around bone gaps with exposed dura. Exposure of frontal and orbital rim defects. Harvesting and reconstruction using autogenous bone grafts with contour matching. Rigid fixation of reconstruction. Layered closure of coronal incision.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure. Visit time is slightly increased because of the increased care necessary for two operative sites.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

24.27 21433 Open treatment of craniofacial separation (LeFort III type); complicated (eg, comminuted or involving cranial nerve foramina), multiple surgical approaches

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21180 requires more technical skill and mental effort than 21433 because of possible dural injury. Additionally, the work involved in getting grafts and contouring is more than 21433.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 5 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 280 Low: 180 High: 480

Median Pre-Service Time: 60 Median Post-Service Time: 90

Length of Hospital Stay: 4

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 1; range 0-20

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21181

Global Period: 090

CPT Descriptor: Reconstruction by contouring of benign tumor of cranial bones (eg, fibrous dysplasia), extracranial

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent with fibrous dysplasia of the forehead treated with extracranial recontouring (no bone grafts).

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family and obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Re-opening the frontal incision and dissection of scarred operative site with protection of the frontal branches of the facial nerves and supraorbital nerves. Exposure of fibrous dysplasia with contouring of cranial bones. Layered closure of coronal incision.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

18.85 21344 Open treatment of complicated (eg, comminuted or involving posterior wall) frontal sinus fracture, via coronal or multiple approaches

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21181 is less complicated than 21344 because the sinus frontal contents will not be exposed.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 12 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 165 Low: 60 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 3

Number & Level of Post-Hospital Visits: 1 x 99213; 1 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-6

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 21182

Global Period: 090

CPT Descriptor:

Reconstruction of orbital walls, rims, forehead, nasoethmoid complex following intra and extracranial excision of benign tumor of cranial bone (eg, fibrous dysplasia), with multiple autografts (includes obtaining grafts); total area of bone grafting less than 40 cm²

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Extensive fibrous dysplasia of orbits, forehead, and nasoethmoid region requiring intracranial and extracranial resection, reconstruction with iliac and/or rib grafts (total grafted area < 40 cm²).

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays with neurosurgeons; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Following removal of fibrous dysplasia of orbits, forehead and nasoethmoid, autogenous bone graft (< 40 sq cm) is harvested. Reconstruction of all above defects is performed with bone grafts using multiple approaches and rigid fixation, including extensive intra-operative contouring. Possible separation of cranial and nasal cavities using galeal-frontalis flap. Layer closure of all approaches.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). One night in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

29.03 15755 Free flap (microvascular transfer)

9.80 21208 Osteoplasty, facial bones; augmentation (autograft, allograft, or prosthetic implant)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21182 is more work than a combination of 15755 and 21208 because of increased difficulty in harvesting of bone grafts and extensive recontouring of complicated geometric structures.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 11 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 360 Low: 75 High: 540

Median Pre-Service Time: 90 Median Post-Service Time: 100

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-4

Other Data: Mean RVW = 31.61

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21183

Global Period: 090

CPT Descriptor: Reconstruction of orbital walls, rims, forehead, nasoethmoid complex following intra and extracranial excision of benign tumor of cranial bone (eg, fibrous dysplasia), with multiple autografts (includes obtaining grafts); total area of bone grafting greater than 40 cm² but less than 80 cm²

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Same as 21182, bone grafted area 40 to 80 cm².

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays with neurosurgeons; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Following removal of fibrous dysplasia of orbits, forehead and nasoethmoid, autogenous bone graft (40-80 sq cm) is harvested. Reconstruction of all above defects is performed with bone grafts using multiple approaches and rigid fixation, including extensive intra-operative contouring. Possible separation of cranial and nasal cavities using galeal-frontalis flap. Layer closure of all approaches.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). One night in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.03	15755	Free flap (microvascular transfer)
9.80	21208	Osteoplasty, facial bones; augmentation (autograft, allograft, or prosthetic implant)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21183 is very similar to a combination of 15755 and 21208.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 390 Low: 90 High: 570

Median Pre-Service Time: 90 Median Post-Service Time: 120

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; rang 0-2

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21184

Global Period: 090

CPT Descriptor: Reconstruction of orbital walls, rims, forehead, nasoethmoid complex following intra and extracranial excision of benign tumor of cranial bone (eg, fibrous dysplasia), with multiple autografts (includes obtaining grafts); total area of bone grafting greater than 80 cm²

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Same as 21182, bone grafted area > 80 cm².

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays with neurosurgeons; communicating with patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Following removal of fibrous dysplasia of orbits, forehead and nasoethmoid, autogenous bone graft (> 80 sq cm) is harvested. Reconstruction of all above defects is performed with bone grafts using multiple approaches and rigid fixation, including extensive intra-operative contouring. Possible separation of cranial and nasal cavities using galeal-frontalis flap. Layer closure of all approaches.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). One night in ICU, involving additional visit time. Also, all additional hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

29.03 15755 Free flap (microvascular transfer)

9.80 21208 Osteoplasty, facial bones; augmentation (autograft, allograft, or prosthetic implant)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 21184 is very similar to a combination of 15755 and 21208.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 480 Low: 90 High: 660

Median Pre-Service Time: 90 Median Post-Service Time: 135

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-2

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 21188

Global Period: 090

CPT Descriptor: Reconstruction midface, osteotomies (other than LeFort type) and bone grafts (includes obtaining autografts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Adolescent following right maxillary fracture for refracture and repositioning of right hemimaxilla and cranial bone graft reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of dental x-rays and dental models; pre-surgical determination of dental occlusion; counseling patient and family about procedure, as well as discussion of bone donor site; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Placement of mandibular and maxillary arch bars. Intraoral approach to maxilla with osteotomy and repositioning. Placement of intermaxillary fixation and rigid fixation of maxillary segment with autogenous bone grafting. Intraoral wound closure and bone graft harvest site closure.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the arch bars as outpatient surgery in a hospital.

KEY REFERENCE SERVICE(S):RVW CPT Code CPT Descriptor

21.67 21247 Reconstruction of mandibular condyle with bone and cartilage autografts (includes obtaining grafts) (eg, for hemifacial microsomia)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The reference service is very similar to 21188 in terms of time, work, judgement and stress.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 7 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 240 Low: 90 High: 600

Median Pre-Service Time: 90 Median Post-Service Time: 90

Length of Hospital Stay: 3

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 2 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-10

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 40840

Global Period: ~~XXX~~

Recommended Global Period: 090

CPT Descriptor: Vestibuloplasty; anterior

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Elderly male smoker underwent composite anterior mandibular resection for floor of mouth squamous cell carcinoma and underwent free fibula reconstruction. Now presents for anterior vestibuloplasty for prosthetic reconstruction.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Intra-operative preparation of splint. Intraoral exposure of anterior labial sulcus with deepening of sulcus using local tissue rearrangement (skin graft, if necessary, is coded separately). Application and fixation of intraoperative splint.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splint in the office.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

8.25 14060 Adjacent tissue transfer or rearrangement, eyelids, nose, ears and/or lips; defect 10 sq cm or less

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 40840 is more complicated than reference service 14060 because of the splint.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 13 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 90 High: 160

Median Pre-Service Time: 45 Median Post-Service Time: 45

Length of Hospital Stay: 1

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 40842 Global Period: ~~XXX~~ Recommended Global Period: 090

CPT Descriptor: Vestibuloplasty; posterior, unilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Elderly female underwent symphyseal to ramal mandibular resection for osteogenic sarcoma followed by free composite scapular flap for reconstruction of mandible. Prior to placement of osseointegrated implants a unilateral posterior vestibuloplasty is planned to deepen the ipsilateral lower buccal sulcus.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Intra-operative preparation of splint. Intraoral exposure of posterior mandibular sulcus with deepening of sulcus using local tissue rearrangement (skin graft, if necessary, is coded separately). Application and fixation of intraoperative splint.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splint in the office.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
8.25	14060	Adjacent tissue transfer or rearrangement, eyelids, nose, ears and/or lips; defect 10 sq cm or less

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 40842 is more complicated than reference service 14060 because of the splint.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 2 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 120 Low: 80 High: 180

Median Pre-Service Time: 38 Median Post-Service Time: 30

Length of Hospital Stay: 1

Number & Level of Post-Hospital Visits: 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 40843 Global Period: ~~XXX~~ Recommended Global Period: 090

CPT Descriptor: Vestibuloplasty; posterior, bilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Forty year old female sustains a gunshot wound to the anterior mandible and undergoes free fibula composite flap reconstruction of mandible from angle to angle. She now presents six months later having seen the maxillofacial prosthodontist who recommends bilateral posterior vestibuloplasties prior to placement of dentures.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Intra-operative preparation of splints. Intraoral exposure of bilateral posterior mandibular sulci with deepening of sulci using local tissue rearrangement (skin graft, if necessary, is coded separately). Application and fixation of intraoperative splints.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splints in the office.

KEY REFERENCE SERVICE(S):

RVW CPT Code CPT Descriptor

8.25 14060 Adjacent tissue transfer or rearrangement, eyelids, nose, ears and/or lips; defect 10 sq cm or less

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 40843 is twice as difficult as reference service 14060 because it is bilateral.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 180 Low: 120 High: 250

Median Pre-Service Time: 45 Median Post-Service Time: 60

Length of Hospital Stay: 1

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 40844 Global Period: ~~XXX~~ **Recommended Global Period: 090**

CPT Descriptor: Vestibuloplasty; entire arch

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Forty year old female sustains a gunshot wound to the anterior mandible and undergoes free fibula composite flap reconstruction of mandible from angle to angle. She now presents six months later having seen the maxillofacial prosthodontist who recommends entire arch vestibuloplasty prior to placement of dentures.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Intra-operative preparation of splint. Intraoral exposure of entire mandibular arch using local tissue rearrangement (skin graft, if necessary, is coded separately). Application and fixation of entire arch mandibular splint.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splint in the office.

KEY REFERENCE SERVICE(S):**RVW CPT Code CPT Descriptor**

8.25 14060 Adjacent tissue transfer or rearrangement, eyelids, nose, ears and/or lips; defect 10 sq cm or less

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 40844 is essentially the two previous procedures (40840 and 40843) combined and equal to three times the work of 14060.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 9 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 180 Low: 120 High: 240

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 2

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 40845

Global Period: ~~XXX~~

Recommended Global Period: 090

CPT Descriptor: Vestibuloplasty; complex (including ridge extension, muscle repositioning)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Fifty year old man undergoes composite resection of mandible and floor of mouth for squamous cell carcinoma of the oral cavity. Reconstruction is carried out by free scapular composite flap. Prosthodontist feels patient is candidate for implants by the new alveolar ridge formed by scapular bone is deficient. Alveolar ridge extension with muscle repositioning is recommended along with complex vestibuloplasty.

Description of Pre-Service Work: Includes hospital admission work-up; procedural work-up; review of x-rays and lab studies; communicating with patient and family about procedure; obtaining consent; scrubbing and waiting before surgery; preparing patient and needed equipment for surgery; and positioning the patient.

Description of Intra-Service Work: Intra-operative preparation of splints. Intraoral exposure of both entire labial arch and lingual arch of mandible with repositioning of muscle of floor of mouth. Local tissue rearrangement of both labial and lingual arches (skin graft, if necessary, is coded separately). Application and fixation of intraoperative labial and lingual splints.

Description of Post-Service Work: Includes patient stabilization; communicating with the patient and other health care professionals (including written and telephone reports and orders). Also, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of the splints in the office.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
8.25	14060	Adjacent tissue transfer or rearrangement, eyelids, nose, ears and/or lips; defect 10 sq cm or less
12.39	15732	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

Procedure 40845 is essentially a combination of the three previous procedures (40840, 40843, and 40844) and equal to three times the work of 14060, plus the work of 15732.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period? N/A

- 1992 Medicare frequency by all physician specialties = 35 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

No Harvard value.

SURVEY DATA:

Median Intra-Service Time: 160 Low: 120 High: 240

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 2

Number & Level of Post-Hospital Visits: 1 x 99215; 1 x 99213; 2 x 99212; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-30

Other Data:



MAY 1994 RUC RECOMMENDATIONS
HAND SURGERY - TAB F

25320 [Capsulorrhaphy or reconstruction, wrist] has been revised to describe new techniques that add time and a greater degree of technical difficulty to the intra-service portion of the procedure. The post-service work of the revised code requires added work (pin removal) and a greater degree of judgement than the old code because of the higher potential for post-operative complications. This argument is substantiated by comparing the Harvard intra-service time of 99 minutes to the RUC survey data of 120 minutes. Further compelling evidence for the increased RVW is included in the attached summary of recommendation form for this code.

2532X [Reconstruction for stabilization of unstable distal ulna or distal radioulnar joint, secondary by soft tissue stabilization (eg, tendon transfer, tendon graft or weave, or tenodesis) with or without open reduction of distal radioulnar joint] and 258XX [Distal radioulnar joint arthrodesis and segmental resection of ulna (eg, Sauve-Kapandji procedure), with or without bone graft] are similar in work. 2532X is a more intense procedure than 258XX and requires more intensive post-operative care, however, 258XX requires more intra-service time.

The intra-service work of 2532X requires more skill and effort than the key reference procedure 25312 [Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; with tendon graft(s) (including obtaining graft), each tendon]. 2532X involves a two tendon transfer with two skin incision, hence, a larger surgical exposure. The potential of injury to the ulnar nerve is high. Confirmation of an accurate reduction of the distal ulna requires an intra-operative x-ray, and, frequently, internal fixation with K-wires. Tunnels must be drilled into bone to allow passage of the tendons. Post-service work is similar in both codes.

Key reference procedure 25390 [Osteoplasty, radius or ulna; shortening] involves excising a segment of ulna followed by internal fixation using a plate and screw. Pre-operative work requires more planning and measurement of x-rays to determine the exact length of bone to be resected than in the 258XX. 258XX does, however, demand meticulous preparation of the arthrodesis site between the head of ulna and sigmoid notch of radius along with internal fixation. The post-service work is similar in both services.

648XX [Sympathectomy, digital arteries, with magnification, each digit] is more difficult than 35207 [Repair blood vessel, direct; hand, finger] as it requires a more extensive anatomic dissection than that needed to repair a vessel. Two arteries to the

affected finger are always treated, and an operating microscope is employed to accomplish the goal of thorough adventitial stripping, while avoiding the significant risk of injury to the artery. The post-service work is similar in both procedures. This procedure is typically performed on one finger and rarely more than two fingers are treated.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AM1	25240	Excision distal ulna <u>partial or complete</u> (eg, Darrach type procedure , or <u>matched resection</u>) (For implant replacement, distal ulna, see 25442) (For obtaining fascia for interposition, see 20920, 20922)	090	4.96 (no change)
AM2	25320	Capsulorrhaphy or reconstruction, wrist, capsulectomy any method, eg, capsulodesis, ligament repair, tendon transfer or graft, (includes synovectomy, resection of capsule, tendon insertions capsulotomy and open reduction) for carpal instability	090	10.00
AM3	●2532X	Reconstruction for stabilization of unstable distal ulna or distal radioulnar joint, secondary by soft tissue stabilization (eg, tendon transfer, tendon graft or weave, or tenodesis) with or without open reduction of distal radioulnar joint (For harvesting of fascia lata graft, see 20920, 20922)	090	9.50
AM4	●258XX	Distal radioulnar joint arthrodesis and segmental resection of ulna (eg, Sauve-Kapandji procedure), with or without bone graft	090	9.50
AM5	●658XX	Sympathectomy, digital arteries, with magnification, each digit	090	10.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No. (CPT Code): AM2 (25320) Global Period: 090

CPT Descriptor: Capsulorrhaphy or reconstruction, wrist, ~~capsulectomy any method, eg, capsulodesis, ligament repair, tendon transfer or graft,~~ (includes synovectomy, ~~resection of capsule, tendon insertions~~ capsulotomy and open reduction) for carpal instability

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old patient with a painful wrist was originally diagnosed as a "sprain" after an injury several months earlier. Diagnostic studies define torn intercarpal ligaments with separation and instability between two or more carpal bones. A soft tissue ligament reconstructive procedure and/or capsulodesis is performed.

Pre-service work: Before beginning the procedure, admission roentgenograms and laboratory studies are compared to earlier imaging studies that demonstrated carpal instability without arthrosis. The expected outcome is discussed with the patient (i.e., decrease in pain, improved strength, limiting of future arthrosis, and possible loss of a percentage of wrist motion) and informed consent is obtained. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient's extremity. The operation is begun after administering a general anesthetic or axillary block. A tourniquet is applied about the upper arm.

Intra-service work: Dorsal or palmar approaches may be utilized with exposure of the carpal bones via capsular flaps. Reduction of the involved carpal bones is performed, followed by insertion of multiple stabilizing pins. Intra-operative roentgenograms are ordered and reviewed to confirm proper reduction and pin placement. Tendon graft strips are harvested, usually from the long extensor tendons of the wrist. These grafts are passed through carefully drilled carpal bone tunnels in order to reconstruct the injured ligaments. [Alternatively, a capsulodesis may be performed by creating troughs in the involved carpal bones and attaching a harvested piece of wrist capsule in these bone troughs through drill holes.] The skin is closed. A sterile dressing and an above elbow cast are applied.

Post-service work: The post-service work includes patient stabilization and communication with the family and other health care professionals (including written and telephone reports and orders). The patient is instructed in care of the cast, and the schedule of cast changes and physical therapy is reviewed, as part of discharge management. Additionally, all hospital visits and post-discharge office visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work, including: converting the above elbow cast to below elbow level four weeks post-operative; and removing the pins and replacing the below elbow cast with a removable splint eight weeks post-operative. The splint is worn until 12 weeks post-operative, while range of motion exercises are started. Careful observation of the patient and imaging studies throughout this extended post-operative period are necessary to monitor for potential complications including: recurrent instability from attenuation of the tendon graft or repair; fracture of carpal bones in weakened areas, created by drill holes and tunnels; and persistent inflammation possible from acute necrosis of cartilage with narrowing of the intercarpal joint space or inadequate reduction.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
9.25	25320	Capsulorrhaphy or reconstruction, capsulectomy, wrist (includes synovectomy, resection of capsule, tendon insertions)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

See attached "Compelling Arguments."

FREQUENCY INFORMATION

- It is estimated that the 1992 Medicare allowed frequency for AM2 was less than 100: 100% of 25320-22 (freq=2*); 10-20% of 25670 (freq= 64*); 50% 25320-51 (freq=83*) plus 25312-51 (freq=63*); and an unknown percentage of 25999. [*1992 Medicare Part B allowed frequency by all physician specialties. 1992 NCH File. HCFA. June 30, 1993. Electronic data.]
- It is estimated that the current annual frequency for the total population is 500-1500 cases.

SURVEY DATA:

Specialty Orthopeadic Surgery/Plastic Surgery/Hand Surgery

Median Intra-Service Time: 120 Low: 40 High: 240

Median Pre-Service Time: 49 Median Post-Service Time: 100

Length of Hospital Stay: 1

Office Visits on Post-Discharge Day(s) : 99213 on day 5; 99214 on days 14, 28, 56, 84

Median Number of Times Provided in Past 12 months: 3 (range: 0-35)

Median Number of Times Provided in Career: 20 (range: 2-800)

COMPELLING ARGUMENTS FOR NEW RVW FOR REVISED CODE 25320

Old code 25320 (RVW 9.25)

Capsulorrhaphy or reconstruction, capsulectomy, wrist (includes synovectomy, resection of capsule, tendon insertions)

Revised code 25320 (Recommended RVW 10.00)

Capsulorrhaphy or reconstruction, wrist, any method, eg, capsulodesis, ligament repair, tendon transfer or graft, (includes synovectomy, capsulotomy and open reduction) for carpal instability

Modification of the descriptor for CPT 25320 (old code) was recommended to the CPT Editorial Panel by the American Society for Surgery of the Hand "to more adequately describe and include the various procedures and modifications used (in current practice). This would help bundle where unbundling is now done." The old code described (albeit, rather poorly) the service earlier applied to the previous understanding of carpal bone injury and pathology. Capsulorrhaphy (ligament tightening) has not given predictable results in chronic carpal instability problems. As a result, newer ligament reconstruction techniques evolved using small tendon grafts passed through carpal bone tunnels, direct open reduction with internal fixation, and, at times, combined dorsal and volar surgical approaches. These new techniques add time and a greater degree of technical difficulty to the intra-service portion of the procedure. The post-service work of the revised code requires added work (pin removal) and a greater degree of judgement than the old code because of the higher potential for post-operative complications.

The current procedure of capsular reconstruction for carpal instability of the wrist includes new aggregate work (mentioned above) which was not done for old code 25320. Our survey median intra-service time of 120 minutes is greater than the intra-service time of 99 minutes noted in prior Medicare resource-based data for old code 25320.¹

Unbundling takes place and other CPT codes are added when reporting the procedure in order to capture all work that is now done:

25670 Open reduction of radiocarpal or intercarpal dislocation, one or more bones (RVW 7.60)

25312 Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single, with tendon graft (RVW 9.18)

The wording in the old code "resection of capsule, tendon insertions, and even synovectomy" are not part of the procedure for which 25320 has come to be used. The confusing language of the old code results in "upcoding" of lesser procedures. Old code 25320 has been used inappropriately to report a soft tissue release procedure at the wrist performed for wrist flexion contractures, such as exist following cerebral palsy and head trauma. For such conditions, CPT 25085 *Capsulotomy wrist (e.g., for contracture)* is more appropriate. But with a lower RVW (5.19) than old code 25320 (9.25), a tendency to upcode has been seen.

The revised code 25320 now adequately describes the more complex nature and extent of the procedure being done in current practice. The CPT Editorial Panel agreed this revision is more than editorial.

¹ A National Study of Resource-Based Relative Value Scales for Physician Services, Phase III: Final Report to the Health Care Financing Administration, Cambridge, Harvard School of Public Health, 1992 (Appendix B2-1) Electronic data, copyright CHEG, 1994.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AM3

Global Period: 090

CPT Descriptor: Reconstruction for stabilization of unstable distal ulna or distal radioulnar joint, secondary by soft tissue stabilization (eg, tendon transfer, tendon graft or weave, or tenodesis) with or without open reduction of distal radioulnar joint

(For harvesting of fascia lata graft, see 20920, 20922)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30-year-old patient has pain and clicking with forearm rotation due to an unstable distal ulna. Soft tissue reconstruction is performed for stabilization.

Pre-service work: Please note the soft tissue stabilizing operations such as this are performed with variations, depending on whether the ulnar head is present or whether it was resected in a previous operation. Appropriate pre-operative planning is necessary to determine the graft(s) to be used in the reconstruction (flexor carpi ulnaris (FCU), extensor carpi ulnaris (ECU), or facia lata). Prior to the operation, pre-operative roentgenograms and laboratory studies are reviewed; operative risks and benefits are discussed with the patient (i.e., a risk of post-operative loss of rotatory motion for the benefit of a pain-free distal radioulnar joint); and informed consent is obtained. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient's extremity. The operation is begun after administering a general anesthetic or axillary block. A tourniquet is applied about the upper arm.

Intra-service work: Being careful to preserve the sensory branches of the ulnar, a skin incision is made at the ulnar border of the 5th metacarpal extending to the middorsal forearm for a distance of 10 cm. A second incision, if used, is on the palmar forearm to the pisiform for a distance of 10 cm. To avoid potential post-operative ulnar nerve compression, it may be necessary to decompress the canal of Guyon. ECU and/or FCU tendons are split for a length of 10 cm and half of the tendon is detached, either proximally or distally, depending on the exact procedure being performed. If the ulnar head has been resected, the tendon slip is passed through the distal open end of the ulna and out through a dorsal drill hole prior to suturing. When the ulnar head is present, a tendon slip is passed through a drill hole in the ulnar head and adjoining joint (pisotriquetral) capsule. After transfixing the distal ulna to the radius with a pin, the tendon graft is pulled taut and sutured. The skin is closed. A sterile dressing and long arm cast are applied.

Post-service work: The post-service work includes patient stabilization and communication with the family and other health care professionals (including written and telephone reports and orders). The patient is instructed in care of the cast, and the schedule of cast changes and physical therapy is reviewed, as part of discharge management. Additionally, all visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work, including removing the pin and cast six weeks post-operative. A removable ulnar gutter splint may be applied to allow gentle rotary motion for an additional six weeks, after which vigorous exercises are started.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AM4

Global Period: 090

CPT Descriptor: Distal radioulnar joint arthrodesis and segmental resection of ulna (eg, Sauve-Kapandji procedure), with or without bone graft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 46-year-old patient with painful arthritis (either rheumatoid or post-traumatic) undergoes an arthrodesis of the distal radioulnar joint with removal of a approximately 1.6 cm segment of ulna immediately proximal to the distal radioulnar joint.

Pre-service work: Before beginning the procedure, admission roentgenograms and laboratory studies are reviewed. The expected outcome is discussed with the patient (i.e., highly predictable pain relief, but less predictable improvement in motion), and informed consent is obtained. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient's extremity. The operation is begun after administering a general anesthetic or axillary block. A tourniquet is applied about the upper arm.

Intra-service work: A longitudinal incision is made that begins at the ulnar styloid process and extends proximally over the dorsal ulna. The sensory branch of the ulnar nerve is identified and protected. After exposing the distal radioulnar joint, the articular surfaces of the head of the ulna and sigmoid notch of the radius are removed. The distal ulna is then pinned or held with a screw to the distal radius. A 1.5 cm extra-periosteal segment of ulna is then removed, leaving the ulnar head distally. A bone graft from the excised segment of ulna is applied to the distal radioulnar joint. A pseudoarthrosis is preserved by suturing the pronator quadratus muscle to the ulnar stump. The skin is closed. A sterile dressing and long arm cast are applied.

Post-service work: The post-service work includes patient stabilization and communication with the family and other health care professionals (including written and telephone reports and orders). As part of discharge management, the patient is instructed in care of the cast and in exercise to maintain range of motion of the fingers and thumb while in the cast. Additionally, all visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work, including removing pins (if used for internal fixation); removing the cast six to eight weeks post-operative; ordering and reviewing roentgenograms to ensure bone union; and supervised exercise to ensure wrist and forearm motion recovery.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
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9.18	25312	Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; with tendon graft(s) (includes obtaining graft), each tendon
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Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Reference service 25312 is a procedure done to either restore or improve motion to fingers or the wrist. While pre-service work may be quite similar to the new code, intra-service work of the new code requires more skill, effort and time. The new code may involve a two tendon transfer with two skin incisions, hence, a larger surgical exposure. The potential of injury to the ulnar nerve is high. Confirmation of an accurate reduction of the distal ulna requires an intra-operative x-ray, and, frequently, internal fixation with K-wires. Tunnels must be drilled into bone to allow passage of the tendons. Post-service work is similar in both codes.

FREQUENCY INFORMATION

- AM3 may have been reported using a variety of codes. The 1992 Medicare allowed frequency for codes most likely used to report this procedure (alone or in combination) included unknown percentages of: 25310-51 (freq=848*); 25312-51 (freq= 63*); 25676-51 (freq=33*); and 25999 (freq=268*). Fascia lata graft(s) (20920-51 and 20922-51) and tendon graft(s) (20924-51), as needed, would be billed in addition to the primary reconstructive procedure. [*1992 Medicare Part B allowed frequency by all physician specialties. 1992 NCH File. HCFA. June 30, 1993. Electronic data.]
- It is difficult to provide a current annual total population frequency estimate because this procedure is so variable, however, it is expected that the national frequency would be low.

SURVEY DATA:

Specialty(s): Orthopaedic Surgery/Plastic Surgery/Hand Surgery

Median Intra-Service Time: 90 Low: 40 High: 180

Median Pre-Service Time: 45 Median Post-Service Time: 75

Length of Hospital Stay: 0

Office Visits on Post-Discharge Day(s) : 99213 on day 5; 99214 on days 28, 48, 84

Median Number of Times Provided in Past 12 months: 2 (range: 0-15)

Median Number of Times Provided in Career: 12 (1-200)

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
9.96	25390	Osteoplasty, radius or ulna; shortening

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Reference service 25390 involves excising a segment of ulna followed by internal fixation using a plate and screw. Pre-operative work requires more careful planning and measurement of x-rays to determine the exact length of bone to be resected than in the new code. The new code does, however, demand meticulous preparation of the arthrodesis site between the head of ulna and sigmoid notch of radius along with internal fixation. Post-service work is similar in both codes.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that the Medicare frequency for AM4 is low. The 1992 Medicare allowed frequency for codes most likely used to report this procedure (alone or in combination) included unknown percentages of: 25240-22 (freq=9*); 25240-51 (freq=790*); 25825 (freq=274); 25800-51 plus 25390-51 (freq=21); 25800-51 plus 25360-51 (freq=50*); and 25999 (freq=268*). [*1992 Medicare Part B allowed frequency by all physician specialties. 1992 NCH File. HCFA. June 30, 1993. Electronic data.]
- It is estimated that the current annual total population frequency of AM4 would also be low.

SURVEY DATA:

Specialty(s): Orthopaedic Surgery/Plastic Surgery/Hand Surgery

Median Intra-Service Time: 100 Low: 40 High: 180

Median Pre-Service Time: 45 Median Post-Service Time: 70

Length of Hospital Stay: 1

Office Visits on Post-Discharge Day(s) : 99212 on day 5; 99213 on day 14; 99212 on day 28; 99214 on day 49

Median Number of Times Provided in Past 12 months: 1 (range: 0-12)

Median Number of Times Provided in Career: 6 (range:0-40)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: AM5 Global Period: 090

CPT Descriptor: Sympathectomy, digital arteries, with magnification, each digit

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 40-year-old female with vasospastic disease of the hand with severe ischemic pain and ulceration of the finger tip unresponsive to medications undergoes sympathectomy of both digital arteries by circumferential stripping of adventitial tissue over a distance of 2 cm or more.

Pre-service work: Before beginning the procedure, admission roentgenograms and laboratory studies are reviewed. Informed consent is obtained from the patient after a discussion about the potential improvement of digital circulation, with no effect on the underlying systemic disease that produced the indications for the operation. The complications of lack of improvement, as well as injury to the artery undergoing sympathectomy, must be thoroughly explained and understood. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient's extremity. After the patient is positioned supine, with the affected extremity supported on a hand table, a general or regional anesthetic is administered.

Intra-service work: A tourniquet is applied about the upper arm. An incision is made in the distal palm, over the vessels involved, with extension into the finger (according to surgeon preference). Dissection of the common digital artery in the distal palm is extended into the finger to expose the proper digital artery on both the radial and ulnar side of the digit. Using an operating microscope and jeweler's forceps, a tedious removal of the adventitia is performed for a longitudinal distance of 1.5-2.0 cm. The common digital artery may be stripped proximally for 1.0-1.5 cm. Great care is necessary, so as not to perforate the vessel. The media and intima must be left untouched or thrombosis will occur. The small arterial branches must be preserved, while still performing a complete adventitial stripping. The skin is closed and a hand dressing is applied.

Post-service work: The post-service work includes patient stabilization and communication with the family and other health care professionals (including written and telephone reports and orders). The circulatory status of the operated digit(s) must be carefully monitored for 24 hours after the operation, with prompt treatment if any circulatory compromise is noted. If circulation does not improve, the complication of hematoma or thrombosis must be considered, necessitating re-exploration. The patient is instructed in range of motion exercises and therapy (occupational or physical) is instituted if the patient needs assistance. Additionally, all hospital and post-discharge office visits for this procedure for 90 days after the day of the operation are considered part of the post-operative work, including removal of sutures 10 to 14 days post-operative.

KEY REFERENCE SERVICE(S):**RVW** **CPT Code** **CPT Descriptor**

9.16 35207 Repair blood vessel, direct; hand, finger

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Reference service 35207 is the repair of one injured vessel in the hand or finger through an existing skin laceration or a limited surgical extensile incision that can be accomplished with loupe magnification. This being "an operation of necessity," it involves less pre-service work than the new code, which is elective, but requires a detailed discussion of risks and relative benefits. Digital sympathectomy requires a more extensive anatomic dissection than that needed to repair a vessel. Two arteries to the affected finger are always treated, and an operating microscope is employed to accomplish the goal of thorough adventitial stripping, while avoiding the significant risk of injury to the artery. Post-service work is similar in both codes.

FREQUENCY INFORMATION

- It is estimated that the 1992 Medicare allowed frequency for AM5 was less than 100: 1-5% of 64704 (freq=1,187*); and an unknown (low) percentage of 37799 (freq=11,014*) and 64999 (freq=3,763*). [*1992 Medicare Part B allowed frequency by all physician specialties. 1992 NCH File. HCFA. June 30, 1993. Electronic data.]
- It is estimated that the current annual frequency for the total population is 300-500 cases, of which, some percentage will include multiple digits.

SURVEY DATA:

Specialty(s): Orthopaedic Surgery/Plastic Surgery/Hand Surgery

Median Intra-Service Time: 90 Low: 40 High: 200

Median Pre-Service Time: 55 Median Post-Service Time: 70

Length of Hospital Stay: 1

Office Visits on Post-Discharge Day(s) : 99212 on day 3; 99213 on day 10; 99211 on days 28, 60

Median Number of Times Provided in Past 12 months: 1 (range: 0-3)

Median Number of Times Provided in Career: 6 (range: 0-20)

**MAY 1994 RUC RECOMMENDATIONS
HAND SURGERY (Krukenberg, Digits) - TAB M**

The RUC recommendations are based on a survey of plastic and microsurgeons. The progression of values preserves the relationships established in the Harvard data. The RUC recommendations parallel the relative values established but differ in the absolute recommended RVW. The RUC noted that the Harvard values were developed from a survey of approximately 3 to 8 orthopaedic surgeons who do not perform these procedures.

The specialty society initially proposed a value of 0.00 for CPT code 26590 because it was felt that the code described a condition rather than the physician work of the actual procedure. Upon further review by the RUC, the validity of the survey data was confirmed and the median survey value of 21.00 RVW is recommended by the RUC.

Similarly, the value for 26585 was originally recommended at 12.50 RVW in the belief that the operation represented approximately one-half of the intra-service work and proportional representation of the pre- and post- work yielded a value of 16.36 RVW. CPT code 26585 [Repair bifid digit] is less work than code 26550 [pollicitation of a digit] because it requires less microsurgical intra-operative work and less postoperative care. Assuming that:

- 1) the pre-op component of a surgical service is 12%, the intra-operative component is 51%; and the post-operative component is 37% of total work (in terms of RVW);
- 2) that the intraoperative and postoperative time for 26585 is 75% of those time for 26550;
- 3) the intensity of the intra-operative work in 26585 is approximately 67% of the work of 26550;

then a calculated RVW for 26585 would be 16.36. $[(25.02) \times 12\% \times 100\%] = (25.02 \times 51\% \times 75\% \times 67\%) + (25.02 \times 37\% \times 75\%) + (25.05\%)$. This equation would equal an RVW of 16.36.

26585	Base RVW	% of RVW	Time Difference	Intensity Difference	
pre-	25.02 x	0.12 x	1.00 x	1.00	= 3.00
intra-	25.02 x	0.51 x	0.75 x	0.67	= 6.41
post-	25.02 x	0.37 x	0.75 x	1.00	= 6.94

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
25915	Krukenberg procedure	090	20.00
26550	Pollicization of a digit	090	25.02
26555	Positional change of other finger	090	19.47
26585	Repair bifid digit	090	16.36
26790	Repair macrodactylia	090	21.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY CONSENSUS RECOMMENDATION

Proposed Harvard Value: 14.08

CPT Code: 25915

Global Period: 090

CPT Descriptor: Krukenberg procedure

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A male, who is blind, presents with bilateral upper extremity amputation at the wrist, requiring tendon transfers and interosseous releases to allow abduction and adduction of the radius from the ulna. At operation, tendons are transferred, as well as a release of the interosseous membrane. The skin flaps are rotated as needed, and the arm is placed in a bulky dressing. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings are changed, and rehabilitation progress is monitored.

Pre-Service Work:

Assess the patient in the emergency unit, with special attention to the condition of the soft tissues; order and review roentgenograms and laboratory tests; discuss the risks, complications, and expected outcome of the operation with the patient and/or responsible family member; obtain informed consent; and coordinate transport to the operating room and preparation of the operating room for emergent operation.

Intra-Service Work:

Position, prep, and drape the patient; incise the skin and perform tendon transfers, as well as a release of the interosseous membrane; rotate skin flaps; and apply a sterile bulky dressing, reinforced with a splint.

Post-Service Work:

Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, and monitoring rehabilitation progress at regular intervals.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVW's.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
7.26	14040	Adjacent tissue transfer or rearrangement, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; defect 10 sq cm or less
8.14	15000	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits): 100 sq cm or less, or each one percent of body area of infants and children
7.77	25310	Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; each tendon

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

A Krukenberg procedure is very rarely performed. The work to perform a Krukenberg involves tendon transfers, development of flaps, and skin grafting to close the defect (see above referenced codes). Based on the quantity and combination of these separate procedures, the consensus committee is recommending the survey median RVW of 20.00. The value which reflects the responses of those surgeons familiar enough with the procedure to estimate a relative work value.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely
Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of seven orthopaedic surgeons, with an intraservice time standard error of 13.4.

SURVEY DATA: Plastic Surgery/Microsurgery

Median Intra-Service Time: 180 Low: 120 High: 300

Median Pre-Service Time: 60 Median Post-Service Time: 120

Length of Hospital Stay: 2

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28, 60)

Median Number of Times Provided in Past 12 months (Range): 0 (0-1)

Median Number of Times Provided in Career (Range): 0 (0-25)

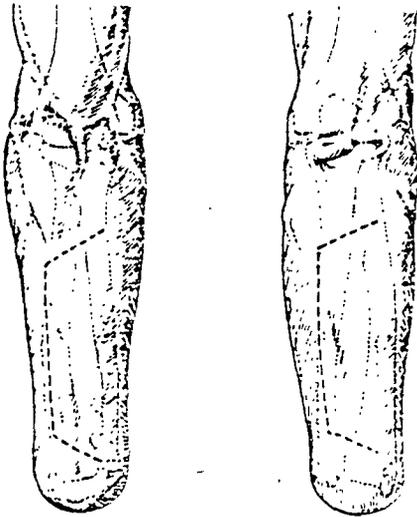


Figure 111-1. Outline of the anterior and posterior incisions.
1232

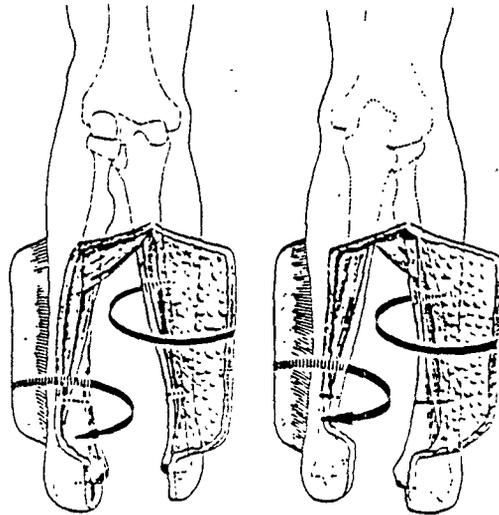


Figure 111-3. Lines of rotation of anterior and posterior flaps.

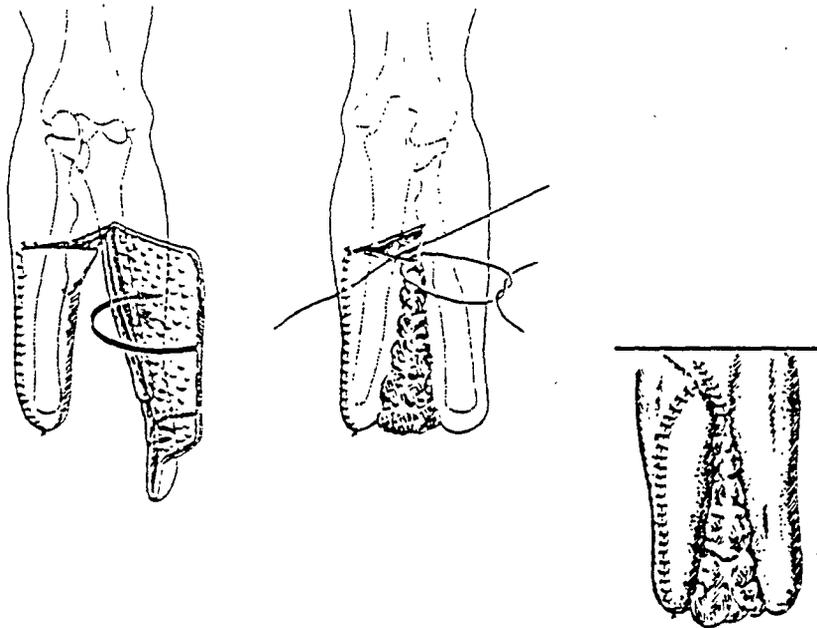


Figure 111-4. Suturing the flaps.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY CONSENSUS RECOMMENDATION

Proposed Harvard Value: 14.65

CPT Code: 26550

Global Period: 090

CPT Descriptor: Pollicization of a digit

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A child, born with aplasia of the thumb, presents for pollicization of the index finger to restore "thumb function." At operation, the neurovascular structures are dissected under the microscope. The A-1 pulley is released, and the proximal second metacarpal is removed. The interosseous muscles are detached. The index finger is transposed, rotated, and held in position with sutures or Kirschner wires. The extensor mechanism is shortened, and three tendon transfers are carried out to create the intrinsic muscles and the long abductor of the new thumb. Skin flaps are closed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work:

Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and the patient's family, including a review of the risk of post-operative decreased motion of the pollicized digit, as well as the possibility of need for further operations; obtain informed consent; and consult with the referring pediatrician and other health care professionals.

Intra-Service Work:

Position, prep, and drape the patient; outline the proposed incisions and incise the skin; microsurgically dissect the neurovascular structures along the palmar aspect of the hand; release the A-1 pulley; remove the proximal second metacarpal and perform an osteotomy; detach the interosseous; transpose and rotate the index finger, using sutures or Kirschner wires to retain position; shorten the extensor mechanism; harvest and transfer three tendons to create the intrinsic muscles and the long abductor of the new thumb; and close the skin flaps and apply a sterile bulky dressing, reinforced with a long-arm splint.

Post-Service Work:

Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring pediatrician, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal, dressing and splint changes, fabrication of a thumb splint to be worn for several months, and monitoring rehabilitation progress at regular intervals.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
7.26	14040	Adjacent tissue transfer or rearrangement, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; defect 10 sq cm or less
7.77	25310	Tendon transplantation or transfer, flexor or extensor, forearm and/or wrist, single; each tendon
7.44	26250	Radical resection (ostectomy) for tumor, metacarpal;
5.10	26477	Tendon shortening, extensor, hand or finger, single, each
3.13	64830	Muscle, myocutaneous, or fasciocutaneous flap; head and neck (eg, temporalis, masseter, sternocleidomastoid, levator scapulae)

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work to perform 26550 involves tendon transfers, an ostectomy; development and rotation of flaps, tenoplasty, microdissection of nerves and an artery, and skin grafting to close the defect (see above referenced codes). Based on the quantity and combination of these separate procedures, the consensus committee is recommending the survey median RVW of 25.02, which reflects the responses by 52 surgeons familiar with this procedure.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 6 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of eight orthopaedic surgeons, with an intraservice time standard error of 6.2.

SURVEY DATA: Plastic Surgery/Microsurgery

Median Intra-Service Time: 240 Low: 120 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 120

Length of Hospital Stay: 2

Post-Hospital Office Visits: 99213 (day 7); 99212 (day 14, 28, 60)

Median Number of Times Provided in Past 12 months (Range): 1 (0-10)

Median Number of Times Provided in Career (Range): 5 (0-80)

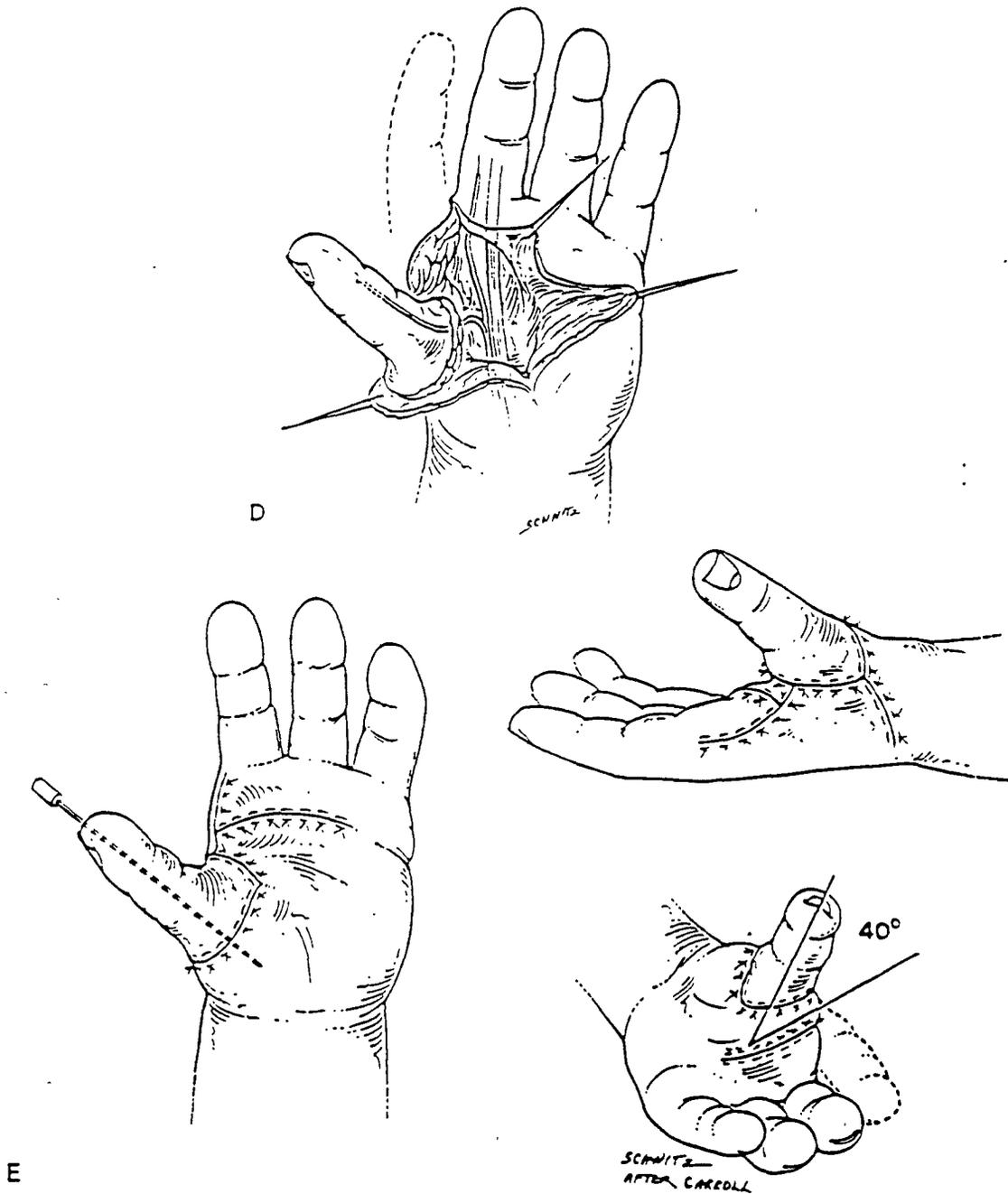


Fig. 57-17 (Continued). (D) The final position of the pollicized distal index finger ray, stabilized by internal fixation. Carroll believed that transfer of the interossei to the lateral bands was unnecessary and extension of the new thumb was "not a problem."²⁰ (E) Closure of the skin flaps using the Carroll technique of pollicization was felt to provide a contracture-free first web space, although scarring remained problematic in some cases.

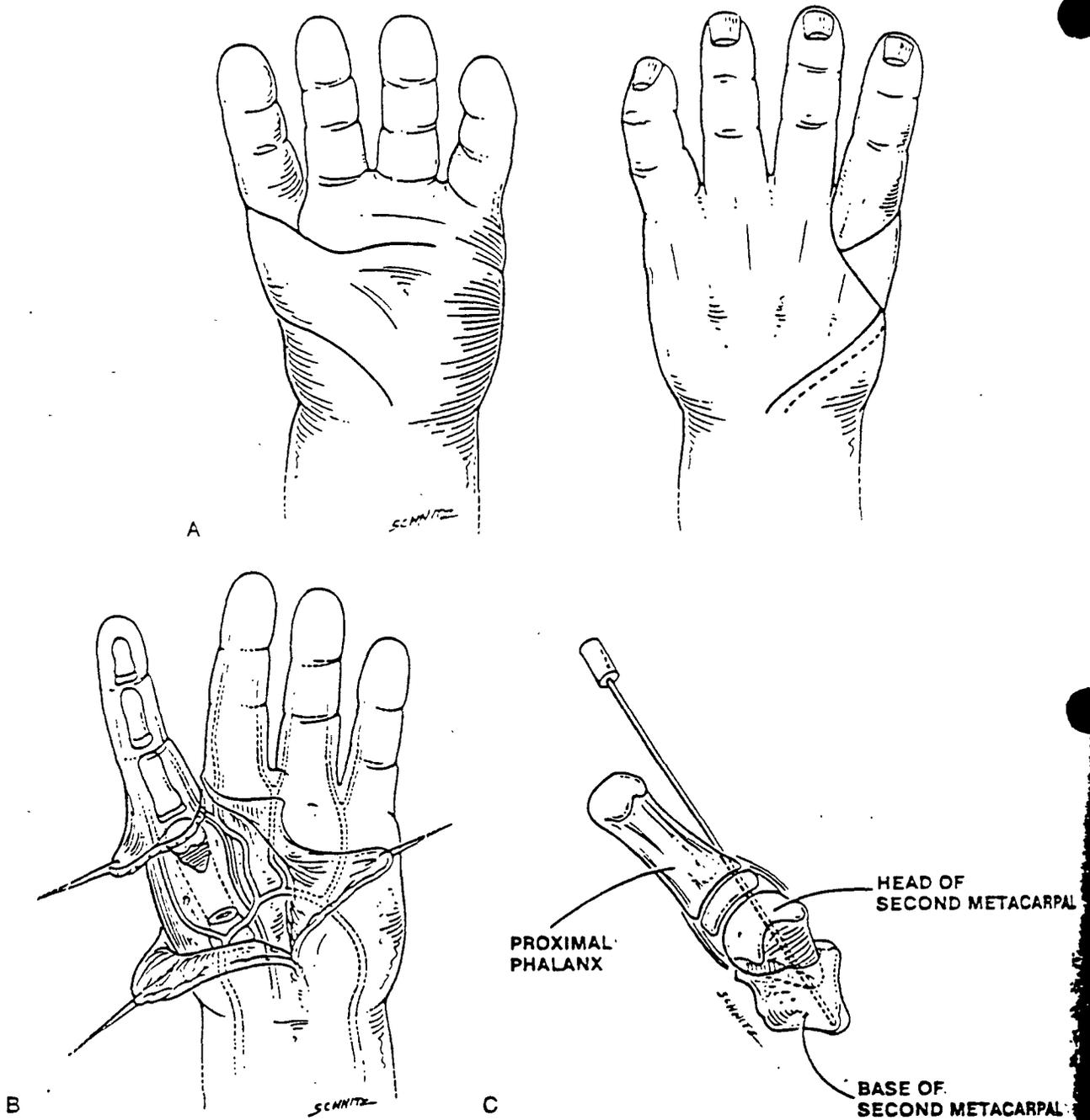


Fig. 57-17. (A-E) Carroll's pollicization technique.²⁰ (A) Incisions designed by Carroll for congenital pollicization were intended to result in a relatively contracture-free first web space. (B) Carroll recommended that all bone and muscle dissection be performed dorsally first, including resection of the diaphysis of the index finger metacarpal. (C) Percutaneous fixation of the contoured metacarpal head to its base was by a single K-wire, often through the entire length of the transposed ray. (Figure continues.)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY CONSENSUS RECOMMENDATION

Proposed Harvard Value: 11.71

CPT Code: 26555

Global Period: 090

CPT Descriptor: Positional change of other finger

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A child, who was born with a pre-axial polydactyly with a triphalangeal thumb, presents for transposition of the more suitable digit to the base of the amputated thumb duplicate. At operation, the unwanted duplicate thumb is removed. The retained duplicate thumb is transferred into a more anatomic position and osteosynthesis is performed. Appropriate tendon transfers and stabilization are performed, as well as any necessary ligamentous reconstruction. Skin flaps are fashioned and inset as needed, and a bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work:

Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and the patient's family, including a review of the risk of post-operative loss of motion, as well as the possibility of need for further operations; obtain informed consent; and consult with the referring pediatrician and other health care professionals.

Intra-Service Work:

Position, prep, and drape the patient; remove the unwanted duplicate thumb; transfer the retained duplicate thumb to a more suitable anatomic position and perform osteosynthesis; transfer and stabilize tendons; perform any necessary ligamentous reconstruction; fashion and inset skin flaps; apply a sterile bulky dressing, reinforced with a long-arm splint.

Post-Service Work:

Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring pediatrician, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture and pin removal, dressing and splint changes, and monitoring rehabilitation progress at regular intervals.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
ZZZ	26550	Pollicization of a digit
7.26	14040	Adjacent tissue transfer or rearrangement, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; defect 10 sq cm or less
7.44	26250	Radical resection (ostectomy) for tumor, metacarpal;
6.57	26545	Reconstruction, collateral ligament, interphalangeal joint, single, including graft, each joint
6.61	26565	Osteotomy for correction of deformity; metacarpal
4.54	26860	Arthrodesis, interphalangeal joint, with or without internal fixation;
1.76	26861	Arthrodesis, interphalangeal joint, with or without internal fixation; each additional interphalangeal joint

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Positional change of other finger is similar to 26550, but does not include as much intraoperative microvascular work as code 26550, and as such, the consensus committee recommends the survey median RVW of 19.47, which reflects the responses by 50 surgeons familiar with this procedure, who estimated a relative value lower than 26550.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 7 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of five orthopaedic surgeons, with an intraservice time standard error of 21.6.

SURVEY DATA: Plastic Surgery/Microsurgery

Median Intra-Service Time: 180 Low: 60 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 90

Length of Hospital Stay: 2

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28, 60)

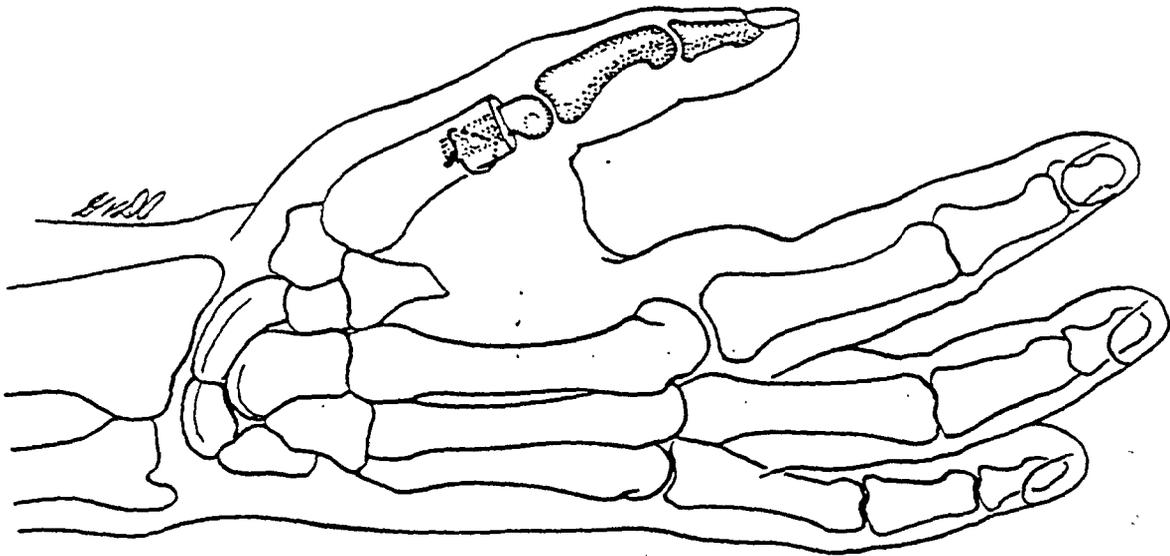
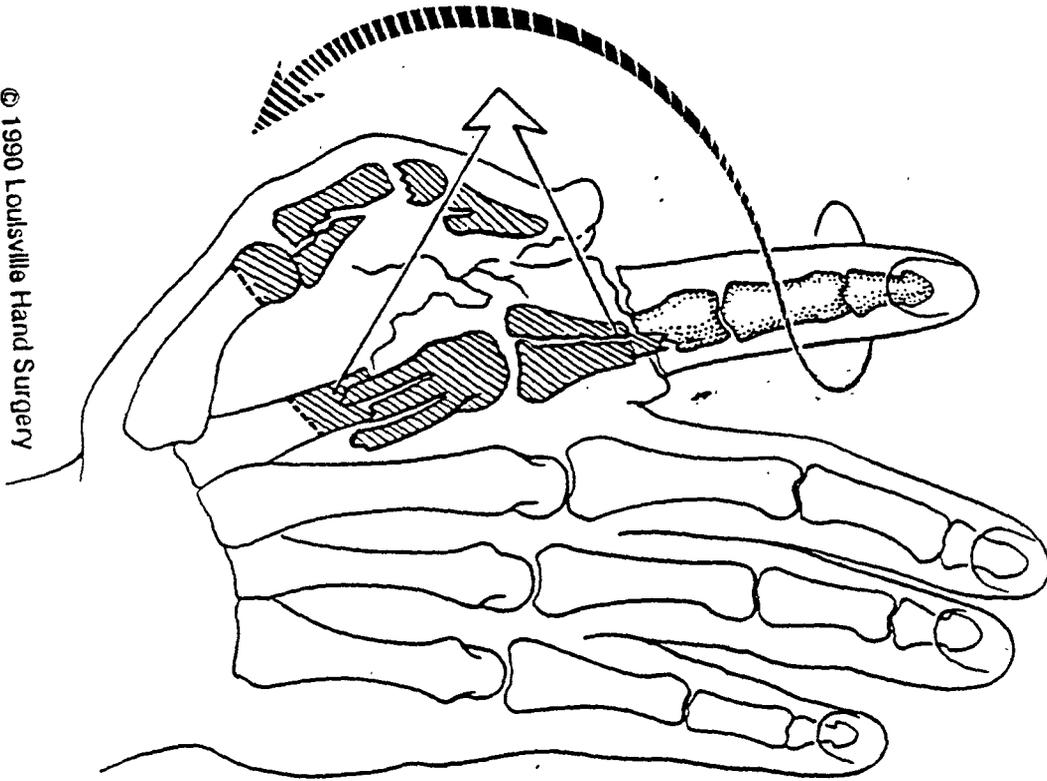
Median Number of Times Provided in Past 12 months (Range): 0 (0-6)

Median Number of Times Provided in Career (Range): 4 (0-55)

26555

22/1

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AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY CONSENSUS RECOMMENDATION

Proposed Harvard Value: 10.13

CPT Code: 26585

Global Period: 090

CPT Descriptor: Repair bifid digit

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A child, who was born with a duplicated thumb, presents for construction of a more functional thumb. At operation, flaps are elevated, as needed. Portions of the duplicate phalanges and metacarpals are removed. Osteotomies for angular deformity are performed. Collateral ligaments are constructed. Flexor and extensor tendons are transferred and redirected. Superfluous tissues are removed, and the skin flaps are inset. A bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work:

Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and the patient's family, including a review of the risk of post-operative loss of motion, late deformity, and instability; obtain informed consent; and consult with the referring pediatrician and other health care professionals.

Intra-Service Work:

Position, prep, and drape the patient; incise the skin and elevate flaps as needed; remove portions of the duplicate phalanges and metacarpals and osteotomized as needed; perform osteotomies for angular deformity; construct collateral ligaments; transfer and redirect flexor and extensor tendons; remove superfluous tissues and inset skin flaps; apply a sterile bulky dressing, reinforced with a long-arm splint.

Post-Service Work:

Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring pediatrician, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture and pin removal, dressing and splint changes, and monitoring rehabilitation progress at regular intervals.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
ZZZ	26550	Pollicization of a digit
7.26	14040	Adjacent tissue transfer or rearrangement, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; defect 10 sq cm or less
7.44	26250	Radical resection (ostectomy) for tumor, metacarpal;
7.36	26485	Tendon transfer or transplant, palmar, single, each tendon; without free tendon graft
6.57	26545	Reconstruction, collateral ligament, interphalangeal joint, single, including graft, each joint
6.61	26565	Osteotomy for correction of deformity; metacarpal

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus committee felt that repair of a bifid digit is less work than pollicization of a digit (26550) because it requires less microsurgical intraoperative work and less postoperative care. Assuming that: (1) the pre-operative component of a surgical service is 12%, the intra-operative component is 51%; and the postoperative component is 37% of total work (in terms of RVWs); (2) that the intraoperative and postoperative time for 26585 is 75% of those times for 26550; and (3) the intensity of the intra-operative work in 26585 is approximately 67% of the work of 26550; then a calculated RVW for 26585 would be 16.36. $[(25.02 \times 12\% \times 100\%) + (25.02 \times 51\% \times 75\% \times 67\%) + (25.02 \times 37\% \times 75\%) + (25.05)]$. The consensus committee recommends an RVW of 16.36, which is less than the survey median RVW of 20.00, but which maintains the work relativity relationship of 26585 to 26550.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 6 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency of 6,912* for "hand reconstruction" patients with congenital defects.
- 1992 national frequency of 8,040* for "birth defect reconstruction" patients--other than cleft/lip/palate, craniofacial, and congenital skin lesions.

*(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: These frequencies may apply to more than one procedure.]

Is this service performed by many physicians across the United States? X Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Any comparison to the Harvard value would be inappropriate because the Harvard value is based on the responses of three orthopaedic surgeons, with an intraservice time standard error of 13.0

SURVEY DATA: Plastic Surgery/Microsurgery

Median Intra-Service Time: 180 Low: 30 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 90

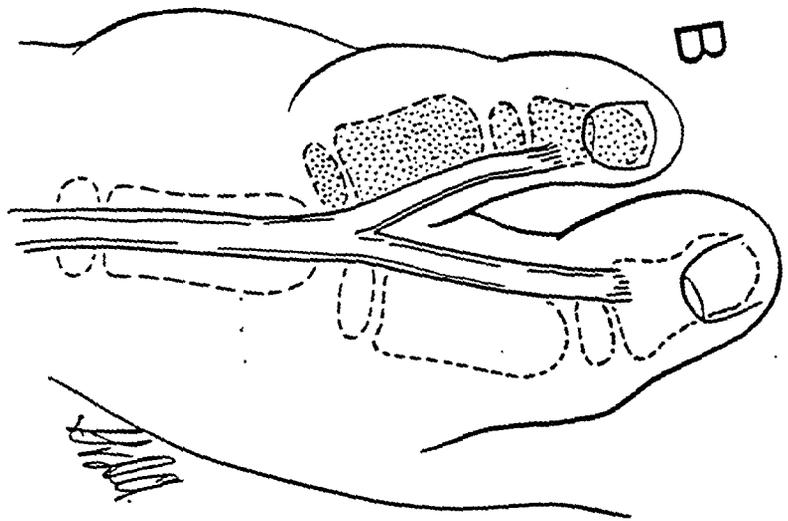
Length of Hospital Stay: 1

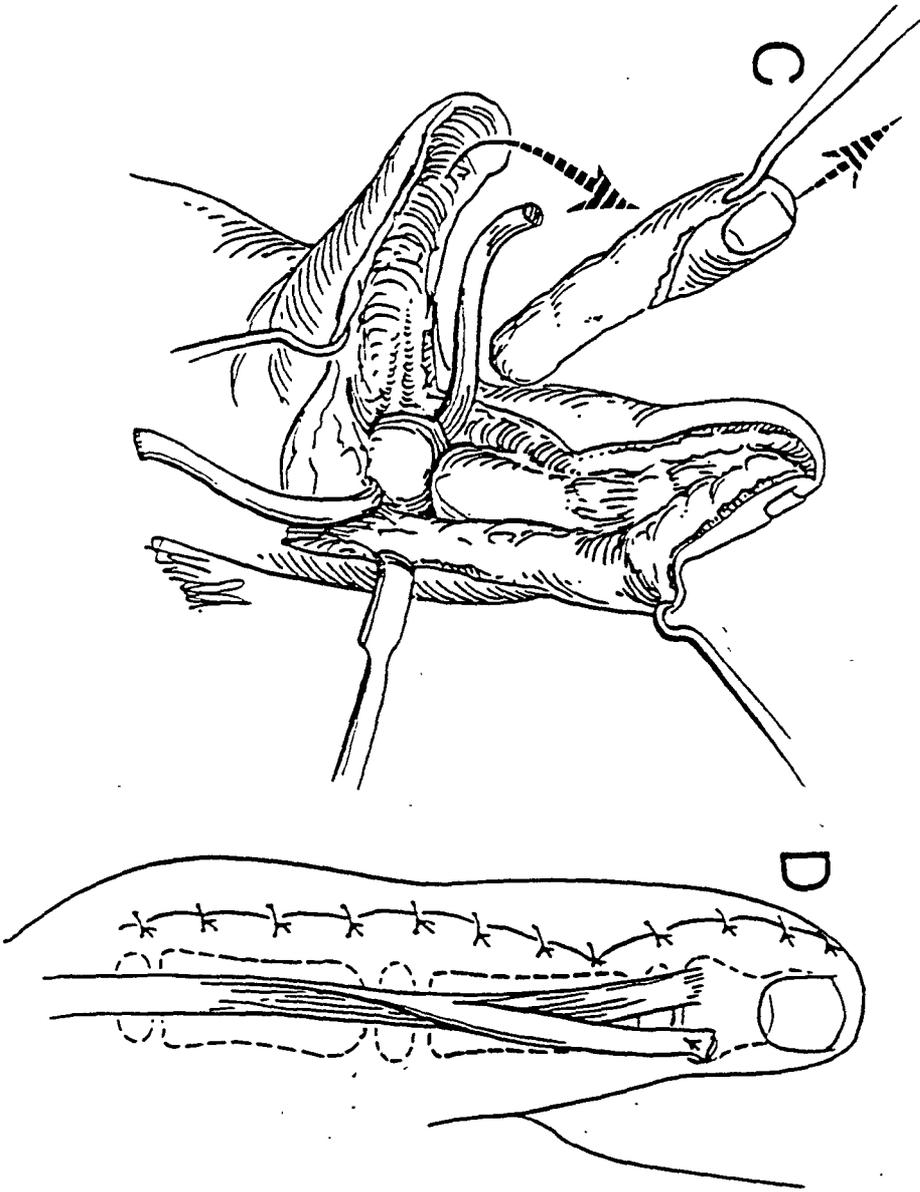
Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28, 60)

Median Number of Times Provided in Past 12 months (Range): 1 (0-8)

Median Number of Times Provided in Career (Range): 6 (0-120)

26585





AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Proposed Harvard Value: 10.98

CPT Code: 26590

Global Period: 090

CPT Descriptor: Repair macrodactylia

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A child, who was born with macrodactyly, presents for soft tissue and bony reconstruction. At operation, skin flaps are developed and the excess soft tissues are excised, including nerves and fat tissue. Epiphysiolyisis, osteotomies, and ostectomies are performed and tendon transfers are carried out, as needed. Amputations, if necessary, are performed. A bulky dressing/splint is applied. During subsequent hospital and office visits, through the 90 day global period, sutures are removed, dressings, casts and splints are changed, and rehabilitation progress is monitored.

Pre-Service Work: Perform hospital admission work-up; review roentgenograms and laboratory studies; communicate with the patient and the patient's family, and obtain informed consent; and consult with the referring pediatrician and other health care professionals.

Intra-Service Work: Position, prep, and drape the patient; fashion skin flaps and excise excess soft tissue, including nerves and fat tissue; perform osteotomies, ostectomies, and epiphysiodeses as needed; transfer tendons as needed; perform any necessary amputations; perform meticulous hemostasis and apply a sterile bulky dressing, reinforced with a long-arm splint.

Post-Service Work: Stabilize the patient; monitor laboratory studies and roentgenograms; communicate with the patient, family, referring pediatrician, and other health care professionals (including written and telephone reports and orders); monitor the wound and change dressing and splints, as needed; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture and pin removal, dressing changes, fabrication and change of splints to protect osteotomies, and monitoring rehabilitation progress at regular intervals.

KEY REFERENCE SERVICE(S): (Ascending CPT order with 1994 RVWs.)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
1.14	11042	Debridement; skin, and subcutaneous tissue
7.26	14040	Adjacent tissue transfer or rearrangement, forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands and/or feet; defect 10 sq cm or less
7.44	26250	Radical resection (ostectomy) for tumor, metacarpal;
6.61	26565	Osteotomy for correction of deformity; metacarpal
4.54	26860	Arthrodesis, interphalangeal joint, with or without internal fixation;
4.97	64776	Excision of neuroma; digital nerve, one or both, same digit
3.14	64778	Excision of neuroma; digital nerve, each additional digit (list separately by this number)

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work to perform 26590 is variable, but may involve debridement, tendon transfers, osteotomies, ostectomies, development and rotation of flaps, epiphysiodeses, amputations, and skin grafting (see above referenced codes). Based on the variability in the quantity and combination of these separate procedures, the consensus committee is recommending the survey median RVW of 21.00, which reflects the wide range of responses by 41 surgeons familiar with this procedure.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 3 (1992 NCH File, HCFA, 3/31/93).

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Plastic Surgery/Microsurgery

Median Intra-Service Time: 180 Low: 60 High: 570

Median Pre-Service Time: 60 Median Post-Service Time: 90

Length of Hospital Stay: 1

Post-Hospital Office Visits: 99213 (days 7, 14); 99212 (days 28, 60)

Median Number of Times Provided in Past 12 months (Range): 0 (0-4)

Median Number of Times Provided in Career (Range): 2 (0-20)

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

ORTHOPAEDIC SURGERY

The RUC recommended ratings are based on a survey of 39 orthopaedic surgeons. A frequency weighted average was derived from 2 vignettes for both CPT codes 26580 and 28360. The recommended values are 17.71 RVW for CPT code 26580 and 12.79 RVW for CPT code 28360.

CPT codes 26580 and 28360 are procedures that are performed to treat anomalies that are very rare. General orthopaedic surgeons are not likely to have ever treated these patients. The specialty society Advisor noted that there is really no such thing as the typical patient, therefore 2 vignettes were developed. When the survey was disseminated respondents were asked to rate each vignette, as well as provide information on the frequency of each patient scenario.

CPT code 26580 - Repair cleft hand, is performed due to the absence of central rays and/or digits. The deformity is characterized by a deep v-shaped or funnel shaped defect in the hand. The correction of syndactyly is often required as a result of this defect. The RUC noted a discrepancy between the RVW for the reference service, CPT code 26561 - 10.76 RVW vs. the recommendation of 17.71 RVW for CPT code 26580. The specialty society Advisor felt that since the repair of a cleft hand is microscopic in nature and further complicated by the age of the patient, the recommended RVW of 17.71 is justified. In comparing the recommended value of 26580 to the key reference service 26561, the specialty society Advisor also noted that a significant portion of the post-operative work for 26580 is focused on the maintenance of the dressing, cast and close monitoring of wound healing. The post-operative period is made more difficult because the patient's are young children, which increases the intensity of the follow-up care provided, which include dressing changes. The number of post-operative visits required ranges between (5-5.5 visits).

CPT code 28360 - Reconstruction, cleft foot, is performed due to a central ray defect and/or the absence of one or more medial rays. The specialty society Advisor noted that the dressing changes for 26580 are much more intense than for 28360. This difference in intensity of follow-up care is reflected in the number of post-operative visits required for 28360 which range from (4.5-6.5 visits).

64876 - Suture of a nerve; requiring shortening of bone of extremity (list separately in addition to code for nerve suture)
A recommendation will be made by the specialty society to the CPT Editorial Panel to have this code deleted.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
26580	Repair cleft hand	090	17.71
28360	Reconstruction, cleft foot	090	12.79

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 26580 Global Period: 090

CPT Descriptor: Repair cleft hand

CLINICAL DESCRIPTION OF SERVICE:

Vignettes Used in Survey:

Vignette #1:

An infant (age 1 to 2 years) with a congenital hand (central ray defect) has a deep V-cleft in the central part of the hand with an opposable thumb and little finger. Corrective surgery is done by the reduction of the interdigital space using local skin flaps and separation of the fused 4th and 5th digits.

Vignette #2:

An infant (age 1 month to 2 years) with a congenital cleft hand (central ray defect) has central V-shaped cleft in the central part of the hand along with rudimentary central metacarpals and non-opposable thumb and little finger. Corrective surgery requires closure of the cleft and separation of fused digits, the central metacarpals are brought parallel by osteotomy or transfer, soft tissue reconstruction of the deep transverse metacarpal ligament, and the thumb is aligned to allow opposition.

Description of Pre-Service Work:

An operative consent is obtained from parents reviewing the specific nature of this congenital anomaly with the surgical goals clearly delineated.

Description of Intra-Service Work:

Incisions and proposed skin flaps are carefully planned. Exacting dissection is necessary to achieve mobilization of skin, vessels, and nerves. Several technically demanding procedures are necessary which may consist of: metacarpal alignment by soft tissue dissection or metacarpal osteotomy requiring internal fixation, reconstruction of the deep transverse metacarpal ligament, and a thumb re-alignment to allow opposition. Mobilization of skin flaps may be necessary to achieve skin closure. A cast is then applied.

Description of Post-Service Work:

Careful observation of circulation is necessary in the early post-operative period. Scrupulous maintenance of the dressing and a protective cast must be kept up for the total duration of wound healing. Parental counseling in the care of the extremity is necessary throughout the post-operative course.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
26561	Repair syndactyly each web space; with skin flaps and grafts	10.76

Relationship to Key Reference Service(s) and/or other Rationale for RVW

Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The reference service, 26561, is a separation of congenitally fused digits accomplished by carefully planned incisions, developing skin flaps and utilizing full-thickness skin grafts. The cleft hand repair requires more pre-service time and a significantly greater amount of intra-service work intensity than the reference service. Pre-service time spent with parents to describe the post operative goals is greater than with the reference service. To a much greater degree than with the reference service, intra-service work for the cleft hand requires constant awareness of the anomalous nature of the anatomy while mobilizing soft tissue, vessels, nerves and bone. Skin flap closure involves a larger area than the reference service.

FREQUENCY INFORMATION:

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? estimated at less than 500

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Vignette #1

Median Intra-Service Time: 150 minutes Low: 110 minutes High: 300 minutes

Median Pre-Service Time: 60 minutes Median Post-Service Time: 100 minutes

Median Length of Hospital Stay: 1 day Median Number & Level of Post-Hospital Visits: 5 visits

Number of Times Provided in Career (Median): 2 times

SURVEY DATA: Vignette #2

Median Intra-Service Time: 195 minutes Low: 120 minutes High: 300 minutes

Median Pre-Service Time: 67.5 minutes Median Post-Service Time: 105 minutes

Median Length of Hospital Stay: 1.5 day Median Number & Level of Post-Hospital Visits: 5.5 visits

Number of Times Provided in Career (Median): 3.5 times

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 28360 Global Period: 090

CPT Descriptor: Reconstruction, cleft foot

CLINICAL DESCRIPTION OF SERVICE:

Vignettes Used in Survey:

Vignette #1:

A 2-year old child with a congenital cleft foot (central ray defect) is treated with surgery which includes excision of the extraneous bony remnants, soft tissue realignment of rays and closure of the cleft.

Vignette #2:

An 8-year old child with a congenital cleft foot (central ray defect) has diverging metatarsal and hallux valgus. Surgical treatment includes alignment of metatarsals by osteotomy, reconstruction of the inter-metatarsal ligament, correction of the hallux valgus and closure of the cleft.

Description of Pre-Service Work:

An operative consent is obtained from parents reviewing the specific nature of this congenital anomaly with the limited post-operative expectations clearly delineated.

Description of Intra-Service Work:

Incisions are carefully planned outlining proposed skin flaps. The anatomic anomaly requires an exacting dissection to mobilize skin and protected vessels and nerves. Any extraneous bony remnants are excised. The metatarsals are aligned by soft tissue mobilization or osteotomy. Metatarsal-phalangeal and carpo-metacarpal joints are aligned by soft tissue release and repair is required. Skin flaps are used for closure of the cleft. A dressing with a cast is applied.

Description of Post-Service Work:

Careful observation of circulation is necessary in the early post-operative period. Scrupulous maintenance of the dressing and protective cast must be done for the total duration of wound healing. Parental counseling in the care of the extremity is necessary throughout the post-operative course.

KEY REFERENCE SERVICE:

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
28260	Capsulotomy, midfoot; medial release only.	7.68

Note: The mail survey respondents selected as a 1st reference service code 28292; Hallux valgus (bunion) correction, with or without sesamoidectomy. The Committee, however, decided that another code selected, code 28260; Capsulotomy midfoot, was more appropriate as a reference service since it more closely reflected the patient age and extent of soft tissue dissection existing in the cleft foot reconstruction.

Relationship to Key Reference Service(s) and/or other Rationale for RVW

Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The reference service, 28260, describes a soft tissue procedure used to mobilize and realign the mid and hind foot in the relatively common pediatric condition of congenital talipes equino-varus (club foot). The cleft foot reconstruction requires more pre-service time and judgment than the reference in order to gain parental understanding of limited post-operative goals. Intra-service work is greater than the reference service in that anomalous anatomy and adaptive structural deformities make surgical correction difficult. Furthermore, unlike the reference service, cleft foot reconstruction may require osteotomy and internal fixation and always requires closure with skin flaps. The post-service work requires fewer cast changes and is, therefore, less intense than the reference service.

FREQUENCY INFORMATION:

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? estimated at less than 50

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Vignette #1

Median Intra-Service Time: 120 minutes Low: 90 minutes High: 300 minutes

Median Pre-Service Time: 60 minutes Median Post-Service Time: 100 minutes

Median Length of Hospital Stay: 3 days Median Number & Level of Post-Hospital Visits: 4.5 visits

Number of Times Provided in Career (Median): 5 times

SURVEY DATA: Vignette #2

Median Intra-Service Time: 120 minutes Low: 90 minutes High: 180 minutes

Median Pre-Service Time: 62.5 minutes Median Post-Service Time: 120 minutes

Median Length of Hospital Stay: 2 days Median Number & Level of Post-Hospital Visits: 6.5 visits

Number of Times Provided in Career (Median): 4 times

MAY 1994 RUC RECOMMENDATIONS
TOTAL CONTACT LEG CAST - TAB G

The RUC recommendation for total contact leg cast is based on a survey of orthopaedic surgeons. 2946X [Application of rigid total contact leg cast] requires the physician to custom make and fabricate the walking surface for each cast. The patient is usually diabetic with a grade 1 or 2 foot ulcer. Use of casts by these patients is risky because these patients are at risk of developing additional ulcers, so a great deal of physician time is spent ensuring that the cast will fit properly. As the cast is being applied the physician holds the foot in place. This procedure is always performed by physician or a podiatrist. The recommended value for this procedure is 1.80 RVW.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
D1	●2946X	Application of rigid total contact leg cast	000	1.80

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking No. (CPT Code): D1 (2946X) Global Period: 000

CPT Descriptor: Application of rigid total contact leg cast

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

55 year old with a diabetic neuropathic ulcer on the weight-bearing surface of the foot without deep infection. An anatomically conforming composite short leg walking cast covering the toes is applied.

Description of Pre-Service Work:

The ulcer has been thoroughly debrided of all necrotic tissue with surrounding callus removed during prior services. Proper patient screening has been done to exclude those with deep infection, excessive edema or excessively fragile skin. The patient selected for total contact walking cast application is thoroughly interviewed to ensure he or she will be able to keep follow-up visits and is able to adhere to cast precautions. Informed consent is obtained with explaining all risks and complications (e.g. joint stiffness, muscle atrophy, skin abrasions, new ulcerations, and malodorous drainage). The materials used for casting must be custom prepared for the patient including the padding and walking platform.

Description of Intra-Service Work:

The patient is placed prone with an assistant holding the foot with the ankle in neutral position and knee flexed at 90°. With a neuropathy, the patient is unable to properly maintain foot position, therefore, an assistant is required. The ulcer is measured with a description recorded in the patient record. Tubular stockinette is applied covering the leg from knee to and including the toes. Minimal padding augmented with felt or adhesive-backed foam used to protect the anterior tibial crest, the malleoli and associated claw toe deformities. Carefully molded elasticized plaster is the initial layer. Layers of standard plaster are used for reinforcement. Often, 1/2 inch plywood strips or rocker soles are incorporated into the cast to allow total contact weight-bearing. Fiberglass casting tape is then used to cover the entire application.

CLINICAL DESCRIPTION OF SERVICE (continued):Description of Post-Service Work:

Before the patient leaves the office, cast instructions are repeated. Full weight-bearing is allowed immediately. If massive swelling is present, non-weight bearing is maintained until the second cast application. A follow-up appointment is made for the initial cast to be changed in no more than 7 to 10 days because of the usual rapid reduction of edema. Subsequent casts are changed every 7 to 14 days. A range of 4 to 12 cast changes are necessary to accomplish healing defined as complete skin closure without drainage or the presence of a sinus tract. Operative intervention is probably necessary if healing does not take place during the time of casting.

FREQUENCY INFORMATION:

How was service coded before?

29425-22 or 29799What is the estimated frequency of usage of this service? 10,000 per year

1992 Medicare NCH file allowed frequency for 29425 (with and without modifiers) was 37,107. Allowed frequency for 29425-22 was 76.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
29425	Short leg cast; walking	1.03

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

29425 is a standard below knee walking cast used for a variety of conditions, most frequently foot and ankle injuries. The materials used are standard "off the shelf items." The short leg walking cast is the usual cast students and inexperienced house officers try their hand at applying in the orthopaedic clinic and emergency room. The casts are well padded to protect skin and bone prominences during wearing and to guard against injury from the cast saw during removal. New code 2946X, while also a below knee walking cast, is used for an entirely different reason and in patients with unique characteristics making cast use extremely risk laden. The neuropathic foot being insensate is extraordinarily prone to developing pressure sores within a cast. The materials used are more costly than those in the reference service and must be customized to the individual patient taking into account any pre-existing foot deformities. Further, the time required to apply the cast is much longer than the reference service. All those who apply the type of cast described in this new code must receive highly specialized and extensive personal training to avoid complications with this, the most difficult of lower extremity cast techniques now used in current practice. As it relates to the key reference service, it is the classic example of a service requiring an increase all "elements of physician work: time, technical skill, judgment, and the stress due to the potential for iatrogenic harm."

SURVEY DATA:

Specialty Orthopaedic Surgery

Median Intra-Service Time: 30 minutes Low: 10 minutes High: 60 minutes

Median Pre-Service Time: 15 minutes Median Post-Service Time: 5 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 38 times

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

RHINOPLASTY

At its November meeting, the RUC adopted recommendations for a family of rhinoplasty codes, with the exception of code 30450, rhinoplasty, secondary; major revision (nasal tip work and osteotomies), which was referred to a facilitation committee for further review. The RUC adopted the facilitation committee's recommendation to reduce the specialty's original recommendation of 20.00 to 18.75. Code 30450 is similar to code 30462, rhinoplasty for nasal deformity secondary to congenital cleft lip and/or palate, including columellar lengthening; tip, septum, osteotomies, which has an RVW of 19.19.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
30400	Rhinoplasty, primary; lateral and alar cartilages and/or elevation of nasal tip	090	10.00	9.87 (Submitted in November)
30410	complete, external parts including bony pyramid, lateral and alar cartilages, and/or elevation of nasal tip	090	14.00	13.82 (Submitted in November)
30420	including major septal repair	090	16.84	16.62 (Submitted in November)
30430	Rhinoplasty, secondary; minor revision (small amount of nasal tip work)	090	7.50	7.40 (Submitted in November)
30435	intermediate revision (bony work with osteotomies)	090	13.75	13.57 (Submitted in November)
30450	major revision (nasal tip work and osteotomies)	090	18.75	18.51

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 30450

Global Period: 090

CPT Descriptor: Rhinoplasty, secondary; major revision (nasal tip work and osteotomies)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient returns after primary or secondary rhinoplasty with major complaints concerning over-resection and major deformity in tip or bony matrix. Open rhinoplasty is frequently required, including multiple tip and dorsal grafts and osteotomies (frequently there is significant scarring and difficulty of defining planes).

Description of Pre-Service Work: Pre-service work is similar to that provided for 30400

Description of Intra-Service Work: This intra-service is the most intense and time consuming of the rhinoplasties. There is a high likelihood that an open approach would be used with dissection through scar tissue, and loss of surgical landmarks. The work usually involved cartilage grafting for reconstruction. Requires more technical skill than that needed for 30420.

Description of Post-Service Work: Post-service work is similar to that provided for 30400.

Key REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
13.69	21206	Osteotomy, maxilla, segmental
16.51	42415	Excision of parotid tumor or parotid gland; lateral lobe, with dissection and preservation of facial nerve.
19.09	42420	Excision of parotid tumor or parotid gland; total, with dissection and preservation of facial nerve

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of 30450, including major revision, osteotomies and tip work, is the most extensive rhinoplasty. It requires more work than a 42420, and more skill than that of a 30420. The panel recommended a RVW at the 75 percentile of the survey, or 20.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 41 (1992 NCH File, HCFA, 3/31/93).
 - 1992 national frequency of 4,435* for "rhinoplasty (secondary)" patients--open. Patients ≥ 65 y.o. 2%.
 - 1992 national frequency of 5,879* for "rhinoplasty (secondary)" patients--closed. Patients ≥ 65 y.o. 2%.
- *(1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]

Is this service performed by many physicians across the United States? Yes No

The service is provided across the nation but by a limited number of surgical subspecialist.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 11.48
Harvard methodology and vignette is unknown.

SURVEY DATA:

Median Intra-Service Time: 150 Low: 75 High: 300

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 2 x 99214; 4 x 99212

Number of Times Provided in Past 12 months (Median): 3; range = 0-63

**MAY 1994 RUC RECOMMENDATION
ENDOSCOPIC SINUS SURGERY - TAB H**

3125X [Nasal/sinus endoscopy, surgical, with maxillary antrostomy; with removal of tissue from maxillary sinus] is similar in work to 30520 [Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft].

312XX [Nasal/sinus endoscopy, surgical with frontal sinus exploration with or without removal of tissue from frontal sinus] is similar to 31239 [Nasal/sinus endoscopy, surgical; with dacryocystorhinostomy (RVW = 8.59)]. The risks associated with 312XX are greater than 31239. 31071 [Sinusotomy frontal; intranasal] is a different procedure than 312XX and should not be used as a point of comparison. 31071 was not an endoscopic procedure and was placed in CPT prior to the invention of Functional Endoscopic Sinus Surgery.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BE1	31071	31071 (BE1) Sinusotomy frontal; intranasal (31071 has been deleted. To report, see 312XX)	090	N/A
<p>ENDOSCOPY</p> <p>(A surgical sinus endoscopy always includes a sinusotomy and diagnostic endoscopy)</p> <p>(Codes 31233-31294 are used to report unilateral procedures unless otherwise specified)</p> <p>(The codes 31231-31235 for diagnostic evaluation refer to employing a nasal/sinus endoscope to inspect the interior of the nasal cavity and the middle and superior meatus, the turbinates, and the sphenoid recess. Any time a diagnostic evaluation is performed all these areas would be inspected and a separate code is not reported for each area)</p>				
	31231	Nasal endoscopy, diagnostic, unilateral or bilateral (separate procedure)	000	0.74 (no change)
	31233	Nasal/sinus endoscopy, diagnostic, with maxillary sinusoscopy (via inferior meatus or canine fossa puncture)	000	1.58 (no change)

	31235	Nasal/sinus endoscopy, diagnostic, with sphenoid sinusoscopy (via puncture of sphenoidal face or cannulation of osteum)	000	2.77 (no change)
	31237	Nasal/sinus endoscopy, surgical; with biopsy, polypectomy or debridement (separate procedure)	000	1.90 (no change)
	31238	with control of epistaxis	000	3.30 (no change)
	31239	with dacryocystorhinostomy	010	8.59 (no change)
	31240	with concha bullosa resection	000	2.64 (no change)
BE2	31245	Nasal/sinus endoscopy, surgical, with osteomeatal complex (OMC) resection and/or anterior ethmoidectomy, with or without removal of polyp(s); (31245 has been deleted. To report, use 31254)	000	N/A
BE3	31246	with antrostomy (31246 has been deleted. To report, use 31254 and 31256)	000	N/A
BE4	31247	with antrostomy with removal of antral mucosal disease (31247 has been deleted. To report, use 31254 and 31267)	000	N/A
BE5	31248	with frontal exploration (31248 has been deleted. To report, use 31254 and 312XX)	000	N/A
BE6	31249	with frontal sinus exploration and antrostomy (31249 has been deleted. To report, use 31254, 31256, and 312XX)	000	N/A
	31250	Nasal endoscopy, diagnostic, with or without biopsy (includes examination of the medial meatus, infundibulum and sinus ostia) (separate procedure) (31250 has been deleted. To report, see 31231-31235)	000	N/A

BE7	31251	with frontal sinus exploration, antrostomy, and removal of antral mucosal disease (31251 has been deleted. To report, use 31254, 31267 and 312XX)	000	N/A
	31252	Nasal endoscopy, surgical; with nasal polypectomy (31252 has been deleted. To report, use 31237)	000	N/A
BE8	●31254	Nasal/sinus endoscopy, surgical; with ethmoidectomy, partial (anterior) (31254 has been deleted. To report, see 31245-31251)	000	4.70 (August 1993 Refinement Process)
BE9	●31255	with ethmoidectomy, total (anterior and posterior) (31255 has been deleted. To report, see 31261-31286)	000	7.04 (1993 RVW with 1994 1.3% reduction)
BE10	●31256	Nasal/sinus endoscopy, surgical, with maxillary antrostomy; (31256 has been deleted. To report, see 31246, 31247, 31251, 31262, 31264, 31269, 31271, 31281, 31282, 31284, 31286) (31258 has been deleted. To report, use 31237)	000	3.33 (1993 RVW with 1994 1.3% reduction)
BE11	●3125X (31267 in 1993)	with removal of tissue from maxillary sinus (31267 has been deleted. To report, use 31245, 31247, 31261, 31280, and 31286)	000	5.52
BE12	●312XX	Nasal/sinus endoscopy, surgical with frontal sinus exploration with or without removal of tissue from frontal sinus	000	8.85
	31258	Nasal endoscopy, surgical; with removal of foreign body(s) 31258 has been deleted. To report, use 31237	000	N/A
	31260	Maxillary sinus endoscopy, diagnostic, with or without biopsy (separate procedure) (31260 has been deleted. To report, use 31233)	000	N/A

BE13	31261	Nasal/sinus endoscopy, surgical, with anterior and posterior ethmoidectomy (APE), with or without removal of polyp(s); (31261 has been deleted. To report, use 31255)	000	N/A
BE14	31262	with antrostomy (31262 has been deleted. To report, use 31255 and 31256)	000	N/A
	31263	Maxillary sinus endoscopy, surgical; with removal of foreign body(s) (31263 has been deleted. To report, use 31267-31299)	000	N/A
BE15	31264	with antrostomy and removal of antral mucosal disease (31264 has been deleted. To report, use 31255 and 31267)	000	N/A
	31265	with removal of cyst (31265 has been deleted. To report, use 31299)	000	N/A
BE16	31266	with frontal sinus exploration (31266 has been deleted. To report, use 31255 and 312XX)	000	N/A
	31268	with removal of fungus ball (31268 has been deleted. To report, use 31267-31299)	000	N/A
BE17	31269	with frontal sinus exploration and antrostomy (31269 has been deleted. To report, use 31255, 31256, and 312XX)	000	N/A
	31270	Sphenoid endoscopy, diagnostic, with or without biopsy (separate procedure) (31270 has been deleted. To report, use 31235)	000	N/A
BE18	31271	with frontal sinus exploration, antrostomy, and removal of antral mucosal disease (31271 has been deleted. To report, use 31255, 31267, and 312XX)	000	N/A

	31275	Sphenoid endoscopy, surgical; (31275 has been deleted. To report, see <u>31287, 31288, and 31291</u>)	000	N/A
	31277	with removal of mucous membrane (31277 has been deleted. To report, use 31288)	000	N/A
BE19	31280	Nasal/sinus endoscopy, surgical, with anterior and posterior ethmoidectomy and sphenoidotomy (APS), with or without removal of polyp(s); (31280 has been deleted. To report use 31255, and <u>31287 or 31288</u>)	000	N/A
BE20	31281	with antrostomy (31281 has been deleted. To report use 31255, 31256 and <u>31287 or 31288</u>)	000	N/A
BE21	31282	with antrostomy and removal of antral mucosal disease (31282 has been deleted. To report, use 31255, 31267, and <u>31287 or 31288</u>)	000	N/A
BE22	31283	with frontal sinus exploration (31283 has been deleted. To report use 31255, 31287 or 31288, and <u>312XX</u>)	000	N/A
BE23	31284	with frontal sinus exploration and antrostomy (31284 has been deleted. To report use 31255, 31256, 31287 or 31288 and <u>312XX</u>)	000	N/A
	31285	Sinus endoscopy, two or more sinuses, unilateral (31285 has been deleted. To report, see 31231-31235)	000	N/A
BE24	31286	with frontal sinus exploration, antrostomy and removal of antral mucosal disease (31286 has been deleted. To report use 31255, 31267, 31287 or 31288, and <u>312XX</u>)	000	N/A
	31287	Nasal/sinus endoscopy, surgical, with sphenoidotomy;	000	3.96 (no change)
	31288	with removal of tissue from the sphenoid sinus	000	4.63 (no change)

	31290	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; ethmoid region	000	13.01 (no change)
	31291	sphenoid region	010	13.67 (no change)
	31292	Nasal/sinus endoscopy, surgical; with medial or inferior orbital wall decompression	010	10.57 (no change)
	31293	with medial orbital wall and inferior orbital wall decompression	010	11.56 (no change)
	31294	with optic nerve decompression	010	13.21 (no change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: BE11 Global Period: 000

CPT Descriptor: Nasal/sinus endoscopy, surgical, with maxillary antrostomy; with removal of tissue from maxillary sinus

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: (Please see attached)

Description of Pre-Service Work: Median Pre-Service Time: 30 minutes

(Please see attached for further description)

Description of Intra-Service Work: Median Intra-Service Time: 50 minutes

(Please see attached for further description)

Description of Post-Service Work: Median Post-Service Time: 30 minutes

(Please see attached for further description)

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft	5.61
69633	Tympanoplasty without mastoidectomy, initial or revision; with ossicular chain reconstruction and synthetic prosthesis	11.89
42440	Excision of submandibular (submaxillary) gland	6.68

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Sampled physicians reviewed the RVWs and procedure descriptions from the standard Otolaryngology AMA Reference Service List to estimate the amount of work involved in BE11. The reference services listed above were the most frequently cited services. Reference service codes 30520, 69633, 42440 were cited in 81%, 69%, and 68% of the cases respectively.

Issue: Endoscopic Sinus Surgery Tracking Number: BE11 Global Period: 000

CPT Descriptor: Nasal/sinus endoscopy, surgical, with maxillary antrostomy; with removal of tissue from maxillary sinus

Typical Service/Patient:

The patient is similar to the patient described for code # 31256, but with more extensive maxillary sinus disease requiring extensive work in the maxillary sinus via the natural ostium or a maxillary sinus trephine (puncture-trocar). The pathology may include polyps, redundant mucous membrane, fungal debris, or bony partitions. This procedure may be performed as an isolated procedure or in conjunction with the treatment of other sinuses.

It includes a review of CT anatomy in the OR, decongestion of the nose prior to anesthesia, application of topical/injectable anesthetics, and preparation of the patient. The uncinate process is partially removed endoscopically. The maxillary sinus ostium is visually identified, palpated and the maxillary ostium obstruction is relieved endoscopically. Residual inferior bony uncinate remnants are removed and the ostium enlarged posteriorly, inferiorly and anteriorly as indicated under endoscopic visualization.

Alternatively, local anesthetic may be injected in the canine fossa and a trocar gently twisted through the anterior maxillary sinus wall. A 4mm 0 or 30 degree telescope is inserted through the trocar and the sinus is inspected. The disease is located and removed with an optical or plain biopsy forcep inserted through the trocar, a middle meatal or an inferior meatal antrostomy. The telescope is reinserted, the sinus reinspected and the sequence repeated until a satisfactory result is obtained.

This procedure requires removal of limited or extensive maxillary sinus disease such as polyps, mucous membrane, bony partitions or massive fungal concretions. Hemostasis with topical agents or sponge insertion may be required. Insertion of stents or packing, writing post op orders, discussion or post operative results, dictation of operative report, and post op discharge planning are also part of the procedure. The surgeon may then communicate with the referring physician.

Tracking Number BE11:

Description of Pre-Service Work: Includes decongestion of the nose prior to anesthesia, application of topical/injectable anesthetics, and preparation of the patient.

Description of Intra-Service Work: CT anatomy is reviewed in the OR. Maxillary sinus ostium is visually identified, palpated and the maxillary ostium obstruction is relieved endoscopically. Residual inferior bony uncinata remnants are removed and the ostium is enlarged posteriorly, inferiorly and anteriorly as indicated under endoscopic visualization. Alternatively, local anesthetic may be injected in canine fossa and a trocar twisted through the anterior maxillary sinus wall. A telescope (4mm 0 or 30 degree) is inserted through the trocar to inspect the sinus. Once the disease is located, it is removed with an optical or plain biopsy forceps inserted through the trocar, a middle meatal or an inferior meatal antrostomy. The telescope is reinserted and these steps are repeated until a satisfactory result is achieved.

The procedure involves removal of limited or extensive maxillary sinus disease such as polyps, mucous membrane, bony partitions or massive fungal concretions. It also includes insertion of stents or packing.

Description of Post-Service Work: Includes writing post-op orders, discussion of post-op results, dictation of operative report, and post-op discharge planning. The surgeon may also communicate with the referring physician.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Otolaryngology

Median Intra-Service Time: 50 minutes Low: 15 minutes High: 120 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: 0 Number & Level of Post-Hospital Visits: 4 (within 90 days)

Number of Times Provided in Past 12 months (Median): 27

Other Data: -

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: BE12 Global Period: 000

CPT Descriptor: Nasal/sinus endoscopy, surgical with frontal sinus exploration with or without removal of tissue from frontal sinus

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: (Please see attached)

Description of Pre-Service Work: Median Pre-Service Time: 30 minutes

(Please see attached for further description)

Description of Intra-Service Work: Median Intra-Service Time: .75 minutes

(Please see attached for further description)

Description of Post-Service Work: Median Post-Service Time: 30 minutes

(Please see attached for further description)

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
69660	Stapedectomy or stapedotomy with reestablishment of ossicular continuity, with or without use of foreign material	11.77
30520	Septoplasty or submucous resection, with or without cartilage scoring, contouring or replacement with graft	5.61
21395	Open treatment of orbital floor "blowout" fracture; periorbital approach with bone graft	11.98

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Sampled physicians reviewed the RVWs and procedure descriptions from the standard Otolaryngology AMA Reference Service List to estimate the amount of work involved in BE12. The reference services listed above were the most frequently cited services. Reference service codes 69660, 30520, and 21395 were cited in 72%, 70%, and 79% of the cases respectively.

Issue: Endoscopic Sinus Surgery

Tracking Number: BE12

Global Period: 000

CPT Descriptor: Nasal/sinus endoscopy, surgical with frontal sinus exploration with or without removal of tissue from frontal sinus

Typical Service/Patient:

A typical patient with acute or chronic frontal sinusitis characterized by frontal pain, purulent frontal sinus drainage and frontal sinus/frontal recess obstruction who might otherwise have an osteoplastic frontal sinus obliteration. This patient may have had recurrent/persistent frontal sinus disease requiring revision surgery, but have little remaining nasal anatomy and few normal landmarks.

It includes review of CT anatomy in the OR, decongestion of the most prior to anesthesia, application of topical/injectable anesthetics and preparation of the patient. The procedure includes delicate removal of obstructing frontal recess cells, polyps or scar tissue and intersinus septae from the dome of the ethmoid and skull base. It may include removal of osteitic bone between the frontal sinus and a supraorbital ethmoid cell. The skull base is at significant risk for perforation resulting in CSF leak or intracranial bleeding. Hemostasis with bipolar cautery, topical agents or sponge insertion may be required. Insertion of stents or packing, writing post op orders, discussion of post operative results, dictation of operative report and post op discharge planning are also part of the procedure. The surgeon may then communicate with the referring physician.

Tracking Number BE12:

Description of Pre-Service Work: Includes decongestion of the most prior to anesthesia, application of topical/injectable anesthetics and preparation of patient.

Description of Intra-Service Work: CT anatomy is reviewed in the OR. Obstructing frontal recess cells, polyps, or scar tissue and intersinus septae from the dome of the ethmoid and skull base are delicately removed. It may also include removal of osteitic bone between the frontal sinus and a supraorbital ethmoid cell. The skull base is at significant risk for perforation resulting in CSF leak or intracranial bleeding. Insertion of stents or packing is also involved.

Description of Post-Service Work: Includes writing post-op orders, discussion of post-op results, dictation of operative report and post-op discharge planning. The surgeon may also communicate with the referring physician.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Otolaryngology

Median Intra-Service Time: 75 minutes Low: 20 minutes High: 150 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: 0 Number & Level of Post-Hospital Visits: 4 (within 90 days)

Number of Times Provided in Past 12 months (Median): 14

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

LARYNGOPLASTY AND TRACHEOPLASTY

Laryngoplasty and tracheoplasty are infrequent services provided for the treatment of stenosis or severe trauma. The proposed values were developed as part of a study conducted by Abt Associates involving a 32-member consensus panel. The RUC evaluated and adopted all of the specialty recommendations for these codes, but some of the information on codes that is collected as part of the RUC survey process had not been collected in the Abt study. For the four laryngoplasty codes, the RUC recommended values are lower than those proposed by Harvard; the tracheoplasty value is higher than the proposed Harvard RVW.

Code 31582 [Laryngoplasty; for laryngeal stenosis, with graft or core mold, including tracheotomy] is a heterogenous description that includes very complex surgery most commonly performed on children for anterior (35%), posterior (25%), or anterior and posterior (40%) stenosis. In its evaluation, the RUC considered the Advisor's description of the work involved in the service, the relationship between the service and the key reference service code 31360 [Laryngectomy; total without neck dissection], and the relationship between the work involved in laryngoplasty for laryngeal stenosis and laryngoplasty for laryngeal web (code 31580, 11.28 RVW). The service described by code 31582 involves several post-hospital visits to evaluate the permanent stent. The physician must also make certain that the parents learn CPR and how to care for an occluded tracheotomy tube. The laryngoplasty for stenosis is much more difficult than laryngoplasty for laryngeal web as 31580 does not require a graft and the disease pathology does not usually include laryngeal stenosis. The laryngoplasty for laryngeal web (31580) is used for a patient with a small scar band and the webbing is already in place, whereas the procedure described by code 31582 is most commonly used to treat patients with 60-70% laryngeal stenosis, including children with stenosis and adults that have crush injuries due to automobile accidents, resulting in severe trauma. It was also noted that the frequency of this procedure is close to 400 cases per year and the past 3-5 years has shown an increase in the severity of the patients.

Code 31588 [Laryngoplasty, not otherwise specified (eg, for burns, reconstruction after partial laryngectomy)] describes a more conventional operation that is approximately the same work as thyroidectomy (subtotal, partial, code 60245, 12.32 RVW). This procedure usually involves development of an epiglottic flap and patients most typically have a tracheotomy tube. Responding to questions regarding the number and level of post-hospital visits, the otolaryngologists explained that the decannulization process is very intense.

Laryngeal reinnervation by neuromuscular pedicle (code 31590) usually involves a patient with a pre-existing tracheotomy tube who has bilateral vocal cord paralysis and extensive nerve damage. The procedure is less complex and involves less risk than total thyroid lobectomy, unilateral (code 60220, 10.10 RVW).

Code 31755 [Tracheoplasty; tracheopharyngeal fistulization, each stage] describes tracheoplasty for a patient with severe stenosis, crush injury, or caustic ingestion. The surgery involves a multi-staged procedure in which tracheal and pharyngeal mucosal flaps are constructed and then allowed to mature before the second stage of the surgery is performed. The specialty Advisor suggested that, in proposing 7.85 RVW, the Harvard study may have confused this procedure with a complex tracheostoma revision (code 31614) which has an RVW of 6.26. Code 31755 is more difficult than 31614 as it includes mobilizing the pharynx and nerve preservation.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
Larynx - Repair				
31582	Laryngoplasty; for laryngeal stenosis, with graft or core mold, including tracheotomy	090	20.45	20.18
31588	Laryngoplasty, not otherwise specified (eg, for burns, reconstruction after partial laryngectomy)	090	12.11	11.95
31590	Laryngeal reinnervation by neuromuscular pedicle	090	6.51	6.43
Tracheoplasty				
31755	Tracheoplasty; tracheopharyngeal fistulization, each stage	090	15.05	14.85

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 31582 Global Period: 090

CPT Descriptor: Laryngoplasty; for laryngeal stenosis, with graft or core mold, including tracheotomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 2 year old child who has anterior subglottic stenosis (70%).
Surgical correction is accomplished with an autogenous costal cartilage graft. An Aboulker stent is also utilized.

Description of Pre-Service Work: Discussion with parents, review of x-rays, positioning patient, preparation of neck, surgeon scrub, placement of rigid endotracheal tube via tracheotomy stoma.

Description of Intra-Service Work: Neck incision, incision in cricoid cartilage, trachea, and possibly larynx, possible lateral and/or cricoid split, contouring of graft, modification of stent and placement and securing of metal tracheotomy tube into stent; placement of stent into airway (often monitored via endoscope), suture of graft into trachea (magnification), closure of wound.

Description of Post-Service Work: Transport to Recovery Room or ICU, dictate report and letter, orders, talk to parents, teach nurses special trach care. 10 days inpatient (2-3 in ICU).

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
31360	Laryngectomy; total without neck dissection	15.56

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Dissection difficult, preservation anterior commissure, recurrent laryngeal nerves, insertion of special stents with secured tracheotomy tube, precise stent placement, teaching family wound and trach care, placement of graft.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 400

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: 3 1/2 hours Low: _____ High: _____

Median Pre-Service Time: 45 min Median Post-Service Time: 60 min

Length of Hospital Stay: 10 days Number & Level of Post-Hospital Visits: 99214 - 2
99213 - 2
99212 - 3

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 31588 Global Period: 090

CPT Descriptor: Laryngoplasty, not otherwise specified (eg, for burns, reconstruction after partial laryngectomy)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 50 year old male undergoes an epiglottic flap for glottic stenosis after a vertical hemilaryngectomy.

Description of Pre-Service Work: Discussion of procedure, obtaining consent, review of pulmonary function studies, evaluation of neck, checking lab, chest x-ray, positioning of patient, marking incision, replacement of tracheotomy tube, scrub preparation of patient.

Description of Intra-Service Work: Laryngotomy (nature depends upon type of reconstruction), development of epiglottic flap (or use of pedicled hyoid graft or strap muscle flap), closure of donor area, suture flap in place, closure larynx and neck.

Description of Post-Service Work: Observation in Recovery Room, dictation of operative report, orders, talking to family; In-Hospital stay - 5 days (7-8 visits/stay); 4 post-operative visits.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
60245	Thyroidectomy (subtotal, partial)	12.32
31360	Laryngectomy, total, without radical neck dissection	15.56

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Approximately same as 60245.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 300

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Approximately the same.

SURVEY DATA:

Median Intra-Service Time: 2½ hours Low: _____ High: _____

Median Pre-Service Time: 45 min Median Post-Service Time: 40 min

Length of Hospital Stay: 5 days Number & Level of Post-Hospital Visits: 99214 - 2
99213 - 3
99212 - 2

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 31590

Global Period: 090

CPT Descriptor:

Laryngeal reinnervation by neuromuscular pedicle

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 23 year old patient has bilateral vocal cord paralysis with resultant airway obstruction due to medial (adducted) positioning of the true vocal cords. A unilateral ansa hypoglossal (omohyoid) neuromuscular flap is placed into the ipsilateral intrinsic laryngeal muscles.

Description of Pre-Service Work: Discussion of procedure, obtaining consent, review of pulmonary function studies, evaluation of neck, checking lab, chest x-ray, positioning of patient, marking incision, replacement of tracheotomy tube, scrub preparation of patient.

Description of Intra-Service Work: Neck incision, identification of neuromuscular pedicle, identification of laryngeal donor site, placement of nerve-muscle graft into muscle, close incision.

Description of Post-Service Work: Dictation of report, orders, talk to family and patient, inpatient hospital visits, post-operative office visits.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
60220	Total thyroid lobectomy, unilateral	10.10
31360	Laryngectomy, total; without radical neck dissection	15.56
42440	Excision of submandibular gland	6.77

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less risk than 60220 and less complex with less care than 31360.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 12

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Lower than Harvard.

SURVEY DATA:

Median Intra-Service Time: 90 min Low: _____ High: _____

Median Pre-Service Time: 60 min Median Post-Service Time: 30 min

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 99214 - 1

99213 - 1
99212 - 3

Number of Times Provided in Past 12 months (Median): _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 31755 Global Period: 090

CPT Descriptor: Tracheoplasty; tracheopharyngeal fistulization, each stage

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30 year old patient has subglottic and upper tracheal stenosis. The patient undergoes a tracheal reconstruction using a tracheopharyngeal flap technique.

Description of Pre-Service Work: Discussion of procedure, obtaining consent, review of pulmonary function studies, evaluation of neck, checking lab, chest x-ray, positioning of patient, marking incision, replacement of tracheotomy tube, scrub preparation of patient.

Description of Intra-Service Work: Neck incision, mobilize trachea and pharynx, dissection and identification of both recurrent laryngeal nerves (often from scar tissue), construction of tracheal and pharyngeal mucosal flaps, suture flaps together, closure of strap muscles, skin.

Description of Post-Service Work: Stabilize patient in Recovery Room; dictate operative report, orders; talk to family and patient, in hospital care (4 days), office follow-up.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
60245	Thyroidectomy (subtotal, partial)	12.32
31360	Laryngectomy; total, without radical neck dissection	15.56

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This is more difficult than a partial thyroidectomy due to the need to develop flaps in addition to identification of the recurrent nerves. It is approximately equal to a total laryngectomy since the pharynx is entered and tracheopharyngeal flaps are made. It requires attempts to preserve the recurrent nerves, whereas the total laryngectomy does not. Immediate and chronic post-operative care is similar to a total laryngectomy.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 150

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

We value it at 1.92 times the Harvard value due to dissection and preservation of recurrent laryngeal nerves, often from scar tissue, and the design and formation of tracheal and pharyngeal flaps.

SURVEY DATA:

Median Intra-Service Time: 3 hours Low: _____ High: _____

Median Pre-Service Time: 1 hour Median Post-Service Time: _____

Length of Hospital Stay: 5 days Number & Level of Post-Hospital Visits: 99214 - 2
99213 - 2
99212 - 3

Number of Times Provided in Past 12 months (Median): ?

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

MAJOR RECONSTRUCTION OF THE CHEST WALL

The RUC approved the recommendation based on a survey median of 44 thoracic and general surgeons. Code 32820, major reconstruction of the chest wall, is also equivalent to 32100, thoracotomy, major, with exploration and biopsy, with 10.18 RVWs plus 15734, muscle, myocutaneous, or fasciotuneous flap; trunk, with 16.70 RVWs [16.70 + .50(10.18)].

CPT Code	CPT Descriptor	Global Period	RVW Recommendation (in 1994 RVWs)
32820	Major reconstruction, chest wall (post traumatic)	090	20.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

CPT Code Number: 32820 Global Period: 090

CPT Descriptor: Major reconstruction, chest wall (post-traumatic)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 38 year old man was in a motor vehicle accident six month previously, which resulted in left chest wall and lung injury. Initial workup revealed multiple fractures in ribs 3-8 and underlying lung contusion. Patient experienced persistent shortness of breath and paradoxical motion in the left chest wall following dismissal after initial hospitalization. Preoperatively, surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. The fractured ribs were excised and reconstructed with a Marlex mesh prosthesis and latissimus dorsi muscle transposition. Chest thoracostomy tubes were placed. Postoperatively, surgeon sees to patient stabilization, including monitoring of hemodynamics and fluid balance. Wound checks and dressing changes are done to assure absence of hematoma and drainage. Communication is made with patient and family. Nutrition is managed through alternative routes. Chest tubes are removed on day 3 and the patient is dismissed on day 10. Office visits are conducted during followup.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a (??thoracotomy??); excise fractured ribs and reconstruct with a mesh prosthesis and latissimus dorsi muscle transposition; place drains (??and chest tube??); close the wound with a layered closure; and apply a sterile dressing.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wound to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
10.18	32100	Thoracotomy, major; with exploration and biopsy
16.70	15734	Muscle, myocutaneous, or fasciocutaneous flap; trunk

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

32820 is the equivalent of 32100 + 15734 [16.70 + 0.5(10.18) = 21.72]. The consensus committee recommends the survey median RVW of 20.00

FREQUENCY INFORMATION

1992 Medicare allowed frequency by all physician specialties for code 15734 was 6,782. (*1992 NCH File, HCFA, 3/31/93)

SURVEY DATA:

Specialty Society: STS/AATS; ACS

Median Intra-Service Time: 215 min Low: 120 min High: 400 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 240 min

Number of Times Provided in Past 12 months (Median): 0 (range 0-5)

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

TRANSPLANT SURGERY

In July 1993, the RUC submitted recommendations for two donor organ transplant codes, donor cardiectomy (code 33940) and donor cardiectomy-pneumonectomy (code 33930), and several other lung transplant codes, which were based on recommendations submitted by the Society of Thoracic Surgeons (STS) as well as a RUC facilitation committee. After publication of the July Proposed Rule, which solicited relative value recommendations for a number of transplant surgery codes, the American Society of Transplant Surgeons (ASTS) expressed interest in participating in the development of RUC recommendations for transplant codes, and also expressed concern that they had not been invited to participate in the development of the RUC recommendations submitted last summer. After reviewing the previous RUC recommendations, the ASTS agreed with the recommendations for single and double lung transplant surgery (codes 32851-54), but the ASTS and STS jointly asked the RUC to reconsider the recommendations for 33930 and 33940 simultaneous with its development of recommendations for kidney, liver, and pancreatic transplant surgery codes. The RUC agreed to reconsider these recommendations and asks that the new values of 10.35 for donor cardiectomy and 14.31 for donor cardiectomy-pneumonectomy presented below be considered in lieu of the values presented in July of 12.00 and 14.00, respectively. Table 3, which contains the 1993 RUC recommendations for the lung transplant codes that were not reconsidered at this meeting, as well as the donor kidney procedure from a living donor (adopted at the November RUC meeting), appear at the end of this section.

The initial recommendations developed by the ASTS or jointly by the ASTS and other specialty societies participating in the RUC for the donor organ transplant codes were based on separate surveys for kidney, heart, pancreas, and liver, but the RUC thought the issues involved in valuing the codes were very similar. As a result, a facilitation committee was formed to consider all of the transplant codes. The recommendations of this facilitation committee are presented below and were accepted by the ASTS representatives and the full RUC.

Cadaver Donor Organ Retrieval Procedures

As is apparent from the attached recommendation forms submitted to the RUC by the specialties, there is considerable and unusual physician travel involved in the retrieval of donor organs and their transport to the recipient. Although this travel time does involve physician resource costs, the RUC does not believe that the physician work component values for the codes are the

appropriate place to reflect these costs. There is a code in CPT for Unusual Travel (code 99082) and the RUC recommends that when donor retrieval involves unusual travel it be separately reported and appropriately compensated.

Since the donor codes listed in Table 1 below involve procedures on a cadaver, no postoperative care of a patient is involved. The intraservice work of the procedures can be broken down into two distinct components: the work involved in retrieving the organ from the donor and the work involved after the organ has been retrieved in preparing the organ to be transplanted into the recipient, known as back bench work. To develop relative values, the RUC separately rated each of these two components, summed them, and added an additional 15% to account for the preoperative management entailed in the service.

The organ retrieval component is generally done by teams working in an organized way to retrieve multiple organs from the same cadaver. On average, this procedure lasts a total of 3 hours, or closer to 4 hours if lung(s) removal is involved. During this total period, a certain amount of time (in hours) is involved in removing each donor organ, shown in column 1 of Table 1, and a certain amount of average time is back bench time (column 2). The intensity per hour of the back bench work involved in a donor pancreatectomy is 50% greater than the intensity per hour of the intraoperative work involved in a Whipple procedure. The intensity per hour of the Whipple procedure is calculated by taking 50% of the interim relative value of 34.55 and dividing that by nearly 4 hours of intraoperative time, which equals 4.5, and which is expressed below as a constant, K. Each of the donor procedures is then ranked according to their intensity relative to K in column 4. Total back bench work is calculated by multiplying time by intensity, or column 2 by column 4.

The work involved in one hour of retrieval may be expressed as a constant, C, equal to half the intensity of a Whipple procedure, or 2.25. Each service is also ranked according to the intraoperative intensity of retrieval relative to C, as shown in column 3. Total organ retrieval work is calculated by multiplying time by intensity, or column 1 by column 3. After retrieval and back bench work are summed, then the 15% is added for preoperative work to get total work.

Column 5 shows the complete equation for each of the donor codes and the result, which is the recommended total work value for each code. The RUC also noted that the back bench work is sometimes done by a different surgeon than the one who does the organ retrieval. Although the CPT Editorial Panel previously rejected proposed new codes for back bench procedures, the RUC suggested that the transplant surgeons seek to have notes included in CPT identifying the back bench component as the post-service portion of the donor codes. If appropriate notes are included, column 6 shows what the physician work of the back bench portion of each service would be if modifier -55 for post-operative care only were used with these codes.

The RUC strongly supports its previous recommendation that the Whipple procedure be valued at 43.00 instead of 34.55. Since the basis of the donor code values is the intensity per hour of the Whipple, the relative values should be increased if the Whipple is increased by the refinement process. This change would increase intensity per hour to 5.2 from 4.5. Column 7 shows what the recommended values would be under this circumstance.

This approach basically places all of these services on the scale of relative work for general surgery in a consistent manner and in the appropriate rank order. The facilitation committee also assessed the results of this approach by comparisons with published relative work values for the key reference services identified in the surveys, such as hepatectomy (code 47130, 32.33 RVW), aortofemoral bypass graft (code 35646, 24.59 RVW), and total abdominal colectomy (code 44152, 23.55 RVW), and considered them reasonable. In addition, the committee noted that the median from the specialty's survey for donor pancreatectomy was 25.00, which is almost the same as the RUC-recommended value for this code. Although the transplant surgeons accepted the RUC's recommendations, they questioned whether the values would be appropriate for removal of a single organ from a cadaver donor. Multiple organ removal is the "typical" service, however, and the values are appropriate for the typical service.

Table 1

CPT Code	CPT Descriptor	Global Period	1	2	3	4	5	6 Total RVW Recommendation	7 Back Bench Only	8 Recommendation with Whipple Increase
50300	Donor nephrectomy, with preparation and maintenance of homograft <u>allograft</u> ; from cadaver donor, unilateral or bilateral	XXX	1.5	1.0	C	K	$((1.5*2.25)+4.5)*1.15$	9.06	4.50	10.47
33940	Donor cardiectomy, with preparation and maintenance of allograft	XXX	1.5	0.5	2C	K	$((1.5*2.25)+(5*4.5))*1.15$	10.35	2.00	11.96
33930	Donor cardiectomy-pneumectomy, with preparation and maintenance of allograft	XXX	1.5	0.75	2.5C	K	$((1.5*2.25)+(75*4.5))*1.15$	14.31	4.00	15.70
47133	Donor hepatectomy, with preparation and maintenance of allograft; <u>from cadaver donor</u>	XXX	2.0	1.0	2.5C	1.25K	$((2*2.25)+4.5)*1.15$	19.41	5.63	22.43
48550	Donor pancreatectomy, with preparation and maintenance of allograft from donor cadaver, with or without duodenal segment for transplantation	XXX	2.0	2.0	2C	1.5K	$((2*2.25)+(2*4.5))*1.15$	25.30	13.00	29.90

Other Transplant Surgery Procedures

In evaluating the other transplant surgery procedures, shown in Table 2, the RUC accepted the specialty's recommendations. Comparisons were made between the procedures being valued and reference procedures, assessing the intensity of intraoperative work, potential morbidity and mortality following the procedures, and likely number of days in the intensive care unit postoperatively. For code 48554, Transplantation of pancreatic allograft, the RUC noted that the patient would be in the ICU a minimum of 10 days following surgery and that the intensity of postoperative care is high for this procedure due to the need to monitor lab values and the difficulty of determining the source of complications in pancreatic patients. Removal of a transplanted allograft (code 48556, 19.74 RVW recommended) requires a longer postoperative stay than a hemigastrectomy (code 43633, 19.61 RVW). Partial donor hepatectomy from a living donor (39.59 recommended) was compared to total right lobectomy (code 47130, 32.33), and it was noted that the partial donor hepatectomy is more intense intraoperatively than a Whipple, which is in turn more intense than a lobectomy. In addition, there is a 6% mortality rate for the living donor patients.

The RUC also carefully evaluated the recommended value of 78.47 for code 47135 for liver allotransplantation because it would be the highest valued service on the RVS. The procedure actually involves six individual procedures with difficult anastomoses and potential problems with portal circulation: laparotomy, hepatectomy, hepatic artery resection, cholecystectomy, and inferior vena cava resection and anastomoses. Postoperatively, average length of stay is 25 days and patients are at risk of becoming severely hypotensive. The new code for heterotopic liver allotransplantation was tabled because it is so rare that the transplant surgeons did not think it had yet been done in the United States.

Table 2

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
33935	Heart-lung transplant with recipient cardiectomy-pneumonectomy	090	57.50
33945	Heart transplant, with or without recipient cardiectomy	090	40.00
47135	Liver <u>allotransplantation; orthotopic, partial or whole, from cadaver or living donor, any age with or without recipient hepatectomy</u>	090	78.47
●471XB	heterotopic, partial or whole, from cadaver or living donor, any age	090	64.75

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
●48550	Donor pancreatectomy, with preparation and maintenance of allograft from donor cadaver, with or without duodenal segment for transplantation	090	25.30
●48554	Transplantation of pancreatic allograft	090	34.55
●48556	Removal of transplanted pancreatic allograft	090	19.74

Table 3: RUC Recommendations Previously Submitted

LUNG TRANSPLANT, July 1993

Comparisons were made between the work involved in lung transplant procedures with that of kidney transplants, as well as the work of harvesting lungs relative to hearts. Harvesting the lungs alone is more work than either the heart alone or the total heart/lung block. The RUC's discussion of the lung transplant codes noted that the removal of a lung from a donor is more difficult than removal from a living patient because of the need to preserve the lung and its susceptibility to the external environment. The RUC also discussed the increased intensity associated with the double lung transplant compared to the single lung transplant due to the inability to rely on the healthy lung if complications arise from the transplant.

Tracking Number	CPT Code (● New)	CPT Descriptor	Coding Change	Global Period	RVW Recommendation
AT11	●32850	Donor pneumonectomy(ies) with preparation and maintenance of allograft (cadaver)	new	XXX	12.00
AT12	●32851	Lung transplant, single; without cardiopulmonary bypass	new	090	36.00
AT13	●32852	with cardiopulmonary bypass	new	090	38.00
AT14	●32853	Lung transplant, double (bilateral sequential or en bloc); without cardiopulmonary bypass	new	090	45.00
AT15	●32854	with cardiopulmonary bypass	new	090	50.00

DONOR NEPHRECTOMY, LIVING DONOR, November 1993

In addition to the comparisons to key reference services offered by the specialty societies, the RUC compared the recommendation for code 50320 [Donor nephrectomy, with preparation and maintenance of homograft; from living donor, unilateral] to the pneumonectomy recommendations adopted by the RUC last year. The committee noted that the kidney team prepares the patient, whereas the lung team does not, as well as the complex pre-evaluation of volunteers who do not need the operation for themselves, but who have offered to undergo the procedure for the sake of someone else. The voluntary nature of the procedure places an unusual burden of stress on the physician, who will be concerned about avoiding any unnecessary injury to the donor.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
50320	Donor nephrectomy, with preparation and maintenance of homograft; from living donor, unilateral	090	22.66	22.37

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Ms. Sandra L. Sherman
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American Medical Association
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Dear Ms. Sherman:

Enclosed please find the relative work value recommendations of the American Society of Transplant Surgeons (ASTS) for the following services:

Tracking number AF13	Donor pancreatectomy (CPT 48550)
Tracking number AF14	Pancreas transplantation (CPT 48554)
Tracking number AF15	Removal of transplanted pancreatic allograft (CPT 48556)
Tracking number K5	Cadaver donor hepatectomy
Tracking number K6	Living donor hepatectomy
Tracking number K7	Orthotopic liver transplant
Tracking number K8	Heterotopic liver transplant

In the past, all seven of those services have either lacked a CPT code or have been reported using a code for which no relative values have been assigned (i.e., an unlisted procedure code, or a code for which Medicare payment is based on individual carrier pricing or on some methodology other than the fee schedule).

Ms. Sandra L. Sherman
January 13, 1994
Page Two

In terms of procedure frequency, we note that the United Network for Organ Sharing Scientific Registry data as of October 15, 1993, showed the following figures for the year 1992:

<u>Procedure</u>	<u>Number</u>
Liver transplantation	2,997
Kidney-liver transplantation	56
Liver-pancreas transplantation	5
Liver-heart transplantation	1
Kidney-pancreas transplantation	491
Pancreas only transplantation	60
Kidney-pancreas-heart transplantation	1

For the pancreas transplant-related procedures, we obtained survey responses from 31 transplant surgeons. For the liver transplant-related procedures, we obtained responses from 26 surgeons for the two more common procedures (cadaver donor hepatectomy and orthotopic liver transplant), and we obtained 20-22 responses for living donor hepatectomy and heterotopic liver transplant, both of which are rarely performed at this time. While the number of responses is less than the RUC ideal of 30, we believe they represent a large proportion of the individuals now performing the procedures in question. In addition, the responders appear to be representative in terms of geographic location, type of program, and other important characteristics.

Please note that our survey was conducted using the 1993 relative work values for the reference procedures. Thus, our reporting forms show the reference procedures with their 1993 work values, and the survey data are expressed in terms of 1993 work values. However, our relative work value recommendations are expressed in terms of the 1994 work values published in the *Federal Register* of December 2, 1993, and therefore reflect the required budget neutrality adjustment.

With respect to heart and heart-lung transplant-related procedures, our recommendations will be submitted under separate cover, in concert with the Society of Thoracic Surgeons.

Ms. Sandra L. Sherman
January 13, 1994
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I plan to be present for the entire RUC meeting. Joining me to present the transplantation codes will be Dr. James Burdick (liver transplantation) and Dr. David Sutherland (pancreas transplantation), and Dr. William Baumgartner (heart and heart-lung transplantation). In addition, I will be available to participate in the expected reconciliation meeting pertaining to the code for cadaver nephrectomy (CPT 50300).

If you have any questions about our submission, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "Frank P. Stuart". The signature is written in black ink and has a long horizontal flourish extending to the right.

Frank P. Stuart, President

dm
Enclosures

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 50300 Global Period: XXX

CPT Descriptor: Donor nephrectomy, with preparation and maintenance of homograft; from cadaver donor, unilateral or bilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:
The patient is brain-dead or is on life support.

Description of Pre-Service Work:
Consultation with family receiving permission for organ donation.

Description of Intra-Service Work:
A long, xiphoid to pubis incision is used to expose the organs to be removed. Careful dissection prepares both kidneys and a long segment of the ureters. The kidneys are removed with all major vessels attached. (i.e. aortic cuff & vena cava). The renal grafts are then prepared for preservation or for immediate transplantation.

Description of Post-Service Work:
Phone call and follow-up between the surgeon who removed the kidney and the transplant surgeon.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
50220	Nephrectomy, including partial ureterectomy, any approach	16.37
50230	Nephrectomy, radical, with regional lymphadenectomy	21.06
50780	Ureteroneocystostomy	17.54

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):
The intra-service work is similar to a radical nephrectomy except that two nephrectomies are being performed and more care is given to preserving the arterial/venous/ureteral anatomy. There is usually a 0 globe as there is no post-operative care. Post-operatively, the transplant surgeon will confer with the surgeon who removed the kidney regarding the kidney tissue, caring for kidney, etc.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 3800

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: 120 min Low: 120 min High: 240 min

Median Pre-Service Time: 60 min Median Post-Service Time: 0 min

Length of Hospital Stay: 0 Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 1

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS**

CPT Code Number: 33930 Global Period: XXX

CPT Descriptor: Donor cardiectomy-pneumonectomy, with preparation and maintenance of allograft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 35-year old male is involved in motor vehicle accident and undergoes brain death. The family gives permission for organ donation and the organ procurement organization contacts a potential recipient center and reports the following information: patient history and physical examination, electrocardiogram, echocardiogram, chest x-ray, appropriate virology titers, arterial blood gases, myocardial enzymes, and the patient's clinical condition emphasizing hemodynamics. The donor's family history and extensive social history is also reported. Arrangements are then made to transport the procurement team to the donor hospital via car, ambulance, helicopter, or airplane. The procurement team is assembled, equipment checked, and proceeds to the donor hospital. Upon arrival, coordination takes place with the renal, pancreas, and liver procurement teams. The chart is inspected and the donor is examined. A bronchoscopy is performed to examine the airways and cultures are obtained. At operation, inspection and palpation of the organs document the lack of any significant abnormalities. Once all of the preliminary dissection is performed and the various procurement teams are satisfied with the organs, separate perfusion of the pulmonary artery and aorta is initiated with cold crystalloid solutions to initiate the preservation process. The heart and both lungs are removed and placed in sterile plastic bags, which are then placed in a container surrounded by ice, to maintain hypothermia. The organs are then transported to the recipient hospital.

Description of Pre-Service Work:

Review of the history and performance of a physical examination with special attention to review chest x-ray, electrocardiogram, echocardiogram, and coronary angiogram if performed. Verification of the social history, blood type, virology titers, sputum, and blood cultures, and declaration of death; communicating with other health care professionals; consulting with referring physician, if necessary; verification of organ donation consent from donor's next of kin; verification of brain death documentation. Assist in coordination with other members of transplant teams. Help in coordinating transport to the operating room in preparation for organ procurement procedure.

Description of Intra-Service Work:

Performance of a bronchoscopy; positioning, prepping, and draping the patient; a midline sternotomy incision with midline abdominal extension; inspection and palpation of the organs; preliminary dissection of both lungs and the heart; placement of perfusion cannulae in the pulmonary artery and ascending aorta; initiation of aortic cross-clamping and perfusion with application of topical cold (4°C) saline; removal of the heart and both lungs; placement in sterile plastic bags followed by placement in containers surrounded by ice; preparation for transportation of the team and organs to the recipient hospital.

Description of Post-Service Work:

Assist in arrangements to transport the procurement team back to the recipient hospital via car, ambulance, helicopter or airplane; maintenance of the allograft organ in a hypothermic state.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33860	Ascending aorta graft, with cardiopulmonary bypass, with or without valve suspension;	31.58
33405	Replacement, aortic valve, with cardiopulmonary bypass; with prosthetic valve other than homograft	28.79
33430	Replacement, mitral valve, with cardiopulmonary bypass	29.75

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The survey median of 30.00 was chosen because it closely reflected the work of the key reference services.

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period

1992 Medicare Part B allowed frequency by all physician specialties for code 33930 is zero.

SURVEY DATA:

Median Intra-Service Time: 180 min Low: 30 min High: 540 min

Median Pre-Service Time: 202.3 min Median Post-Service Time: 120 min

Length of Hospital Stay: 0.0

Number & Level of Post-Hospital Visits: 0.0

Number of Times Provided in Past 12 months (Median): 2

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 33935 Global Period: 090

CPT Descriptor: Heart-lung transplant with recipient cardiectomy-pneumonectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 34-year old woman was evaluated for progressive onset of dyspnea on exertion, fatigue, malaise, and a 12-pound weight loss. She is unable to carry out her daily functions and has been on home oxygen for the past three months. Chest x-ray reveals an enlarged right heart and prominent pulmonary arteries. Cardiac catheterization reveals fixed pulmonary hypertension. Transplant work-up reveals no other major illnesses or associated diseases. Virology titers are measured and pre-formed antibodies are determined. Social history demonstrates good compliance and a strong family support. The patient is placed on the active transplant list. Upon notification of an appropriate donor, the patient is admitted to hospital or transferred from an intensive care setting to the operating room. Close coordination between the recipient and the donor procurement team reduces the amount of ischemic time. Following the arrival of the donor heart-lung bloc in the operating room, the patient is placed on cardiopulmonary bypass. Both the heart and lungs are removed in sequential manner. The new heart and lungs are placed in the chest. The tracheal anastomosis is completed first, followed by the right atrium and subsequently the aortic anastomosis. The patient is weaned from cardiopulmonary bypass. Extensive detailed hemostasis is performed. The patient requires ventilatory support and hemodynamic monitoring in an intensive-care-unit setting for 6 to 7 days. The patient is then transferred to a cardiac recovery floor with the remaining stay of approximately 20 days. Nutritional support is occasionally required. Intensive monitoring for both rejection and infection of the transplanted organs is required. Progressive rehabilitation is often necessary due to the debilitated state of the patient prior to operation.

Description of Pre-Service Work:

Hospital admission work-up with special attention to evaluating the chest x-ray; reviewing laboratory studies; communicating with the patient, the patient's family, and other healthcare professionals; consulting with the referring cardiologist and/or pulmonologist; close coordination is maintained between recipient and donor procurement teams to reduce the ischemic time; obtaining consent from the patient. Appropriate counseling to this patient includes review of the risks associated with the procedure and the postoperative course; counseling also consists of informing the patient of the potential non-function of the donor heart and lungs, renal failure associated with the operation, rejection and infection and immunosuppressive drugs.

Description of Intra-Service Work:

Positioning, prepping, and draping the patient; midline sternotomy incision is performed with initial dissection of the heart and both lungs; preparation is made for placement of the patient on cardiopulmonary bypass; with arrival of the donor heart-lung allograft, bypass is instituted; the heart and lungs are removed in a sequential manner; anastomoses consist of the trachea, right atrium and aorta; the patient is weaned from cardiopulmonary bypass; detailed hemostasis is performed. Chest tubes and temporary pacing wires are placed; incision is closed in a layered manner using wire for the sternum followed by absorbable suture for the fascia, subcutaneous tissue and skin; application of a sterile dressing over the incision.

Patient stabilization; communicating with the patient, family and other healthcare professionals (including written and telephone reports and orders); careful monitoring of fluids and inotropic drugs, cardiopulmonary, and hemodynamic status (including monitoring chest roentgenograms, electrocardiograms, echocardiograms, and laboratory results); monitoring and care of the incision; monitoring, care, and removal of all chest tubes and discharge preparation and education. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after day of operation are considered part of the postoperative work for this procedure; including evaluating laboratory reports and adjusting medications, but excluding visits whose sole purpose is management of immunosuppressive therapy.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33860	Ascending aorta graft, with cardiopulmonary bypass, with or without valve suspension	31.58
33430	Replacement, mitral valve, with cardiopulmonary bypass	29.75

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The median value from the survey was chosen. This procedure requires substantially more work than the highest-valued reference procedures from the cardiothoracic codes.

FREQUENCY DATA:

Estimate the number of times this service might be provided nationally in a one-year period:

1992 Medicare Part B allowed frequency by all physician specialties for code 33935 was 2
(*1992 NCH File, HCFA, 3/31/93)

SURVEY DATA:

Median Intra-Service Time: 360 min Low: 180 min High: 600 min

Median Pre-Service Time: 180 min Median Post-Service Time: 650 min

Length of Hospital Stay: 25 da

Number & Level of Post-Hospital Visits (Median): 3 - 99214 (2); 99213 (1)

Number of Times Provided in Past 12 months (Median): 0 (Note: Only 10-12 surgeons in the country do this

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 33940 Global Period: XXX

CPT Descriptor: Donor cardiectomy, with preparation and maintenance of allograft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 37-year old male is involved in a motor vehicle accident and undergoes brain death. The family gives permission for organ donation and the organ procurement organization contacts a potential recipient center and reports the following information: patient history and physical examination, electrocardiogram, echocardiogram, chest x-ray, appropriate virology titers, arterial blood gases, myocardial enzymes, and the patient's clinical condition, emphasizing hemodynamics. The donor's family history and extensive social history are also reported. Arrangements are then made to transport the procurement team to the donor hospital via car, ambulance, helicopter, or airplane. The procurement team is assembled, equipment checked, and proceeds to the donor hospital. Upon arrival, coordination takes place with the renal, pancreas, lung, and liver procurement teams. The chart is inspected and the donor is examined. At operation, inspection and palpation of the heart document the lack of any significant abnormalities. Once all of the preliminary dissection is performed and the various procurement teams are satisfied with the organs, perfusion of the aorta is initiated with cold crystalloid solution to initiate the preservation process. The heart is removed and placed in sterile plastic bags, which are then placed in a container surrounded by ice, to maintain hypothermia. The heart is then transported to the recipient hospital.

Description of Pre-Service Work:

Review of the history and performance of a physical examination with special attention review chest x-ray, electrocardiogram, echocardiogram, and coronary angiogram if performed. Verification of the social history, blood type, virology titers, sputum, and blood cultures, and declaration of death; communicating with other health care professionals; consulting with referring physician, if necessary; verification of organ donation consent from donor's next of kin; verification of brain death documentation. Assist in coordination with other members of transplant teams. Help in coordinating transport to the operating room in preparation for organ procurement procedure.

Description of Intra-Service Work:

Positioning, prepping, and draping the patient; a midline sternotomy incision with midline abdominal extension; inspection and palpation of the donor heart; preliminary dissection of the heart; placement of a cardioplegic perfusion cannulae in the pulmonary artery and ascending aorta; initiation of aortic cross-clamping and perfusion with application of topical cold (4°C) saline; removal of the heart; placement in sterile plastic bags followed by placement in containers surrounded by ice; preparation for transportation of team and organ to recipient hospital

Description of Post-Service Work:

Assist in arrangement to transport the procurement team back to the recipient hospital via car, ambulance, helicopter or airplane; maintenance of the allograft organ in a hypothermic state.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33641	Repair atrial septal defect, secundum, with cardiopulmonary bypass, with or without patch	20.15
33460	Valvectomy, tricuspid valve, with cardiopulmonary bypass	21.84

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The survey median of 21.00 is recommended. The median was close to the work values of the key reference services.

FREQUENCY DATA:

Estimate the number of times this service might be provided nationally in a one-year period:

1992 Medicare Part B allowed frequency by all physician specialties for code 33940 was 15 (*1992 NCH File, HCFA, 3/31/93)

SURVEY DATA:

Median Intra-Service Time: 180 min Low: 150 min High: 570

Median Pre-Service Time: 180min Median Post-Service Time: 90 min

Length of Hospital Stay: 0

Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 9

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 33945 Global Period: 090

CPT Descriptor: Heart transplant, with or without recipient cardiectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

The patient is a 49-year old man with end-stage cardiac disease secondary to ischemic cardiomyopathy. His past medical history is significant for a strong family history of coronary artery disease and hypertension. The patient had undergone coronary artery bypass grafting three years prior to evaluation. He did well until readmitted recently with increasing congestive heart failure, fatigue, and a 20-pound weight loss over six months. Transplant evaluation demonstrated a left ventricular ejection fraction of 12%, patent coronary artery bypass grafts, and a pulmonary vascular resistance of 2 Wood units. Evaluation further demonstrated no systemic diseases, good compliance and family support, and no evidence of infection. The patient required Dopamine for blood pressure support until an appropriate donor heart became available. At operation, the pericardial space was remarkably adhered. Patient bypass grafts were demonstrated and dissected free. Close coordination with the donor procurement team was maintained during the entire preoperative and intraoperative procedure to reduce the ischemic time of the transported heart. Once the heart was in the operating room, the patient was placed on cardiopulmonary bypass and a standard cardiectomy procedure was performed with excision of the right and left atria at the level of the ventricles and the aorta and pulmonary artery just proximal to their respective semilunar valves. The heart was then placed in the pericardium and the four anastomoses (left atrium, right atrium, pulmonary artery, and aorta) were completed. The patient was weaned from cardiopulmonary bypass, hemostasis was obtained, and the patient was transferred to the intensive care unit. The patient required ventilatory support for one day and hemodynamic monitoring for 3-6 days, following which the patient is transferred to a cardiac recovery floor, where the average stay is 10-14 days. During this time, intensive monitoring for rejection and infection occurs. The patient often requires intensive rehabilitation due to his debilitated state prior to operation.

Description of Pre-Service Work:

Hospital admission work-up with special attention to evaluating the chest x-ray; reviewing laboratory studies; communicating with the patient, the patient's family, and other healthcare professionals; consulting with the referring cardiologist; close coordination is maintained between recipient and donor procurement teams to reduce the ischemic time; obtaining consent from the patient. Appropriate counseling to this patient includes review of the risks associated with the procedure and the postoperative course; counseling also consists of informing the patient of the potential non-function of the donor heart and lungs, renal failure associated with the operation, rejection and infection and immunosuppressive drugs.

Description of Intra-Service Work:

Positioning, prepping, and draping the patient; midline sternotomy incision is performed with initial dissection of the heart; preparation is made for placement of the patient on cardiopulmonary bypass; with arrival of the donor heart allograft, bypass is instituted; the heart is then removed; if a heterotopic heart transplantation procedure is being performed, the recipient heart remains in place; anastomoses consist of the right atrium, left atrium, pulmonary artery and aorta; the patient is weaned from cardiopulmonary bypass; detailed hemostasis is performed. Chest tubes and temporary pacing wires are placed; incision is closed in a layered manner using

sterile dressing over the incision.

Description of Post-Service Work:

Patient stabilization; communicating with the patient, family and other healthcare professionals (including written and telephone reports and orders); careful monitoring of fluids and inotropic drugs, cardiopulmonary, and hemodynamic status (including monitoring chest roentgenograms, electrocardiograms, echocardiograms, and laboratory results); monitoring and care of the incision; monitoring, care, and removal of all chest tubes and discharge preparation and education. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after day of operation are considered part of the postoperative work for this procedure; including evaluating laboratory reports and adjusting medications, but excluding visits whose sole purpose is management of immunosuppressive therapy.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33860	Ascending aorta graft, with cardiopulmonary bypass, with or without valve suspension	31.58
33430	Replacement, mitral valve, with cardiopulmonary bypass	29.75

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The median value from the survey is recommended. However, this procedure requires substantially more work than the highest-valued reference procedure from the cardiothoracic codes.

FREQUENCY DATA:

Estimate the number of times this service might be provided nationally in a one-year period:

1992 Medicare Part B allowed frequency by all physician specialties for code 33945 was 318 (*1992 NCH File, HCFA, 3/31/93)

SURVEY DATA:

Median Intra-Service Time: 300 min Low: 150 min High: 900 min

Median Pre-Service Time: 180 min Median Post-Service Time: 360 min

Length of Hospital Stay: 14.5 da

Number & Level of Post-Hospital Visits (Median): 3 99214 (2); 99213 (1)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AF13

Global Period: XXX

CPT Descriptor: Donor pancreatectomy, with preparation and maintenance of allograft from donor cadaver, with or without duodenal segment for transplantation.

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is brain-dead and on life support, and is to be used as a multiple organ donor, including a heart, lung, liver and kidneys in addition to the pancreas. A cruciate incision, extending from the sternal notch to the pubis and from the right to the left flank is used to expose all organs. The pancreas and liver are mobilized together as the initial maneuvers. The portal vein, hepatic artery and bile duct are dissected in the porta-hepatis and the gastro-duodenal artery ligated. The hepatic artery is freed from the pancreas to its origin at the celiac axis. The origin of the splenic artery is identified. The left gastric artery is ligated. The celiac and superior mesenteric arteries are isolated at their origins from the aorta. A Feuer maneuver is performed mobilizing the duodenum. Following incision of the suspensory ligaments of the liver and as the thoracic organs are clamped and removed, the aorta and inferior mesenteric vein are infused with UW solution. The duodenum stapled and divided at the pylorus and at the ligament of Treitz. The splenic artery is divided at its origin and the portal vein is transected midway between the pancreas and liver, and the celiac axis at its origin, allowing the liver to be removed. The superior mesenteric artery is divided at its origin allowing the pancreas to be removed. The pancreas is refushed with UW on the back table and prepared for preservation or for immediate transplantation.

Description of Pre-Service Work: Remain available by pager 24 hours a day, 7 days a week so that a potential organ donor can be evaluated expeditiously. Discuss the issues of suitability and logistics of organ donation with the OPO donor coordinator during evaluation and planning for procurement. Communicate with the transplant coordinators and surgical procurement team to assemble and travel to the donor hospital. Transportation often involves several hours of travel, involving transportation to the meeting point, to the airport, an air flight, and from the local airport to the procurement hospital and then back again. This service is always rendered as an emergency, typically occurring part of or all of a night. Once on site, complete evaluation of the donor including review of the medical records relating to the cause of death, the hospital course, reevaluation of the potential high risk habits of the potential donor, reevaluation of the laboratory values and pertinent radiologic tests. A physical examination is performed. Arrangement of appropriate pressor agents and antidiuretics and other medications to maintain hemodynamic stability and adequate perfusion of all organs. Coordination of the procurement process with other procurement teams that may also be present to retrieve other organs. Discuss and facilitate organization of the operation with anesthesiologists and nurses who may be unfamiliar with the details of the process. Communication with the histocompatibility lab for procurement of appropriate blood samples and lymph nodes for tissue typing and crossmatching.

Description of Intra-Service Work: Position, prep, and drape the patient. Explore the donor through a midline incision from xyphoid to pubis with cruciate incisions as necessary and manually evaluate the intra-abdominal viscera. Open the gastrocolic ligament to expose the pancreas. Assess the vascular anatomy of the liver to recognize a possible accessory or anomalous right hepatic artery. Dissect the porta hepatis and identify the common bile duct and ligate it adjacent to the duodenum and divide it. Identify the common hepatic artery and dissect back towards the celiac trunk including dissection and vessel looping of the splenic artery. Dissect the portal vein. Perform a generous Kocher maneuver to mobilize the head of the pancreas. Position the NG tube through the pylorus into the duodenum and infuse antifungal and antibiotic agents. Pull back the NG tube into the stomach and with the GIA stapler, staple the first portion of the duodenum just distal to the pylorus and staple the very proximal jejunum distal to the ligament of Treitz. Take down the ligament attachments between the spleen and the abdominal wall, colon, and kidney. Mobilize the tail of the pancreas. Dissect the mesocolon and identify the middle colonic vessels. Identify the superior mesenteric arterial cascade distal to the pancreatic uncinata. Heparinize the patient and cannulate the infrarenal aorta and cannulate the inferior mesenteric vein. Apply vascular clamps to the suprahepatic aorta and flush the infrarenal aorta and inferior mesenteric vein with cold preservation solution and apply topical cold solution. Control the amount

of flushing of the pancreas through the splenic artery and superior mesenteric artery. Divide the portal vein, splenic artery, and superior mesenteric artery. Divide the middle colonic vessels either with the GIA stapler or individual suture ligatures. Divide the small bowel mesenteric vascular arcade either with the GIA stapler or individual suture ligatures. Remove the pancreaticoduodenal allograft with spleen intact. Procure the donor common iliac, external iliac, and internal iliac arteries and veins. Reexamine the pancreaticoduodenal allograft on the "back table" and package with vessels in preservation solution in ice for transport. Procure additional lymph nodes from small bowel mesentery as needed for completion of crossmatching. Close the cadaver donor incision.

Description of Post-Service Work: Contact transplant coordinator at recipient hospital and confirm appropriate medical status of the recipient and give estimation of time when the organs will be back at the recipient hospital. Transportation then is taken back from the donor hospital to the recipient hospital. Dictate description of procedure. After the trip back to the transplanting hospital, on the "back table", the pancreaticoduodenal allograft is prepared for transplantation. The common bile duct is located and cannulated with a 5 French catheter to identify the ampulla. With this marked, the proximal and distal ends of the duodenum are shortened to an appropriate length, restapled with the GIA stapler, and the two ends inverted with interrupted sutures as Lembert stitches. The mesenteric vessels distal to the uncinate process of the pancreas are identified and individually ligated. There are two groups which include the middle colonic vessels and the small intestinal vessels from the superior mesenteric artery arcade. The inferior and superior borders of the pancreas graft are trimmed of extraneous adipose tissue. The spleen is taken off the tail of the pancreas by ligation of individual vessels. Next, vascular reconstruction is performed by constructing a Y-graft between the donor iliac vessels and the superior mesenteric artery and splenic artery of the pancreas allograft. Two end-to-end arterial anastomoses are performed. A portal venous extension graft utilizing donor common iliac vein is performed as an end-to-end anastomosis, if necessary. A duodenotomy is made on the antimesenteric border opposite the ampulla. The 5 French feeding tube is removed from the common bile duct and the common bile duct ligated.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
47130	Hepatectomy, resection of liver; total right lobectomy	32.33
35646	Bypass graft, with other than vein; aortofemoral or bifemoral	24.59
44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy	23.55
43635	Hemigastrectomy or distal subtotal gastrectomy including pyloroplasty, gastroduodenostomy or gastrojejunostomy; with vagotomy, any type	19.61

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): While post-operative evaluation and management services are not provided for this cadaver procedure, considerable work is involved after the pancreas is removed to prepare the organ for transplantation. In fact, since this "back table" work (see description of post-service work above) typically takes 120 to 180 minutes by itself, the recommended value is higher than the median value from the survey, which is based on a median post-service time of 0 minutes (and a median intra-service time of 200 minutes). The lower value derived from the survey may stem from the respondents' failure to understand that the service included this "back table" work. The value being recommended is consistent with the survey-based value for cadaver donor hepatectomy (33.56), the vignette for which much more clearly called attention to the required "back table" work (see tracking number K5).

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AF14

Global Period: 090

CPT Descriptor: Transplantation of pancreatic allograft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25 year old female has had insulin-dependent Type I diabetes mellitus for 15 years. She has diabetic retinopathy and neuropathy and is brittle, with frequent episodes of diabetic keto-acidosis alternating with insulin reactions. She no longer can sense when blood sugar becomes low until she collapses (hypo-glycemic unawareness), and thus requires constant attention from her family and cannot live independently. She is treated with a pancreas transplant when a suitably matched cadaver donor becomes available. A whole pancreas duodenal allograft is transplanted through a midline abdominal incision with anastomosis of the graft artery and vein to the recipient iliac artery and vein. The graft duodenum is then anastomosed to the recipient bladder for drainage of exocrine secretions. The post-operative course is complicated by a peripancreatic fluid collection which is drained.

Description of Pre-Service Work: When an appropriately matched organ from a healthy donor becomes available the transplant surgeon is notified and subsequently contacts the potential recipient. The surgeon assesses the patient over the telephone to determine if any medical conditions currently exist that would contraindicate transplantation at this time. If it is determined that the potential recipient is relatively healthy they are admitted to the hospital in preparation for surgery. Upon admission the patient undergoes a complete physical and laboratory examination. A cross match is obtained between the recipient and the pancreas donor. When the crossmatch is negative and all is in readiness for the operation, the patient is taken to the preanesthesia holding area for evaluation by anesthesiology.

Description of Intra-Service Work: Position, prep, and drape the patient. Place Foley catheter and central venous line. Coordinate with anesthesiology administration of antibiotics and intraoperative immunosuppression. Perform a midline abdominal incision and manual intra-abdominal evaluation. Mobilize the ascending colon and identify and mobilize the recipient left ureter and left common iliac arteries and veins. Isolate, ligate, and divide all the left hypogastric veins. Heparinize the patient and apply vascular clamps to the iliac arteries and veins. Perform the venotomy and perform the end-to-side portal vein to external iliac vein anastomosis. Next, perform the arteriotomy and perform the end-to-side arterial conduit graft to external iliac artery anastomosis. Release the vascular clamps, inspect anastomosis, and inspect the vascularity to the pancreas allograft. Ligate bleeding vessels. Remove the allogeneic spleen if not previously removed in the pretransplant organ preparation procedure. Mobilize the bladder and perform the duodenocystostomy as a hand-sewn two-layered anastomosis. Position the pancreas graft appropriately and reposition the mobilized colon. Thoroughly irrigate the abdomen with antibiotic and antifungal irrigation solution. Close the fascia and skin incision and dress the incision.

Description of Post-Service Work: Help with transfer and transport of the patient to the postoperative recovery area. Ensure that hemodynamic stability is achieved. Communicate with the family as well as other health care professionals (including written and telephone reports). Dictate operative reports. While in the postoperative recovery area and prior to transport to the ICU, reevaluate the laboratory parameters and hemodynamic stability. Assess the patient frequently over the next 48 hours to maintain hemodynamic stability, determine metabolic function of the pancreas transplant, and the presence of postoperative bleeding requiring re-exploration. Assess cardiac, pulmonary, and renal function including monitoring of x-rays and nuclear medicine blood flow studies or duplex ultrasounds. Over the remainder of the inpatient period, determine activity level and diet. Assess the acid-base status of the patient. Surveillance for peripancreatic fluid collection via abdominal x-rays, ultrasound, or CT scan. Presence of peripancreatic fluid collection with clinical signs and symptoms of possible pancreaticocystostomy leak or abscess entails. Arranging aspiration of peripancreatic fluid collection by invasive radiology consultants or abdominal exploration. Analyze fluid drainage by routine chemistries and microbiology cultures. After recovery

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: K6

Global Period: XXX

CPT Descriptor: Donor hepatectomy, with preparation and maintenance of allograft; partial, from living donor

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: At laparotomy of a 25 year-old healthy mother, a prospective living liver segment donor for her infant, the liver is assessed. The left bile duct, hepatic artery and portal vein are dissected in preparation for use of the left lateral segment. The left hepatic vein is dissected. The division of the hepatic parenchyma is done, with ligation of many small vessels. Care is taken to spare the structures necessary for the segment with minimal impingement on the donor's remaining liver. The patient is heparinized, the structures divided, and the segment transferred to the ice bath and flushed. In the donor, the vessels are sewn and tied. Hemostasis is achieved and the patient closed.

On the liver segment, a saphenous vein segment is anastomosed to the hepatic artery branch, and a cryopreserved iliac vein allograft is thawed appropriately and anastomosed to the portal vein branch. With cold perfusion, further bleeders are sewn or ligated. Large hemostatic ligatures are placed to help control bleeding from the cut end. The hepatic vein is trimmed.

Description of Pre-Service Work: Hospital admission work-up; reviewing laboratory studies; communicating with the patient and the patient's family, and other health care professionals. Counsel the patient on the issues of suitability and timing overall, and deal with the questions and concerns regarding whether to proceed, factoring in progression of the child's disease, likelihood of pediatric donor availability, and the risks to donor and recipient of either proceeding or waiting.

Description of Intra-Service Work: Position, prep and drape the patient. Remove a segment of saphenous vein from the arterial graft. Explore the donor through a bilateral subcostal incision and evaluate the intraabdominal contents. Assess the anatomy of the liver. Begin the dissection at the hilum with the bile duct, and after tracing it up to the bifurcation, dissect the artery and then the portal vein to this point. Take down the attachments to the diaphragm and then dissect the vena cava anterolaterally into the substance of the left lobe, to dissect around the left hepatic vein. Assess whether the anatomy will allow removal that is safe for the donor and will be functional in the recipient. Dissect the hepatic parenchyma of the medial segment of the left lobe, tying many small bleeders, and using caution to avoid meandering structures that must be preserved. Preserve structures necessary for the segment with minimal impingement on the donor's remaining liver. Once the segment is connected only by the vessels, heparinize the recipient, clamp and divide the vessels, remove the segment to the back table, and help an assistant flush the segment with cold preservation solution. In the donor, oversee the left hepatic vein stump, tie the other structures, and achieve hemostasis. Close and dress the incision.

On the back table, anastomose the saphenous vein segment to the hepatic artery branch. Carefully thaw a cryopreserved iliac vein allograft and anastomose it to the portal vein branch. Tailor the hepatic vein orifice appropriate for anastomosis. Flush the portal vein and hepatic artery with perfusion to test for leaks and tie or sew these. Place large hemostatic ligatures through the hepatic substance to help control bleeding from the cut liver surface.

Description of Post-Service Work: Review the postoperative orders and dictate the operative note. Communicate with the family and other health care professionals (including written and telephone reports) regarding the donor's status.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
47130	Hepatectomy, resection of liver; total right lobectomy	32.33

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): There is considerable stress involved because the procedure is performed on an otherwise healthy individual whose life could be at risk if complications develop. In addition, considerable work is involved after the liver segment is removed to prepare the organ for transplantation. Further, the dissection must be performed very carefully in order to assure a functioning organ (i.e., the organ is not simply being discarded or sent to pathology); otherwise, the recipient's life will be at risk, and the living donor's contribution will be wasted. Recommended work value has been adjusted downward from the median survey value to reflect the fact that many responders appear to have mistakenly included postoperative evaluation and management services (which would be paid separately under the proposed global fee policy for this procedure). Recommended value is expressed in terms of 1994 relative values (i.e., the required budget neutrality adjustment has been made). If the postoperative evaluation and management services were included, the recommended 1994 work value would be 42.93.

RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Median Intra-Service Time: 270 Low: 180 High: 400

Median Pre-Service Time: 120 Median Post-Service Time: 200

Length of Hospital Stay: 8 Number & Level of Post-Hospital Visits: 2-99213

Number of Times Provided in Past 12 months (Median): 0

Other Data: none

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: K7

Global Period: 090

CPT Descriptor: Liver allotransplantation; orthotopic, partial or whole, from cadaver or living donor, any age with or without recipient hepatectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Following the standard pre-operative workup and preparations, an otherwise healthy 45 year-old male with chronic active hepatitis and cirrhosis causing ascites, coagulopathy and recent variceal bleeding is explored for liver transplant. With care to minimize blood loss, numerous adhesions containing varices are tied and divided. The common bile duct is tied and ligated. The arterial branches are tied and divided. The portal vein is identified and dissected. The left lobe is taken down. The supra- and infra-hepatic cavae are dissected. The dissection behind the liver is completed. Major collaterals under the liver to the IVC that bleed are suture ligated.

The use of veno-venous bypass is assessed by test clamping. In conjunction with the anesthesiologists, it is agreed that "partial" bypass, using systemic but not portal limb, will be employed, and this is begun. Clamps are placed on the infrahepatic cava, the portal vein, and then the suprahepatic cava, which are divided and the old liver removed.

The donor liver is positioned in place and the suprahepatic anastomosis done. Next the infrahepatic cava is sewn similarly, during which time the portal vein is perfused with cold Ringer's lactate. Then the portal vein is trimmed and this anastomosis done. The portal vein is flushed before tying the anastomosis, and then, in cooperation with anesthesiology, the flow carefully restored. Hemostasis is achieved, and bypass is discontinued.

The recipient artery is dissected, anastomosed to the donor, and the pulsation and flow are assessed. Circuits of hemostasis inspection are now performed, discussing coagulation control with anesthesiology, until hemostasis is satisfactory. The bile ducts are anastomosed using a T-tube, and cholangiogram is performed and assessed. The liver is biopsied. Hemostasis is completed, and the patient closed. Postoperative care including monitoring of initial graft function and control of coagulation defects is provided.

Description of Pre-Service Work: Participate in the continuous on call coverage so that surgeons will be available anytime a donor becomes available. With the donor team, assess the status of possible donor livers, admit and pre-op the patient accordingly. Assess need to deal with any intercurrent problems such as renal failure or pleural effusion that may have developed. Ensure that appropriate preoperative medicines are given.

Description of Intra-Service Work: Position, prep and drape the patient, with special care to pad and cover appropriately in view of the potential length of the procedure. Explore through a bilateral subcostal with manubrial extension and assess the intraabdominal contents. Dissect the liver away from the anterior abdominal wall, tying and coagulating bridging varices. Open the lesser sac and divide the gastrohepatic ligament, ligating crossing vessels. Dissect the hilum with similar caution, dividing the bile duct with a tag and ligating and dividing the arteries. Dissect out the portal vein circumferentially and for several centimeters to facilitate the anastomosis. Dissect the liver circumferentially, using extensive hemostasis and avoiding damage to the right kidney and diaphragm. Dissect around the suprahepatic and infrahepatic cavae in preparation for cross-clamping. In discussion with anesthesia, "test clamp" the portal vein and the infrahepatic cava and decide upon the use of partial (systemic) not portal bypass. Dissect out the femoral-saphenous vein junction and place the outflow cannula. Receive the sterile bypass tubing and connect to the femoral cannula, avoiding air bubbles, then attach the "Y" tubing with Luer locks to the tubing for return from the pump and hand that through the drapes to the anesthesiologists. Begin bypass, positioning the tubing for a good flow. Finish the retrohepatic and retrocaval dissection, continuing to maximize hemostasis. Tie the portal vein high in the hilum and clamp it, dividing it to preserve length. Clamp the infrahepatic and then the suprahepatic cavae and cut them, then remove the

liver from the field. Sew and coagulate bleeders in the raw posterior area, and further achieve hemostasis as needed. Trim the suprahepatic cava to exclude potential leaks, but not shortening it significantly. Place the stitches, bring the allograft into the field, and sew the back wall of the suprahepatic cava from within, followed by the front wall. Begin cold flush through the graft portal vein, and anastomose the portal vein, taking care to avoid narrowing it. Flush this before tying it. Near the end of this anastomosis, make sure the anesthesiologists are prepared. Carefully restore flow, first removing the suprahepatic then portal clamps, and controlling the portal flow initially as necessary for hypotension. One the patient is stable, inspect for bleeding with circuits of inspection, and control it. Dissect out the artery appropriate for a "branch patch" and then trim the donor artery and anastomose it to the recipient's, preserving proper orientation. Inspect to ensure adequacy of flow in the artery, and dissect it out further as necessary. Next, work on hemostasis for as long as necessary to get it well-controlled, discussing anticoagulation management with the anesthesiologists. Discontinue the bypass catheter and close the groin incision. Then dissect out the bile duct orifice as necessary, and do the biliary anastomosis by first placing the back row of sutures, then placing the T tube, then placing the front row. Irrigate to inspect for leaks. Perform and interpret a cholangiogram. Do a cholecystectomy by first dissecting down the junction with the graft with the cautery, developing the dissection as the duct narrows to avoid damage to the common duct or an accessory right hepatic duct off the gall bladder, ligating and dividing the artery and duct at a safe level and coagulating the bed for hemostasis after the gall bladder has been removed. Perform a needle biopsy of the graft and coagulate the site. Irrigate, and inspect for residual sponges and instruments. Place the drains and the T tube through the anterior abdominal wall and then close the incision by sewing the fascia layers, then skin staples and stitches to the tubes. Dress the incision.

Description of Post-Service Work: Help with transfer and transport. Ensure that there is good bile flow, or irrigate and inspect to determine the problem, and make sure of hemodynamic stability. Communicate with the patient, family, and other health care professionals (including written and telephone reports). Assess frequently over the next two days to determine whether the metabolic picture shows good function, whether clotting factors and bile are being made, and whether bleeding requiring reexploration is present. If early function is poor, decide whether to relist for another transplant. Assess pulmonary, renal or neurological abnormalities, including monitoring of roentgenograms and laboratory tests, and determine treatment. Over the inpatient period, determine diet and activity advances, management of T tube with cholangiogram and internalization, and removal of drains. Manage the complication(s) that are likely. Oversee predischage teaching if the patient does well. Provide frequent postoperative follow-up for wound care, management of T tube and medicines other than immunosuppressives, optimization of fluid and electrolyte status and rehabilitation, including disability assessments, for the first 90 days.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RWV</u>
47130	Hepatectomy, resection of liver; total right lobectomy	32.33

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RWV RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): The procedure is exceedingly intense throughout. Potential for fatal complications is very high. Procedure definitely involves about 2.5 times as much work as a kidney transplant (CPT 50365; 1993 work value--32.90) and more than three times as much work as aortofemoral bypass (CPT 35636; 1993 work value--24.59). The consequences of graft failure are obviously much more serious than in the case of kidney graft failure. Procedure involves not only removal of old liver (reasonably comparable to reference procedure 47130; 1993 work value--31.33) but transplantation of new liver as well, with many, difficult anastomoses required, and in a patient who is generally extremely ill. Recommendation is based on the mean, rather than the median, because of bimodal distribution of survey responses. In addition, magnitude estimation is known to be less reliable when the work involved is significantly greater than that for any of the reference procedures, which is definitely the case here. Recommended work value is expressed in terms of 1994 relative values (i.e., the required budget neutrality adjustment has been made).

RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Median Intra-Service Time: 520 Low: 300 High: 1440
Median Pre-Service Time: 120 Median Post-Service Time: 700
Length of Hospital Stay: 25 Number & Level of Post-Hospital Visits: 2-99215; 5-99213
Number of Times Provided in Past 12 months (Median): 25

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: K5

Global Period: XXX

CPT Descriptor: Donor hepatectomy, with preparation and maintenance of allograft; from cadaver donor

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: In a previously healthy 30 year-old non-obese brain-dead automobile accident victim who had a moderate elevation of blood alcohol level on admission, the retrieval surgeon assesses the liver visually, by palpation, and decides a biopsy which is taken is satisfactory. Coordination between the other organ teams is provided for. The dissection of the hilum, the coronary ligaments, and preservation of an accessory left gastric artery are done. The biliary tract is flushed. The inferior epigastric/portal vein and the aorta are dissected and prepared for flushing. Cannulation, and flushing with vena cava venting are carried out. The hilum dissection is completed with care to avoid damage to accessory arteries. The remaining attachments with the cava are cut, and the liver is removed and packaged.

After the trip back to the transplanting hospital, on the "back table" the vena cavae are dissected and tested for leaks. The portal vein is dissected, cannulated for later flushing, and tested for leaks. The artery is dissected, with care to preserve the accessory left.

Description of Pre-Service Work: Remain on call at all times so that a donor can be dealt with expeditiously. Discuss issues of suitability and logistics with the donor coordinators during the evaluation and planning for the retrieval. Organize a surgical team to go, and travel to the donor hospital, often involving several hours of travel to an airport, in the air, and from the local airport to the hospital and back again. This service is always rendered as an emergency, typically part of or all of a night. Evaluate the donor hemodynamics, laboratory values and examination as necessary at the donor institution. Arrange appropriate pressor and other medication regimen preoperatively. Coordinate the retrieval process with the teams that may be there to retrieve other organs. Discuss and help organize the operation with anesthesiologists and nurses who may be unfamiliar with the details of the process.

Description of Intra-Service Work: Position, prep and drape the brain dead, ventilated donor. Explore the abdomen through a midline incision extending cephalad from the pubis through the sternum and diaphragm as necessary, and manually palpate intra-abdominal viscera to rule out unanticipated masses, abscesses, etc. Dissect all attachments to the liver so that it is fully mobilized and attached only by the suprahepatic vena cava, infrahepatic vena cava, portal vein dissected back toward the celiac artery trunk (look for accessory or anomalous hepatic arteries), and common bile duct dissected to the head of the pancreas. Heparinize the patient and cannulate the infrarenal aorta and cannulate the inferior mesenteric vein. Apply occluding vascular clamps to the suprahepatic aorta and flush both cannulas with cold preservation solution while applying cold topical rinse solution. Divide the portal vein, hepatic artery, common bile duct, and inferior vena cava above and below the liver. Remove the common iliac artery and its bifurcation branches and a segment of external iliac vein for possible use in reconstructing the liver's vasculature. Reexamine the liver on the back table and package it in sterile fashion with vessels in preservation solution in ice for transport. Procure additional lymph nodes from small bowel mesentery as needed for completion of crossmatching.

Description of Post-Service Work: Dictate the operative note and make sure the relationships with the donor hospital are satisfactory. After travelling back to the home institution, do the back table dissection, first removing the diaphragm from the suprahepatic cava, making sure that the diaphragmatic veins are tied. Dissect off the adrenal and ligate that vein. Test flush the cava and sew or tie other leaks. Carefully dissect the accessory left hepatic artery and preserve its course. Dissect the main hepatic artery, removing most of the accompanying lymphatics. Dissect out the portal vein, place a cannula for flushing, test leaks and repair these.

sent to the patient's primary care physician. In addition, a telephone call is made to the primary care physician to describe the patient's hospitalization, current status, and to establish the responsibilities that will be assumed by the transplant service. The patient is given instructions about needed lab testing. Posttransplant clinic is available to the patient for specific problems. Each patient is discharged with a foley catheter which is to remain in place for 14 days after discharge, and then removed.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy	23.55
43635	Hemigastrectomy or distal subtotal gastrectomy including pyloroplasty, gastroduodenostomy orgastrojejunostomy; with vagotomy, any type	19.61

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): A number of these cases are quite difficult, especially where vascular reconstructions must be done in the face of infection. There is also the difficult decision making involved in determining whether removal is warranted, since the healing process is far from simple.

RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Median Intra-Service Time: 180 Low: 120 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 225

Length of Hospital Stay: 14 Number & Level of Post-Hospital Visits: 1-99214; 3-99213

Number of Times Provided in Past 12 months (Median): 1

Other Data: none

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AF15

Global Period: 090

CPT Descriptor: Removal of transplanted pancreatic allograft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 45 year old male with a history of insulin-independent Type I diabetes mellitus and endstage nephropathy, who has undergone a combined kidney and pancreas transplant from a cadaver donor, with the pancreas anastomosed to the right iliac vessels and the graft duodenum connected to the bladder via a duodenocystostomy. Post-operatively the pancreas graft functions initially, but then is complicated by fever, abdominal pain, and CT evidence of peri-pancreatic fluid collection. Percutaneous drainage fluid grows staphylococcus and candida. Antibiotics are given. On the 14th postoperative day, pancreatic graft function ceases, and a doppler ultra-sound shows thrombosis of the graft vein. At laparotomy, an infected pancreas is encountered. The iliac vessels are mobilized proximally distal, the patient is heparinized, the pancreas duodenum is separated from the bladder, the artery and vein to the pancreas are ligated and divided, and the graft is removed. The bladder is closed and peritoneal lavage catheters inserted for irrigation of the infected area. Post-operatively the patient required ventilatory support for 24 to 48 hours. A course of antibiotics is given for 2 weeks.

Description of Pre-Service Work: Pre-service work entails preparing the patient for general anesthetic and surgery. This involves maintenance of hemodynamic stability and correction of electrolyte abnormalities, hyperglycemia, and coagulopathy. The patient's family is contacted and the procedure discussed. Consent for operation is obtained either from the patient or the patient's family.

Description of Intra-Service Work: The patient is appropriately positioned and the abdomen prepped and draped in a sterile manner. A Foley catheter is placed and, if necessary, a central venous line. Coordination with anesthesiologist for appropriate timing of parenteral administration of antibiotics. The previous midline incision is reopened. Intra-abdominal fluid is collected for microbiology analysis. The abdominal viscera are manually explored. The iliac vessels are identified, mobilized, and controlled proximal and distal to the vascular anastomoses. The patient is heparinized and vascular clamps applied. The anastomoses are taken down and the arteriotomy and venotomy closed without compromising the lumen of the vessel. The duodenum is taken down off the bladder and the pancreas graft submitted to pathology for evaluation. The cystostomy is closed in two or three layers with an absorbable monofilament suture. The peritoneum is irrigated with antibiotic and antifungal agents. Peritoneal lavage catheters are inserted for postoperative irrigation of the infected area. The fascia is closed with interrupted nonabsorbable monofilament suture. The skin is packed open and the wound dressed. The lavage catheters are sutured to the skin.

Description of Post-Service Work: Help with transfer and transport to the postoperative recovery area. Ensure that there is hemodynamic stability. Communicate with the patient, family and other health care professionals (including written and telephone reports). Dictate operative reports. Review pathology of pancreas graft. Review microbiology results and modify antibiotics as necessary. While in the intensive care unit, monitor the patient frequently during the next 48 hours to maintain adequate hemodynamic stability and to ascertain the potential for postoperative bleeding or arterial or venous thrombosis of the iliac vessels. Monitor clinical status of the cardiopulmonary system and kidney transplant function. Continue antimicrobial therapy and assess that the infection is adequately controlled. As the patient recovers, determine activity level and reinstatement of diet. Remove the peritoneal lavage catheters. Perform twice to three times daily wound dressing changes to the open skin incision. Teach patient appropriate wound management.

During the patient's recuperation, he receives extensive education regarding general health care, transplant medications and side effects, and how to do his lab monitoring. A complete summary of the patient's course is dictated for the medical record and is

approved

AMA/SPECIALTY SOCIETY RVS UPDATE COMMITTEE MEETING
The Pointe Hilton Resort at Squaw Peak
Phoenix, Arizona
February 3-6, 1994

MINUTES

I. Call to Order

Grant V. Rodkey, MD, Chair
Robert Berenson, MD
Robert Florin, MD*
John O. Gage, MD
Timothy Gardner, MD
Arthur Garson, Jr., MD*
Tracy R. Gordy, MD
Michael Graham, MD
Kay K. Hanley, MD
W. Benson Harer, Jr., MD
James E. Hayes, MD
Charles Koopman, Jr., MD
Steven A. Kamenetzky, MD*
George F. Kwass, MD
Michael D. Maves, MD
David L. McCaffree, MD
Kenneth A. McKusick, MD

Clay Molsted, MD*
James M. Moorefield, MD
L. Charles Novak, MD
Eugene S. Ograd II, MD
Robert Peters, DO*
Byron Pevehouse, MD
Peter Sawchuck, MD*
Chester W. Schmidt, Jr., MD
Paul Schnur, MD*
Howard Shapiro, MD
Gregory A. Slachta, MD
Ray E. Stowers, DO
Richard Tuck, MD
John Tudor, Jr., MD
Richard Whitten, MD*
William L. Winters, MD

(* indicates alternate member)

Doctor Rodkey opened the meeting at 8:18 a.m. He introduced Kay Jewell, MD, of HCFA, and Richard Whitten, MD, alternate AMA representative.

II. Approval of November 19-21 Minutes

Two amendments were made:

- Page 14, item 19, Cornea Procedures, should be corrected to show that code 65771 (radial keratotomy) was referred to the Research Subcommittee with the cosmetic procedures because it is not covered by insurance.
- Page two, the phrase "within the family" should be added to the second full paragraph to give greater emphasis to Bernie Patashnik's discussion of budget neutrality within a family of codes.

The minutes were approved as amended.

III. Calendar of Meeting Dates

Doctor Rodkey reported that Doctors Kwass and Whitten will be speakers at the AMA conference on May 5-6, 1994, on use of the RBRVS in the private sector. Staff announced that conference registration fees will be waived for members of the RUC, but the privilege is not transferable.

IV. CPT Update

Doctor Gordy reported that the CPT Editorial Panel will have two meetings -- one in February and another in March -- before the RUC's next meeting in May. The Panel plans to consider vignettes for new and revised CPT codes as part of the coding proposals. Thus, both CPT and the RUC will be "on the same playing field."

CPT plans to maintain continuity in the CPT/RUC vignettes by advising the RUC if the vignettes are changed during the CPT process. There was extensive discussion about coordinating the development of vignettes, especially in view of the urgency of forwarding the results of the May RUC meeting to HCFA for the 1995 Medicare RVS. It was suggested that the Research Subcommittee review the CPT vignettes before the May RUC meeting. Some members indicated that the CPT development of vignettes would infringe on the RUC's responsibility to develop vignettes. **There were two separate but similar motions regarding creation of a three- or four-member ad hoc committee to review the vignettes from the February and March CPT meetings and determine their suitability for use in the specialty societies' surveys. Both motions were defeated.** Some arguments against the motions were that (1) the ad hoc committee would establish an additional level of review, (2) validating CPT vignettes would exceed the RUC's charter of reviewing CPT actions, and (3) it would increase the cost of the specialty societies' involvement in the RUC if they had to send a RUC member or alternate to another committee meeting.

V. Research Subcommittee Report

Doctor Kwass reported on a number of items that had been discussed at the January 8, 1994, Research Subcommittee meeting. The subcommittee had suggested that the staff develop a list of types of arguments that the Carrier Medical Director review panels typically use when they review RUC recommendations. The staff circulated the resulting list as a hand-out.

The subcommittee had also discussed the CPT Editorial Panel's plan to develop vignettes for new and revised codes. The subcommittee determined that if there is a difference between the CPT vignette and the specialty society survey vignette, the specialty society would need to explain the discrepancy to the RUC. The subcommittee had concerns about the suitability of using CPT vignettes in RUC surveys. For example, the vignettes should narrowly define a typical service in a way that minimizes the likelihood of "leading" physician respondents to a particular conclusion or of causing confusion about the meaning of codes. Because of its concerns, the subcommittee recommended that the CPT vignettes be forwarded to the Specialty Society RVS Committees as soon as they become available.

Following up on a memo discussed at the November meeting regarding addition of codes to specialty reference lists for use in surveys for revised codes, the Research Subcommittee amended the language on specialty reference sets in the Instructions to Specialty Societies.

The RUC adopted a motion to accept the Research Subcommittee report.

Two other discussions at the Research Subcommittee had lead to development of supplementary subcommittee reports. A workgroup comprised of Doctors Maves, McCaffree, and Berenson developed a report on periodic review of services which was presented to the RUC for information. This report addressed selection criteria for periodic review and indicated that all codes coming before the RUC will be monitored and reviewed on a three-year basis beginning with codes considered in calendar year 1992. New technology codes would be reviewed on an annual basis. Factors to be monitored would be frequency, expenditures, site of service, length of stay, number and type of providers, and scientific information. The report also addressed review criteria, recommending that changes of 5% annually and 10% over three years be initially considered for review. **The RUC adopted a motion to accept the report, which is attached to these minutes.**

Doctor Kwass also presented a report of the Research Subcommittee's work group on relative values for "restricted" procedures, such as cosmetic or medically unnecessary procedures that patients, rather than insurance carriers, typically pay for. Although the initial work group report included a series of recommendations, the subcommittee decided not to offer them to the RUC to vote on. Some RUC members expressed disappointment with the report. They said that they preferred not to have work values for such codes because publishing work values could inhibit the physician's ability to obtain the market price for a service that physicians usually provide to meet a consumer demand. On the other hand, it was noted that HCFA was interested in having relative values for every code in CPT and that, if the RUC does not recommend values for cosmetic or medically unnecessary services, HCFA may develop its own values. **After both sides had been heard, the RUC adopted a motion to accept the work group report.**

VI. Cross-Specialty Reference List Subcommittee Report

Doctor Gage reported on the February 3 meeting of the Cross-Specialty Reference List Subcommittee. He said that staff had compiled a list of potential reference services using the criteria adopted at the November RUC meeting. The list will be distributed to the specialty societies for comments. The subcommittee will review the specialty comments before the next RUC meeting. The subcommittee's report was received for information.

VII. HCFA Update

Kay Jewell, MD, announced that the Spring proposed rule will include an update on Geographic Practice Cost Indexes (GPCIs); multiple procedure policy; proposed values for non-covered and carrier-priced services; and case management. In response to questions, she said that HCFA believes that the work values from the Hsiao study were sound, but it recognizes that there have been changes in the RBRVS since the Hsiao study. She noted that Mr. Patashnik had already addressed the committee about the changes in work values that resulted from budget neutrality adjustments, adding that the across-the-board reduction was "out of our hands."

Doctor Ogrod discussed the issue of using the RBRVS to reimburse physicians for capitated care, which he described as one of the "most significant problems facing medicine." **There was a motion to refer the question to the Research Subcommittee, but after it was mentioned that the AMA Board of Trustees is considering the issue and that it was beyond the RUC's charge, the motion failed.**

VIII. Review of 1994 Interim Values

Prior to the meeting, specialty societies were invited to provide the RUC with comments on the interim values published in the December 2 Rule for discussion at the RUC meeting. Jerry Stone, MD, a Carrier Medical Director, participated in the portion of the RUC meeting addressing these comments to augment the explanations provided in the Rule. Doctor Stone described the process used by the CMDs to review the RUC recommendations and commented on the value of both the RUC and CMD review. He concluded his remarks by saying that the CMDs are "a fair bunch," most of them are board certified, many of them were practicing physicians, and they identify with and are sympathetic to practicing physicians.

The RUC discussed HCFA's reductions from the RUC-recommended values for several of the codes in the Rule, including code 44615 for intestinal stricturoplasty, code 48150 for the Whipple procedure, and code 38102 for splenectomy. Doctor Jewell suggested that it would be more productive for the concerned specialty Advisors to meet directly with HCFA staff than for the RUC to continue through all of the specialty comments that were received. RUC members expressed support for this suggestion, so Doctor Rodkey ended the discussion at the meeting. **A motion was made for the RUC to reaffirm its support for all of its recommendations for the 1994 RVS. Comments suggested that such a reaffirmation would be premature in the absence of a more complete discussion of the recommendations that were not adopted, and the motion failed.** [Staff note: In follow-up to this discussion, it is our understanding that selected RUC Advisors and two RUC members will be invited to participate directly in HCFA's summer refinement process for the 1994 interim values.]

IX. Relative Value Recommendations

1. Reconstructive And Cosmetic Surgery [Tab 6]

CPT Code Numbers: 30450, 30400-30420, 30430, 30435

Presentation: Patricia Gomukwa, MD; Charles Koopman, MD

American Society of Plastic and Reconstructive Surgeons, Inc., American Academy of Otolaryngology - Head & Neck Surgery, Inc., and American Academy of Facial Plastic and Reconstructive Surgery

At its November meeting, the RUC adopted recommendations for a family of rhinoplasty codes, with the exception of code 30450, rhinoplasty, secondary; major revision (nasal tip work and osteotomies), which was referred to a facilitation committee chaired by Doctor Graham for further review. The RUC adopted the facilitation committee's recommendation to reduce the specialty's original recommendation of 20.00 to 18.75. Code 30450 is similar to code 30462 [Rhinoplasty for nasal deformity secondary to congenital cleft lip and/or palate, including columellar lengthening; tip, septum, osteotomies, 19.19 RVW].

2. **Dentoalveolar Structures[Tab 7]**

CPT Code Numbers: 41822, 41823, 41828, 41830, 41872, 41874

Presentation: Jeffrey Resnick, MD; Charles Koopman, MD

American Society of Maxillofacial Surgeons, American Society of Plastic and Reconstructive Surgeons, Inc., American Academy of Otolaryngology - Head and Neck Surgery, Inc.

This issue was originally discussed by the RUC at its November meeting. The RUC felt that the typical vignettes described in the original survey did not reflect the services and referred the issue back to the specialty societies. The revised recommendations considered at the February RUC meeting were substantially lower than those proposed earlier and are based on a consensus panel of six physicians that also have degrees in dental surgery. The consensus panel was able to compare these services with reference services with existing relative values. The RUC thought the only appropriate way to value codes 41872 or 41874 was on a per quadrant basis and suggested that the specialty society submit a request for the revision to the CPT Editorial Panel. These services are most commonly performed by dentists and are typically covered by dental insurance rather than medical insurance. The American Dental Association provided the following dental code crosswalks:

CPT 41822 = ADA 7470

CPT 41830 = ADA 7999 by report

CPT 41823 = ADA 4260

CPT 41872 = ADA 4210

CPT 41828 = ADA 7970

CPT 41874 = ADA 7320 without extraction

3. **Pediatric Neurosurgery[Tab 9]**

CPT Code Numbers: 61559, 61564

Presentation: Robert Florin, MD, American Association of Neurological Surgeons

CPT codes 61559 and 61564 had a survey response level of 100%. The recommended median survey value of 28 pediatric neurosurgeons for CPT code 61559 is 32.00 RVW and for 61564 33.00 RVW. CPT code 61564 was previously surveyed with an incorrect CPT code descriptor. The descriptor did not include optic nerve decompression which represents a good portion of the work, and poses a significant amount of risk for this procedure.

The primary key reference service for 61559 is 61552 with an RVW of 19.48. 61559 requires multiple craniectomies but is more complex due to the need to decompress the entire skull, including orbits and anterior basal regions. The key reference services for 61564 are 61512, 61518, and 61700, which have RVWs ranging from 24.85-35.68. The techniques of the key reference services are similar to resection of a sphenoid ridge meningioma except for the age and size of the patient and the invasion of the orbit. Additional dissection, usually with the microscope, is required for exposure and decompression of the optic nerve.

4. **Modification of Ocular Implant[Tab 10]**

CPT Code Number: 65125

Presentation: Arthur Perry, MD, American Academy of Ophthalmology and American Association of Ophthalmologic Plastic and Reconstructive Surgery

Doctors Kamenetsky and Tudor consulted on this code and the RUC adopted their recommendation to reduce the specialty's original recommendation from 5.55 to 3.00 RVW.

This reduction represents a 50% decrease in the work value when compared to the key reference service 65920 [Removal of implanted material, anterior segment eye, 8.10 RVW]. In addition, the RUC suggested that the specialty society work with the CPT Editorial Panel on clarification of the nomenclature of the code to ensure that this CPT code applies to a procedure that includes one or more peg placements.

5. Orthopaedic Surgery[Tab 11]

CPT Code Numbers: 26580, 28360, 64876

Presentation: Alan Morris, MD, American Academy of Orthopaedic Surgery

The RUC recommended ratings were based on a survey of 39 orthopaedic surgeons. A frequency weighted average was derived from two vignettes for both CPT codes 26580 and 28360. The recommended values are 17.71 RVW for CPT code 26580 and 12.79 RVW for CPT code 28360.

CPT codes 26580 and 28360 are procedures that are performed to treat anomalies that are very rare. General orthopaedic surgeons are not likely to have ever treated these patients. The specialty society Advisor noted that there is really no such thing as the typical patient, therefore 2 vignettes were developed. When the survey was disseminated respondents were asked to rate each vignette, as well as provide information on the frequency of each patient scenario.

CPT code 26580 - Repair cleft hand, is performed due to the absence of central rays and/or digits. The deformity is characterized by a deep v-shaped or funnel shaped defect in the hand. The correction of syndactyly is often required as a result of this defect. The RUC noted a discrepancy between the RVW for the reference service, CPT code 26561 - 10.76 RVW vs. the recommendation of 17.71 RVW for CPT code 26580. The specialty society Advisor felt that since the repair of a cleft hand is microscopic in nature and further complicated by the age of the patient, the recommended RVW of 17.71 is justified. In comparing the recommended value of 26580 to the key reference service 26561, the specialty society Advisor also noted that a significant portion of the post-operative work for 26580 is focused on the maintenance of the dressing, cast and close monitoring of wound healing. The post-operative period is made more difficult because the patients are young children, which increases the intensity of the follow-up care provided, which includes dressing changes. The number of post-operative visits required ranges between 5 and 5.5.

CPT code 28360 - Reconstruction, cleft foot, is performed due to a central ray defect and/or the absence of one or more medial rays. The specialty society Advisor noted that the dressing changes for 26580 are much more intense than for 28360. This difference in intensity of follow-up care is reflected in the number of post-operative visits required for 28360 which ranges from 4.5 to 6.5.

64876 - Suture of a nerve; requiring shortening of bone of extremity (list separately in addition to code for nerve suture). A recommendation will be made by the specialty society to the CPT Editorial Panel to have this code deleted.

6. **Microsurgery/Hand Surgery[Tab 14]**

CPT Code Numbers: 20802, 20805, 20808, 20816, 20822, 20824, 20827, 20838, 25915, 26550, 26555, 26585, 20955, 20960, 20969, 20970-20973

Presentation: Daniel Nagle, MD; Neil Jones, MD; Paul Petty, MD

American Society of Plastic and Reconstructive Surgeons, Inc., American Society of Reconstructive Microsurgery

Microsurgeons, plastic surgeons, and otolaryngologists developed joint recommendations for these services using three methodologies: survey median of physicians familiar with microsurgery, survey mean of the same group of physicians, and a building block approach using the component services in each surgery. The RUC considered these services to be some of the most difficult procedures in medicine, requiring similar amounts of intensity, skill, and time as the more difficult neurosurgery and transplant surgery procedures. The RUC agreed with the relationships established between the codes in each family of procedures, but referred the issue to a facilitation committee chaired by Doctor Graham to determine an appropriate value for the base code for each family. The facilitation committee was convinced that the initial relative values proposed by the specialty needed to be appropriately linked to similar neurosurgery and general surgery procedures with existing values in the RVS.

The RUC emphasized the difference between the methodologies used in developing the RUC recommendations and the Harvard study. The Harvard study included the opinions of only five orthopaedic surgeons, whereas the RUC survey included the insights of over 60 microsurgeons who are very familiar with these services, including several who had performed these services within the past year.

It should also be noted that several of the existing codes for incomplete replantation, hand surgery, and microvascular flaps need to be either clarified or deleted. The specialty societies involved will be proposing coding revisions to the CPT Editorial Panel in the near future and the RUC recommended that relative values for these services be deferred until after this process is complete.

Replantation (Arm, Forearm, and Hand):

Assuming that the proposed relationship between the three codes (20802, 20805, and 20808) in this family was correct, the facilitation committee evaluated the relationship of the proposed RVW for the base code 20802, replantation, arm, to other reference services. The committee decided that this service should be linked in intensity of other procedures, including the Whipple procedure and transplant surgery, with an intensity of 4.50 RVWs per hour of intra-service time. Assuming this relationship, the RUC recommended a value of 50.00 for replantation of the arm (20802); 70.46 for replantation of the forearm (20805); and 76.08 for replantation of the hand (20808).

Replantation (Digit and Thumb):

Judging the proposed relationship between the four codes (20816, 20822, 20824, and 20827) in this family to be correct, the facilitation committee evaluated the relationship of the proposed RVW for the base code 20816, replantation, digit to other reference services. The

committee decided that these services should reflect the intensity of pediatric neurosurgery services that the RUC had recently evaluated. After reviewing the available survey data, the committee found that the intra- and post-service time, as well as the average length of hospital stay and number and level of post-hospital visits, were very similar to pediatric neurosurgery service code 61564 for [Excision, intra and extracranial, benign tumor of cranial bone (eg, fibrous dysplasia); with optic nerve decompression], approved by the RUC earlier at 33.00. The RUC recommended, therefore, a value of 33.00 for code 20816; 30.03 for 20822; 35.68 for 20824; and 31.22 for 20827.

Replantation (Foot):

The committee was convinced that the work of replantation of the foot is equivalent to the work of replantation of the arm, therefore an RVW of 50.00 was recommended for code 20838.

Microvascular Flaps:

Judging the proposed relationship between the five codes (20955, 20969, 20970, 20972, and 20973) in this family to be correct, the facilitation committee evaluated the appropriateness of the proposed RVW for the base code 20955 [Bone graft with microvascular anastomosis; fibula]. The committee felt that the relative value determined by the building block approach was more appropriate than the higher survey median and mean. Based on this assumption, the RUC recommended a value of 38.00 for code 20955; 44.28 for 20969; 44.10 for 20971; 44.22 for 20972; and 47.29 for 20973.

Hand Surgery:

Doctor Maves is working with the specialty societies on the four hand surgery codes (25915, 26550, 26555, and 26585), which the facilitation committee was not able to complete at the February RUC meeting. A facilitation report will be presented at the May RUC meeting.

7. **In Vitro Fertilization[Tab 16]**

CPT Code Numbers: 58970, 58972, 58974, 58976

Presentation: Larry P. Griffin, MD; George Hill, MD

American College of Obstetricians and Gynecologists, American Fertility Society

A facilitation committee was formed to consider this issue, chaired by Doctor Moorefield, and the RUC adopted the facilitation committee's recommendations.

The recommended median survey values for CPT codes 58970 (3.70 RVW) and 58976 (4.00 RVW) were based on a survey that included 70 obstetricians/gynecologists and reproductive endocrinologists for code 58970 and 65 obstetricians/gynecologists and reproductive endocrinologists for code 58976, which is more than twice the number of responses required by the RUC.

Follicle puncture for oocyte retrieval, any method CPT code - 58970, is performed for the retrieval of eggs and assumes that the patient has undergone ovarian stimulation, with hormonal therapy to increase oocyte production. During the procedure multiple follicles on

an ovary are stimulated using ultrasonic guidance or laparoscopy. The vagina is inspected for bleeding and after the inspection the patient is transferred to a recovery room to be monitored for complications. It was noted that this procedure is performed both laparoscopically and open. Although the open procedure is more difficult, CPT code 58970 would be used to report both.

CPT code 59872 can be performed two ways. During the Gamete intra-fallopian tube transfer (GIFT) procedure, a mixture of ova and sperm is placed into a catheter, and the ova/sperm mixture is then injected directly into one or both fallopian tube(s), via laparoscopy. This procedure is performed immediately following oocyte retrieval. The Zygote intra-fallopian transfer (ZIFT) is performed the day after oocyte retrieval. The oocytes are combined with sperm and allowed to reach the pronuclear stage. At this time the sperm/zygote combination is placed into a catheter and injected into one or both fallopian tube(s), via laparoscopy.

The specialty society Advisor clarified for the RUC that the decision for a patient to undergo intra-fallopian vs. intra-uterine insemination is patient preference unless clinically indicated. The specialty society Advisor also confirmed for the RUC that since CPT codes 58970 and 58976 are usually performed laparoscopically, a separate code for laparoscopy would not be separately reported.

Recommendations for CPT codes 58972 [Culture and Fertilization of oocyte(s)] and 58974 [Embryo transfer, any method] were referred back to the specialty societies.

8. **Ambulatory Blood Pressure Monitoring[Tab 18]**

CPT Code Numbers: 93784, 93786, 93788, 93790

Presentation: Joe R. Wise, Jr., MD, FACC, American College of Cardiology

This issue was referred back to the specialty society.

9. **Esophageal Surgery[Tab 20]**

RUC Tracking/CPT Code Numbers: F8 - F23, 32820

Presentation: Peter Pairolero, MD, FACS, Society of Thoracic Surgeons/American Association for Thoracic Surgery, American College of Surgeons

The RUC recommendations for the esophageal surgery codes were based on the survey median of 45 general surgeons and thoracic surgeons. These services have been performed since the 1950s, however, they were previously reported as fragmented services. The coding revisions for CPT 1995 will bundle the procedures. In evaluating these codes, the RUC carefully considered the crosswalks from the 1994 codes to the new and revised codes for 1995. The relative value recommendations were estimated to be work neutral.

431XB [Total or near total esophagectomy, without thoracotomy; with pharyngogastrostomy or cervical esophagostomy, with or without pyloroplasty (transhiatal), 27.50 RVW recommended] is the same work as CPT code 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy], which has an RVW of 27.50. CPT code 43119 was revised to better reflect the service that the physician is performing. The RUC noted that

431XB is almost always performed with a pyloroplasty, even though the CPT descriptor for the code reads "with or without pyloroplasty".

The service described by 431XC [Total or near total esophagectomy, without thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 33.00 RVW] is the same physician work as a combination of three CPT codes: 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy]; 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure)]; and 44140 [Colectomy, partial; with anastomosis, using the -51 modifier]. The total amount of physician work of these three services is reflected in the 33.00 RVW for 431XC.

431XE [Total or near total esophagectomy, with thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty, 30.00 RVW] and 431XF [Total or near total esophagectomy, with thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 34.00 RVW] both require the physician to perform a thoracotomy in addition to a laparotomy, which requires additional work. 431XE is the same physician work as a combination of CPT codes 32100 [Thoracotomy, major; with exploration and biopsy, 10.18 RVW] and 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 RVW]. 431XF requires the same physician work as the reference services: 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 RVW], 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW]; and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW]. Although the physician work for 431XC is similar to 431XF, 431XF includes a thoracotomy.

431XH [Partial esophagectomy, cervical, with free intestinal graft, including microvascular anastomosis, obtaining the graft and intestinal reconstruction, 30.00 RVW] describes a partial esophagectomy. The physician work for this service includes the placement of a prejejunal transplant into the neck with anastomosis and microvascular transfer. There were no codes in CPT to adequately describe this service, therefore this procedure was probably reported as an unlisted procedure code. The physician work involved in 431XH is similar to the combination of codes: 15755 [Free flap (microvascular transfer), 28.65 RVW]; 43100 [Excision of a local lesion, esophagus, with primary repair; cervical approach, 8.56 RVW]; and 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW]. The RUC noted that this is a rare procedure that is performed on less than 250 Medicare patients per year. The RUC also noted that 431XH is usually performed with two surgeons, and the code would be reported with the -62 modifier.

431XI [Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with thoracic esophagogastrostomy, with or without pyloroplasty (Ivor Lewis), 28.79 RVW] and 431XJ [Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 32.00 RVW] describe a partial esophagectomy performed at the distal 2/3 portion, via thoracotomy and laparotomy. The physician work involved in 431XI is similar in nature to CPT code 43110 [Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty, 28.79 RVW], therefore the recommended RVW is the same. 431XJ includes a bowel reconstruction, colon

interposition and anastomosis. 431XJ is considered a combination of 43110 and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XL [Partial esophagectomy, distal two-thirds, with thoracotomy only, with or without proximal gastrectomy, with thoracic esophagogastrostomy, with or without pyloroplasty, 28.00 RVW] is also similar to code 43110, but without the abdominal incision. Therefore, the RUC recommended a slightly lower RVW of 28.00. 431XM [Partial esophagectomy, thoracoabdominal approach, with or without proximal gastrectomy; with esophagogastrostomy, with or without pyloroplasty, 28.00 RVW], although similar to CPT code 43120 [Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW], is considered more difficult than 43120 because the physician must perform a thoracoabdominal incision. 431XN [Partial esophagectomy, thoracoabdominal approach, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 32.00 RVW] is the same procedure as 431XM with additional physician work required for the reconstruction of the bowel, colon interposition, and anastomosis. The physician work involved in 431XN is similar to a combination of CPT codes 43120 [Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW] and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XP [Total or partial esophagectomy, without reconstruction (any approach), with cervical esophagostomy, 25.00 RVW], involves the removal of the esophagus without reconstruction. 431XP is the same work as a combination of CPT codes 43119-52 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 RVW modified by -52] and 43352 [Esophagostomy, fistulization of esophagus, external; cervical approach, 11.04 RVW].

Codes 431XQ [Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with stomach, with or without pyloroplasty, 26.35 RVW] and 431XR [Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 30.00 RVW], describe gastrointestinal reconstruction for previous esophagectomy. 431XQ describes this reconstruction in conjunction with the stomach; 431XR describes the reconstruction in conjunction with the colon. The RUC noted that these procedures are done without performing a thoracotomy. Code 431XQ would previously have been reported using code 43120 [Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW] with modifier-22, and the physician work is the same as 43120. The physician work of 431XR is based on a combination of CPT codes 43120, 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW], and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XU describes the ligation or stapling at gastroesophageal junction for a pre-existing esophageal perforation [15.00 RVW]. This procedure can be performed via laparotomy or thoracotomy. The physician work for 431XU is similar to CPT code 43331 [Esophagomyotomy (Heller type), with or without hiatal hernia repair; thoracic approach, 14.89 RVW].

Code 32820, major reconstruction of the chest wall, is also equivalent to 32100, thoracotomy, major, with exploration and biopsy, with 10.18 RVWs plus 15734, muscle, myocutaneous, or fasciotaneous flap; trunk, with 16.70 RVWs [16.70 + .50(10.18)].

10. **Gastrostomy[Tab 21]**

RUC Tracking Numbers: G1 - G3

Presentation: Paul Collicott, MD, FACS, American College of Surgeons

There was considerable discussion of this issue. This issue was referred to a facilitation committee that will meet at the May RUC meeting. This committee will be chaired by Doctor Schnur. Other members are Doctors Hayes, Winters, Slachta, and Shapiro.

11. **Stomach Suture[Tab 21]**

RUC Tracking Numbers: H8, H10

Presentation: Paul Collicott, MD, FACS, American College of Surgeons
American College of Obstetricians and Gynecologists

This issue was also referred to the facilitation committee chaired by Doctor Schnur that will meet at the May RUC meeting.

12. **Rectal Surgery[Tab 23]**

RUC Tracking Numbers: I4, I9

Presentation; Paul Collicott, MD, FACS, Frank Opelka, MD, FACS
American College of Surgeons and American Society of Colon and Rectal Surgeons

The RUC developed recommendations for the new codes in this section. Revisions in existing codes were considered to be editorial and no change was recommended. Codes 4511X [Proctectomy, partial, with rectal mucosectomy, ileoanal anastomosis, creation of ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy] and 4512X [Proctectomy, partial, without anastomosis, perineal approach] describe services which could not be reported using existing CPT codes. It is estimated that 4511X represents 80% of services previously reported as code 45112 [Proctectomy, combined abdominoperineal, pull-through procedure, 24.29 RVW] with modifier -22. The recommendation for 4511X is based on a survey of the colon and rectal surgeons who have the most experience with this procedure. This procedure is difficult as it requires preservation of the ileum and requires taking down the previous ileostomy in order to prepare the rectum for partial resection and subsequent anastomosis. Code 4512X is more difficult than 58150, total abdominal hysterectomy, because of extensive scarring from previous operation and the difficulty of post-operative wound management. This procedure would not be performed in the global period of the primary procedure, as it typically occurs at least six months later.

13. **Exploration and Drainage for Rectal Injury[Tab 24]**

RUC Tracking Numbers: J1, J2

Presentation: Paul Collicott, MD, FACS; Frank Opelka, MD, FACS

American College of Surgeons, American Society of Colon and Rectal Surgeons

The recommendations for 458XA and 458XB are based on a survey median of nearly 60 general surgeons and colon and rectal surgeons. Code 458XA [Exploration, repair, and presacral drainage for rectal injury] is more work than 43420 [Closure of esophagostomy or fistula; cervical approach] because the injury is more difficult to locate. This procedure is also more difficult than exploration of anal fissures or abscess as intra-abdominal exploration is frequently required. The RUC recommends 17.75 RVW for 458XB [Exploration, repair, and presacral drainage for rectal injury; with colostomy]. Not only is there additional work in performing the colostomy, but the significance of the injury that requires the colostomy to be performed makes the primary procedure more difficult. The RUC discussed the vignette used to survey for J2 and concluded that the typical patient undergoing this procedure would be a post-resuscitation patient in shock. There is a 5-6% mortality rate for these patients.

14. **Liver Surgery[Tab 25]**

RUC Tracking Numbers: K4, K5

Presentation: Paul Collicott, MD, FACS, American College of Surgeons

The RUC recommendation for the new code 4702X [Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cysts(s) or abscess(es)] is based on a comparison to codes 47010 [Hepatotomy for drainage of abscess or cyst, one or two stages] and 47300 [Marsupialization of cyst or abscess of liver], both with an RVW of 8.85. 4702X is slightly more work than 47010 and 47300 as more care is required to avoid spillage and to protect the remaining abdominal contents. 4702X is estimated to represent 1% of services previously reported with code 47010 and modifier -22, which had a 1992 Medicare frequency of 12.

The other coding revisions in this section were considered editorial and no change in relative value was recommended.

15. **Bile Duct Surgery[Tab 26]**

RUC Tracking Numbers: L7, L11, L12

Presentation: Paul Collicott, MD, FACS, American College of Surgeons

The RUC adopted recommendations for three new codes 4774X, 4778X, and 4790X based on a survey of general surgeons. Other coding revisions in this section were considered editorial and no change in relative value is recommended. 4774X [Cholecystoenterostomy; Roux-en-Y with gastroenterostomy] is performed on patients that have pancreatic and/or bowel cancer. During this procedure the Roux-en-Y loop is mobilized and anastomosis is performed. The recommended RVW of 16.41 for this procedure is less than the survey median and is calculated by adding the difference between the work involved in cholecystoenterostomy, direct (12.03) and Roux-en-Y (14.08) to the work of cholecystoenterostomy with gastroenterostomy (14.57). The recommended RVW is also higher than the reference services due to the additional work that is required to mobilize the Roux-en-Y loop and the

additional anastomosis. Previously 4774X was reported as a multiple procedure using CPT codes 47740 [Cholecystoenterostomy; Roux-en-Y] and 43820 [Gastrojejunostomy] with modifier -51.

4778X [Anastomosis, Roux-en-Y, of intrahepatic biliary ducts and gastrointestinal tract] is performed primarily on patients with biliary cancer, as a secondary surgery on patients that have had previous resection of the of the common bile duct with anastomosis. During the secondary surgery the right and left hepatic ducts are anastomosed by developing a Roux-en-Y jejunal loop. The recommended RVW for 4778X of 24.48 is lower than the RVW of the key reference service for this code, which is 47701 [Portoenterostomy (eg, Kasai procedure), 26.87 RVW].

4790X [Suture of extrahepatic biliary duct for pre-existing injury (separate procedure)] is performed on patients that are septic due to advanced peritonitis and may also have extensive bowel injury. The recommended RVW of 15.80 falls in between RVWs for the reference procedures because 4790X involves more physician work than 47420 [Choledochotomy or choledochostomy with exploration, drainage, or removal of calculus, with or without cholecystotomy, 15.48 RVW], due to sepsis and bile drainage, but is less physician work than 47800 [Reconstruction, plastic, of extrahepatic biliary ducts with end-to-end anastomosis, 17.91 RVW] because the physician is not reconstructing the extrahepatic biliary ducts.

16. Peritoneal Shunts[Tab 27]

RUC Tracking Codes: M3, M6, M7

Presentation: Paul Collicott, MD, FACS, American College of Surgeons
American College of Obstetrics and Gynecology

The RUC recommendations for the peritoneal shunt codes were based on a survey of general surgeons and obstetricians/gynecologists. 4942X, 494XA, and 494XB are new codes that will adequately describe all of the aspects of peritoneal shunt management which were previously not identified in CPT.

4942X describes the removal of a permanent intraperitoneal catheter due to intractable infection of the vascular access site. The RUC recommended the adoption of 5.92 RVW for 4942X, which is comparable to the RVW of the reference service 62256 [Removal of complete CSF shunt system; without replacement, 5.97 RVW]. The RUC adopted an RVW that was higher than the reference service 49421 [Insertion of intraperitoneal cannula or catheter for drainage or dialysis; permanent, 4.94 RVW] for this code because it was noted that removal of the catheter which involves dissection is more work than catheter insertion.

494XA describes the ligation of a peritoneal-venous shunt following the surgery for the placement of a peritoneal shunt. The ligation is recommended 5 days post-op if the shunt is rendered dysfunctional due to extensive bleeding. The recommended RVW for 494XA is lower than that of reference service 62256 [Removal of complete CSF shunt system; without replacement, 5.97 RVW], and comparable to reference service 32020 [Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure)]. The recommended RVW 494XA is also higher than reference service 37700 [Ligation and

division and complete stripping of long or short saphenous veins], because the underlying condition of the patient makes the procedure more complex.

494XB describes the removal of a peritoneal-venous shunt, a procedure that is performed due to shunt malfunction and/or infection. The RUC recommendations for ligation [494XA, 3.99] and removal [494XB, 6.42] for peritoneal-venous shunt are both well below the current value of 8.67 for revision of peritoneal-venous shunt [49426].

17. **Endocrine Surgery[Tab 28]**

RUC Tracking Codes: P2, P3, P4

Presentation: Paul Collicott, MD, FACS; Charles Koopman, MD

American College of Surgeons, American Academy of Otolaryngology - Head and Neck Surgery, Inc.

The RUC adopted the recommendations for the endocrine surgery codes based on a survey of otolaryngologists and general surgeons. Additional descriptive information about this group of services was provided, and frequency information is provided on each of the attached recommendation forms. It is notable that for two of these services, codes 6000X and 6050X, the RUC is recommending changes in the estimated global periods.

6000X [Aspiration and/or injection, thyroid cyst] is a complicated procedure due to the risk of injury. The aspiration in the neck region puts the patient at risk for damage to the airways or great vessels. The work that is done for this procedure is very similar to CPT code 60100* [Biopsy thyroid, percutaneous core needle, 0.98 RVW]. The RUC noted that this procedure was also similar in nature to CPT code 19100 [Biopsy of breast; needle core (separate procedure), 1.30 RVW]. The RUC also compared the physician work for CPT code 88170 [Fine needle aspiration with or without the preparation of smears; superficial tissue (eg, thyroid, breast, prostate), 0.52 RVW] to 6000X, which would also be reported for the injection of sclerosing solution, a more complicated procedure than aspiration. Since 6000X would be reported for aspiration and/or injection the higher RVW is justified.

602XA [Partial thyroid lobectomy, unilateral; with or without isthmusectomy] involves working within the capsule that encases the thyroid gland. The patient has usually experienced difficulty in swallowing which is the result of a thyroid nodule that is surgically removed. The recommended RVW for 602XA is 10.63. The work that is done is 602XA, including the isthmusectomy, is more complicated than the most similar reference service 60220 [Total thyroid lobectomy, unilateral, RVW 9.97]. The work for 602XA is considered less complicated than 60245 [Thyroidectomy, subtotal or partial, 12.16 RVW], because the physician is not performing a partial thyroidectomy.

602XB [Partial thyroid lobectomy, unilateral; with contralateral subtotal lobectomy, including isthmusectomy] is considered an extremely intense procedure. The surgeon must take special care not to damage the parathyroid. In addition the surgeon is performing this procedure bilaterally, including bilateral isthmusectomies. Increasingly, this operation is being performed on a younger patient population, usually as the result of Graves Disease. Patients who have Graves disease are usually free of the significant disease pathology to the organs that are near the thyroid and the surgeon must use extra precaution to ensure that these

other organs are not damaged. It was noted that the patients put themselves at potentially great surgical risk by undergoing surgery as opposed to radiation therapy which may have been refused by the patient or was ineffective. The recommended RVW for 602XB is 15.65, which is slightly lower than 60240 [Thyroidectomy, total or complete, 15.83 RVW].

6050X [Parathyroid autotransplantation], is a new procedure that was previously reported using an unlisted CPT code. The patients that undergo this procedure are in renal failure complicated by hyperparathyroidism. This procedure is an add-on procedure to parathyroidectomy.

RUC recommendations for the new thymectomy codes are approximately work neutral. Codes 60520 [revised to read Thymectomy, partial or total; transcervical approach (separate procedure)] and 605XA [Thymectomy, partial or total; sternal split or transthoracic approach, without radical mediastinal dissection (separate procedure)] are reported according to the specific approach that the surgeon took to perform the operation. Both 60520 (16.00 RVW) and 605XA (18.00 RVW) are similar in work to the key reference service, which is code 60520 prior to revision [Thymectomy, partial or total (separate procedure), 17.30 RVW]. The difference in the RVW is based on the complexity of the approach, with a transcervical approach rated less difficult than a sternal split. 605XB is also a code for thymectomy that is performed via sternal split or transthoracic approach. The RVW for 605XB is greater than that of 60520 and 605XA because the surgeon is also performing a radical mediastinal dissection.

18. **Transplant Surgery**

CPT Code Numbers 50300, 33940, 33930, 47133, 48550, 33935, 33945, 47135, 471XB, 48550, 48554, 48556

Recommendations for transplant procedures were included in multiple tabs within the RUC agenda book. In addition, the Society of Thoracic Surgeons requested that recommendations previously adopted by the RUC for two transplant procedure codes 39930 and 39940 be reconsidered so that the survey data from the membership of the American Society of Transplant Surgeons (ASTS) could be incorporated in the RUC recommendations for these codes. A facilitation committee chaired by Doctor Moorefield agreed to reconsider the codes.

A facilitation committee was then formed with Doctor Gage as Chair to consider the relative value recommendations for all of the transplant procedures on the agenda. The committee met with representatives from involved specialties and from the ASTS, including Doctors James Burdick, David Sutherland, and William Baumgartner. The facilitation committee developed recommendations for the cadaver donor transplant procedures (50300, 33940, 33930, 47133, 48550) using estimates of time and intensity for each service. The committee adopted the specialties' recommendations for all of the other transplant procedure codes (33935, 33945, 47135, 471XB, 48550, 48554, 48556).

The ASTS representatives indicated that they would accept the facilitation committee's recommendations and the RUC adopted the facilitation committee report. A minority view

was expressed by Doctor Slachta that the cadaver donor code recommendations lacked face validity. Copies of the complete recommendations of the facilitation committee and the RUC have been previously distributed.

19. **Diaphragm[Tab 29]**

CPT Tracking Numbers: V1, V2, V4, V5

American College of Surgeons, Society of Thoracic Surgeons

This issue was withdrawn by the specialty societies because all of the CPT changes are considered editorial.

20. **Esophagogastrostomy[Tab 30]**

CPT Tracking Numbers: X1, X2

American College of Surgeons, Society of Thoracic Surgeons

This issue was withdrawn by the specialty societies and will be referred back to the CPT Editorial Panel.

21. **Esophageal Repair[Tab 31]**

CPT Tracking Numbers: Z1, Z2, Z3, Z4,

American College of Surgeons, Society of Thoracic Surgeons/American Association for Thoracic Surgery, American Academy of Otolaryngology - Head and Neck Surgery, Inc.

This issue was withdrawn by the specialty societies because all of the CPT changes are considered editorial.

X. Other Issues

At the November RUC meeting, Mr. Bernie Patashnik had indicated that HCFA was working to develop plans for the five-year review of the RBRVS. Subsequently, in a meeting of AMA and HCFA staff, HCFA requested that the AMA and the RUC develop a "concept proposal" by mid-March outlining organized medicine's interest in and thoughts on how the five-year review should be conducted. On Sunday morning, Doctor Rodkey announced the formation of a new RUC Subcommittee on the Five-Year Review to work with AMA staff in developing this proposal. Doctor Tudor was appointed to chair the subcommittee and the other members appointed were Doctors Gage, Graham, Hanley, Kwass, Maves, Moorefield, Ograd, and Slachta. This subcommittee held an initial meeting on Sunday at the conclusion of the RUC meeting.

Doctor Rodkey distributed and discussed a letter he received from Doctor Bristow, who wrote on behalf of the AMA Board of Trustees to respond to the three recommendations to the AMA that were adopted by the RUC at its November meeting. The letter indicated that the Board had adopted the recommendations and asked the AMA General Counsel's Office to explore how the RUC's concerns could be integrated in the AMA's health system reform efforts.

A request was received from the American College of Rheumatology for the RUC to reconsider its recommendation for code 75075 for DEXA. **A facilitation committee chaired by Doctor Hanley agreed to reconsider the recommendation at the May RUC meeting.**

The RUC approved three motions requesting that staff prepare the following items for the Research Subcommittee's review:

- 1) an annotated list of RUC actions;**
- 2) guidelines for developing compelling evidence; and**
- 3) an insert for the Instructions to Specialty Societies and recommendation form to inform those conducting surveys that they may request other relevant information from survey respondents and provide for this additional information to be given to the RUC.**

Report of Subcommittee on Periodic Review of Services

February 4, 1993
Phoenix, AZ

Michael D. Maves, MD
David L. McCaffree, MD
Sharon Mikolanis for Robert Berenson, MD

Introduction: The Subcommittee reviewed materials distributed by Dr. McCaffree and discussed the issue of Periodic Review of Services as noted in the 1993 RUC meeting:

The RUC will periodically review the relative values assigned to all procedure codes for new services. A detailed plan for such a process will be developed by the RUC staff for consideration by the Research Subcommittee and the full RUC. The RUC staff are directed to query HCFA staff about their receptivity to this process and its timetable.

Process: It was the feeling of the Subcommittee that the problem of periodic review of procedures could be accomplished in a three step process:

1. Selection Criteria
2. Monitoring Criteria
3. Review Criteria

Selection Criteria: The question to the group was: "Which codes are worth our time and consideration and in what manner?".

1. All codes coming before the AMA-RUC will be monitored and reviewed on a three year basis. This review would begin with RUC recommendations beginning in CY 1992 (which would be available for review in 1995).

2. New technology codes (defined as codes describing procedures which have not previously been present within the CPT Manual ie. skull base surgery, endoscopic cholecystectomy) would be reviewed on an annual basis.

- * The selection criteria would be initiated at the time of presentation of the code before the RUC.
- * Timing of the review should closely correspond with the planned five year reviews of the RBRVS by HCFA.
- * This review should occur on a calendar year basis rather than a fiscal year basis to correspond with the issuance of HCFA rules as well as allowing accumulation of at least six month preliminary data.

Monitoring Criteria: "What type of information should be followed?"

1. Frequency data (volume information)
2. Dollar expenditures
3. Site of service
4. Length of stay

5. Number and type of providers
6. Scientific information

Database fields: Code - Volume - Dollars - Site - LOS - Providers

- * Could use BMAD, HIAA, MedStat data

- * First derivative data on an annual basis is as important as actual numbers themselves. For instance, the rate of change in the number of operations with respect to time or expenditures may be more informative rather than the percentage change alone. This information will be developed by AMA staff/consultants/committee.

Review Criteria: "When do we become concerned about our information?"

1. The Subcommittee would recommend changes of 5% for annual reviews and 10% for three year reviews as initial fences for consideration. Final values would be dependent upon review of actual information.

2. This information would be accumulated by AMA staff in association with HCFA and should be shared with the appropriate specialty societies.

3. A select committee could be appointed to monitor and report on such information and to alert the Research Subcommittee about significant changes which occur in this data.

4. We would recommend inclusion of codes where the specialty society recommended work RVU's directly to HCFA or where public comments were used instead of AMA-RUC recommendations.

5. The Subcommittee would also recommend following codes which received values by the RUC but were not given work values by HCFA because these procedures did not involve physician work (ie. care plan oversight).

6. Recommendations for review would be shared with the specialty societies who could provide input information as well as obtain data input from AMA or HCFA.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

LIVER SURGERY - TAB 25

American College of Surgeons
American Society of Transplant Surgeons

*new procedures,
new technology*

Tracking Number	CPT Code (● New)	CPT Descriptor	Coding Change	Global Period	Source of Current RVW*	RVW Recommendation
K1	47000	Biopsy of liver, percutaneous needle; <u>percutaneous</u>	revised	000	3 92 RVW = 2.66 6 93 RVW = 1.95 6 94 RVW = 1.92	1.92 (no change)
K2	47001	when done for indicated purpose at time of other major procedure (not as a separate procedure)	revised	ZZZ	3 92 RVW = 2.01 6 93 RVW = 1.95 6 94 RVW = 1.92	1.92 (no change)
K3	47100	Biopsy of liver, wedge (separate procedure)	revised	090	2 92 RVW = 7.12 6 93 RVW = 6.92 6 94 RVW = 6.83	6.83 (no change)
K4	●4702X	Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cyst(s) or abscess(es)	new	090		9.00
K5	47133	Donor hepatectomy, with preparation and maintenance of allograft; <u>from cadaver donor</u>	revised	XXX	N/A	33.56 19.41
K6	●471XA	partial, from living donor	new	XXX	N/A	39.59 ✓
K7	47135	Liver <u>allograft</u> ; <u>orthotopic, partial or whole, from cadaver or living donor, any age with or without recipient hepatectomy</u>	revised	090	N/A	78.47 ✓

Pass

Pass

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 = Not considered in refinement process

K8	●471XB	heterotopic, partial or whole, from cadaver or living donor, any age	new	989		64.75
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W/Drawn

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 = Not considered in refinement process

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Specialty Society(s): American College of Surgeons

Presenter(s) at RUC Meeting: Paul Collicott, MD, FACS

Tracking Number: K4 Global Period: 090 **Recommended RVW: 9.00**

CPT Descriptor: Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cyst(s) or abscess(es)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 50-year-old male, presenting with fever and right upper quadrant pain, had a CT scan that showed a 10 cm in diameter cyst in the right lobe of the liver. The lesion was diagnosed as an echinococcal cyst. Laparotomy was performed, and the cyst was aspirated using a 60 ml syringe, 18 gauge needle, and 3-way stopcock. The cyst was then injected with hypertonic saline. The endocyst was excised and the cavity obliterated.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing imaging studies and laboratory reports; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, and obtaining informed consent; and coordinating anti-parasitic therapy.

Intra-service Work:

Positioning, prepping, and draping the patient; performing an abdominal incision; excluding the peri-hepatic area from the remainder of the abdomen with scolicedal-soaked packs; aspirating the cyst and then performing multiple irrigations and aspirations with hypertonic saline; incising the exocyst and excising the endocyst; obliterating the resulting cavity with a flap of omentum; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); evaluating lab reports; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
9.09	49000	Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)
8.85	47300	Marsupialization of cyst or abscess of liver
8.85	47010	Hepatotomy for drainage of abscess or cyst, one or two stages

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Although the survey median RVW was 15.00, the College's committee recommends an RVW of 9.00, feeling that the work of K9 is only slightly less than 49000 due to the fact that the surgeon can use a limited approach. In addition, it is slightly more work than 47300 and 47010 due to the care required to avoid spillage and to protect the remaining abdominal contents. It should be noted that the frequency for this procedure is low and many of the survey respondents had limited experience.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that K4 represents 1% of the previously reported cases for code 47010-22.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 47010-22 was 12* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty Society(s): American College of Surgeons

Median Intra-Service Time: 120 Low: 60 High: 300

Median Pre-Service Time: 60 Median Post-Service Time: 140

Length of Hospital Stay: 7

Post-Hospital Office Visits: 99212 (day 7); 99211 (days 21, 28)

Number of Times Provided in Past 12 months: 0 (range = 0-4)

Other Data: Survey respondents used 1993 RVWs in providing their response to this survey.

Sample Size: 80 Response Rate (%): 35 (44%) Median RVW: 15.00

25th pctl RVW: 12.00 75th pctl RVW: 20.00 Low: 6.50 High: 30.00

American Society of Transplant Surgeons

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January 13, 1994.

Ms. Sandra L. Sherman
Director, Department of Payment Systems
American Medical Association
515 North State Street
Chicago, Illinois 60610

Dear Ms. Sherman:

Enclosed please find the relative work value recommendations of the American Society of Transplant Surgeons (ASTS) for the following services:

Tracking number AF13	Donor pancreatectomy (CPT 48550)
Tracking number AF14	Pancreas transplantation (CPT 48554)
Tracking number AF15	Removal of transplanted pancreatic allograft (CPT 48556)
Tracking number K5	Cadaver donor hepatectomy
Tracking number K6	Living donor hepatectomy
Tracking number K7	Orthotopic liver transplant
Tracking number K8	Heterotopic liver transplant

In the past, all seven of those services have either lacked a CPT code or have been reported using a code for which no relative values have been assigned (i.e., an unlisted procedure code, or a code for which Medicare payment is based on individual carrier pricing or on some methodology other than the fee schedule).

Ms. Sandra L. Sherman
January 13, 1994
Page Two

In terms of procedure frequency, we note that the United Network for Organ Sharing Scientific Registry data as of October 15, 1993, showed the following figures for the year 1992:

<u>Procedure</u>	<u>Number</u>
Liver transplantation	2,997
Kidney-liver transplantation	56
Liver-pancreas transplantation	5
Liver-heart transplantation	1
Kidney-pancreas transplantation	491
Pancreas only transplantation	60
Kidney-pancreas-heart transplantation	1

For the pancreas transplant-related procedures, we obtained survey responses from 31 transplant surgeons. For the liver transplant-related procedures, we obtained responses from 26 surgeons for the two more common procedures (cadaver donor hepatectomy and orthotopic liver transplant), and we obtained 20-22 responses for living donor hepatectomy and heterotopic liver transplant, both of which are rarely performed at this time. While the number of responses is less than the RUC ideal of 30, we believe they represent a large proportion of the individuals now performing the procedures in question. In addition, the responders appear to be representative in terms of geographic location, type of program, and other important characteristics.

Please note that our survey was conducted using the 1993 relative work values for the reference procedures. Thus, our reporting forms show the reference procedures with their 1993 work values, and the survey data are expressed in terms of 1993 work values. However, our relative work value recommendations are expressed in terms of the 1994 work values published in the *Federal Register* of December 2, 1993, and therefore reflect the required budget neutrality adjustment.

With respect to heart and heart-lung transplant-related procedures, our recommendations will be submitted under separate cover, in concert with the Society of Thoracic Surgeons.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Specialty Society: American Society of Transplant Surgeons

Presenter(s) at RUC Meeting: James Burdick, M.D., and Frank Stuart, M.D.

Tracking Number: K7

Global Period: 090

Recommended RVW: 78.47

CPT Descriptor: Liver allotransplantation; orthotopic, partial or whole, from cadaver or living donor, any age with or without recipient hepatectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Following the standard pre-operative workup and preparations, an otherwise healthy 45 year-old male with chronic active hepatitis and cirrhosis causing ascites, coagulopathy and recent variceal bleeding is explored for liver transplant. With care to minimize blood loss, numerous adhesions containing varices are tied and divided. The common bile duct is tied and ligated. The arterial branches are tied and divided. The portal vein is identified and dissected. The left lobe is taken down. The supra- and infra-hepatic cavae are dissected. The dissection behind the liver is completed. Major collaterals under the liver to the IVC that bleed are suture ligated.

The use of veno-venous bypass is assessed by test clamping. In conjunction with the anesthesiologists, it is agreed that "partial" bypass, using systemic but not portal limb, will be employed, and this is begun. Clamps are placed on the infrahepatic cava, the portal vein, and then the suprahepatic cava, which are divided and the old liver removed.

The donor liver is positioned in place and the suprahepatic anastomosis done. Next the infrahepatic cava is sewn similarly, during which time the portal vein is perfused with cold Ringer's lactate. Then the portal vein is trimmed and this anastomosis done. The portal vein is flushed before tying the anastomosis, and then, in cooperation with anesthesiology, the flow carefully restored. Hemostasis is achieved, and bypass is discontinued.

The recipient artery is dissected, anastomosed to the donor, and the pulsation and flow are assessed. Circuits of hemostasis inspection are now performed, discussing coagulation control with anesthesiology, until hemostasis is satisfactory. The bile ducts are anastomosed using a T-tube, and cholangiogram is performed and assessed. The liver is biopsied. Hemostasis is completed and the patient closed. Postoperative care including monitoring of initial graft function and control of coagulation defects is provided.

Description of Pre-Service Work: Participate in the continuous on call coverage so that surgeons will be available anytime a donor becomes available. With the donor team, assess the status of possible donor livers, admit and pre-op the patient accordingly. Assess need to deal with any intercurrent problems such as renal failure or pleural effusion that may have developed. Ensure that appropriate preoperative medicines are given.

Description of Intra-Service Work: Position, prep and drape the patient, with special care to pad and cover appropriately in view of the potential length of the procedure. Explore through a bilateral subcostal with manubrial extension and assess the intraabdominal contents. Dissect the liver away from the anterior abdominal wall, tying and coagulating bridging varices. Open the lesser sac and divide the gastrohepatic ligament, ligating crossing vessels. Dissect the hilum with similar caution, dividing the bile duct with a tag and ligating and dividing the arteries. Dissect out the portal vein circumferentially and for several centimeters to facilitate the anastomosis. Dissect the liver circumferentially, using extensive hemostasis and avoiding damage to the right kidney and diaphragm. Dissect around the suprahepatic and infrahepatic cavae in preparation for cross-clamping. In discussion with anesthesia, "test clamp" the portal vein and the infrahepatic cava and decide upon the use of partial (systemic) not portal bypass. Dissect out the femoral-saphenous vein junction and place the outflow cannula. Receive the sterile bypass tubing and connect to the femoral cannula, avoiding air bubbles, then attach the "Y" tubing with Luer locks to the tubing for return from the pump and hand that through the drapes to the anesthesiologists. Begin bypass, positioning the tubing for a good flow. Finish the retrohepatic and retrocaval dissection, continuing to maximize hemostasis. Tie the portal vein high in the hilum and clamp it, dividing it to preserve length. Clamp the infrahepatic and then the suprahepatic cavae and cut them, then remove the

liver from the field. Sew and coagulate bleeders in the raw posterior area, and further achieve hemostasis as needed. Trim the suprahepatic cava to exclude potential leaks, but not shortening it significantly. Place the stitches, bring the allograft into the field, and sew the back wall of the suprahepatic cava from within, followed by the front wall. Begin cold flush through the graft portal vein, and anastomose the portal vein, taking care to avoid narrowing it. Flush this before tying it. Near the end of this anastomosis, make sure the anesthesiologists are prepared. Carefully restore flow, first removing the suprahepatic then portal clamps, and controlling the portal flow initially as necessary for hypotension. Once the patient is stable, inspect for bleeding with circuits of inspection, and control it. Dissect out the artery appropriate for a "branch patch" and then trim the donor artery and anastomose it to the recipient's, preserving proper orientation. Inspect to ensure adequacy of flow in the artery, and dissect it out further as necessary. Next, work on hemostasis for as long as necessary to get it well-controlled, discussing anticoagulation management with the anesthesiologists. Discontinue the bypass catheter and close the groin incision. Then dissect out the bile duct orifice as necessary, and do the biliary anastomosis by first placing the back row of sutures, then placing the T tube, then placing the front row. Irrigate to inspect for leaks. Perform and interpret a cholangiogram. Do a cholecystectomy by first dissecting down the junction with the graft with the cautery, developing the dissection as the duct narrows to avoid damage to the common duct or an accessory right hepatic duct off the gall bladder, ligating and dividing the artery and duct at a safe level and coagulating the bed for hemostasis after the gall bladder has been removed. Perform a needle biopsy of the graft and coagulate the site. Irrigate, and inspect for residual sponges and instruments. Place the drains and the T tube through the anterior abdominal wall and then close the incision by sewing the fascia layers, then skin staples and stitches to the tubes. Dress the incision.

Description of Post-Service Work: Help with transfer and transport. Ensure that there is good bile flow, or irrigate and inspect to determine the problem, and make sure of hemodynamic stability. Communicate with the patient, family, and other health care professionals (including written and telephone reports). Assess frequently over the next two days to determine whether the metabolic picture shows good function, whether clotting factors and bile are being made, and whether bleeding requiring reexploration is present. If early function is poor, decide whether to relist for another transplant. Assess pulmonary, renal or neurological abnormalities, including monitoring of roentgenograms and laboratory tests, and determine treatment. Over the inpatient period, determine diet and activity advances, management of T tube with cholangiogram and internalization, and removal of drains. Manage the complication(s) that are likely. Oversee predischarge teaching if the patient does well. Provide frequent postoperative follow-up for wound care, management of T tube and medicines other than immunosuppressives, optimization of fluid and electrolyte status and rehabilitation, including disability assessments, for the first 90 days.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
47130	Hepatectomy, resection of liver; total right lobectomy	32.33

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): The procedure is exceedingly intense throughout. Potential for fatal complications is very high. Procedure definitely involves about 2.5 times as much work as a kidney transplant (CPT 50365; 1993 work value--32.90) and more than three times as much work as aortofemoral bypass (CPT 35636; 1993 work value--24.59). The consequences of graft failure are obviously much more serious than in the case of kidney graft failure. Procedure involves not only removal of old liver (reasonably comparable to reference procedure 47130; 1993 work value--31.33) but transplantation of new liver as well, with many, difficult anastomoses required, and in a patient who is generally extremely ill. Recommendation is based on the mean, rather than the median, because of bimodal distribution of survey responses. In addition, magnitude estimation is known to be less reliable when the work involved is significantly greater than that for any of the reference procedures, which is definitely the case here. Recommended work value is expressed in terms of 1994 relative values (i.e., the required budget neutrality adjustment has been made).

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Specialty Society: American Society of Transplant Surgeons

Presenter(s) at RUC Meeting: James Burdick, M.D., and Frank Stuart, M.D.

Tracking Number: K8

Global Period: 090

Recommended RVW: 64.75

CPT Descriptor: Liver allotransplantation; heterotopic, partial or whole, from cadaver or living donor, any age

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 33 year-old woman with overwhelming encephalopathy from cryptogenic cirrhosis and poor pulmonary reserve is admitted to the intensive care unit, and prepared for surgery, including correction of central hemodynamics and renal function, and the initiation of perioperative antibiotics. Her condition is believed to preclude orthotopic liver transplantation. At surgery the next morning, she is explored, and the portal vein, infrahepatic cava and infrarenal aorta are dissected and prepared for anastomosis. The portal vein, infrahepatic cava and infra-renal aorta are dissected and positioned subhepatic on the right and the end-to-side vena cava anastomosis done while the graft is flushed via the portal vein. The end-to-side portal vein anastomosis is done, and then, in cooperation with anesthesiology, the portal flow is carefully established. The celiac artery aortic patch is anastomosed to the recipient aorta. After hemostasis is established a Roux-en-Y loop is created and the biliary anastomosis performed. Hemostasis is achieved and the patient is closed. Postoperative care, including monitoring of encephalopathy and coagulation deficits, and cardiopulmonary status, is provided. The post-operative course is complicated by a period of anuria, a right pleural effusion, and staph positive septicemia.

Description of Pre-Service Work: Participate in the continuous on call coverage so that surgeons will be available anytime a donor becomes available. With the donor team, assess the status of possible donor livers, admit and pre-op the patient accordingly. Assess need to deal with any intercurrent problems such as renal failure or pleural effusion that may have developed. Ensure that appropriate preoperative medicines are given.

Description of Intra-Service Work: Position, prep and drape the patient, with special care to pad and cover appropriately in view of the potential length of the procedure. Explore through a bilateral subcostal and assess the intraabdominal contents. Dissect the liver away from the anterior and right lateral abdominal wall, tying and coagulating bridging varices. Open the lesser sac and divide the gastrohepatic ligament, ligating crossing vessels. Dissect the hilum with similar caution, retracting bile duct and artery to the left and exposing a segment of portal vein for anastomosis. Dissect out the portal vein circumferentially and for several centimeters, to facilitate the anastomosis. Dissect around the infrahepatic cavae in preparation for this anastomosis. Dissect out a segment of infrarenal aorta. On the back table, remove the left lateral segment of the donor allograft, using multiple ties on bridging vessels. Trim and prepare the donor vessel orifices. Oversee the donor infrahepatic cava. Clamp the recipient vena cava, place the stitches, bring the allograft into the field, and sew the back wall of the graft suprahepatic cava end to side to the recipient infrahepatic cava, followed by the front wall, using cold flush through the graft portal vein. After sufficient flush is in, anastomose the portal vein in similar fashion end-to-side to the recipient portal vein, taking care to avoid narrowing it. Flush this before tying it. Near the end of the portal anastomosis, make sure the anesthesiologists are prepared. Carefully restore flow, first removing the suprahepatic then portal clamps, and controlling the portal flow initially as necessary for hypotension. Once the patient is stable, inspect for bleeding and control it. Dissect out the artery appropriate for a "branch patch" and then anastomose it end-to-side to the recipient's aorta, preserving proper orientation. Inspect to ensure adequacy of flow in the artery. Next, work on hemostasis for as long as necessary to get it well-controlled, discussing anticoagulation management with the anesthesiologists. Then select an appropriate jejunal segment for a Roux-en-Y loop, divide it at the proximal extent with the GIA stapler, divide the mesentery between snaps and ties. Anastomose the end of the proximal limb to the side of the distal limb about 60 cm. down from the end, using closely-spaced two layer closure. Dissect the mesentery off the colon, hold it up and find a colonic mesenteric arcade, bring the loop through to position it at the bile duct. Create a small opening in the loop, and anastomose it to the bile duct with a closely-spaced single layer closure. As the anterior row is finished, incorporate a feeding tube stent segment. Put a stitch to hold the loop next to the liver. Close the mesenteric trap. Do a cholecystectomy by first dissecting down the junction with the graft with the cautery, developing the dissection as the duct

narrows to avoid damage to the common duct or an accessory right hepatic duct off the gall bladder, ligating and dividing the artery and duct at a safe level and coagulating the bed for hemostasis after the gall bladder has been removed. Perform a needle biopsy of the graft and coagulate the site. Irrigate, and inspect for residual sponges and instruments. Place the drains through the anterior abdominal wall and then close the incision by sewing the fascia layers, then skin staples and stitches to the tubes. Dress the incision.

Description of Post-Service Work: Help with transfer and transport. Ensure that there is good bile flow, or irrigate and inspect to determine the problem, and make sure of hemodynamic stability. Communicate with the patient as possible, family, and other health care professionals (including written and telephone reports). Assess frequently over the next two days to determine whether the metabolic picture shows good function, whether clotting factors and bile are being made, and whether bleeding requiring reexploration is present. If early function is poor, decide whether to relist for another transplant. Assess for failure to resolve pulmonary, renal or neurological abnormalities, including monitoring of roentgenograms and laboratory tests, and determine appropriate treatment. Over the inpatient period, determine diet and activity advances and removal of drains. Manage the complication(s) that are likely. Oversee pre-discharge teaching if the patient does well. Provide frequent postoperative follow-up for wound care, management of medicines other than immunosuppressives, optimization of pulmonary, fluid and electrolyte status and rehabilitation, including disability assessments, for the first 90 days.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
47130	Hepatectomy, resection of liver; total right lobectomy	32.33

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): As in the case of orthotopic liver transplantation, the procedure is exceedingly intense throughout, and the patient is extremely unstable. However, the procedure requires less intra-service time because the native liver is not removed. Recommendation is again based on the mean, rather than the median. Recommended work value is expressed in terms of 1994 relative values (i.e., the required budget neutrality adjustment has been made).

RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: American Society of Transplant Surgeons

Median Intra-Service Time: 420 Low: 300 High: 1440

Median Pre-Service Time: 120 Median Post-Service Time: 600

Length of Hospital Stay: 30 Number & Level of Post-Hospital Visits: 2-99215; 5-99213

Number of Times Provided in Past 12 months (Median): 0

Other Data: Mean RVW--65.60

Sample Size: 50 Response Rate (%): 40% Median RVW: 56.50

25th Percentile RVW: 43.75 75th Percentile RVW: 84.25 Low: 32.33 High: 129.32

MAY 1994 RUC RECOMMENDATIONS
PACEMAKER - TAB L

The specialty society initially developed recommendations for the Pacemaker codes at the June 1993 RUC meeting when the CPT revisions were made. The RUC referred the issue back to the specialty society at the time because they did not have a sufficient sample size. In December 1993, interim values for these codes were published in the Federal Register. Once completed, the survey suggested that many of the interim values were too low. Except for six codes, the RUC adopted the specialty's recommendation that the published interim values be maintained. The RUC recommendations for the six pacemaker codes are based on a survey of cardiologists.

CODE #	Survey Median	RVW Recommendation
33234	9.50	9.00
33235	10.25	10.25
33241	5.50	3.00
33244	17.75	12.00

Code 33232, Removal of permanent pacemaker, was deleted and replaced with codes 33233 [Removal of permanent pacemaker; pulse generator only], 33234 [Removal of permanent pacemaker; and transvenous electrode(s), single lead system, atrial or ventricular], 33235 [Removal of permanent pacemaker; and transvenous electrode(s), dual lead system], and 33244 [Removal of implantable cardioverter-defibrillator pulse generator and/or lead system; by other than thoracotomy]. 33234 represents the removal of the pacemaker pulse generator only. 33234 and 33235, removal of complete lead systems, are performed on patients that must have the lead systems removed most typically due to infection that could not be resolved with antibiotic therapy. The RUC noted that the removal of the pacemaker pulse generator and transvenous electrodes requires more physician work than the insertion of such a device. This is due to adhesions at the pacemaker site and active attachment of the device to arterio-ventricular wall. The mortality rate associated with this procedure is .51%. 1-2% of the patient population experience bleeding complications that require additional surgery.

The survey median for 33235 is 10.25 RVW which the RUC recommends be adopted. The survey median for 33234 is 9.5 RVW. The specialty society recommended a value slightly lower than the survey median, noting that this value more accurately reflects the differential in work effort between the extraction of the single lead system, and the extraction of the dual lead system.

33244 [Removal of implantable cardioverter-defibrillator pulse generator and/or lead system; by other than thoracotomy], is a completely new code which involves the removal of a complete implantable cardioverter-defibrillator (ICD) system using a transvenous approach. This procedure involves more work effort than that required to remove a dual chamber pacemaker system, as more device components must be extracted. Although the survey median was 17.75 RVW, the specialty society noted, and the RUC agreed that a value of 12.00 provides a more accurate recognition of this service's interrelationship with 33235.

93732 [Electronic analysis of dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretations of recordings at rest and during exercise, analysis of event markers and device response); with reprogramming] and 93735 [Electronic analysis of single dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretations of recordings at rest and during exercise, analysis of event markers and device response); with reprogramming (0.75 RVW)], include the work involved in 93731 [Electronic analysis of dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretations of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming (0.46 RVW)] and 93734 [Electronic analysis of single dual chamber pacemaker system (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretations of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming (0.38 RVW)], with the addition of reprogramming of the device to. This reprogramming is done to: 1) define (diagnose) the patient's underlying rhythm, define (diagnose) the interaction between the patient and the device; and 3) improve the therapeutic impact of the device upon the specific pathophysiology of the patient (i.e. adjusting the AV interval, outputs to conserve energy and/or insure safety, rate response of the pacing system with activity and metabolic need). Rate-adaptive technology is new, and the work involved in reprogramming these complex devices was not accounted for in the assignment of interim work values for 1994 (93732 = .86 RVW; 93735 = .51 RVW). Considerably more mental effort, judgement, technical skill, and time are required for these devices. Multiple reprogramming sequences are typically required. The specialty society noted that the survey times for reprogramming appear to be understated. The RUC recommends the median survey values of 1.20 RVW for 93732 and 0.75 for 93735.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendations
PACEMAKER OR DEBIBRILLATOR				

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendations
	33200	Insertion of permanent pacemaker with epicardial electro(s); by thoracotomy	090	11.20 (no change)
	33201	by xiphoid approach	090	9.03 (no change)
	33206	Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial	090	6.11 (no change)
	33207	ventricular	090	7.36 (no change)
	33208	atrial and ventricular AV sequential	090	7.51 (no change)
AS1	33210	Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)	090	3.34 (no change)
AS2	●33211	Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)	090	3.44 (no change)
AS3	33212	Insertion or replacement of pacemaker pulse generator or automatic implantable cardioverter defibrillator pulse generator only; single chamber, atrial or ventricular	090	5.27 (no change)
AS4	●33213	dual chamber	090	6.22 (no change)
AS5	●33214	Upgrade of implanted pacemaker system, conversion of single chamber system to dual chamber system (includes removal of previously placed pulse generator, testing of existing lead, insertion of new atrial lead, insertion of new pulse generator)	090	7.51 (no change)
AS6	33216	Insertion, replacement or repositioning of permanent transvenous electrode(s) only (15 days or more after initial insertion); single chamber, atrial or ventricular	090	5.13 (no change)
AS7	●33217	dual chamber	090	5.49 (no change)

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendations
AS8	33218	Repair of pacemaker; electrode(s) only; <u>single chamber, atrial or ventricular</u>	090	5.08 (no change)
	33219	with replacement of pulse generator (33219 was deleted. To use 33212, 33213 and 33218 or 33220)	090	N/A
AS9	●33220	dual chamber	090	5.16 (no change)
AS10	33222	Revision or relocation of skin pocket for pacemaker or automatic implantable cardioverter-defibrillator	090	4.64 (no change)
AS11	●33223	Revision or relocation of skin pocket for implantable cardioverter-defibrillator	090	6.21 (no change)
	33232	Removal of permanent pacemaker (33232 has been deleted. To report, see 332X6a-323X9)	090	N/A
AS12	●33233	Removal of permanent pacemaker; pulse generator only	090	2.85 (no change)
AS12a	●33234	and transvenous electrode(s), single lead system, atrial or ventricular	090	9.00
AS13	●33235	and transvenous electrode(s), dual lead system	090	10.25
AS14	●33236	Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular	090	11.84 (no change)
AS15	●33237	dual lead system	090	12.83 (no change)
AS16	●33238	Removal of permanent transvenous electrode(s) by thoracotomy	090	14.31 (no change)
AS17	●33240	Insertion or replacement of implantable cardioverter-defibrillator pulse generator only	090	7.28 (no change)

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendations
AS18	●33241	Removal of implantable cardioverter-defibrillator pulse generator only	090	3.00
AS19	●33242	Repair of implantable cardioverter-defibrillator pulse generator and/or leads	090	5.92 (no change)
AS20	●33243	Removal of implantable cardioverter-defibrillator pulse generator and/or lead system; by thoracotomy	090	21.71 (no change)
AS21	●33244	by other than thoracotomy	090	12.00
	33245	Implantation or replacement of automatic implantable cardioverter-defibrillator pads via thoracotomy, with or without sensing electrodes;	090	12.71 (no change)
	33246	with insertion of automatic implantable cardioverter-defibrillator pulse generator	090	19.49 (no change)
AS22	●33247	Insertion or replacement of implantable cardioverter-defibrillator pulse generator lead(s), by other than thoracotomy;	090	9.87 (no change)
	33248	Revision or removal of automatic implantable cardioverter-defibrillator pads and electrodes (33248 has been deleted. To report, see 33X14, 33X15)	090	N/A
AS23	●33249	with insertion of cardio-defibrillator pulse generator	090	12.97 (no change)
CARDIAC FLUOROSCOPY				
	93280	Cardiac fluoroscopy (93280 has been deleted. To report, For chest fluoroscopy, see 71023, 71034, 76000)	XXX	N/A
PACEMAKER MONITORING				
AS24	●93724	Electronic analysis of antitachycardia pacemaker system (includes electrocardiographic recording, programming of device, induction and termination of tachycardia via implanted pacemaker, and interpretation of recordings)	000	4.94 (no change)

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendations
AS25	93731	Electronic analysis of dual chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker) (<u>includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response</u>); without reprogramming	XXX	0.46 (no change)
AS26	93732	with reprogramming	XXX	1.20
AS27	93733	<u>Electronic analysis of dual chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker)</u> , telephonic analysis	XXX	0.17 (no change)
AS28	93734	Electronic analysis of single chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker) (<u>includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response</u>); without reprogramming	XXX	0.38 (no change)
AS29	93735	with reprogramming	XXX	0.75
AS30	93736	<u>Electronic analysis of single chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker)</u> , telephonic analysis	XXX	0.15 (no change)
	93737	Electronic analysis of cardioverter/defibrillator <u>only (interrogation, evaluation of pulse generator status)</u> ; without reprogramming	XXX	0.45 (no change)
AS31	93738	with programming	XXX	0.93 (no change)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS1 CPT Code: 33210 Global Period: 000

CPT Descriptor: Insertion or replacement of temporary transvenous single chamber cardiac electrode
or pacemaker catheter (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70 year old man with history of previous coronary artery disease and myocardial infarction presents with chest pain and ECG evidence of acute anterior myocardial infarction. He receives thrombolytic therapy four hours into his present illness with resolution of pain after two hours. Six hours after admission, he has widening of his QRS on ECG and Mobitz II second degree AVB associated with mild hypotension. A temporary pacing catheter is passed through a femoral venous sheath into the right ventricle with adequate pacing thresholds and no immediate complications.

Description of Pre-Service Work: The patient is clinically assessed in the Intensive Care Unit. The records are reviewed. Rhythm strips are carefully scrutinized for determination of advanced AV block in a hemodynamically comprised patient. Laboratory data is reviewed for any reversible cause. A coagulation panel is also assessed for risk of bleeding. The procedure is discussed with the patient and family, as are the risks. Arrangements are made for cardiovascular technician, fluoroscopy, radiology technician and a circulating nurse. The temporary trans-venous pacemaker set-up tray is obtained, and electrode sheath for a pulse generator. Temporary emergency back-up transcutaneous pacing is also established in case of an emergency, as well as a safe intravenous central line. Informed consent is obtained.

Description of Intra-Service Work: The patient is sedated and is continually monitored with oxygen saturations, automatic blood pressure and continuous ECG. The patient is prepped and draped about the right groin. The right groin is infiltrated with a local anesthetic. Using the Seldinger sheath-set technique, a sheath set is inserted. A temporary bipolar pacing electrode is advanced through the sheath set and the electrode is positioned in the right ventricular apex. Standard threshold testing is carried out with respect to R-wave sensing and volts to capture. The sheath set and electrode are secured to the right groin, and a dry sterile dressing is applied.

The patient is moved to the gurney with continuous ECG, blood pressure and oxygen saturation monitoring in place.

Description of Post-Service Work: The patient is transferred back to the Intensive Care Unit. Post-operative orders are written for temporary pacing, the desired heart rate, sensitivity and output. Electrode position is documented by chest x-ray. The chest x-ray is reviewed and an electrocardiogram is also obtained. Orders are written for sedation and analgesia, as well as possible prophylactic antibiotics.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33210	Insertion of temporary transvenous cardiac electrode, or pacemaker catheter (separate procedure)	3.34
93612	intra-ventricular pacing	3.05

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The technical advisory panel identified the language changes in this CPT code to be minor editorial modifications to a code already appropriately valued. Therefore, the median survey value of 3.55 RVUs is slightly too high and the technical advisory panel recommends that the existing RVU of 3.34 be maintained.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 600,000 (Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA:

Cardiology

Median Intra-Service Time: 30 mins Low: 15 mins High: 1 hr 50 mins

Median Pre-Service Time: 30 mins Median Post-Service Time: 30 mins

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 9

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS2 CPT Code: ■33211 Global Period: 000

CPT Descriptor: Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 54 year old man admitted with acute myocardial infarction one day ago complicated by right ventricular injury and atrioventricular block. Periods of sinus bradycardia ensue with progressive hypotension. Expansion of fluid volume is associated with atrioventricular sequential pacing is recommended for hemodynamic stability. This requires insertion of a temporary transvenous pacing system with one of two approaches (i.e. a ventricular pacing catheter with a proximal port for insertion of an atrial wire or two separate transvenous electrodes). Both require fluoroscopic positioning of the atrial lead and pacing threshold and sensing measurements as well as rate adjustment and AV interval selection. Pre-procedure work is 20 minutes to obtain consent and selection of proper access. Intra work time is estimated at one hour. Immediate post procedure work time is 15 to 20 minutes. This also requires 3 to 7 hospital visits in the intensive care unit (15 minutes each) to assess proper functioning during the time of use and removal of the system at the time of patient recovery or replacement with another temporary or permanent pacing system.

Description of Pre-Service Work: The patient is assessed. The medical record is reviewed. Rhythm strips are analyzed for appropriate atrial function. Laboratory data is also reviewed for CBC, BUN, electrolytes, a coagulation panel, and scrutinized for reversible causes of the arrhythmia. The procedure and its risks are discussed with the patient. The patient's family is also counseled. Arrangements are made for the cardiovascular technician, fluoroscopy/radiology technician and circulating nurse. A temporary transvenous pacer is setup as arranged for, including appropriate equipment. Two electrodes, one atrial and one ventricular electrode, and sheaths are obtained. Emergency temporary transthoracic external pacing system is established, as well as a safe intravenous line. An informed consent is obtained.

Description of Intra-Service Work: The patient is sedated. Oxygen saturations, continuous blood pressure monitoring and ECG lines are established in the x-ray department. The patient is prepped and draped about the right groin and the right groin is infiltrated with a local anesthetic. Using the Seldinger technique, two sheath sets are sequentially placed. A single electrode is advanced and positioned in the right ventricular apex. Threshold testing in the right ventricular apex is carried out with respect to sensing and volts to capture. A second electrode is advanced through the second sheath set and is positioned in the right atrial appendage or lateral atrial wall where atrial capture and thresholds are determined. Both sheath sets and electrodes are secured to the right groin and a dry sterile dressing is applied. The pacemaker electrodes are connected to a temporary external dual-chamber pulse generator.

Description of Post-Service Work: The patient is transferred back to the Intensive Care Unit. Post-operative orders are written with respect to the temporary pacemaker, its settings with respect to rate, AV delay, sensitivity and output. A chest x-ray is obtained and reviewed to document the electrode position. Electrocardiogram is obtained to document appropriate capture. Orders for sedation and analgesia are written. Patient is monitored for appropriate sensing, capture and underlying rhythm on both the atrium and ventricle. The dressings are carefully assessed, as well as the connections to the pulse generator and any unusual potential bleeding. If required, arrangements are made for permanent transvenous pacemaker insertion.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33210	Insertion of temporary transvenous cardiac electrode, or pacemaker catheter (separate procedure)	3.34
93610	Intra-atrial pacing	3.05
93612	Intraventricular pacing	3.05

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This temporary pacemaker procedure requires the placement of two pacing wires and therefore calls for a slightly higher work value than the same service for single chamber (CPT code 33210, RVU 3.34), as additional work in placing the wires and testing them is required. Therefore the technical advisory panel recommends that the median survey value of 3.44 RVUs be adopted. Currently, the TAP has estimated that fewer than one percent of those services previously reported as 33210 were for dual chamber temporary pacemaker placement.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely ___

Estimate the number of times this service might be provided nationally in a one-year period? -6000(Medicare)

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 45 mins Low: 15 mins High: 2 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 45 mins

Length of Hospital Stay: 7 days Number & Level of Post-Hospital Visits: 3 Visits, Level III

Number of Times Provided in Past 12 months (Median): 3

(99213)

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS3 CPT Code: 33212 Global Period: 090

CPT Descriptor: Insertion or replacement of pacemaker pulse generator ~~or automatic implantable cardioverter defibrillator pulse generator~~ only; single chamber, atrial or ventricular

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 92 year old man is undergoing replacement of his previously implanted ventricular pulse generator that was implanted 10 years ago because of battery depletion. There has been no evidence of lead malfunction. Following surgical removal of the old pulse generator (reported separately), the pulse generator is set aside for explant analysis with testing during the procedure confirming apparent battery depletion. The lead is tested with a pacing system analyzer to make certain that sensing and pacing thresholds are acceptable, that lead impedance is within an acceptable range, and that no untoward effects of pacing at high outputs occur. After ascertaining that the lead is acceptable for continued use, it is connected to a new pulse generator which has also been tested during the procedure to make certain that it is within specifications. The pacemaker and lead are then placed in the pacemaker pocket with care being used to place the lead beneath the pacemaker pocket and closed with appropriate suture material.

Description of Pre-Service Work: The patient is evaluated in the Pacemaker Clinic. The pacemaker is re-programmed and interrogated to determine battery status, appropriate sensing, appropriate capture, and the pacemaker is inhibited to determine underlying rhythm and the requirement for temporary transvenous pacemaker and risk of asystole during disconnection of the pacemaker. Patient is evaluated for stability with respect to overall cardiovascular status. A brief history and physical are obtained. Arrangements are made for the cardiovascular, laboratory and/or fluoroscopy in the Operating Room. CBC and coagulation panel are obtained. The patient is admitted to the hospital. The procedure and its risks are discussed with the patient and patient's family, as well as potential complications. If required, arrangements are made for a temporary transvenous pacemaker. The Cardiac Catheterization Laboratory and Operating Room are scheduled, as well as the x-ray technician, cardiovascular technician and nurse. A reliable intravenous line is established.

Description of Intra-Service Work: The patient is sedated per the physician. Continuous electrocardiographic, blood pressure and oxygen saturation monitoring is established. The patient is prepped and draped about the existing old pulse generator. The area is infiltrated with local anesthesia. A cut-down is made over the existing pocket. Dissection is carried down to the old pulse generator, which is freed up and disconnected from the endocardial lead system. The pacemaker pocket is sterilized with a Betadine sponge and lavage. The temporary electrode is then tediously freed up from entrapping scar. Chronic threshold testing is carried out with respect to underlying rhythm, sensing and capture threshold. The pacemaker pocket is lavaged and revised if necessary. After appropriate threshold measurements, if the electrode is reliable, a new pulse generator is connected to the chronic electrode. It is inserted in the pocket. The pocket is then sutured with respect to two layers of subcutaneous suture and one layer of subcuticular skin closure. A dry sterile dressing is applied. The patient is returned to the monitoring area.

Description of Post-Service Work: After monitoring the vital signs and obtaining a chest x-ray and an electrocardiogram, the patient is discharged to be followed in the Pacemaker Clinic. The patient returns to the Pacemaker Clinic, where appropriate pacemaker sense and capture is once again re-determined. The wound is assessed with respect to appropriate healing. The dressing is removed. Any required antibiotics or analgesic medications are prescribed. The patient is then established on a schedule for periodic appropriate

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33207	Insert permanent pacemaker, ventricular	7.36
33210	Insert temporary pacemaker	3.34

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The division of existing CPT code 33212 was adopted to recognize the unique effort required for the insertion of various devices. The revised code 33212 now describes the insertion or replacement of a single chamber pacemaker pulse generator. The insertion or replacement of an ICD pulse generator, which is more difficult than a single chamber pacemaker, has been assigned its own code. The original codes, which did not specify single versus dual chamber, had a value of 6.15 RVUs. These language changes indicate a slightly lower physician work value and the technical advisory panel recommends that a value of 5.27 RVUs be adopted.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 6000
 Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hour Low: 40 min High: 2 hrs 15 mins
 Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hour
 Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 1 visit, Level I
 Number of Times Provided in Past 12 months (Median): 10
 Other Data: Median number of times this service provided in career: 75

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS4 CPT Code: 33213 Global Period: 090

CPT Descriptor: Insertion or replacement of pacemaker pulse generator only; dual chamber

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 74 year old man with dual-chamber pacing system previously implanted for third degree AV block is in need of pulse generator replacement due to battery depletion. There has been no evidence of lead malfunction. Following removal of the old pulse generator (reported separately), the pacemaker is disconnected from the leads and tested to confirm battery depletion. The atrial and ventricular leads are then both tested for sensing and pacing threshold characteristics as well as for evaluation of lead impedance. Testing at high outputs on both leads is accomplished. The leads are connected to a new pulse generator which has also been evaluated for appropriate activity and the pacemaker and leads are once again placed within the fibrous capsule of the pacemaker and the pocket closed with appropriate suture material

Description of Pre-Service Work: The pacemaker site is examined for any evidence of local device complications, infection or twitching. The lead system hardware is reviewed for compatibility with the replacement generator.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: After monitoring the vital signs and obtaining a chest x-ray and an electrocardiogram, the patient is discharged to be followed in the Pacemaker Clinic. The patient returns to the Pacemaker Clinic, where appropriate pacemaker sense and capture is once again re-determined. The wound is assessed with respect to appropriate healing. The dressing is removed. Any required antibiotics or analgesic medications are prescribed. The patient is then established on a schedule for periodic appropriate Pacemaker Clinic visits, as well as transtelephonic monitoring.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212	Insert/replace pulse generator, ICD generator	5.27
33210	Insertion of temporary transvenous cardiac electrode/pacemaker cath	3.34

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

This new code describes the insertion or replacement of a pacemaker pulse generator for a dual chamber system, and requires a work effort which is higher than a for a single chamber system. The technical

advisory panel recommends that a value of 6.22 RVUs be adopted.

AS4

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? -6750 or approximately 50% of the volume previously reported for code 33212 (Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hr 15 mins Low: 45 mins High: 2 hrs 3 mins

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 1 visit, Level I

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS5 CPT Code: ●33214 Global Period: 090

CPT Descriptor: Upgrade of implanted pacemaker system, conversion of single chamber system to dual chamber system (includes removal of previously placed pulse generator, testing of existing lead, insertion of new lead, insertion of new pulse generator)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 63 year old man, incapacitated with what appears to be pacemaker syndrome, is undergoing upgrade of his previously implanted ventricular transvenous pacing system to a dual-chamber system. The procedure involves surgical preparation of the skin and infiltration of a local anesthetic agency over the previous infraclavicular pacemaker pocket which is opened using sharp and blunt dissection with care utilized to avoid cutting of the pacemaker lead lying within the pacemaker pocket. The lead and pulse generator are dissected free of adhesions and both are removed from the pocket and disconnected with the pulse generator set aside for explant evaluation. The lead is tested with a pacing system analyzer (sensing thresholds, pacing thresholds and impedance) to make certain that it is acceptable for continued use in a dual-chamber system. Under fluoroscopic guidance through the upper aspect of the pacemaker pocket, an 18 gauge needle is inserted into the left subclavian vein with care taken to avoid needle puncture of the ventricular lead. Using the Seldinger technique, the new atrial lead is advanced into the central venous circulation. The lead is positioned into several different areas of the right atrium before acceptable electrical parameters are accomplished after the injury current is allowed to abate. This new atrial lead is secured to the underlying fibrous capsule of the pacemaker pocket using the sleeve and suture material. Pacing at high outputs is accomplished to make certain that right diaphragmatic (phrenic nerve) stimulation is not present. Ventriculoatrial conduction is tested for by pacing on the ventricular lead and sensing on the atrial lead. The pacemaker pocket is enlarged using sharp and blunt dissection inferomedially to accommodate the new, larger pacemaker and leads are placed in the pacemaker pocket with the leads coiled deep to the pacemaker. The wound is then closed with appropriate suture materials in several layers.

Description of Pre-Service Work: The pacemaker site is examined for any evidence of local device complications, infection or twitching. The lead system hardware is reviewed for compatibility with the replacement generator.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: After monitoring the vital signs and obtaining a chest x-ray and an electrocardiogram, the patient is discharged to be followed in the Pacemaker Clinic. The patient returns to the Pacemaker Clinic, where appropriate pacemaker sense and capture is once again re-determined. The wound is assessed with respect to appropriate healing. The dressing is removed. Any required antibiotics or analgesic medications are prescribed. The patient is then established on a schedule for periodic appropriate Pacemaker Clinic visits, as well as transtelephonic monitoring.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33208	Insertion of perm. pacemaker w/transvenous electrode(s); AV seq.	7.51
33207	Insertion of perm. pacemaker w/transvenous electrode(s); ventr.	7.36

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time, technical skill & physical effort, mental effort and judgement; and stress)

The upgrade of a pacemaker system from a single chamber to a dual chamber system involves approximately the same physician work effort, but slightly different actual work, as the insertion of a completely new dual chamber pacemaker system (CPT code 33208, 7.51 RVUs). The difference is that upgraded service requires additional work to remove the previously placed pulse generator and may involve excision of scar tissue and the tunneling of additional leads. Therefore, the technical advisory panel recommends that the RVU for this code be established at 7.51, slightly lower than the median survey value of 8.0 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? unknown

Is this service performed by many physicians across the United States? Yes No (Increasingly so)

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs Low: 1 hr High: 3 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 2 visits, Level II

Number of Times Provided in Past 12 months (Median): 5

Other Data: Overall, responders reported providing this service 7 times (median) in career

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS6 CPT Code: 33216 Global Period: 090

CPT Descriptor: Insertion, replacement or repositioning of permanent transvenous electrode(s) only (15 days or more after initial insertion); single chamber, atrial or ventricular

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: An 82 year old woman is admitted to the hospital after a syncope spell. The electrocardiogram reveals "fine" atrial fibrillation with a slow ventricular rate of 30/minute. Acute infarction is ruled out by serial enzymes and serial ECG. A decision to implant a ventricular demand pacemaker is made. The patient is brought to the laboratory in the non-sedated, fasting state. The left subclavian region is prepared and the region of interest infiltrated with 1% lidocaine. The left subclavian vein is cannulated and a guide wire introduced. A "peel away" sheath is introduced into the subclavian vein via the guiding wire. A bipolar pacing lead is introduced into the right ventricular apex with fluoroscopic guidance. Satisfactory pacing and sensing thresholds are verified. Telemetry is checked and programmed prior to hospital discharge.

Description of Pre-Service Work: The electrocardiogram reveals "fine" atrial fibrillation with a slow ventricular rate of 30/minute. Acute infarction is ruled out by serial enzymes and serial ECG. A decision to implant a ventricular demand pacemaker is made. Complete discussion with patient and family regarding procedure/complications. Adequate documentation including exam, pre-medical history, social history, family history and review of symptoms.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: Telemetry is checked and programmed prior to hospital discharge. Inspection of incision site; review of post-procedure chest x-ray; arrangements made for pacemaker follow-up.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33206	Insertion of perm. pacemaker w/transvenous electrode(s); atrial	6.11
33207	Insertion of perm. pacemaker w/transvenous electrode(s); ventr.	7.36
33208	Insertion of perm. pacemaker w/transvenous electrode(s); AV seq.	7.51

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The description of this code was clarified to indicate that this is for a single chamber system only. Therefore, the technical advisory panel recommends that the existing RVU assignment of 5.13 be maintained rather than the median survey value of 7.46.

AS6

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 79% of the services provided by cardiovascular specialists - 7500 (Medicare)

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hr 30 mins Low: 40 mins High: 2 hrs 30 mins

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr 30 mins

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 2 visits, Level II

Number of Times Provided in Past 12 months (Median): 12

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS7 CPT Code: ●33217 Global Period: 090

CPT Descriptor: Insertion, replacement or repositioning of permanent transvenous electrode(s) only (15 days or more after initial insertion); dual chamber

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 23 year old man is admitted for dual chamber pacemaker implantation. The indication is congenital AV block with progressive exercise intolerance. The patient is brought to the laboratory in the non-sedated, fasting state. The left subclavian region is prepared and the region of interest infiltrated with 1% lidocaine. The left subclavian vein is cannulated and a guide wire introduced. A "peel away" sheath is introduced into the subclavian vein via the guiding wire. A bipolar pacing lead is introduced into the right ventricular apex with fluoroscopic guidance. An atrial "J" lead is introduced into the right atrial appendage in a similar fashion. Satisfactory pacing and sensing thresholds are verified. Telemetry is checked and programmed prior to hospital discharge.

Description of Pre-Service Work: Review of exercise test and/or ECGs. Examine patient and appropriate documentation. Discussion with patient/family regarding procedures/complications.

Description of Intra-Service Work: Vignette above describes intra-service work. [Pocket formation]

Description of Post-Service Work: Telemetry is checked and programmed prior to hospital discharge. May need exercise to determine appropriate settings. Inspect incision; review chest x-ray; arrange follow-up.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33208	Insertion of perm. pacemaker w/transvenous electrode(s); AV seq.	7.51
33207	Insertion of perm. pacemaker w/transvenous electrode(s); ventr.	7.36

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

This procedure is similar to CPT code 33216 but includes the placement of an additional lead. Therefore, the work RVU recommended by the technical advisory panel is 5.49 RVUs, slightly higher than that recommended for CPT code 33216 (5.13 RVUs). The technical advisory panel believes that the median survey value of 7.9 RVUs was derived from the clinical descriptor (vignette) originally developed for this code and is too high. The vignette describes the complete insertion of a pacemaker system, rather than the

actual intent of the code (e.g., lead insertion and repositioning).

AS7

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? a small portion of those previously reported as 33216

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA:

Cardiology

Median Intra-Service Time: 2 hrs. Low: 1 hr High: 3 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 visits, Level II

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS8 CPT Code: 33218 Global Period: 090

CPT Descriptor: Repair of pacemaker; electrode(s) only; single chamber, atrial or ventricular

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 65 year old man who is pacemaker dependent is noted to have episodic failure to pace. Non-invasive telemetry has been performed and a low impedance detected. The patient is taken to the catheterization laboratory after receiving mild sedation. A temporary transvenous pacemaker is inserted through the contralateral internal jugular vein and its pacing parameters tested. The original pacer site is prepped and under local anesthesia the pacer and lead are carefully dissected free of scar tissue. The lead is disconnected from the pacer and visually inspected. Its electrical integrity is evaluated with a pacing system analyzer. A focal defect in external insulation is noted and repaired using a piece of tubular insulation, adhesive, and suture material. The electrical integrity is confirmed using the pacing system analyzer. The temporary lead is withdrawn and the pacemaker and repaired lead carefully re-inserted into the pocket which is closed in layers. The entire procedure is performed with automated cuff blood pressure, pulse oximeter, and ECG monitoring.

Description of Pre-Service Work: Low impedance detected plus complete troubleshooting of the system to eventually lead the physician to the impedance as the problem. Review all programming and telemetered data; compare to prior data, review chest x-ray, examine patient and discuss procedure and risks with patient.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: Re-program and document telemetry including impedance and arrange follow-up.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33208	Insertion of perm. pacemaker w/transvenous electrode(s); AV seq.	7.51
33207	Insertion of permanent pacemaker w/transvenous electrode(s); ventricular	7.36

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The technical advisory panel recommends that the existing value of 5.08 RVUs for CPT code 33218 be

maintained. The majority of services provided to repair pacemaker electrodes involve only a single lead. Therefore, the existing value should be maintained at that established for the original code.

AS8

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 500 (Medicare)

Is this service performed by many physicians across the United States? Yes No

Cardiology

SURVEY DATA:

Median Intra-Service Time: 1 hr 30 mins Low: 40 mins High: 3 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 Visits, Level III

Number of Times Provided in Past 12 months (Median): 0

Other Data: Provided this service a median of 2 times in career

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS9 CPT Code: ●33220 Global Period: 090

CPT Descriptor: Repair of pacemaker electrode(s) only; dual chamber

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 55 year old pacemaker dependent man develops symptoms referable to episodic failure to pace the atria and ventricles. He is admitted the morning of the procedure and given mild sedation. He is taken to the catheterization laboratory and a temporary lead is inserted into the contralateral internal jugular vein. Its capture and sensing threshold is verified. The pacemaker site is prepped and under local anesthesia the generator and the two leads are dissected free of scar tissue. Both leads are visually inspected and tested for electrical integrity using a pacing system analyzer. Insulation defects in both leads are noted and repaired using pieces of insulation tubing, adhesive, and suture material. The integrity of the leads are rechecked with the pacing system analyzer, the temporary lead withdrawn, and the permanent system replaced into the pocket. The wound is closed in layers. The procedure is performed under ECG monitoring, automated blood pressure cuff readings, and pulse oximetry.

Description of Pre-Service Work: Low impedance detected plus complete troubleshooting of the system to eventually lead the physician to the impedance as the problem. Review all programmed and telemetered data; comparison to prior data, review chest x-ray, examine patient and discuss procedure and risks with patient.

Description of Intra-Service Work: As discussed in the above vignette.

Description of Post-Service Work: Re-program and document telemetry including impedance and arrange follow-up.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33208	Insertion of perm. pacemaker w/transvenous electrodes(s); AV sequential	7.51
33218	Repair pacemaker, electrodes only	5.08

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The technical advisory panel described the repair of electrodes for a dual chamber pacemaker system as slightly more work than that required for a single chamber system (5.08 RVUs). A value of 5.16 RVUs is

recommended for this code.

AS

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 500 (Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs Low: 10 mins High: 15 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 Visits, Level III

Number of Times Provided in Past 12 months (Median): 0

Other Data: Responders provided this service a median of 2 times (max of 150 times) in career.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS10 CPT Code: 33222 Global Period: 090

CPT Descriptor: Revision or relocation of skin pocket for pacemaker ~~or automatic implantable~~
~~cardioverter-defibrillator~~

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 75 year old woman develops a darkened area of skin overlying an area of the pacemaker. This is indicative of "pre-erosion" which if not attended will lead to frank erosion of the generator through the skin. The patient is mildly sedated and brought to the catheterization laboratory. The pacer pocket and the site of the new pocket is prepped. Under local anesthesia the pacer and its lead(s) are dissected free of scar tissue. The leads are tested for capture and sensing thresholds with the pacing system analyzer. The site is inspected to ensure that erosion (which will mandate removal of the device and implantation of a new system) had not occurred. A new pocket is made in the subcutaneous tissue of the upper abdominal wall under local anesthesia. The patient is given intravenous anesthesia for a tunneling procedure which accommodates lead extenders for each lead. The lead extenders are connected to the indwelling leads and then the pacer is attached to the lead extenders and placed in the new pocket. The procedure is performed under continuous ECG monitoring, automated blood pressure cuff, and pulse oximetry.

Description of Pre-Service Work: Evaluation of patient status is conducted and informed consent obtained. A mild sedative is administered and the patient is transferred to the cardiac catheterization laboratory.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: After monitoring the vital signs and obtaining a chest x-ray, and an electrocardiogram, the patient is discharged to be followed in the Pacemaker Clinic. The patient returns to the Pacemaker Clinic, where appropriate pacemaker sense and capture is once again re-determined. The wound is assessed with respect to appropriate healing. The dressing is removed. Any required antibiotics or analgesic medications are prescribed. The patient is then established on a schedule for periodic appropriate Pacemaker Clinic visits, as well as transtelephonic monitoring

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212 (1993)	Insert/Replace pacemaker pulse or automatic implantable cardioverter-defibrillator pulse generator	5.42
33207	Insertion of permanent pacemaker w/transvenous electrode(s);	7.36

ventricular

33222 (1993)

Revise/relocate skin pocket for pacemaker or automatic
cardioverter-defibrillator

4.86

AS10

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement, and stress).

The description of CPT code 33222 has been revised to include the revision or relocation of the skin pocket for pacemaker pulse generator and no longer includes ICD generators. Not infrequently, based on the patient's condition and the integrity of the current pocket, the relocation via tunneling existing pacemaker leads may be required to gain access to the new pulse generator location. However, the technical advisory panel recommends that the value of 4.64 RVUs be maintained in lieu of the median survey value of 7.95 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? ~ 900 (Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA:

Cardiology

Median Intra-Service Time: 1 hr 52 mins Low: 45 mins High: 3 hrs 30 mins

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 3 Visits, Level II

Number of Times Provided in Past 12 months (Median): 0

Other Data: Responders provided this service a median of 2 times (max of 10 times) in career

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS11 CPT Code: ●33223 Global Period: 090

CPT Descriptor: Revision or relocation of skin pocket for implantable cardioverter-defibrillator

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 50 year old man developed pre-erosion of his defibrillator site. He receives mild sedation and the defibrillator site is prepped. Under local anesthesia supplemented with intravenous anesthesia the defibrillator pocket is entered and the device exposed. The pocket is inspected for frank erosion. A new pocket is made, the defibrillator is detached from the leads and the latter are tunneled to the new site. The defibrillator is reconnected to the leads, and placed in the new site. The procedure is performed under ECG monitoring with automated blood pressure cuff and pulse oximetry.

Description of Pre-Service Work: Evaluation of patient status is conducted and informed consent obtained. A mild sedative is administered and the patient is transferred to the cardiac catheterization laboratory.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: After monitoring the vital signs and obtaining a chest x-ray, which is reviewed, as well as electrocardiogram, the patient is discharged to be followed in the Pacemaker Clinic. The patient returns to the Pacemaker Clinic, where appropriate pacemaker sense and capture is once again re-determined. The wound is assessed with respect to appropriate healing. The dressing is removed. Any required antibiotics or analgesic medications are prescribed. Patient is then established on a schedule for periodic appropriate Pacemaker Clinic visits, as well as transtelephonic monitoring.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212 (1993)	Insertion/Replacement pacemaker pulse generator, automatic implantable cardioverter-defibrillator pulse generator	5.42
33222 (1993)	Revise/relocate skin pocket for pacemaker/automatic implantable cardioverter-defibrillator	4.86

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort, mental effort and judgement, and stress)

This new CPT code was created to separate out into a unique code the physician work effort to revise or relocate an ICD pulse generator. This procedure requires significantly more work than that involved in the revision or relocation of a standard pacemaker pulse generator. The ICD pulse generator is much larger in size and is attached to more leads than a pacemaker. It is placed in a deeper pocket, often located behind the rectus abdominus. For these reasons, a physician work value of 6.21 is recommended by the technical advisory panel.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 100 (Medicare)

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hr 30 min Low: 1 hr High: 3 hrs

Median Pre-Service Time: 53 mins Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 1

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS12 CPT Code: 33233 Global Period: 090

CPT Descriptor: Removal of permanent pacemaker; pulse generator only

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 48 year old man received a permanent pacemaker after a myocardial infarction. The system later malfunctioned and it was determined that the patient should have the pulse generator removed. The patient is given mild sedation and taken to the catheterization laboratory. The patient is prepped and local anesthesia is given. The procedure is performed under ECG monitoring, with pulse oximetry. The pacer pocket is opened under local anesthesia and the generator and lead are dissected free of scar tissue. The lead(s) is disconnected from the generator and capped. No infection of the leads is noted. The generator is removed and the pocket is closed in layers. The patient is monitored postoperatively for wound healing and any recurrence of rhythm disturbances.

Description of Pre-Service Work: After the patient is evaluated in the Pacemaker Clinic, arrangements are made for the Cardiac Catheterization Laboratory or Operating Room. The procedure and the risks associated with removal of the pulse generator are discussed with the patient and patient's family. Arrangements are made for the x-ray technician, cath lab technician and nurse. An informed consent is obtained.

Description of Intra-Service Work: Under sedation, with continuous monitoring of the electrocardiogram, blood pressure and oxygen saturation monitoring, and establishment of a safe intravenous line, the patient is prepped and draped about the existing pacemaker pocket. The pocket is infiltrated with local anesthesia. A cut-down is made over the pocket. Dissection is carried down to the old pulse generator, which is freed up and disconnected from the electrodes. Once removed, the pacemaker pocket is carefully inspected, lavaged with Betadine. If no further assessment is required, the pacemaker lead(s) is capped.

The subcutaneous tissue is approximated in two layers, and then the skin is approximated with 4-1 Vicryl subcuticular stitch. The patient is returned to the Recovery area, where monitoring is continued for any arrhythmias.

Description of Post-Service Work: The patient returns to the Pacemaker Clinic, evaluated for stability of cardiac rhythm with electrocardiographic monitoring, Holter recording. The incision is checked for hematoma formation. Dry sterile dressing changes are carried out.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212 (1993)	Insert/replace pulse generator or implant cardioverter-defibrillator pulse generator	5.42
33222 (1993)	Revise/relocate skin pocket to implant cardioverter-defibrillator	4.86
33232 (1993)	Remove permanent pacemaker	5.02

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This code, in 1993, represented the removal of a complete permanent pacemaker, including leads when appropriate. For 1994, there are 3 codes, this one reflecting the removal of pulse generator only. The previous code had a value of 5.02 which the ACC believed was quite undervalued given the inherent difficulty on removing leads. In fact, the lead removal is the most work intensive component. Therefore, the technical advisory panel recommends the value of 2.85 for this service.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? ~85¹

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 53 mins Low: 30 min High: 2 hrs 30 mins

Median Pre-Service Time: 45 min Median Post-Service Time: 30 min

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 0

Other Data: One survey respondent reported doing 10 of these services in his career, others stated 1-2 times/career

¹Based on expert estimates of volume distribution: this new code description represents approximately 5 percent of the services reported in 1991 as code 33232, which had a total Medicare volume of ~1700. However, the intent of the codes has also changed which may be reflected in an increase in volume. When a pulse generator is replaced with one of like kind this code is used to document removal and the insertion code is used for insertion purposes. The multiple procedure rule is then applied.

**A MA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS12a CPT Code: ●33234 Global Period: 090

CPT Descriptor: Removal of permanent pacemaker; and transvenous electrode(s), single lead system, atrial or ventricular

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 48 year old man received a permanent pacemaker after a myocardial infarction. The system later malfunctioned and it was determined that the patient should have his system removed. The patient is given mild sedation and taken to the catheterization laboratory. Arrangements are made for surgical backup should myocardial perforation occur and he is typed and crossmatched for 2 units of blood. The patient is prepped and under local anesthesia a sheath is placed in the right femoral vein in case a femoral approach is needed for lead removal. A femoral arterial line is also inserted for continuous monitoring of blood pressure. The procedure is performed under ECG monitoring, with pulse oximetry. The pacer pocket is opened under local anesthesia and the generator and lead dissected free of scar tissue. The lead is disconnected from the generator, it is cut to expose its inner core, and a locking stylet inserted to the lead's tip. Gentle traction is applied and it is determined that the lead is adherent to the myocardium. An extension is applied to the locking stylet and a plastic dilator placed over the lead and through the venous system to near the tip of the lead thus dissecting it free from adhesions. Supplemental intravenous anesthesia is required. A counter traction is established by the dilator to the lead which comes free and is removed. The pocket is closed in layers.

Description of Pre-Service Work: The patient is assessed and medical record is reviewed with respect to lead failure, underlying rhythm, patient's exact pacing requirement, the age of leads, pacemaker and lead implant information, make and manufacturer. Labs are reviewed with respect to blood count, rhythm strips and coagulation panel. The procedure and risk are discussed with the patient and family. Careful discussion is carried out with respect to the complications of tamponade and death from avulsion of the right ventricle and the potential need for emergency open heart surgery. Arrangements are made for Operating Room time, fluoroscopy, general anesthesia, an arterial line and cardiovascular surgical back-up. Arrangements are made for the tools of extraction and extraction kit. Arrangements for back-up temporary pacing are also carried out. If new pulse generator and electrodes are required, the replacement electrodes and pulse generator are arranged for. The chest x-rays are carefully reviewed for total number of electrodes to be removed.

Description of Intra-Service Work: The patient is prepped and draped. Under general anesthesia, with an arterial line, infiltration of local anesthesia over the existing pacer pocket and then cut down and dissected for the pulse generator and lead. The lead is freed from the trapping scar, as well as the pulse generator. The lead and pulse generator are disconnected. The pulse generator is wrapped in sterile antiseptic soaked gauze. Careful dissection of the electrode down to the entry site in the vein is carried out, freeing it of all entrapping scar. All securing anchor ties are released. The lead is checked for patency with a stilette, is also sized with respect to length. The pacemaker pin is then prepared by being cut free. The electrode coil is exposed, and sized with a series of sizing pins. The appropriate sized locking stilette is advanced and

engaged. After the locking stilette is engaged, traction is applied. If the electrode fails to release, metal dilator is then placed over the pacemaker electrode in an attempt to enter the central circulation with a dilator to rupture fibrous bands under the clavicle. If successful, a series of counter traction sheaths are applied to the

AS12a

electrode and advanced to the tip of the electrode and myocardium interface, in an attempt to lyse myocardial adhesions. If this is unsuccessful, this approach is abandoned and preparations are made to removing lead from the groin. The right groin is infiltrated with lidocaine, using Seldinger technique the guide wire is advanced to the inferior vena cava. A #16 French extraction sheath set and an extraction work station is advanced to the inferior vena cava. The rubber dilator is removed and replaced with a pre-loaded inner sheath that contains a Dotter retriever, basket and deflecting wire. The deflecting wire is connected to a deflecting handle. The pacemaker lead is released superiorly into the central circulation. Attempts are made to grab the electrode with the deflecting wire and subsequently untangle it in the Dotter basket. The entire lead is then pulled into the #16 French sheath set. The sheath set is advanced superiorly over the electrode rupturing the fibrous bands. The sheath is advanced into the myocardial electrode interface and myocardial adhesions are sliced, freeing the electrode. The electrode freed-up is pulled into the sheath set, the sheath set is retracted with the Dotter basket and deflecting wire and removed from the system central circulation.

The patient is carefully monitored for cardiac tamponade. The initial incision of the old pacemaker pocket is carefully inspected, lavaged and closed in two layers, the puncture site of the right groin, a dry, sterile dressing is applied after appropriate pressure.

Description of Post-Service Work: The patient is continually monitored with respect to arterial blood gasses and blood pressure, and is recovered from anesthesia in the Recovery Room. If a temporary transvenous pacemaker is left in place, patient remains in the hospital and arrangements are made for the insertion of a new pacing system after appropriate antibiotics and convalescent therapy. If the new pacemaker system has been placed at the time of extraction, the patient is recovered and referred to the Pacemaker Clinic.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33207	Insert perm. pacemaker w/transvenous electrode(s); ventricular	7.46
33208	Insert perm. pacemaker w/transvenous electrode(s); AV sequential	7.61
33212	Insert/replace pulse generator or implant cardioverter-defibrillator pulse generator	5.42

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Removal of this system, including transvenous electrodes with pulse generator removal, requires special tools, additional experience and procedure duration (more than two times that required for insertion of the transvenous pacemaker system).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 650²

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs. 30 min Low: 40 min. High: 4 hrs.

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr.

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 1

Other Data: _____

²Based on expert estimates of volume distribution: this new description represents approximately 38 percent of the services reported in 1991 as code 33232, which had a total 1991 Medicare volume of ~1700. Clinical experts however agree that the services are becoming more common.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS13 CPT Code: ●33235 Global Period: 090

CPT Descriptor: Removal of permanent pacemaker; and transvenous electrode(s), dual lead system

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70 year old man has had a dual chamber pacing system for 5 years which is now malfunctioning. It is determined that he needs the present system removed but no new one inserted. He is given mild sedation and brought to the catheterization laboratory at a time that urgent surgical backup is available. He has 2 units of blood typed and crosshatched. Continuous ECG and pulse oximetry are obtained. A femoral arterial sheath is inserted to monitor continuous systemic blood pressure. A femoral venous sheath is introduced to provide a means for inserting lead removal devices from the groin should that be necessary (about 1/3 the time). Under local anesthesia the pacer and its leads are exposed and dissected free. The leads are disconnected from the generator, their connectors are cut and their central core dilated to accept a locking stylet which is sized appropriately. Traction is applied to each lead however it is noted that a counter traction method is required and a dilator is advanced over the lead freeing up vascular adhesions. The dilator is positioned near the tip of the lead a traction-counter applied freeing the lead. Each lead is removed in this fashion. The leads and generator are removed and the pocket is closed.

Description of Pre-Service Work: The patient is assessed and medical record is reviewed with respect to lead failure, underlying rhythm, patient's exact pacing requirement, the age of leads, pacemaker and lead implant information, make and manufacturer. Labs are reviewed with respect to blood count, rhythm strips and coagulation panel. The procedure and risk are discussed with the patient and family. Careful discussion is carried out with respect to the complications of tamponade and death from avulsion of the right ventricle and the potential need for emergency open heart surgery. Arrangements are made for Operating Room time, fluoroscopy, general anesthesia, an arterial line and cardiovascular surgical back-up. Arrangements are made for the tools of extraction and extraction kit. Arrangements for back-up temporary pacing are also carried out. If new pulse generator and electrodes are required, the replacement electrodes and pulse generator are arranged for. The chest x-rays are carefully reviewed for total number of electrodes to be removed.

Description of Intra-Service Work: The intra-service work is a complete duplication for each lead that is to be removed and does not relate to single or dual-chambered system, but relates to the number retained electrodes that must be extracted. If there are six wires in place, the identical procedure as AS12-a is carried out per each multiple electrode.

Description of Post-Service Work: The patient is continually monitored with respect to arterial blood gasses and blood pressure, and is recovered from anesthesia in the Recovery Room. If a temporary transvenous pacemaker is left in place, patient remains in the hospital and arrangements are made for the insertion of a new pacing system after appropriate antibiotics and convalescent therapy. If the new pacemaker system has been placed at the time of extraction, the patient is recovered and referred to the Pacemaker Clinic.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33232 (1993)	remove permanent pacemaker	5.02
33208	Insert perm. pacemaker w/transvenous electrode(s); AV sequential	7.51
33248 (1993)	Revise/remove cardioverter-defibrillator pads/electrodes	16.84

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Removal of this system, including transvenous electrodes with pulse generator removal, requires special tools, additional experience and procedure duration (more than two times that required for insertion of the transvenous pacemaker system).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 970³

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs. 50 min. Low: 30 min. High: 4 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 visits, Level IV

Number of Times Provided in Past 12 months (Median): 1

Other Data: _____

³ Based on expert estimates of volume distribution: this new code description represents approximately 57 percent of the services reported in 1991 as code 33232, which had a total Medicare volume of ~1700. However, the intent of the codes has also changed which may be reflected in a increase in volume.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS14 CPT Code: ●33236 Global Period: 090

CPT Descriptor: Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70 year old patient with ASHD, status post CABG received a permanent epicardial pacemaker because of complete heart block during his coronary bypass surgery ten years earlier. This involved placement of a single wire on the right ventricular. The pacemaker has reached end of service. Analysis of the electrode is consistent with an insulation leak. The old pulse generator and the chronic defective electrode are removed. Temporary wires were placed and arranged for transvenous system prior to discharge.

Description of Pre-Service Work: The patient is evaluated for pacemaker function including the status of the pulse generator and the lead. chest x-ray and routine blood work are required, as well as, for evaluation for the suitability for thoracotomy.

Description of Intra-Service Work: A thoracotomy is performed by median sternotomy as a left anterior lateral thoracotomy will not reach the right ventricle where the unipolar lead is attached. After the median sternotomy careful dissection of the ventricle to remove fibrous tissue surrounding the lead and the electrode is required. Attention to the avoidance of cardiac laceration is necessary. Once the point of attachment of the electrode to the right ventricle is found the scar tissue is removed and the electrode removed from the heart. The heart requires repair of the defect caused by removal of the electrode. The electrode is then cut from the lead. The lead is followed in its scar tissue encasement and transected at several points so that it can be removed completely. Two left ventricle temporary wire electrodes are implanted for postoperative management. Attention is turned to the pulse generator site in the subcutaneous tissue. The lead is detached from the pulse generator, the pulse generator is removed and a portion of the mesothelial lining of the pulse generator site is removed or scarified and the pulse generator pocket obliterated. All wounds are closed and a temporary pacemaker connected to the temporary pacemaker leads.

Description of Post-Service Work: Postoperatively temporary pacing will be continued until a transvenous implantation is performed. The patient will require management of mediastinal and possible pleural chest tubes and general pulmonary toilet. Postoperatively the patient will be ambulated and prepared for discharge approximately 7-10 days postoperatively. Transvenous implantation of a single or dual chamber pacemaker as necessary can be undertaken approximately three days before the proposed discharge.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33232 (1993)	Removal of permanent pacemaker	5.02
33248 (1993)	revise/remove ICD pads & electrodes	16.84

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time, technical skill & physical effort; mental effort and judgement; and stress):

CPT code 33200 describes the insertion of a permanent pacemaker with epicardial electrodes, by thoracotomy. This procedure describes the removal of this particular system. This procedure code describes a patient who must undergo a thoracotomy specifically for the removal of the epicardial electrodes. Therefore, this code should be valued at 11.84 RVUs, slightly higher than the initial insertion of the epicardial electrodes by thoracotomy (RVU 11.20).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? unknown

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs Low: 15 mins High: 4 hrs

Median Pre-Service Time: 30 mins Median Post-Service Time: 1 hr

Length of Hospital Stay: 6 days Number & Level of Post-Hospital Visits: 3 visits, Level II

Number of Times Provided in Past 12 months (Median): 0

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS15 CPT Code: ●33237 Global Period: 090

CPT Descriptor: Removal of permanent epicardial pacemaker and electrodes by thoracotomy; dual lead system

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 65 year old woman with complete heart block received a DDD pacemaker system during coronary artery bypass surgery. Eight weeks postoperatively, the patient developed a fever and chills. Erythema developed about the pacemaker pocket. Cultures were positive for Staph Epidermidis. The pacemaker pocket is fluctuant and indurated. An echocardiogram demonstrates fluid in the pericardium. Arrangements are made for thoracotomy, at which time the electrodes and pacemaker are removed. A temporary transvenous system is placed.

Description of Pre-Service Work: The patient is evaluated for pacemaker function including the status of the pulse generator and the lead. chest x-ray and routine blood work are required, as well as, for evaluation for the suitability for thoracotomy.

Description of Intra-Service Work: A thoracotomy is performed by median sternotomy as a left anterior lateral thoracotomy will not reach the right ventricle where the unipolar lead is attached. After the median sternotomy careful dissection of the ventricle to remove fibrous tissue surrounding the lead and the electrode is required. Attention to the avoidance of cardiac laceration is necessary. Once the point of attachment of the electrode to the right ventricle is found the scar tissue is removed and the electrode removed from the heart. The heart requires repair of the defect caused by removal of the electrode. The electrode is then cut from the lead. The lead is followed in its scar tissue encasement and transected at several points so that it can be removed completely. Two left ventricle temporary wire electrodes are implanted for postoperative management. Attention is turned to the pulse generator site in the subcutaneous tissue. The lead is detached from the pulse generator, the pulse generator is removed and a portion of the mesothelial lining of the pulse generator site is removed or scarified and the pulse generator pocket obliterated. All wounds are closed and a temporary pacemaker connected to the temporary pacemaker leads.

Description of Post-Service Work: Intensive antibiotics are administered until the patient is entirely afebrile and apparently free of infection. The tube thoracostomy is irrigated with antibiotic solution as is the pacemaker pulse generator site so that the wound is clean. Irrigation is then discontinued. Perhaps 5-7 days following thoracotomy for removal of hardware, transvenous implantation of a dual chamber pacemaker is undertaken with the pulse generator in a pectoral region. As it is unclear from the vignette at which site the pulse generator had been previously implanted it is important that the new pulse generator be placed in the opposite pectoral region, that is a site which is entirely virgin and not previously used.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
32100	Thoracotomy, major; w/exploration and biopsy	10.18
33248 (1993)	Revision/removal of automatic implantable cardioverter-defibrillator pads and electrodes	16.84

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure code describes the removal of a permanent epicardial pacemaker system with electrodes, by thoracotomy for a dual chamber system. This patient is often quite sick, the sites infected and difficult to work with. The value for this code should be set higher than that for a single chamber system and therefore the technical advisory panel recommends a physician work value of 12.83 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Unknown

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 3 hrs Low: 1 hr 30 mins High: 4 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr 30 mins

Length of Hospital Stay: 7 days Number & Level of Post-Hospital Visits: 3 visits, Level II

Number of Times Provided in Past 12 months (Median): 3

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS16 CPT Code: ●33238 Global Period: 090

CPT Descriptor: Removal of permanent transvenous electrode(s) by thoracotomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 56 year-old male, status post permanent pacemaker for sick sinus syndrome in 1987 develops a three week history of fevers and chills. Blood cultures are positive for Staph Aureus. Echocardiography demonstrates vegetations on the distal pacemaker electrode. Attempts at removal of the electrode via transvenous techniques are only partially successful. Remnants of the electrode, including the tip, are retained in the right ventricular apex with the vegetations. A thoracotomy is performed. The right atrium is purse-stringed and opened. The lead remnants with vegetations are directly extracted through the atriotomy.

Description of Pre-Service Work: Blood cultures are positive for Staph Aureus. Echocardiography demonstrates vegetations on the distal pacemaker electrode. Attempts at removal of the electrode via transvenous techniques are only partially successful.

Description of Intra-Service Work: A thoracotomy is performed. The right atrium is purse-stringed and opened. The lead remnants with vegetations are directly extracted through the atriotomy.

Description of Post-Service Work: Intensive antibiotic administration to which the organism (Staphylococcus aureus) has been demonstrated to be sensitive will have to be undertaken for six weeks postoperatively. The patient will be treated as if for open heart surgery with management of mediastinal and possibly pleural chest tubes. Temporary pacemaker wires will have to have been inserted during the thoracotomy but these will not function satisfactorily for more than a week, and possibly not even that long. Consequently a temporary transvenous pacemaker will need to be inserted thereafter. Should the patient recover appropriately, approximately two weeks before hospital discharge a new transvenous pacemaker implantation can be performed while antibiotics are continued. Multiple blood cultures during the course of antibiotic management will be required to demonstrate that the blood stream is sterilized. Repeat echocardiography will be required to demonstrate that new vegetations have not formed. With the patient off antibiotics for approximately one week new blood cultures will be required to demonstrate that there is no growth and to determine that the fever does not recur.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
32100	Thoracotomy, major; with exploration & biopsy	10.18
33248 (1993)	Revise/remove automatic implantable cardioverter-defibrillator	

AS16

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time, technical skill & physical effort, mental effort and judgement, and stress)

This new procedure code describes the removal of permanent transvenous electrodes by thoracotomy. Although this procedure does not require that the chest be completely opened, an atriotomy is typically required to remove the leads from the internal lining of the heart. Significant scar tissue and possible sepsis complicate this procedure. Therefore, the technical advisory panel recommends that the median survey value of 14.50 be adopted (this value was reduced by HCFA to 14.31 in the 1994 across-the-board RVU reduction for budget neutrality).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Unknown

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: . Cardiology

Median Intra-Service Time: 3 hrs Low: 25 mins High: 4 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr 15 mins

Length of Hospital Stay: 7 days Number & Level of Post-Hospital Visits: 4 visits, Level II

Number of Times Provided in Past 12 months (Median): 0

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS17 CPT Code: ●33240 Global Period: 090

CPT Descriptor: Insertion or replacement of implantable cardioverter-defibrillator pulse generator only

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 64-year-old man with a history of coronary artery disease, old myocardial infarction approximately 3-4 years ago with depressed left ventricular function with a left ventricular ejection fraction of 34%. The patient presented with sudden cardiac arrest 3 years ago and underwent cardiac catheterization and electrophysiological evaluation. Implantable pacemaker-cardioverter-defibrillator pulse generator and lead system were inserted by thoracotomy. During the past 3 years the patient has used both the antitachycardia pacing and shock therapy function of the device and has been followed in the defibrillator clinic. In the last 1 month the battery charge has declined below specified end-of-life values.

Following removal of the old pulse generator (reported separately using code (33241), the pocket is irrigated and the lead system integrity is verified. A new pulse generator is connected to the pacing and defibrillation leads. The pocket is irrigated and the generator implanted in the previous pocket.

Description of Pre-Service Work: The patient is evaluated with electronic analysis of implantable cardioverter defibrillator function in the defibrillator clinic. Electrocardiography is done and the charging time of the defibrillator is analyzed. Charging time is deemed to be excessive and replacement of the unit is decided upon. The patient has chest PA and lateral x-rays performed and routine blood work, CBC and urine. The patient is admitted to the hospital.

Description of Intra-Service Work: Under heavy sedation the generator is disconnected. Following removal of the old pulse generator (reported separately), the pocket is irrigated and the lead system integrity is verified. A new pulse generator is connected to the pacing and defibrillation leads. The pocket is irrigated and the generator implanted in the previous pocket.

Description of Post-Service Work: The patient will be observed in the hospital overnight to assure that there is no bleeding or other untoward postoperative occurrence and to allow recovery from general anesthesia. The patient will be discharged the following morning if all is well.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212	Insertion/Replacement pacemaker pulse generator, automatic implantable cardioverter-defibrillator pulse generator	5.27
33219 (1993)	Repair pacemaker with replacement pulse generator	4.86

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time, technical skill & physical effort; mental effort and judgement; and stress)

This new code for the insertion or replacement of an ICD pulse generator only requires more physician work than that required for a standard pacemaker pulse generator. Of the three pulse generator services established with the division of existing code 33212, this service requires the most intensive physician work effort. The previous code had a value of 6.15 RVUS. The technical advisory panel recommends a value of 7.28.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? ~2,160(Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hr 8 mins Low: 45 mins High: 2 hrs

Median Pre-Service Time: 38 mins Median Post-Service Time: 53 mins

Length of Hospital Stay: 3 days Number & Level of Post-Hospital Visits: 1 visit, Level II

Number of Times Provided in Past 12 months (Median): 6

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking Number: AS18 CPT Code: ●33241 Global Period: 090

CPT Descriptor: Removal of implantable cardioverter-defibrillator pulse generator only

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 64-year-old male with a history of coronary artery disease, old myocardial infarction approximately 3-4 years ago with depressed left ventricular function with a left ventricular ejection fraction of 34%. The patient presented with sudden cardiac arrest 3 years ago and underwent cardiac catheterization and electrophysiological evaluation. Implantable pacemaker-cardioverter-defibrillator pulse generator and lead system were inserted by thoracotomy. During the past 3 years the patient has used both the antitachycardia pacing and shock therapy function of the device and has been followed in the defibrillator clinic. In the last 1 month the battery charge has declined below specified end-of-life values.

The patient was admitted on the evening prior to the procedure. A brief admission history and physical examination is performed to assess wound site and chest x-ray to assess lead system integrity. The wound site is inspected for any infection or effusion. The surgical procedure requires induction of general anaesthesia and preparation of the abdomen or in the future thoracic pulse generator pocket site. The pocket is opened and the lead system carefully dissected free. The generator is disconnected and removed.

Description of Pre-Service Work: A brief admission history and physical examination is performed to assess wound site and chest x-ray to assess lead system integrity. The wound site is inspected for any infection or effusion.

Description of Intra-Service Work: The surgical procedure requires induction of general anaesthesia and preparation of the abdominal thoracic pulse generator pocket site. The pocket is opened and the lead system carefully dissected free. The generator is disconnected and removed. (This ICD removal is often coupled with an implant code [33240] when a depleted device is replaced by a new device.) Determination of the stimulation threshold and lead system integrity is made.

Description of Post-Service Work: The patient is maintained in the hospital after recovering from general anaesthesia. Chest x-ray and abdominal film are performed to evaluate and record the presence of a new device and the patient is discharged from the hospital on the day after the operative procedure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212	Insertion/Replacement pacemaker pulse generator, automatic implantable cardioverter-defibrillator pulse generator	5.27
33232 (1993)	Removal of permanent pacemaker	5.02

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort, mental effort and judgement, and stress)

Similar to the removal of a permanent pacemaker pulse generator, but more extensive due to the size of the device and the presence of up to four leads and the frequent presence of a "Y" adaptor.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Previously reported as 33248 which had very low Medicare volume.

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 1 hr Low: 4 mins High: 3 hrs

Median Pre-Service Time: 45 mins Median Post-Service Time: 1 hr

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 1 Visit, Level II

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS19 CPT Code: ●33242 Global Period: 090

CPT Descriptor: Repair of implantable cardioverter-defibrillator pulse generator and/or leads

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 58 year old obese man with cardiomyopathy and recurrent sustained ventricular tachycardia had undergone insertion of a cardioverter-defibrillator three months ago. Postoperatively he has had two episodes of tachycardia terminated by anti-tachycardia pacing or shock therapy. Progressive increase in his pacing and defibrillation thresholds is observed at the last electrophysiologic study performed for device programming. Failure to defibrillate with the first maximum output is also intermittently observed. A chest x-ray shows no crumpling of the ventricular defibrillation patch lead. Epicardial pacing wires appear normally located. Exploration of the cardioverter-defibrillator system is recommended.

After the abdominal pulse generator pocket has been opened under general anesthesia by the surgeon (who would typically report code 33240, tracking code AS 17, separately), the pulse generator and leads are visually inspected, typically by the electrophysiologist. If loose set screws or loose/missing screw caps are found, these are repaired. If a y-connector was used for a 3-patch system, then additional dissection and exploration of the y-patch is required to determine possible malfunction. Testing of the lead system for pacing, sensing in sinus rhythm, ventricular tachycardia and fibrillation, cardioversion and defibrillation is performed using an external cardioverter-defibrillator. Repeated induction of ventricular fibrillation and tachycardia is required with an average of 2 to 3 inductions. This requires joint efforts of two physicians one of whom is an electrophysiologist. Defibrillation threshold testing is performed. If unsatisfactory, lead system repositioning and retesting are required. The lead system is re-connected to the cardioverter-defibrillator pulse generator. Ventricular tachycardia and fibrillation are reinduced and device function is retested including anti-tachycardia pacing, cardioversion and defibrillation. After demonstration of satisfactory function, abdominal incision is closed.

Description of Pre-Service Work: A chest x-ray shows no crumpling of the ventricular defibrillation patch lead. Epicardial pacing wires appear normally located. Exploration of the cardioverter-defibrillator system is recommended.

Description of Intra-Service Work: Vignette above (second paragraph) describes intra-service work.

Description of Post-Service Work: Following closure of the wound the patient is recovered from general endotracheal anesthesia and may be discharged within 48 hours of the operative intervention. The patient is monitored throughout this period for device malfunction or failure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33212	Insertion/replacement of pacemaker pulse generator, automatic implantable cardioverter-defibrillator pulse generator	5.27
33207	Insert perm. pacemaker w/transvenous electrode(s); ventricular	7.36
33248 (1993)	Revision/removal of automatic implantable cardioverter-defibrillator pads and electrodes	16.84
33240	Insertion or replacement of implantable cardioverter defibrillator pulse generator only	7.28

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement, and stress)

This invasive ICD troubleshooting procedure includes testing and repair of the device. This code is used in addition to the surgical procedure required to isolate and replace the pulse generator. The only time the procedure is performed is when a device is malfunctioning and each component must be thoroughly evaluated. Specifically, this code represents a combination of the repair of a dual chamber pacemaker lead system (CPT code 33220, RVU 5.16), and the full testing of an ICD system (CPT code 93640, RVU 5.0). Significant time is required to identify the problem with the system, repair it and then conduct the testing (e.g., defibrillator thresholds). Therefore, accounting for the increased effort beyond the dual chamber system repair, the technical advisory panel recommends a value of 5.92 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Previously reported as 33248 which had very low Medicare volume.

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs Low: 1 hr High: 4 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 2

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS20 CPT Code: ●33243 Global Period: 090

CPT Descriptor: Removal of implantable cardioverter-defibrillator pulse generator and/or lead system;
by thoracotomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year-old man presents with a history of diabetes, congestive heart failure and a prior cardiac arrest. The patient had undergone insertion of an implantable cardioverter-defibrillator lead system by thoracotomy with epicardial placement of 3 defibrillation pads and 2 pacing leads with abdominal insertion of a pulse generator. There is now an infection in the pulse generator pocket ascending into the lead system to the epicardium. The patient has a low grade fever as well as reddening and effusion in the pulse generator pocket.

Due to prior cardiac surgery, the thorax is opened either through a preexisting median sternotomy or a lateral thoracotomy. Careful and extensive dissection of the retrosternal space to the pericardium is required. Extra-pericardial patches may require dissection into the plane between the heart and the lung. Posterior dissection with lifting of the heart may be required. The procedure may require hemodynamic support with partial cardiopulmonary bypass in particularly difficult cases. The lead system is removed from the chest and delivered by opening the abdominal pulse generator pocket and extracting the leads. The abdominal pulse generator pocket is opened and the pulse generator disconnected from the lead system and removed separately. The entire surgical procedure may involve 3-4 hours of intraoperative procedure time. Postoperative recovery is similar to that of the thoracotomy with the addition of intravenous and/or oral antibiotic therapy for resolution of infection. Alternative therapy must be sought in the period for this patient who is at risk for recurrent cardiac arrest.

Description of Pre-Service Work: This patient will require non-invasive evaluation of his ability to tolerate thoracotomy for removal of the defibrillator. Routine blood work, ECG, blood cultures and cultures of the infected pulse generator site are reviewed.

Description of Intra-Service Work: Vignette above (second paragraph) describes intra-service work.

Description of Post-Service Work: Postoperatively, the patient is recovered in the Surgical Intensive Care Unit with chest tubes into the pleural space and possibly into the mediastinum. He will have an irrigating catheter in the pulse generator site and will undergo irrigation of that site with antibiotic solution for several days. He will require observation in the Surgical Intensive Care Unit for one or possibly two days if all goes well and will remain hospitalized for approximately 5-7 days before being considered for discharge.

Postoperatively he will also require re-evaluation for the state of his cardiac arrhythmia and whether re-implantation of new ICD is necessary. If it is determined that a new device is necessary, this will be implanted transvenously. If placed during this admission, the patient will require up to 10 days of hospitalization

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33246	Implant automatic cardioverter-defibrillator pads with/without electrodes; with insertion of pulse generator	19.49
33248 (1993)	Revision/removal of automatic implantable cardioverter-defibrillator pads and electrodes	16.84

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The removal of an ICD pulse generator and/or lead system by thoracotomy is similar to coronary artery bypass re-operation: the excision of scar tissue and the risk to the patient during the second surgery require additional work effort beyond the basic procedure. The original implantation of an ICD system by thoracotomy has a value of 19.75 RVUs. The re-operation code for open heart surgery has a value of 6.01 RVUs. Therefore, the technical advisory panel recommends that a value of 21.71 RVUs, somewhat less than the addition of the re-operation code to an initial ICD implantation code, but somewhat higher than the median survey value, be adopted.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
Estimate the number of times this service might be provided nationally in a one-year period? Previously reported as 33248 which had very low Medicare volume.
Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 3 hrs 30 mins Low: 1 hr High: 8 hrs
Median Pre-Service Time: 1 hr 30 mins Median Post-Service Time: 2 hrs 15 mins
Length of Hospital Stay: 7 days Number & Level of Post-Hospital Visits: 3 Visits, Level III
Number of Times Provided in Past 12 months (Median): 0
Other Data: Service provided (max) 10 times/career

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS21 CPT Code: ●33244 Global Period: 090

CPT Descriptor: Removal of implantable cardioverter-defibrillator pulse generator and/or lead system; by other than thoracotomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 68-year-old woman with a history of diabetes who had suffered a prior cardiac arrest, had undergone insertion of an implantable cardioverter-defibrillator and lead system inserted by transvenous insertion of 1-2 catheter defibrillation electrodes and cutaneous patch electrode. The patient has developed an infection of the pulse generator and lead system. There is infection in the pulse generator pocket ascending into the lead system to the epicardium. The patient has a low grade fever as well as reddening and effusion in the pulse generator pocket. Both thoracic and abdominal surgical sites are required (in the pectoral region and in the upper abdomen). The lead system requires disconnection from the pulse generator which is removed. Stilettes are introduced into the catheter electrodes which are then moved from their insertion into the heart. This procedure can be extremely time-consuming. The leads are then delivered from the subclavian vein or cephalic vein insertion site individually and then removed through the tunnel from the thoracic to the abdominal incision. Alternative approaches could require femoral vein puncture and use of a basket catheter for lead capture and delivery

Description of Pre-Service Work: The patient has a low grade fever as well as reddening and effusion in the pulse generator pocket. Pre-operative lab studies and other appropriate test results are evaluated. Surgical consent is obtained.

Description of Intra-Service Work: Both thoracic and abdominal surgical sites are required (in the pectoral region and in the upper abdomen). The lead system requires disconnection from the pulse generator which is removed. Stilettes are introduced into the catheter electrodes which are then moved from their insertion into the heart. This procedure can be extremely time-consuming. The leads are then delivered from the subclavian vein or cephalic vein insertion site individually and then removed through the tunnel from the thoracic to the abdominal incision. Alternative approaches could require femoral vein puncture and use of a basket catheter for lead capture and delivery. Drains and irrigation catheters are placed, as appropriate, and the wounds are closed.

Description of Post-Service Work: The patient must be monitored throughout the anesthesia and surgical recovery period for potential post-operative complications. Most importantly, these patients undergo this procedure because there is a problem with the integrity of the device or the infection is present. Therefore, tachy-arrhythmias are a significant risk and must be treated appropriately until a new device can be placed. Further, the patient may manifest complications of the extraction including pericardial tamponade, tricuspid valve and/or venous injury. A minimum of 24 hours of ICU care is required; the patient is then transferred to a telemetry unit.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33246	Implant automatic cardioverter-defibrillator pads with/without electrodes; with insertion of pulse generator	19.49
33248 (1993)	Revision/removal of automatic implantable cardioverter-defibrillator pads and electrodes	16.84

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort, mental effort and judgement; and stress)

This new code recognizes new technology which allows an ICD system to be placed and removed transvenously. Currently, a surgical abdominal approach is typical. The removal of such a system is similar to the insertion of the system, with the exception that no testing of the system is required. It is a technically difficult procedure, requiring even more effort than a pacemaker extraction, because the transvenous ICD lead is larger, more susceptible to fibrotic entrapment and fragmentation on extraction. Further, the non-thoracotomy approach is associated with a higher risk of endocardial and venous injury. Therefore, this code should be valued at 12.0 RVUs, slightly lower than an insertion (tracking code AS23 recommended value of 12.97) and considerably lower than the median survey value of 17.75.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? unknown

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 3 hrs 30 mins Low: 1 hr 15 mins High: 6 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 2 hrs

Length of Hospital Stay: 4 days Number & Level of Post-Hospital Visits: 3 Visits, Level II

Number of Times Provided in Past 12 months (Median): 0

Other Data: Service provided (max) 38 times/career

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS22 CPT Code: ●33247 Global Period: 090

CPT Descriptor: Insertion or replacement of implantable cardioverter-defibrillator lead(s), by other than thoracotomy;

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year-old man with chronic lung disease and coronary artery disease, history of myocardial infarction presents with congestive heart failure with a left ventricular ejection fraction of 32% and recurrent sustained ventricular tachycardia. Insertion of an implantable cardioverter-defibrillator system using non-thoracotomy leads has been recommended. Pre-service work includes preoperative assessment for appropriate lead system access. The procedure involves percutaneous as well as dissection techniques for obtaining access through the subclavian and/or cephalic veins into the right ventricular apex, typically with fluoroscopic guidance. A second defibrillation electrode is placed under fluoroscopic guidance in the right atrium/superior vena cava. Both leads are tunnelled along the lateral thorax to the abdominal region and attached to the pre-existing pulse generator (in some initial implantations, the leads are placed separately in advance of the pulse generator).

Description of Pre-Service Work: Pre-service work includes preoperative assessment for appropriate lead system access. Surgical consent is obtained.

Description of Intra-Service Work: The procedure involves percutaneous as well as dissection techniques for obtaining access through the subclavian and/or cephalic veins into the right ventricular apex, typically with fluoroscopic guidance. A second defibrillation electrode is placed under fluoroscopic guidance in the right atrium/superior vena cava. Both leads are tunnelled along the lateral thorax to the abdominal region and attached to the pre-existing pulse generator (in some initial implantations, the leads are placed separately in advance of the pulse generator).

Description of Post-Service Work: The patient requires standard post-anesthesia observation common to all surgical procedures. In addition, the newly implanted device requires significant assessment for the stability of the lead placement, wound integrity as well as overall patient recovery from the procedure trauma and the induction of multiple VF episodes.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33208	Insert permanent pacemaker with transvenous electrode(s); AV sequential	7.51
33245	Implant automatic cardioverter-defibrillator pads, with/without electrodes	12.71

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

The insertion of ICD pulse generator leads transvenously reflects new technology. This procedure is more involved than the removal of a dual lead permanent pacemaker system. The creation of a subcutaneous pocket and the required tunneling for lead placement requires intensive physician work effort. However, this procedure does not require as much work effort as the removal of such a device, which is valued at 12.0 RVUs (tracking code AS 21). Therefore, the technical advisory panel believes that the median survey value of 12.9 RVU is too high, and recommends a value of 9.87 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Fewer than 500
services per year are expected for this code, but this service is increasingly being performed as replacement leads are
required.

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs 15 min Low: 1 hr 30 mins High: 4 hrs

Median Pre-Service Time: 1 hr Median Post-Service Time: 1 hr

Length of Hospital Stay: 3 days Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 5

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS23 CPT Code: ●33249 Global Period: 090

CPT Descriptor: Insertion or replacement of implantable cardioverter-defibrillator lead(s), by other than thoracotomy; with insertion of cardio-defibrillator pulse generator

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year-old man with chronic lung disease and coronary artery disease, history of myocardial infarction presents with congestive heart failure with a left ventricular ejection fraction of 32% with recurrent sustained ventricular tachycardia. Insertion of an implantable cardioverter-defibrillator system using non-thoracotomy leads had been recommended. Pre-service work includes preoperative assessment for appropriate lead system access.

Description of Pre-Service Work: Pre-service work effort includes the preoperative assessment for anesthesia risk and appropriateness of obtaining lead system access from either subclavian site or the cephalic vein. The procedure is reviewed with the patient (and family, as applicable), and if not already obtained, a consent form is signed.

Description of Intra-Service Work: The procedure involves percutaneous as well as dissection techniques for obtaining access through the subclavian and/or cephalic veins into the right ventricular apex, typically with fluoroscopic guidance. A second defibrillation electrode is placed under fluoroscopic guidance in the right atrium/superior vena cava. Both leads are tunneled along the lateral thorax to the abdominal region and pulse generator pocket is developed within or anterior to the rectus sheath. The rectus sheath may have to be opened in this dissection. After satisfactory thresholds are obtained, the lead system is formally anchored and connected to an abdominal pulse generator. Both abdominal and pectoral incision sites are closed.

Description of Post-Service Work: The patient requires standard post-anesthesia observation common to all surgical procedures. In addition, the newly implanted device requires significant assessment for the stability of the lead placement, wound integrity as well as overall patient recovery from the procedure trauma and the induction of multiple VF episodes.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
33246	Implant cardioverter-defibrillator pads, with or without sensing electrodes; with insertion of cardioverter-defibrillator pulse generator	19.49
33208	Insert permanent pacemaker with transvenous electrode(s); AV sequential	7.51

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

This new code builds on tracking code AS22 (code 33243 RVUs 9.87) by adding the insertion of the ICD pulse generator. The technical advisory panel has recommended a value of 7.28 for the insertion of the ICD pulse generator only. A value of 12.97 for this code reflects the work value of 9.87 RVUs for placing the ICD leads and an additional value of 3.1 (slightly less than half of code 33247) for placing the pulse generator at the same time. Some economies-of-scale are realized.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Fewer than 800 services per year are expected (see tracking code AS22). A higher volume is expected for this code, as it is more frequently the case that the entire procedure is undertaken at one time.

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 2 hrs 30 min Low: 1 hr 12 min High: 4 hrs 30 min

Median Pre-Service Time: 1 hr 15 mins Median Post-Service Time: 1 hr 10 mins

Length of Hospital Stay: 3 days Number & Level of Post-Hospital Visits: 2 Visits, Level II

Number of Times Provided in Past 12 months (Median): 15

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking Number: AS24 CPT Code: 93724 Global Period: 000

CPT Descriptor: Electronic analysis of antitachycardia pacemaker system (includes electrocardiographic recording, programming of device, induction and termination of tachycardia via implanted pacemaker, and interpretation of recordings)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: An 8 year old girl with AAIT pacemaker for PSVT after Mustard procedure returns for routine evaluation of pacemaker. The patient is connected to a single-lead ECG monitor and a free-running strip is obtained and analyzed. A magnet is then placed over the pacemaker and additional strips are obtained and analyzed. The following programming sequence is then performed: telemetric information related to programmed parameters, battery status, impedance, and summary of anti-tachycardia events that have occurred since last "cleared" are obtained and analyzed. Thresholds, capture and sensing, are determined and recorded. Using NIPS (non-invasive programmed stimulation) multiple attempts are made to initiate the tachyarrhythmia to determine appropriate termination by the pacemaker.

Description of Pre-Service Work: Pre-service work effort includes the preoperative assessment for anesthesia risk and appropriateness of obtaining lead system access from either subclavian site or the cephalic vein. The procedure is reviewed with the patient (and family, as applicable), and if not already obtained, a consent form is signed.

Description of Intra-Service Work: Above vignette describes intra-service work for this non-Medicare patient. Medicare patients who more likely present with ventricular tachycardia (VT) may require a greater work effort, as the procedure can be more intensive when dealing with rhythms such as VT.

Description of Post-Service Work: The patient is monitored for any possible post-tachyarrhythmia complications and appropriate functioning of the device.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93631	Intra-operative cardiac pacing and mapping	7.68
93618	Induction of arrhythmia by electrical pacing	4.31
93735	Electronic analysis of single-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); with reprogramming	0.51

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The typical patient described in the vignette is a child, and the technical advisory panel (TAP) believed that a value of 4.0 more accurately reflects the work required to treat a child with PSVT. However, for the typical Medicare patient, the work is more involved and intensive. The technical advisory panel viewed this service in the elderly patient as a combination of a arrhythmia induction code and a non-invasive reprogramming service. Although these two reference codes (codes 93618 and 93735) currently have a combined value of 4.82, the technical advisors have recommended a value of 0.75 for the revised code 93735 (tracking code AS29). Recognizing the overlap of pre- and post-service effort for these two services, the TAP recommends a value of 4.94 RVUs for this combined service.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly X Sometimes ___ Rarely ___

Estimate the number of times this service might be provided nationally in a one-year period? unknown

Is this service performed by many physicians across the United States? ___ Yes X No

SURVEY DATA: Cardiology

Median Intra-Service Time: 40 mins Low: 20 mins High: 2 hrs

Median Pre-Service Time: 15 mins Median Post-Service Time: 10 mins

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 6

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking Number: AS25 CPT Code: 93731 Global Period: XXX

CPT Descriptor: Electronic analysis of dual chamber ~~internal~~ pacemaker system ~~(may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker)~~ (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 72 year old woman with a dual-chamber pacemaker, DDDR, implanted 4 years earlier for complete heart block presents to your office stating that her pacemaker is followed routinely by the implanting physician. However, she is vacationing in your area and has missed her routine pacemaker check. She wants to know if it is functioning properly but is not interested in having anything changed. Patient is connected to a single-lead ECG monitor and a free-running strip is obtained and analyzed. A magnet is then placed over the pacemaker and additional strips are obtained and analyzed. No programming is indicated.

Description of Pre-Service Work: History assessed as to indications for pacer therapy, and current symptoms. Patient is connected to monitor and using programmer to interrogate pacer to establish currently programmed parameters.

Description of Intra-Service Work: Patient is connected to a single-lead ECG monitor and free-running strip obtained and analyzed. A magnet is then placed over the pacemaker and magnet strip obtained and analyzed. No programming is indicated.

Description of Post-Service Work: Assessing stability of patient post exercise. Documentation and recording of findings.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93731	Electronic analysis of dual-chamber internal pacemaker system without reprogramming	0.46
99213	Office Visit, established patient, Level III	0.56

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement, and stress)

This code revision now more accurately describes current clinical practice, including exercising the patient and interrogating the pacemaker before and after exercise. As this service does not include reprogramming, the existing value of .46 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 83,000 (Medicare only)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 15 min Low: 5 min High: 60 min

Median Pre-Service Time: 5 min Median Post-Service Time: 5 min

Length of Hospital Stay: 0 Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 36

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS26 CPT Code: 93732 Global Period: XXX

CPT Descriptor: Electronic analysis of dual chamber ~~internal~~ pacemaker system ~~(may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker)~~ (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); with reprogramming

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 68 year old man with a DDDR pacemaker implanted 3 months earlier for sinus node dysfunction and severe chronotropic incompetence returns to your office for reevaluation of programmed settings and complains that he is still fatigued with exercise. Patient is connected to a single-lead ECG monitor and a free-running strip is obtained and analyzed. A magnet is then placed over the pacemaker and additional strips are obtained and analyzed. The following programming sequence is then performed: telemetric information related to sensor profiles, i.e. rate counters, analyzed prior to reprogramming pacemaker, information is printed; programmed VVI and ventricular pacing and sensing thresholds checked, programmed AAI and trial pacing and sensing thresholds checked, isometric exercises performed to assess for myopotentials after reprogramming to DDD mode. Telemetric information obtained and analyzed including battery data and impedance data. Patient is then exercised in some manner and sensor response to exercise is assessed and pacemaker reprogrammed appropriately.

Description of Pre-Service Work: The patient's history assessed as to indications for pacer therapy and symptomology. the monitor and programmer are set up to interrogate the pacer and establish currently programmed parameters.

Description of Intra-Service Work: Vignette above describes in detail the intra-service work.

Description of Post-Service Work: Assessing stability of patient post exercise. Explain to patient any changes in programming and expected pacing rate and/or response to exercise. Documentation and recording of findings.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93732	Electronic analysis of dual-chamber internal pacemaker system with reprogramming	0.86
99242	Office consultation, new/established patient, Level III	1.12

93015	Exercise ECG, complete	0.75
93350	Stress Echo	1.54

AS26

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time, technical skill & physical effort, mental effort and judgement, and stress)

Previous pacing interrogation systems did not recognize rate-adaptive technology. Programming is more complex and physician work intensive. The exercise of the patient before and after interrogation, with subsequent reprogramming of the device requires similar to, but slightly less work effort than a stress echo (code 93350, RVU 1.54). When compared to a single-chamber service which has a recommended value of 0.75 RVUs, this service is appropriately valued at 1.2 RVUs to reflect the additional work involved in reprogramming a more complex device.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 42,500 (Medicare only)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 40 min Low: 15 min High: 1 hr

Median Pre-Service Time: 10 min Median Post-Service Time: 5 min

Length of Hospital Stay: 0 Number & Level of Post-Hospital Visits: 0

Number of Times Provided in Past 12 months (Median): 44

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS27 CPT Code: 93733 Global Period: XXX

CPT Descriptor: Electronic analysis of dual chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker), telephonic analysis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: An 80 year old woman with DDD pacemaker implanted 6 years earlier for AV block calls for routine transtelephonic assessment of permanent pacemaker. After patient is identified and appropriate patient data made available, i.e. previous transmission, D type of generator, date of implant, etc. the patient is asked to transmit a free-running, i.e. non-magnet, ECG. If ECG is of good quality the patient is then asked to transmit a 30 second ECG with magnet placed over pacemaker. At times it is difficult for the patient to remember the necessary sequence and has to repeat the magnet sequence to obtain ECG that is interpretable. Strips are analyzed and the information recorded.

Description of Pre-Service Work: Identify patient, retrieve prior record for comparison. Often with elderly patients necessary to help with transmission by coaching over the phone.

Description of Intra-Service Work: Receiving magnet, non-magnet and ECG strips. Analyze for normalcy and gather all pressure TTM data, i.e., rate, pulse width, compare to expected indicators.

Description of Post-Service Work: Prepare report for patient and/or referring physician. Store data.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93731	Electronic analysis of dual-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); without reprogramming	0.46
93733	Electronic analysis of dual-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); telephone analysis	0.17

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This language represents an editorial change, and therefore, the technical advisory panel recommends that the existing value of .17 be maintained.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? >100,000

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 10 mins Low: 2 mins High: 1 hr

Median Pre-Service Time: 5 mins Median Post-Service Time: 5 mins

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 100

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS28 CPT Code: 93734 Global Period: XXX

CPT Descriptor: Electronic analysis of single chamber ~~internal~~ pacemaker system ~~(may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker);~~ (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); without reprogramming

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 68 year old woman with chronic atrial fibrillation who had previous AV nodal ablation and implantation of a VVIR pacemaker returns for routine pacemaker follow up with no complaints. (Please refer to the above CPT descriptor for delineation of services included.)

Description of Pre-Service Work: History assessed as to indications for pacer therapy and symptomology. Review prior pacing parameters and other pertinent records such as interim transtelephonic assessments.

Description of Intra-Service Work: As outlined in code descriptor. Connect to ECG recording device. Obtain appropriate programmer. Interrogate the device.

Description of Post-Service Work: Stability of patient post-evaluation is assessed, and physician determines subsequent needs as to later reprogramming. Documentation and recording of findings is completed.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93734	Electronic analysis of single-chamber internal pacemaker system; without reprogramming	0.38
99212	Office Visit, established patient, Level II	0.38

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress)

Although this technology allows for advanced analyses, this particular service does not involve reprogramming which constitutes the most complex component of analyses of these devices. Therefore, the existing value of .38 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 152,000 (Medicare only)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 17 min Low: 2 min High: 60 min

Median Pre-Service Time: 5 min Median Post-Service Time: 5 min

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 50

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking Number: AS29 CPT Code: 93735 Global Period: XXX

CPT Descriptor: Electronic analysis of single chamber ~~internal~~ pacemaker system ~~(may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker);~~ (includes evaluation of programmable parameters at rest and during activity where applicable, using electrocardiographic recording and interpretation of recordings at rest and during exercise, analysis of event markers and device response); with reprogramming

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 62 year old man who has chronic atrial fibrillation with complete heart block complains of shortness of breath on exertion. Evaluation has demonstrated that the pacemaker has not responded appropriately to activity. He needs to be evaluated in the pacemaker clinic for the device to be reprogrammed at appropriate rate response settings. (Please refer to the above CPT descriptor for delineation of services included.)

Description of Pre-Service Work: History assessed as indications for pacemaker therapy and symptomology. Review prior pacing parameters and other pertinent records such as interim transtelephonic assessments.

Description of Intra-Service Work: The patient is connected to an ECG recording device and an appropriate programmer. The device is interrogated. Reprogramming of the SSI (VVI or AAI) at a lower rate is performed and the underlying rhythm is assessed. If the underlying rhythm is present, rate and output parameters are reprogrammed to determine pacing threshold. Once accomplished, the rate is returned to an appropriate level and sensitivity thresholds are determined by either reprogramming sensitivity progressively until lost or programming to triggered mode and reprogramming until lost. The sensitivity function is then returned to an appropriate value. If the device is capable of rate adaption, the patient must then be exercised to determine whether rate adaptive parameters are normal.

Description of Post-Service Work: Determine the stability of the patient post-evaluation and determine the subsequent needs for later programming and follow-up. Document and record the findings. Explain to the patient any change in program parameters and expected pacing rate(s) and/or rate response.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93735	Electronic analysis of single-chamber internal pacemaker system with reprogramming	0.51
93734	Electronic analysis of single-chamber internal pacemaker system; without reprogramming	0.38

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation: (Include all applicable elements of work in rationale: time, technical skill & physical effort, mental effort and judgement, and stress)

To assess the value and maximize the therapeutic impact one must assess the responsiveness of the pacemaker at rest and during exercise. The technology has continued to advance in this area, with an increasing number of rate-adaptive devices being implanted, which now allow for more sophisticated analyses of the device and pacemaker reprogramming as required. This service requires a similar work effort to that required for a follow-up inpatient consultation, valued at 0.75 RVUs. Therefore, the coding language revision for this codes warrants an increase in the value to .75 RVUs.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 38,000 (Medicare only)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 25 min Low: 5 min High: 60 min

Median Pre-Service Time: 5 min Median Post-Service Time: 8 min

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 30

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS30 CPT Code: 93736 Global Period: XXX

CPT Descriptor: Electronic analysis of single chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker), telephonic analysis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 77 year old woman with VVIR pacemaker implanted 3 years earlier for atrial fibrillation with slow ventricular response calls for routine transtelephonic assessment of permanent pacemaker. After patient identified and appropriate patient data made available, I>E> previous transmission, d type of generator, date of implant, etc. the patient is asked to transmit free-running, i.e. non-magnet, ECG. If ECG is of good quality the patient is then asked to transmit a 30 second ECG with magnet placed over the pacemaker. At times it is difficult for the patient to remember the necessary sequence and has to repeat the magnet sequence to obtain ECG that is interpretable. Strips analyzed and information recorded.

Description of Pre-Service Work: Obtain the patient's previous records so that comparison can be made to previous pulse width and rate to determine appropriate output on today's transmission.

Description of Intra-Service Work: Obtain magnet and non magnet strips. Must be determined over the phone if these are of good quality so that it is known whether or not the patient needs to repeat the information. It should also be discussed with the patient whether or not they are having any symptoms that are all attributable to the pacemaker.

Description of Post-Service Work: Analyze and record the findings. It also needs to be compared to prior values. A report must then be generated to the patient and/or the physician.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RW</u>
93736	Electronic analysis of single-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); telephone analysis	0.15
93731	Electronic analysis of dual-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); without reprogramming	0.46
93733	Electronic analysis of dual-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); telephone analysis	0.17

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This code did not change. Language change was editorial. Maintain existing value.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally
in a one-year period? 900,000 (Medicare)

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 10 mins Low: 2 mins High: 25 mins

Median Pre-Service Time: 5 mins Median Post-Service Time: 10 mins

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 75

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AS31 CPT Code: 93738 Global Period: XXX

CPT Descriptor: Electronic analysis of cardioverter/defibrillator only (interrogation, evaluation of pulse generator status); with reprogramming

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 51 year old woman with cardioverter defibrillator implanted 6 months ago because of cardiac arrest, with ventricular fibrillation, from which she was resuscitated. Since her last visit she experienced a defibrillator shock while walking her dog. Interrogation of the device confirms a shock and comparison of detection rates shows a change not previously documented. Following interrogation of the device, the tachycardia rate criterion was reprogrammed.

Description of Pre-Service Work: Obtain patient's prior records and especially electronic analysis of the cardioverter defibrillator from the previous check. Discuss with the patient whether or not she has had any symptoms to suggest that the device has discharged since she was last evaluated or if she has had any other symptoms that would be pertinent for an ICD.

Description of Intra-Service Work: The device should be interrogated and determine whether or not any type of therapy has been delivered and also determine appropriateness of charge and battery status.

Description of Post-Service Work: Discuss with the patient the findings. They need to know whether or not shocks have occurred and whether or not they need additional consultation. They also need to know when the next check should be based on the current charge status. The findings should all be documented at that point.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93732	Electronic analysis of dual-chamber internal pacemaker system (may include rate, pulse amplitude and duration, configuration of wave form, and/or testing of sensory function of pacemaker); with reprogramming	0.86
93737	Electronic analysis of cardioverter/defibrillator; without reprogramming	0.45
93738	Electronic analysis of cardioverter/defibrillator; with reprogramming	0.93

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Editorial change only. Maintain existing value.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA: Cardiology

Median Intra-Service Time: 20 mins Low: 5 mins High: 2 hrs

Median Pre-Service Time: 10 mins Median Post-Service Time: 10 mins

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 15

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
WOUNDS OF THE HEART AND GREAT VESSELS - TAB 14

The rank order between 33320, 3332X, and 33322 should be equivalent to the rank order of 33330, 3333X, and 33335, and therefore, the RUC suggests that 33322 [Suture repair of aorta or great vessels; with cardiopulmonary bypass] be reviewed in the five-year refinement process.

The shunt bypass procedures listed below are almost always performed on an emergency basis to treat trauma patients. Code 3333X [Suture repair of aorta or great vessels; with shunt bypass] is more work than 35211 [Repair blood vessel, direct; intrathoracic, with bypass] (RVW = 20.37) due to additional vascular anastomosis. It is recommended that the incremental difference between 33320 and 3332X (3.39) should be consistent with the incremental difference in 33330 and 3333X [Insertion of graft, aorta or great vessels; with shunt bypass].

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
S4	33320	Suture repair of aorta or great vessels; without <u>shunt or cardiopulmonary</u> bypass	090	15.56 (no change)
S5	●3332X	with shunt bypass	090	18.95
S6	33322	with cardiopulmonary bypass	090	18.60 (24.17 - recommended to reflect proper rank order: should be reviewed in the 5 year refinement process)
S7	33330	Insertion of graft, aorta or great vessels; without <u>shunt or cardiopulmonary</u> bypass	090	19.36 (no change)
S8	●3333X	with shunt bypass	090	22.75
S9	33335	with cardiopulmonary bypass	090	27.97 (no change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: S5

Global Period: 090

CPT Descriptor: Suture repair of aorta or great vessels; with shunt bypass

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 22-year-old restrained driver presents at the emergency department with multiple injuries, including a widened mediastinum by chest roentgenogram, following a high-speed head-on automobile accident. Angiography confirms traumatic aortic rupture. Patient is taken to operating room where primary repair of aortic injury is accomplished with the use of a Gott shunt. Postoperatively, the patient is in ICU for three days, requiring ventilator and nutritional support. The patient is discharged 10 days post-injury without neurologic sequelae.

Pre-service work:

Communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; coordinating care with other physicians, if necessary; and obtaining consent from the patient or responsible family member.

Intra-service work:

Positioning, prepping, and draping the patient; insertion of hemodynamic monitoring devices; planning and making an incision in the chest wall; isolating the aorta; insertion of the shunt; opening the hematoma; exposing the injured portion of the aorta; performing repair; removal of the shunt and repairing insertion sites; placement of chest tubes; layered closure of the incision, including skin; and application of sterile dressing.

Post-service work:

Patient stabilization, including complete neurologic examination to rule out paraplegia; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); ICU care (72 hours) with ventilatory and nutritional support management; monitoring and care of the incision; monitoring, care, and removal of tubes; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including: evaluating laboratory reports and roentgenograms.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
15.56	33320	Suture repair of aorta or great vessels; without bypass
20.37	35211	Repair blood vessel, direct; intrathoracic, with bypass
17.31	35216	Repair blood vessel, direct; intrathoracic, without bypass

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure is always performed as an emergency. The intraoperative work of S5 is more difficult than 33320 because the insertion and removal of a shunt is required. The intraoperative work of placement of a shunt (S5) is very similar to placement of bypass cannulae; in fact, this service was most likely coded as 35211 in the past and was most commonly cited as the key reference by the survey participants. Consequently, the consensus committee recommends the survey median RVW of 20.37.

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 240 Low: 80 High: 480

Median Pre-Service Time: 90 Median Post-Service Time: 225

Length of Hospital Stay: 10

Office Visits on Post-Discharge Day(s) : 99213 on days 14, 42

Median Number of Times Provided in Past 12 months: 0 (range: 0-1)

Median Number of Times Provided in Career: 0 (range: 0-12)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: S8

Global Period: 090

CPT Descriptor: Insertion of graft, aorta or great vessels; with shunt bypass

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 22-year-old restrained driver presents at the emergency department with multiple injuries, including a widened mediastinum by chest roentgenogram, following a high-speed head-on automobile accident. Angiography confirms traumatic aortic rupture. Patient is taken to operating room where repair of aortic injury is accomplished with graft interposition and with the use of a Gott shunt. Postoperatively, the patient is in ICU for three days, requiring ventilator and nutritional support. The patient is discharged 10 days post injury without neurologic sequelae.

Pre-service work:

Communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; coordinating care with other physicians, if necessary; and obtaining consent from the patient or responsible family member.

Intra-service work:

Positioning, prepping, and draping the patient; insertion of hemodynamic monitoring devices; planning and making an incision in the chest wall; isolating the aorta; insertion of the shunt; opening the hematoma; exposing the injured portion of the aorta; performing repair by graft; removal of the shunt and repairing insertion sites; placement of chest tubes; layered closure of the incision, including skin; and application of sterile dressing.

Post-service work:

Patient stabilization, including complete neurologic examination to rule out paraplegia; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); ICU care (72 hours) with ventilatory and nutritional support management; monitoring and care of the incision; monitoring, care, and removal of tubes; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including: evaluating laboratory reports and roentgenograms.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
19.36	33330	Insertion of graft, aorta or great vessels; without bypass
27.97	33335	Insertion of graft, aorta or great vessels; with cardiopulmonary bypass
20.37	35211	Repair blood vessel, direct; intrathoracic, with bypass

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The current RVW of 35211 is based on the responses of only three general surgeons in the Harvard Phase III study. The survey sample alone invalidates the resulting RVW. The RVW for 33335, which is based on responses from 10 thoracic/cardiovascular surgeons in the Harvard Phase III study, more appropriately reflects the value for the work of S8. Previously stated, the work required for insertion of a Gott shunt is similar to the work required for bypass cannulae. This age group obviously will come off the pump without any significant problems. The difference, therefore, between S5 and S8 is the additional suture line required for the insertion of the prosthetic graft. To determine the value of this additional suture line, the consensus committee considered the mean differences between 35081 (22.40) vs 35192 (23.70), 35621 (13.38) vs 35654 (17.82); and 35546 (24.44) vs 35551 (25.45), which are pairs of codes that represent services that have the same technical procedure, but add an additional vascular anastomosis. The result of this consideration is that the consensus committee recommends the survey median RVW of 22.75, which is 2.38 units greater than S5.

SURVEY DATA:

Specialty Society(s) General Surgery

Median Intra-Service Time: 240 Low: 120 High: 540

Median Pre-Service Time: 90 Median Post-Service Time: 225

Length of Hospital Stay: 10

Office Visits on Post-Discharge Day(s) : 99213 on days 14, 42

Median Number of Times Provided in Past 12 months: 0 (range: 0-2)

Median Number of Times Provided in Career: 1 (range: 0-24)

1992 NCH Medicare File Frequency Data to Supplement 5/94 RUC Presentation

Tracking No	CPT	Modifier(s)	Allowed Frequency	COMMENTS
S5	35211	No Modifiers	16	← S5 most likely reported as 35211 in the past.
	35211	-82 two surgeons	(2/2)	
	35211	-51 multiple	44	
	35211	TOTAL	81	

I10 / I12	45170	No Modifiers	5,178
	45170	-22 unusual	84
	45170	-22 unusual/-51 multiple	2
	45170	-51 multiple	448
	45170	-52 reduced	49
	45170	-54 surg. care only	12
	45170	-82 two surgeons	(2/2)
	45170	-55 postop/-56 preop only	6
45170	TOTAL	5,779	

Old Descriptors:
 45170 = excision
 45180 = excision / destruction - malignant
 New Descriptors:
 I10 = excision
 I12 = destruction

I10 and I12 were most likely reported using 45170 and 45180, however, the change in the descriptors imply that some percentage of 45180 frequency now would be reported under I10 (i.e., excision taken out of descriptor).

I10 / I12	45180	No Modifiers	2,267
	45180	-22 unusual	31
	45180	-22 unusual/-51 multiple	1
	45180	-51 multiple	130
	45180	-52 reduced	22
	45180	-52 reduced/-51 multiple	1
	45180	-54 surg. care only	3
	45180	-82 two surgeons	1
45180	TOTAL	2,456	

L2 / L3	47710	No Modifiers	118
	47710	-22 unusual	4
	47710	-22 unusual/-51 multiple	1
	47710	-22 unusual/-54 surg care	1
	47710	-51 multiple	34
	47710	-52 reduced/-51 multiple	1
	47710	-52 reduced/-82 two surg	(2/2)
47710	TOTAL	180	

L2 represents a majority of the services previously reported under 47710.

L2 / L3	47780	No Modifiers	1,775
	47780	-22 unusual	54
	47780	-22 unusual/-51 multiple	42
	47780	-22 unusual/-54 surg care	2
	47780	-22 unusual/-54 surg care	2
	47780	-51 multiple	119
	47780	-51 multiple/-54 surg. car	2
	47780	-52 reduced	3
	47780	-52 reduced/-51 multiple	21
	47780	-54 surg. care only	8
	47780	-55 postop mgmt only	1
	47780	-82 two surgeons	(10/2)
	47780	-88 surgical team	1
	47780	TOTAL	1,979

L3 would have been reported using 47710-22 plus 47780-51 for the anastomosis.

**MAY 1994 RUC RECOMMENDATIONS
CORONARY ENDARTERECTOMY - TAB 21**

Code 335XX [Coronary endarterectomy] is similar in work to 33970 [Insertion of intra-aortic balloon assist device through the femoral artery, open approach] and 33971 [Removal of intra-aortic balloon assist device including repair of femoral artery, with or without graft]. However, with the balloon insertion and removal, while the procedure is less complex, there is more post-procedure surgical effort and attention involved. With coronary endarterectomy, the procedure is more difficult and time-consuming, but the effort of the surgeon once the procedure is accomplished is less.

The intensity of this procedure was judged to be at least twice that of a bowel resection and anastomosis, code 4412X. The increased intensity reflects not only the work in the intra-service time, but also the increased morbidity and mortality rates that can result from this add-on procedure.

This service is currently reported using 33570 with a -51 modifier. Therefore, the recommendation of 4.50 represents a substantial decrease from the current RVW of 8.81 (17.62 x 50%).

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
T1	33570	Coronary angioplasty (endarterectomy with or without gas, arterial implantation or anastomosis), with bypass	090	N/A
T2	33575	combined with vascularization (33570, 33575 have been deleted. To report, see 33510-33536 and 335XX)	090	N/A
T3	●335XX	Coronary endarterectomy, open, any method, of left anterior descending, circumflex, or right coronary artery performed in conjunction with coronary artery bypass graft procedure, each vessel (list separately in addition to primary procedure) (Use 335XX only with 33510-33516, 33553-33536)	ZZZ	4.50

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: T3 Global Period: ZZZ

CPT Descriptor: Coronary endarterectomy, open, any method, of left anterior descending, circumflex, or right coronary artery performed in conjunction with coronary artery bypass graft procedure, each vessel (list separately in addition to primary procedure)

(Use 335XX only with 33510-33516, 33553-33536)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey.

Intra-service work: A 61-year-old woman with diabetes had a myocardial infarction and was admitted for coronary artery revascularization. Arteriography had demonstrated multiple occlusions of the left anterior descending (LAD) and left circumflex coronary arteries. She underwent median sternotomy to expose the heart and great vessels. After the institution of cardiopulmonary bypass, the LAD was found to be diffusely atherosclerotic (as demonstrated on coronary angiography), with numerous "skip" lesions, and thus was unsuitable for a single bypass graft. The LAD was dissected out from the surrounding tissues, incised in its mid-portion and the arteriotomy extended superiorly and inferiorly. The atherosclerotic plaque was carefully separated from the vessel wall and deployed circumferentially. As each septal and diagonal vessel was approached, they were separately endarterectomized. At the conclusion of the procedure, the raw vessel surface was cleansed of debris. A large saphenous vein bypass graft was developed and sewn into place. The LAD was closed with a vein patch graft when the endarterectomization was completed. The left circumflex coronary artery was then revascularized with a saphenous vein graft. The patient was taken off cardiopulmonary bypass and sent to the intensive care unit.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RW</u>
33530	Reoperation, coronary artery bypass procedure or valve procedure, more than one month after original operation (list separately in addition to code for primary procedure)	5.93
33970	Insertion of intra-aortic balloon assist device through the femoral artery, open approach	8.14
33971	Removal of intraaortic balloon assist device, including repair of femoral artery, with or without graft	4.08
35301	Thromboendarterectomy, with or without patch graft; carotid, vertebral subclavian, by neck incision	16.13

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The coronary endarterectomy procedure is similar to 33530, in that it is an add-on code with no pre- or postoperative work included in the RVW. The overall work effort involved in coronary endarterectomy is similar to 33970 and 33971. However, with the balloon insertion and removal, while the procedure is less complex, there is more post-procedure surgical effort and attention involved. With coronary endarterectomy, the procedure is more difficult and time-consuming, but the effort of the surgeon once the procedure is accomplished is less. 35301 has similar intraoperative work to coronary endarterectomy. However, its RVW is higher because it includes pre- and postoperative as well as intraoperative work.

FREQUENCY DATA:

1992 Medicare allowed frequency for cardiac and thoracic surgery for the deleted coronary endarterectomy code 33570 (without revascularization) was 880. For deleted code 33575 (with revascularization), it was 545 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: Thoracic Surgery

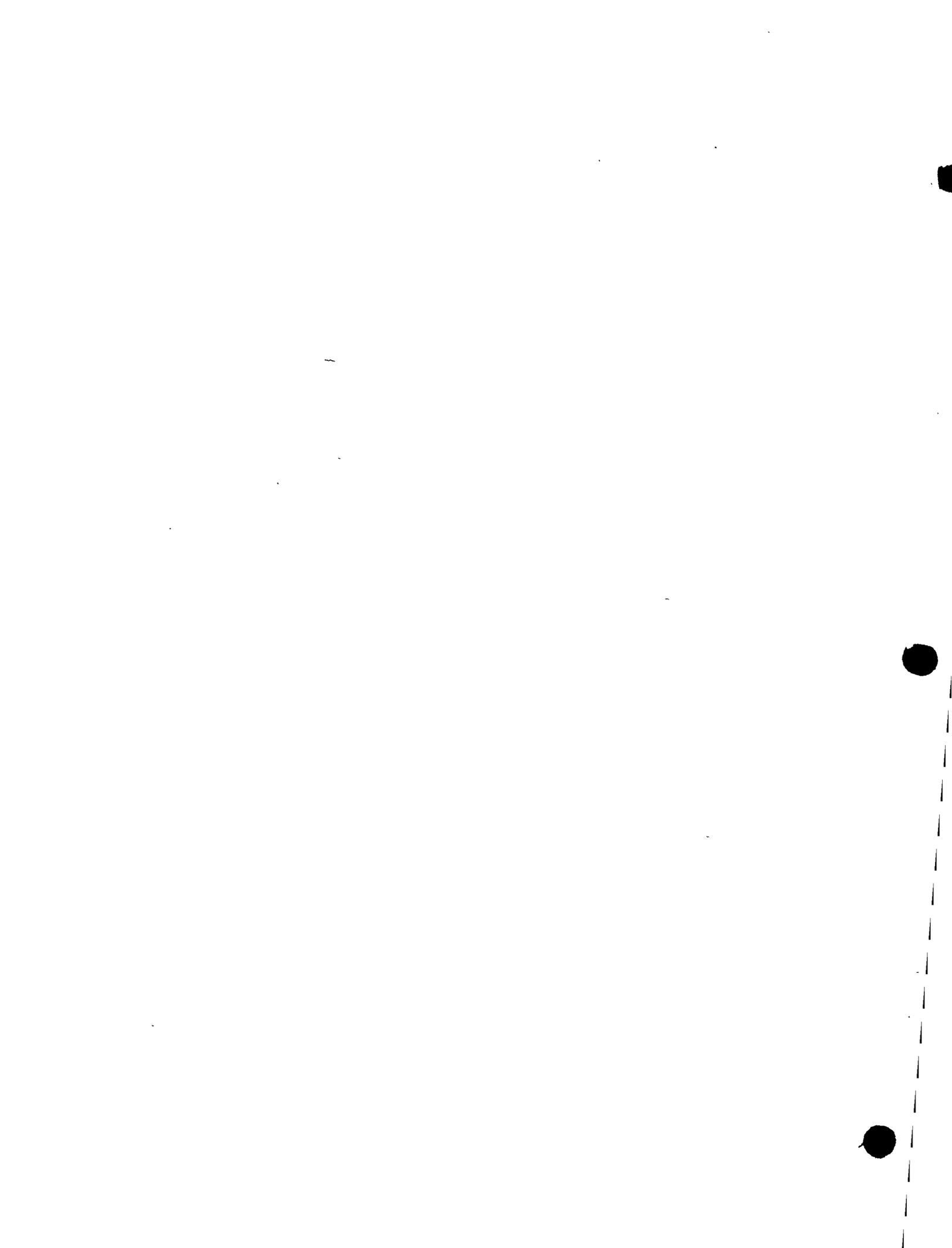
Median Intra-Service Time: 30 min Low: 2 min High: 90 min

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 3

Other Data: _____



AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

VASCULAR SURGERY

As discussed in the cover letter from Doctor Rodkey, the RUC believes that the Harvard proposed values for the carrier-priced and non-covered values are not valid. The RUC Advisor for the Society of Vascular Surgery, however, thought that the vascular surgery procedures were performed too infrequently to survey and agreed with the Harvard values. The RUC agrees with the advisor that the recommendations are appropriate. The attached table places the following vascular surgery procedures within the Society of Vascular Surgery's reference service list:

- 34501 Valvuloplasty, femoral vein
- 34510 Venous valve transposition, any vein donor
- 34520 Cross-over vein graft to venous system
- 34530 Saphenopopliteal vein anastomosis
- 35161 Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for aneurysm, false aneurysm, or occlusive disease, other arteries
- 35162 Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for ruptured aneurysm, other arteries
- 35548 Bypass graft, with vein; aortoiliofemoral, unilateral
- 35549 Repair of graft-enteric fistula
- 35870 Bypass graft, with vein; aortoiliofemoral, bilateral
- 36835 Insertion of Thomas shunt
- 36840 Insertion mandril
- 36845 Anastomosis mandril

Society of Vascular Surgery
List of Reference Services and Recommendations (in Bold)

1/27/94

Page 1

CPT Code	Descriptor	RVW	Global Period*
99214	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: a detailed history; a detailed examination; medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 25 minutes face-to-face with the patient and/or family.	.95	XXX
99254	Initial inpatient consultation for a new or established patient, which requires three key components: a comprehensive history; a comprehensive examination; and medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 80 minutes at the bedside and on the patient's hospital floor or unit.	2.30	XXX
36840	Insertion mandril	4.24	090
37720	Ligation and division and complete stripping of long or short saphenous veins	5.28	090
36845	Anastomosis mandril	5.49	090

CPT Code	Descriptor	RVW	Global Period*
35454	Transluminal balloon angioplasty, open; iliac	6.11	000
36835	Insertion of Thomas shunt	6.70	090
34201	Embolectomy or thrombectomy, with or without catheter; femoropopliteal, aortoiliac artery, by leg incision	8.13	090
34501	Valvuloplasty, femoral vein	9.95	090
27880	Amputation leg, through tibia and fibula;	10.81	090
34510	Venous valve transposition, any vein donor	12.04	090
34520	Cross-over vein graft to venous system	12.63	090
35656	Bypass graft, with other than vein; femoral-popliteal	14.01	090
35556	Bypass graft, with vein; femoral-popliteal	15.64	090
35301	Thromboendarterectomy, with or without patch graft; carotid, vertebral, subclavian, by neck incision	16.13	090
34530	Saphenopopliteal vein anastomosis	16.73	090
35654	Bypass graft, with other than vein; axillary-femoral-femoral	17.82	090
35161	Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for aneurysm, false aneurysm, or occlusive disease, other arteries	17.87	090
35162	Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for ruptured aneurysm, other arteries	18.91	090
35566	Bypass graft, with vein; femoral-anterior tibial, posterior tibial, peroneal artery or other distal vessels	20.43	090

CPT Code	Descriptor	RVW	Global Period*
35548	Bypass graft, with vein; aortoiliofemoral, unilateral	20.62	090
35870	Repair of graft-enteric fistula	20.85	090
35081	Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for aneurysm, false aneurysm, or occlusive disease, abdominal aorta	22.40	090
35549	Bypass graft, with vein; aortoiliofemoral, bilateral	22.44	090
35646	Bypass graft, with other than vein; aortofemoral or bifemoral	24.27	090
35091	Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for aneurysm, false aneurysm, or occlusive disease, abdominal aorta involving visceral vessels (mesenteric, celiac, renal)	28.41	090
35082	Direct repair of aneurysm, false aneurysm, or excision (partial or total) and graft insertion, with or without patch graft; for ruptured aneurysm, abdominal aorta	29.14	090

*A service paid on a global basis includes visits and other services provided in addition to the basic procedure during the day preceding the procedure and for a specified number of days after the procedure is provided. The global period identified above refers to the number of post-service days of care included in the payment for a global surgical package as determined by the Health Care Financing Administration for Medicare payment purposes. There are three categories of global services (090, 010, 000). In addition, three global codes may be used: XXX = Global concept does not apply to this code; YYY = Global period is to be set by the Medicare carrier; and ZZZ = Code is part of another service and falls within the global period for the other service.

CPT five-digit codes, two-digit numeric modifiers, and descriptions only are copyright by the American Medical Association. No payment schedules, fee schedules, relative value units, scales, conversion factors or components thereof are included in CPT. The AMA is not recommending that any specific relative values, fees, payment schedules, or related listings be attached to CPT. Any relative value scales or related listings assigned to CPT codes are not those of the AMA, and the AMA is not recommending use of these relative values.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

TRANSLUMINAL ANGIOPLASTY

There is an established principle in the RBRVS that the work for open balloon angioplasty is equivalent to the work for percutaneous balloon angioplasty. The RUC believes that, to maintain consistency with the rest of the RVS, the value for code 35472 [Transluminal balloon angioplasty, percutaneous; aortic] should be identical to the value for code 35452 [Transluminal balloon angioplasty, open; aortic].

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
35472	Transluminal balloon angioplasty, percutaneous; aortic	000	7.08	6.99

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 35472 Global Period: 000

CPT Descriptor: Transluminal balloon angioplasty, percutaneous; aortic

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: NA

DEPARTMENT OF
CIT 22 1993
PAYMENT SYSTEMS

Description of Pre-Service Work: Review of medical record including laboratory work. Review of previous radiographs and angiograms. Discussion of procedure and complications with patient. Consultation with referring physicians.

Total Time: 45 minutes to 1 hour.

Description of Intra-Service Work: Preparation and draping of patient, administration of intravenous sedation, puncture of vessel and placement of catheter or sheath, obtaining preprocedural localization arteriograms, stenosis catheterization and balloon angioplasty with final follow-up arteriograms. Catheter and sheath removal with puncture site hemostasis obtained.

Total Time: 1 to 2 hours.

Description of Post-Service Work: Discuss results of procedure with patient and family, consult with referring physicians, writing of postoperative orders.

Total Time: 30 minutes.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
35452	Transluminal balloon angioplasty, open; aortic	7.08
35472	Transluminal balloon angioplasty, percutaneous; iliac	6.19
35473	Transluminal balloon angioplasty, percutaneous; femoral popliteal	7.54

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation

(Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress): Aortic angioplasty compares directly in work to other angioplasties. Previous SCVIR surveys (1991) indicated aortic angioplasty to be greater in work than iliac and less than femoral-popliteal. In current Medicare fee schedules, transluminal angioplasty aortic, open (CPT 35452) is valued at 7.08. It is an established and HFCA-recognized principle that work for open angioplasty is the same as work for percutaneous angioplasty; therefore, the value for percutaneous angioplasty of the aorta should be identical to the already accepted value for open angioplasty of the aorta (RVW: 7.08).

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes
 Rarely

Estimate the number of times this service might be provided nationally in a one-year period?
less than 1000

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

FETAL TRANSFUSION

In presenting the recommendation for code 36460 [Transfusion, intrauterine, fetal], the Advisor noted that the procedure is performed rarely and is generally limited to tertiary medical centers. The procedures were much more common in the 1960s and 1970s, but with the advent of Rhogam (anti D immunoglobulin), better neonatal intensive care units, and better antenatal surveillance techniques, the frequency of these procedures has decreased over the last two decades. The RUC's recommendation is based on both the results of the specialty survey and the comparison to key reference service code 49000 [Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)], with an RVW of 9.21. Pre-service work for the transfusion is somewhat greater than pre-service work for the exploratory laparotomy, requiring both maternal and fetal assessment. Time required to perform the intra-service portion of both procedures is similar, but the intrauterine fetal transfusion requires a greater level of technical skill and physical effort and entails more stress than 49000. Post-service work is less for 36460 because there is no global period associated with the procedure. Taking into account the published post-service work percentage of 35% for exploratory laparotomy and the higher level of pre- and intra-service work associated with the transfusion, the RUC considered the survey median of 6.75 appropriate.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
36460	Transfusion, intrauterine, fetal	XXX	6.75	6.66

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 36460

Global Period: XXX

CPT Descriptor: Transfusion, intrauterine, fetal**CLINICAL DESCRIPTION OF SERVICE:****Vignette Used in Survey:**

A 31 year old woman at 28 weeks gestation has Rh isoimmunization. Serial biochemical and sonographic findings indicate the need for an intrauterine fetal transfusion. A percutaneous intravascular (or intraabdominal) transfusion is performed. (Note: This does not include ultrasound guidance which is coded separately.)

Description of Pre-Service Work:

Fetal intrauterine transfusions are performed for the treatment of fetal anemia due to a variety of causes, including Rh and atypical antibody isoimmunization, fetal viral infections, and idiopathic causes. These procedures are most commonly performed between 18 weeks and 34 weeks' gestation.

Pre-service work consists largely of risk assessment, fetal assessment, extensive counseling of the patient, and order writing.

Fetal intrauterine transfusions usually are performed in an operating room, in a labor and delivery unit, or other hospital unit dedicated to this procedure. The pregnant patient is placed in the supine position with lateral uterine displacement. A sonogram is performed as a separate procedure to determine fetal positioning, the placental positioning and vascular access for the proposed transfusion. Blood products have been previously obtained to the specifications indicated by the attending physician. After the complete sonography is performed, the maternal abdomen is prepped and draped in a sterile manner as with any surgical procedure. Maternal anesthesia ranges from a regional anesthetic such as spinal or epidural to maternal sedation with intravenous narcotics and/or barbiturates, and less commonly, general anesthesia. Occasionally, it is necessary to give the fetus a paralyzing agent by percutaneous intramuscular injection. The usual monitoring, as with any surgical procedure, is carried out by an anesthesiologist, anesthetist, or other designated person.

Description of Intra-Service Work:

Under ultrasonic guidance, a heparinized small gauge spinal needle is placed percutaneously through the maternal abdomen and uterine wall into the fetal umbilical vein. The exact placement of this needle is dependent on positioning of the placenta and umbilical cord. Ideally, the needle is placed into the umbilical vein at its insertion into the body of the placenta. On occasion, the umbilical vein can be accessed at the fetal umbilicus or as the vein traverses the fetal liver. After the needle is placed into the umbilical vein, a sample of fetal blood is withdrawn through the needle. This blood is tested to document entry into the fetal vasculature. A fetal hematocrit or hemoglobin is determined in order to calculate the appropriate amount of packed red blood cells to be transfused. With continued sonographic surveillance, packed red blood cells are then transfused into the fetal circulation through the previously placed needle. During the procedure, the fetal heart rate is monitored continuously or intermittently using sonographic surveillance. At the end of the procedure all instruments and needles are removed.

At times it is technically impossible to place a needle percutaneously into the fetal circulation. In these cases it is necessary to perform the transfusion by the intraperitoneal route. Under sonographic guidance, a larger bore needle is placed percutaneously through the maternal abdomen and uterine wall and, subsequently, through the fetal abdominal wall into the fetal peritoneal cavity. The needle is directed sonographically to the area between the fetal umbilicus and the dome of the fetal bladder. The blood products are transfused using syringes or gravity drainage into the peritoneal cavity. The amount of blood transfused is calculated prior to the procedure. During the procedure, the fetal heart rate is monitored continuously or intermittently using sonographic surveillance. With an intraperitoneal transfusion, some physicians advocate placement of radiopaque dye at the beginning and end of the procedure to document that the transfusion has indeed taken place in the peritoneal cavity and not in a fetal viscus. At the end of the procedure all instruments and needles are removed.

The fetal intrauterine transfusion normally requires two operators. The first is responsible for passage of the needle as previously described. The second operator performs the radiologic supervision and interpretation (coded separately) and may assist with needle placement. Often, a third person is needed to actually perform the transfusion as the needle is steadied by the first operator and the sonographic surveillance is performed by the second operator.

Description of Post-Service Work:

Fetal surveillance is continued using sonography or electronic fetal monitoring. Sometimes it is necessary to monitor the patient for a long period of time for evidence of maternal and/or fetal compromise.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
49000	Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)	9.21

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Pre-work for 36460 is somewhat greater than pre-work for 49000, requiring both maternal and fetal assessment. Time required to perform the intra-service portion of both procedures is probably similar, but 36460 requires a greater level of technical skill and physical effort and entails more stress than 49000. Post-service work is clearly less for 36460 because there is no global period associated with the procedure. Taking into account an estimated post-service work percentage of 35.1% for 49000 (see HCFA, Percentage Distributions of Proposed Total Work Components - Pre, Intra, and Post - for Surgical Procedures Surveyed by Harvard University) and the higher level of intra-service work, the survey median of 6.75 seems reasonable.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Not available

Data from the Centers for Disease Control indicate that Rh sensitization, the primary indication for the procedure occurs in about 0.6% of the approximately 4 million births that occur each year. A small subset of this group of about 24,000 pregnancies will require fetal intrauterine transfusion. 1991 BMAD data show no claims submitted for this procedure.

Is this service performed by many physicians across the United States? Yes No

Fetal intrauterine transfusions are generally performed only by maternal fetal medicine specialists in tertiary care centers. These procedures were much more common in the 1960's and 1970's. With the advent of Rhogam (anti D immunoglobulin), better neonatal intensive care units, and better antenatal surveillance techniques, the number of these procedures has decreased over the last two decades.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable

SURVEY DATA:

Median Intra-Service Time: 60 minutes Low: 45 minutes High: 120 minutes

Median Pre-Service Time: 60 minutes Median Post-Service Time: 60 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 4

Other Data: _____

1111



MAY 1994 RUC RECOMMENDATIONS
EXCHANGE OF ARTERIAL CATHETER - TAB 30

The RUC recommendation for exchange of arterial catheter is based on a survey of radiologists and interventional radiologists. CPT code 3720X [Exchange of a previously placed arterial catheter during thrombolytic therapy], is a different and separate procedure from the base procedure 37201 [Transcatheter therapy, infusion for thrombolysis other than coronary]. The RUC concluded that this procedure is a substantive activity that occurs at a different time from the primary procedure, 37201. It is normally done on the next day when the physician determines that a clot is persisting in spite of thrombolysis.

The specialty societies initially recommended a value of 4.08 RVW. The RUC concluded that 3720X, which is performed approximately 15% of the time after the primary procedure 37201, should be valued at 50% of the original work value of 37201 (7.33). The RUC recommendation for 3720X is 3.66 RVW, which is also the median RVW from the specialty survey.

CPT code 759XX [Exchange of a previously placed arterial catheter during thrombolytic therapy with contrast monitoring, radiological supervision and interpretation] is performed in a separate setting under the direct supervision of an interventional radiologist. The same physician also interprets the results of the test. The infusion of contrast for this procedure occurs overnight, so it would be rare for this procedure to occur on the same day with another service. This code represents the physician work only. The recommended value for 759XX is 0.50 RVW.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BF1	●3720X	Exchange of a previously placed arterial catheter during thrombolytic therapy (For radiological supervision and interpretation, see 759XX)	000	3.66
BF2	●759XX	Exchange of a previously placed arterial catheter during thrombolytic therapy with contrast monitoring, radiological supervision and interpretation (For procedure, see 3720X)	XXX	0.50

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS

SUMMARY OF RECOMMENDATION

Tracking Number: BF1 Global Period: 000

CPT Descriptor: Exchange of a previously placed catheter during thrombolytic therapy
(For radiological supervision and interpretation, see 759XX)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 58 year old man is undergoing thrombolytic therapy for a thrombosed left femoral-popliteal graft. Urokinase has been infusing into the proximal portion of the graft for 14 hours, via a catheter placed from the right groin. There has been some clinical improvement. A routine followup angiogram has shown clearing of clot in the graft but there has been embolization of thrombus to the tibial trifurcation. In order to treat the distal occlusion, a guide wire is manipulated into the distal popliteal artery and the infusion catheter is exchanged for a new catheter which has its tip positioned within the distal thrombus. The catheter is secured in the right groin, covered with a sterile dressing, and the infusion is continued.

Description of Pre-Service Work:

Review previous angiograms and chart. Discuss findings with referring physicians and describe progress and procedure with patient.

Description of Intra-Service Work:

Position patient on table, prep groin including removal of all dressings and application of Povidone-iodine solution. Place guidewire through catheter and manipulate guidewire into a distal position. Pull existing catheter over guidewire and place new catheter over guidewire to a new distal position. Manipulate catheter and guidewire into final selective position. Confirm catheter location by injection of contrast material and secure new catheter in place in groin with application of sterile dressing and re-initiation of infusion.

Description of Post-Service Work:

Consult with patient and referring physicians, write procedural note and orders.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
36245	Selective catheter placement, arterial system; each first	5.13

order abdominal, pelvic or lower extremity artery branch,
within a vascular family.

**RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW
RECOMMENDATION** (include all applicable elements of work in rationale: time; technical skill & physical
effort; mental effort and judgement; and stress):

The consensus panel concludes that the work effort represents similar physician work to 36245 in that it involves selective catheter placement, guidewire manipulation, and other activities that are part of 36245. There is no work of initial arterial access; therefore, the RVW is less than the key reference service.

The recommended RVW is the average of each specialty societies' median RVW from their survey.

**IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE
SURVEY RESULTS, PLEASE EXPLAIN WHY: N/A**

SURVEY DATA:

Specialty: Interventional Radiology

Median Intra-Service Time: 30 min. Low: 10 min. High: 100 min.

Median Pre-Service Time: 10 min. Median Post-Service Time: 10 min.

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 20

Other Data: _____

*Please complete the following if more than one specialty society was involved in developing the
recommendation:*

SURVEY DATA:

Specialty: Radiology

Median Intra-Service Time: 30 min. Low: 10 min. High: 80 min.

Median Pre-Service Time: 13 min. Median Post-Service Time: 10 min.

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 15

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Tracking Number: BF2 Global Period: XXX

CPT Descriptor: Exchange of a previously placed catheter during thrombolytic therapy with contrast monitoring, radiological supervision and interpretation (For procedure, see 3720X)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 58 year old man is undergoing thrombolytic therapy for a thrombosed left femoral-popliteal graft. Urokinase has been infusing into the proximal portion of the graft for 14 hours, via a catheter placed from the right groin. There has been some clinical improvement. A routine followup angiogram has shown clearing of clot in the graft but there has been embolization of thrombus to the tibial trifurcation. In order to treat the distal occlusion, a guide wire is manipulated into the distal popliteal artery and the infusion catheter is exchanged for a new catheter which has its tip positioned within the distal thrombus. The catheter is secured in the right groin, covered with a sterile dressing, and the infusion is continued.

Description of Pre-Service Work: N/A

Description of Intra-Service Work:

Supervision of technologists and performance of radiography during the exchange of the arterial catheter; recording of pertinent radiographic data; interpretation of radiographs obtained and dictation of radiographic reports.

Description of Post-Service Work: N/A

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RWW</u>
75962	Transluminal balloon angioplasty, peripheral artery, radiological supervision and interpretation	0.55

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The median surveyed value was 1.02, but the consensus panel concluded that many surveys were overvalued. The recommended reference service is closer in nature to the work of this new service, but the new service has less inherent work than the reference source.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY: N/A

SURVEY DATA:

Specialty: Interventional Radiology

Median Intra-Service Time: 25 min. Low: 12 min. High: 100 min.

Median Pre-Service Time: 10 min. Median Post-Service Time: 10 min.

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 22

Other Data: _____

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Radiology

Median Total Procedure Time: 42.5 min. Low: 5 min. High: 120 min.

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 18

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

UROLOGY

The RUC accepted the specialty's recommendation for code 37788, penile revascularization, which is a treatment for impotence that is infrequently provided. The RUC's review of code 54440 [Plastic operation of penis for injury] and 54670 [Suture or repair of testicular injury] noted that these services, particularly 54440, are very heterogeneous; the nature of the repair depends on the type and severity of the injury. The injuries may result from a crushed pelvis, intercourse, intentional self-mutilation, or unintentional masturbation accidents.

Electroejaculation (code 55870) is a rare procedure that is used for artificial insemination, especially for patients with a spinal cord injury or with multiple sclerosis. The service is provided by a physician. Proctoscopy is required to ensure that there are not lesions over the prostate, and sometimes the procedure is done in the operating room under anesthesia. Complexity of the service is increased when the patient ejaculates into the bladder and the physician must retrieve the specimen using a catheter.

Donor Nephrectomy

In addition to the comparisons to key reference services offered by the specialty societies, the RUC compared the recommendation for code 50320 [Donor nephrectomy, with preparation and maintenance of homograft; from living donor, unilateral] to the pneumonectomy recommendations adopted by the RUC last year. The committee noted that the kidney team prepares the patient, whereas the lung team does not, as well as the complex pre-evaluation of volunteers who do not need the operation for themselves, but who have offered to undergo the procedure for the sake of someone else. The voluntary nature of the procedure places an unusual burden of stress on the physician, who will be concerned about avoiding any unnecessary injury to the donor. A recommendation for code 50300 will be provided after the February RUC meeting.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
37788	Penile revascularization, artery, with or without vein graft	090	23.00	22.70
50300	Donor nephrectomy, with preparation and maintenance of homograft; from cadaver donor, unilateral or bilateral	XXX	No Recommendation at this time	No Recommendation at this time

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
50320	Donor nephrectomy, with preparation and maintenance of homograft; from living donor, unilateral	090	22.66	22.37
54440	Plastic operation of penis for injury	090	12.00	11.84
54670	Suture or repair of testicular injury	090	6.59	6.50
55870	Electroejaculation	000	4.00	3.95

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 37788

Global Period: 090

CPT Descriptor:

Penile revascularization, artery, with or without vein graft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Type 1

55 year old male s/p urinary bypass, ex-smoker with impotence.

Type 2

24 year old male s/p pelvic trauma with arteriographic evidence of pudendal artery disruption.

Description of Pre-Service Work:

Consultation prior to operation. H/P and orders. Scrubbing and /Sh prep as usual.

Description of Intra-Service Work:

Two different surgical procedures are performed. One is an anastomosis between one or more harvested arterial supplies (usually the inferior epigastric artery) to the dorsal artery(s) of the penis and the other is an arterialization of the deep dorsal vein also using the epigastric artery(s) as the graft. Occasionally a vein interposition graft is used.

Description of Post-Service Work:

Routine post-op care, including orders and recovery room care. 3 level 3 and 3 level 2 hospital visits.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
35560	Bypass graft with vein; aortorenal	22.66
51595	Cystectomy, complete, with ureteroileal conduit or sigmoid bladder, including bowel anastomosis; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric and obturator nodes	35.09

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

A major vascular reconstructive procedure which is similar in time and intensity and technical skill to repair of a renal artery. Compared to cystectomy (reference procedure on GU list) the parameters are about 2/3 of the cystectomy.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 200

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

NOT APPLICABLE

SURVEY DATA:

Median Intra-Service Time: 240 min Low: 6 min High: 540 min

Median Pre-Service Time: 60 min Median Post-Service Time: 90 min

Length of Hospital Stay: 4 days Number & Level of Post-Hospital Visits: 4 at level 2

Number of Times Provided in Past 12 months (Median): 0 career: 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 50320 Global Period: 90

CPT Descriptor: Donor nephrectomy, with preparation and maintenance of homograft; from living donor, unilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

The donor is a health-related sibling/parent/child of a patient suffering from chronic renal failure.

Description of Pre-Service Work:

History, physical and prep orders. Scrubbing and positioning and skin prep as usual.

Description of Intra-Service Work:

Through a generous flank/abdominal incision, the kidney to be removed is carefully dissected with particular attention being paid to the renal and ureteral blood supply. A long length of ureter (level of iliac artery) is dissected. The renal artery and vein are dissected to their origins (aorta and vena cava, respectively). After removal, the kidney is perfused and readied for immediate transplantation.

Description of Post-Service Work:

Routine dressing and recovery room care as usual. 5-6 level 2 hospital visits. 2 level 2 office visits.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
50230	Nephrectomy, including radical ureterctomy, any approach	21.06
55845	Prostatectomy, retropubic radical; with bilateral pelvic lymphadenectomy	27.39
35560	Aorta renal bypass	22.66

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Slightly more work than 50230 as careful attention is paid to preserving the normal architecture of the kidney, its vessels and the ureter. Not quite as much work/effort is needed as the radical prostatectomy.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 2400

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: 180 min Low: 120 min High: 180 min

Median Pre-Service Time: 120 min Median Post-Service Time: 100 min

Length of Hospital Stay: 6 days Number & Level of Post-Hospital Visits: 5 level 2

Number of Times Provided in Past 12 months (Median): 1

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 54440 Global Period: 090

CPT Descriptor: Plastic operation of penis for injury

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

The patient has received a traumatic injury to the penis.

Description of Pre-Service Work:

Consultation with patient/family in emergency room concerning the injury. Possible complications include loss of penis, possible skin graft and urinary diversion.

Description of Intra-Service Work:

The variations and severity of the injuries differ and each repair is predicated on the type of injury. Temporary urinary diversion might be necessary (suprapubic cystotomy or perineal urethrostomy). No Case is the Same! The average case can be repaired in 90 minutes. Mutilation injuries are excluded. May involve microsurgical vascular and nerve repair.

Description of Post-Service Work:

Post-op care related to severity of injury. Routine immediate care includes orders and wound dressing. The level and number of post operative visits also related to severity of injury.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
51860	Cystorrhaphy, suture of bladder wound, injury or rupture; simple	11.44
54120	Amputation of penis, partial	9.46
54304	Plastic operation on penis for correction of chordee or for first stage hypospadias repair with or without transplantation of prepuce and/or skin flaps	12.42
54360	Plastic operation on penis to correct angulation	11.67

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Time and complexity of average case is quite similar to 54360 and 54304, both penile procedures. 51860 is on the GU reference list and compares in a similar way.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 250

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: 120 min Low: 60 High: 300

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 4 days Number & Level of Post-Hospital Visits: 3 at level 2

Number of Times Provided in Past 12 months (Median): 1 career: 100

Other Data: _____

Please complete this page if more than one specialty society was involved in developing the recommendation.

Median Intra-Service Time: 120 min Low: 60 min High: 300 min

Median Pre-Service Time: 30 min Median Post-Service Time: 60 min

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 0; range 0-2

Other Data: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 54670 Global Period: 090

CPT Descriptor: Suture or repair of testicular injury

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A traumatic injury to the testicle, usually blunt trauma, but occasionally, may be open in a healthy young male. May be a multiple trauma patient.

Description of Pre-Service Work:

Consultation with patient/family in emergency room concerning the injury and possible effects, i.e. loss of testicle.

Description of Intra-Service Work:

Scrotal exploration is carried out and the viability of the testis is assessed. Necrotic tissue is excised and repair is performed by careful suture of the tunica albuginea. The repaired testis is replaced in the scrotal sac which is closed routinely. May need to coordinate with other surgical specialists.

Description of Post-Service Work:

Routine immediate care including orders and wound dressing. 2 level 2 visits in hospital. But variable if large hematoma is present.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
51860	Cystorrhaphy, suture of bladder wound, injury or rupture; simple	11.44
54520	Orchiectomy, simple	5.05
54640	Orchiopexy, any type with or without hernia repair	6.71

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Similar in time and complexity to the orchiopexy; more work than a simple orchiopexy and about half of the reference procedure repair bladder laceration.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 1000

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: 60 min Low: 30 min High: 180 min

Median Pre-Service Time: 30 min Median Post-Service Time: 42.5 min

Length of Hospital Stay: 2 days Number & Level of Post-Hospital Visits: 2.5 at level 2

Number of Times Provided in Past 12 months (Median): 0, but career 12 average

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 55870 Global Period: 000

CPT Descriptor: Electroejaculation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Male patient with spinal cord injury who is unable to ejaculate and wishes to try artificial insemination.

Description of Pre-Service Work:

Consultation with patient and family. Prepare the electrostimulator for use.

Description of Intra-Service Work:

An electrostimulator is placed in the rectum so that it abuts the prostate. Stimulation is applied and seminal specimens are obtained and prepared for artificial insemination.

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
51726	Complex cystometrogram (eg, calibrated electronic equipment)	1.75
51785	Electromyography studies (EMG) of anal or urethral sphincter, any technique	1.57
52000	Cystourethroscopy (separate procedure)	2.06

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Equipment and calibration similar to electromyographic study, but about twice as much time is required for the test. About twice the time with similar effort to 52000 on the reference list.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____ 350

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

SURVEY DATA:

Median Intra-Service Time: _____ 30 min _____ Low: _____ 15 min _____ High: _____ 60 min _____

Median Pre-Service Time: _____ 15 min _____ Median Post-Service Time: _____ 15 min _____

Length of Hospital Stay: _____ 0 _____ Number & Level of Post-Hospital Visits: _____ 0 _____

Number of Times Provided in Past 12 months (Median): _____ 4 _____

Other Data: _____

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

DENTOALVEOLAR STRUCTURES

This issue was originally discussed by the RUC at its November meeting. The RUC felt that the typical vignettes described in the original survey did not reflect the services and referred the issue back to the specialty societies. The revised recommendations considered at the February RUC meeting were substantially lower than those proposed earlier and are based on a consensus panel of six physicians that also have degrees in dental surgery. As described on the attached summary forms, the consensus panel was able to compare these services with reference services with existing relative values. The RUC thought the only appropriate way to value codes 41872 or 41874 was on a per quadrant basis and has suggested that the specialty society submit a request for the revision to the CPT Editorial Panel. These services are most commonly performed by dentists and are typically covered by dental insurance rather than medical insurance. The American Dental Association has provided the following dental code crosswalks:

CPT 41822 = ADA 7470	CPT 41830 = ADA 7999 by report
CPT 41823 = ADA 4260	CPT 41872 = ADA 4210
CPT 41828 = ADA 7970	CPT 41874 = ADA 7320 without extraction

CPT Code	CPT Descriptor	Global Period	RVW Recommendation (in 1994 RVWs)
41822	Excision of fibrous tuberosities, dentoalveolar structures	XXX (010 - recommended)	2.29
41823	Excision of osseous tuberosities, dentoalveolar structures	XXX (090 - recommended)	3.18
41828	Excision of hyperplastic alveolar mucosa, each sextant or quadrant (specify)	XXX (010 - recommended)	1.27 per quadrant

41830	Alveolectomy, including curettage of osteitis or sequestrectomy	XXX (010 - recommended)	1.13
41872	Gingivoplasty, <u>each quadrant (specify)</u>	XXX (090 - recommended)	2.47 per quadrant
41874	Alveoplasty, <u>each quadrant (specify)</u>	XXX (090 - recommended)	2.97 per quadrant

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41822

Global Period: ~~XXX~~

Recommended Global Period: 010

CPT Descriptor: Excision of fibrous tuberosities, dentoalveolar structures

TYPICAL SERVICE/PATIENT:

An elderly patient requires excision of excess fibrous tissue of the maxillary tuberosity for a new upper denture.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.29	40812	Excision of lesion of mucosa and submucosa, vestibule of mouth; with simple repair

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The time, skill, and effort of 41822 is very similar to 40812.

[Note: The recommended global period is consistent with the global period of the key reference service.]

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41823

Global Period: ~~XXX~~

Recommended Global Period: 090

CPT Descriptor: Excision of osseous tuberosities, dentoalveolar structures

TYPICAL SERVICE/PATIENT:

An elderly patient presents with bilateral lingual bony tuberosities and requires excision of tissue and bone in order to be fitted for a mandibular denture.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.03	21040	Excision of benign cyst or tumor of mandible; simple
4.32	21032	Excision of maxillary torus palatinus

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The recommended RVW of 3.18 is an average of 21040 and 21032. The excision of osseous tuberosities requires more time, skill, and effort than 21040, but less than 21032.

[Note: The recommended global period is consistent with the global period of the key reference services.]

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41828

Global Period: ~~XXX~~

Recommended Global Period: 010

CPT Descriptor: Excision of hyperplastic alveolar mucosa, each sextant or quadrant (specify)

TYPICAL SERVICE/PATIENT:

A patient, who presents for fixed restoration (eg, crown or bridge), requires excision of excess gingiva to expose more tooth root.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
1.27	40810	Excision of lesion of mucosa and submucosa, vestibule of mouth; without repair
1.24	40820	Destruction of lesion or scar of vestibule of mouth by physical methods (eg, laser, thermal, cryo, chemical)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The time, skill, and effort of 41828 is very similar to 40810 or 40820. The recommended RVW is 1.27 per quadrant.

[Note: The recommended global period is consistent with the global period of the key reference services.]

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41830

Global Period: ~~XXX~~

Recommended Global Period: 010

CPT Descriptor: Alveolectomy, including curettage of osteitis or sequestrectomy

TYPICAL SERVICE/PATIENT:

A patient, who presents with local osteitis after removal of a 3rd molar, requires scraping of the alveolar bone and debridement of the adjacent soft tissue.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
1.13	11042	Debridement; skin, and subcutaneous tissue

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The time, skill, and effort of 41830 is very similar to 11042.

[Note: The recommended global period is consistent with the global period of the key reference service.]

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41872

Global Period: ~~XXX~~

Recommended Global Period: 090

CPT Descriptor: Gingivoplasty

Recommended Editorial Change to Descriptor: Gingivoplasty (each quadrant, specify)

TYPICAL SERVICE/PATIENT:

A middle aged patient with periodontal disease requires a gingival flap transfer to cover an exposed tooth root.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.66	41520	Frenoplasty (surgical revision of frenum, eg, with Z-plasty)
2.29	40819	Excision of frenum, labial or buccal (frenumectomy, frenulectomy, frenectomy)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The recommended RVW of 2.47 per quadrant is an average of 41520 and 40819. Gingival revision requires more time, skill, and effort than 40819, but less than 41520.

[Note: The recommended global period is consistent with the global period of the key reference services.]

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 41874

Global Period: ~~XXX~~

Recommended Global Period: 090

CPT Descriptor: Alveoplasty

Recommended Editorial Change to Descriptor: Alveoplasty (each quadrant, specify)

TYPICAL SERVICE/PATIENT:

A 60-year-old edentulous patient with no previous history of wearing dentures, requires alveolar bony contouring of the alveolar ridge.

KEY REFERENCE SERVICE(S) (1994 RVW DATA):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
2.03	21040	Excision of benign cyst or tumor of mandible; simple
4.32	21032	Excision of maxillary torus palatinus
3.18	41823	Excision of osseous tuberosities, dentoalveolar structures

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The recommended RVW of 2.97 **per quadrant** is slightly lower than the average of 21040 and 21032. Alveolar revision, as described under "typical service/patient," requires slightly less time, skill, and effort than 41823 (which had a recommended RVW of 3.18 and was based on the time, skill, and effort of 21040 and 21032).

[Note: The recommended global period is consistent with the global period of the key reference services.]

FEBRUARY 1994 RUC RECOMMENDATIONS
ESOPHAGEAL SURGERY - TAB 20

The RUC recommendations for the following esophageal surgery codes are based on the survey median of 45 general surgeons and thoracic surgeons. These services have been performed since the 1950s, however, they were previously reported as fragmented services. The coding revisions for CPT 1995 will bundle the procedures. In evaluating these codes, the RUC carefully considered the crosswalks from the 1994 codes to the new and revised codes for 1995. The relative value recommendations are estimated to be work neutral. Frequency estimates for each code and information on how the services would previously have been reported are provided on the attached recommendation forms.

431XB [Total or near total esophagectomy, without thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty (transhiatal), 27.50 RVW recommended] is the same work as CPT code 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy], which has an RVW of 27.50. CPT code 43119 was revised to better reflect the service that the physician is performing. The RUC noted that 431XB is almost always performed with a pyloroplasty, even though the CPT descriptor for the code reads "with or without pyloroplasty".

The service described by 431XC [Total or near total esophagectomy, without thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 33.00 RVW] is the same physician work as a combination of three CPT codes: 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy]; 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure)]; and 44140 [Colectomy, partial; with anastomosis, using the -51 modifier]. The total amount of physician work of these three services is reflected in the 33.00 RVW for 431XC.

⁴³¹² 431XE [Total or near total esophagectomy, with thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty, 30.00 RVW] and ⁴³¹¹ 431XF [Total or near total esophagectomy, with thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 34.00 RVW] both require the physician to perform a thoracotomy in addition to a laparotomy, which requires additional work. 431XE is the same physician work as a combination of CPT codes 32100 [Thoracotomy, major; with exploration and biopsy, 10.18 RVW] and 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 PVW]. 431XF requires the same physician work as the reference services: 43119 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 RVW], 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW]; and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW]. Although the physician work for 431XC is similar to 431XF, 431XF includes a thoracotomy.

431XH [Partial esophagectomy, cervical, with free intestinal graft, including microvascular anastomosis, obtaining the graft and intestinal reconstruction, 30.00 RVW] describes a partial esophagectomy. The physician work for this service includes the placement of a prejejunal transplant into the neck with anastomosis and microvascular transfer. There were no codes in CPT to adequately describe this service,

431XH [Partial esophagectomy, cervical, with free intestinal graft, including microvascular anastomosis, obtaining the graft and intestinal reconstruction, 30.00 RVW] describes a partial esophagectomy. The physician work for this service includes the placement of a prejejunal transplant into the neck with anastomosis and microvascular transfer. There were no codes in CPT to adequately describe this service, therefore this procedure was probably reported as an unlisted procedure code. The physician work involved in 431XH is similar to the combination of codes: 15755 [Free flap (microvascular transfer), 28.65 RVW]; 43100 [Excision of a local lesion, esophagus, with primary repair; cervical approach, 8.56 RVW]; and 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW]. The RUC noted that this is a rare procedure that is performed on less than 250 Medicare patients per year. The RUC also noted that 431XH is usually performed with two surgeons, and the code would be reported with the -62 modifier.

431XI [Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with thoracic esophagogastrectomy, with or without pyloroplasty (Ivor Lewis), 28.79 RVW] and 431XJ [Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 32.00 RVW] describe a partial esophagectomy performed at the distal 2/3 portion, via thoracotomy and laparotomy. The physician work involved in 431XI is similar in nature to CPT code 43110 [Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty, 28.79 RVW], therefore the recommended RVW is the same. 431XJ includes a bowel reconstruction, colon interposition and anastomosis. 431XJ is considered a combination of 43110 and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XL [Partial esophagectomy, distal two-thirds, with thoracotomy only, with or without proximal gastrectomy, with thoracic esophagogastrectomy, with or without pyloroplasty, 28.00 RVW] is also similar to code 43110, but without the abdominal incision. Therefore, the RUC recommended a slightly lower RVW of 28.00. 431XM [Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with esophagogastrectomy, with or without pyloroplasty, 28.00 RVW], although similar to CPT code 43120 [Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW], is considered more difficult than 43120 because the physician must perform a thoracoabdominal incision. 431XN [Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 32.00 RVW] is the same procedure as 431XM with additional physician work required for the reconstruction of the bowel, colon interposition, and anastomosis. The physician work involved in 431XN is similar to a combination of CPT codes 43120 [Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW] and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XP [Total or partial esophagectomy, without reconstruction (any approach), with cervical esophagostomy, 25.00 RVW], involves the removal of the esophagus without reconstruction. 431XP is the same work as a combination of CPT codes 43119-52 [Total esophagectomy with gastropharyngostomy, without thoracotomy, 27.50 RVW modified by -52] and 43352 [Esophagostomy, fistulization of esophagus, external; cervical approach, 11.04 RVW].

Codes 431XQ [Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with stomach, with or without pyloroplasty, 26.35 RVW] and 431XR [Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es), 30.00 RVW], describe gastrointestinal reconstruction for previous esophagectomy. 431XQ describes this reconstruction in conjunction with the stomach; 431XR describes the reconstruction in conjunction with the colon. The RUC noted that these procedures are done without performing a thoracotomy. Code 431XQ would previously have been reported using code 43120 [Esophagogastrctomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty, 26.35 RVW] with modifier-22, and the physician work is the same as 43120. The physician work of 431XR is based on a combination of CPT codes 43120, 44130 [Enteroenterostomy, anastomosis of intestine; (separate procedure), 11.21 RVW] and 44140 [Colectomy, partial; with anastomosis, 17.27 RVW].

431XU describes the ligation or stapling at gastroesophageal junction for a pre-existing esophageal perforation [15.00 RVW]. This procedure can be performed via laparotomy or thoracotomy. The physician work for 431XU is similar to CPT code 43331 [Esophagomyotomy (Heller type), with or without hiatal hernia repair]; thoracic approach, 14.89 RVW].

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommenda- tion (in 1994 RVWs)
ESOPHAGUS Incision (For esophageal intubation with laparotomy, see 43510)				
F1	43100	Excision of lesal lesion, esophagus, with primary repair; cervical approach	090	8.56 (no change)
F2	43101	thoracic <u>or abdominal</u> approach	090	15.28 (no change)
F3	43105	Wide excision of malignant lesion of cervical esophagus, with or without laryngectomy;	090	N/A
F4	43106	with radical neck dissection (Wookey type procedure) (43105, 43106 have been deleted. To report, see 431XH, 431XP, 31360, and 31365)	090	N/A

F5	43110	Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty (43110 has been deleted. To report, see 431XB-431XF)	090	N/A
F6	43111	with second-stage pyloroplasty (43111 has been deleted. To report, see 431XB, 431XP)	090	N/A
F7	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy (43119 has been deleted. To report, see 431XB)	090	N/A
F8	●431XB	Total or near total esophagectomy, without thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty (transhiatal)	090	27.50
F9	●431XC	with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)	090	33.00
F10	●431XE	Total or near total esophagectomy, with thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty	090	30.00
F11	●431XF	with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)	090	34.00
F12	43115	Esophagectomy (at upper two-thirds level) with segment replacement, one or two stages (43115 has been deleted. To report, see 431XH-431XJ)	090	N/A
F13	●431XH	Partial esophagectomy, cervical, with free intestinal graft, including microvascular anastomosis, obtaining the graft and intestinal reconstruction	090	30.00
F14	●431XI	Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with thoracic esophagogastrostomy, with or without pyloroplasty (Ivor Lewis)	090	28.79
F15	●431XJ	with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)	090	32.00

F16	43120	Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal, with or without pyloroplasty (43120 has been deleted. To report, see 431XN)	090	N/A
F17	•431XL	Partial esophagectomy, distal two-thirds, with thoracotomy only, with or without proximal gastrectomy, with thoracic esophagogastrostomy, with or without pyloroplasty	090	28.00
F18	•431XM	Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with esophagogastrostomy, with or without pyloroplasty	090	28.00
F19	•431XN	with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)	090	32.00
F20	•431XP	Total or partial esophagectomy, without reconstruction (any approach), with cervical esophagostomy	090	25.00
F21	•431XQ	Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with stomach, with or without pyloroplasty	090	26.35
F22	•431XR	with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)	090	30.00
OTHER PROCEDURES				
F23	•431XU	Ligation or stapling at gastroesophageal junction for pre-existing esophageal perforation	090	15.00

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F8 Global Period: 090

CPT Descriptor: Total or near total esophagectomy, without thoracotomy; with pharyngogastrostomy or cervical esophagogastrostomy, with or without pyloroplasty (transhiatal)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 60-year-old man presents with one month history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion in the distal esophagus. Esophagoscopy demonstrates adenocarcinoma. The surgeon performs reevaluation of the patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At laparotomy, the distal esophagus and stomach are mobilized. Through a cervical excision, the entire esophagus is resected. Reconstruction is with stomach through the esophageal bed. Surgical maneuvers include incision in abdomen and neck, transposition of the stomach into neck, esophagogastrostomy, pyloromyotomy. Chest tubes are placed and the neck is drained. Postoperatively, the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Chest tubes are removed on day three. Oral feeding is resumed on day six. Neck drains are removed on day seven and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; incise the neck and abdomen; mobilize the distal esophagus and stomach; resect the esophagus; transpose the stomach into the neck; establish an anastomosis between the esophagus or pharynx and the stomach; divide the pyloric muscle, if necessary; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
27.50	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus committee believes F8 represents a better descriptor than 43119, which will be deleted in the 1995 CPT manual, and recommends an RVW of 27.50, which is less than the survey median RVW of 28.79.

FREQUENCY INFORMATION:

It is estimated that F8 represents 88-90% of the previously reported cases for 43119
1992 Medicare Part B allowed frequency by all physician specialties for code 43119 was 339.

SURVEY DATA:

Specialty: Thoracic Surgery and General Surgery

Median Intra-Service Time: 300 min Low: 200 min High: 480 min

Median Pre-Service Time: 90 min Median Post-Service Time: 255 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (2); 99212 (1)

Number of Times Provided in Past 12 months (Median): 5 (range 0-60)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F9 Global Period: 090

CPT Descriptor: Total or near total esophagectomy, without thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation and anastomosis(es)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 60-year old man with prior subtotal gastrectomy presents with one month history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion in the distal esophagus. Esophagoscopy demonstrates adenocarcinoma. Prior to operation surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtaining informed consent; and rediscussion of procedure. At laparotomy, the distal esophagus is mobilized. Through a cervical incision, the entire esophagus is resected. Intestinal continuity is re-established with colon interposition through the esophageal bed. Surgical maneuvers include incision in abdomen and neck, resection of cancer, isolation of colon transplant, transposition of colon into neck, esophagocolostomy, gastrocolostomy, and colocolostomy. Chest tubes are placed and the neck is drained. Postoperatively, the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication is made with patient and family. Chest tubes are removed on day three. Oral feeding is resumed on day six. Neck drains are removed on day seven and the patient is dismissed on day eight. Office visits occur during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; incise the neck and abdomen; mobilize the distal esophagus; resect the esophagus; create an esophagocolostomy, gastrocolostomy, and colocolostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
27.50	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy
11.21	44130	Enteroenterostomy, anastomosis of intestine (separate procedure)
17.27	44140	Colectomy, partial; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F9 is equal to the work of 43119-52 + 44140 + 44130 [0.9(27.50) + 0.5(17.27) + 0.25(11.25) = 36.19]. Although the survey median RVW of 33.00 does not reflect the additional work of colectomy and enteroenterostomy, the consensus committee recommends the survey median RVW of 33.00.

FREQUENCY INFORMATION

It is estimated that F9 represents less than 5% of the previously reported cases for 43119. 1992 Medicare allowed frequency by all physician specialties for code 43119 was 339 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 360 min Low: 200 min High: 600 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-30)

Estimated Frequency: Medicare Part B, 1992 NCH File - 339.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F10 Global Period: 090

CPT Descriptor: Total or near total esophagectomy, with thoracotomy; with pharyngogastrostomy or cervical esophagogastronomy, with or without pyloroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year-old woman presents with a six week history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion in the upper thoracic esophagus posterior to the mid trachea. Esophagoscopy demonstrates adenocarcinoma. Prior to operation surgeon performs reevaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At thoracotomy, the cancer is separated from the trachea and the intrathoracic esophagus is mobilized. The stomach is then mobilized through a laparotomy. Finally, the entire esophagus is excised through a cervical incision. Reconstruction is with stomach through the esophageal bed. Maneuvers include transposition of stomach into neck, esophagogastronomy, pyloromyotomy. Chest tubes are placed and the neck is drained. Postoperatively, the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracotomy drainage. Wound checks and dressing changes are done to assure absence of hematoma and drainage. Communication occurs with patient and family. Chest tubes removed on day three. Oral feeding is resumed on day six. Neck drains are removed on day seven and the patient is dismissed on day eight. Office visits are conducted during follow up

Pre-service Work: Hospital admission work-up; review roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracotomy and separate the lesion from the trachea; mobilize the intrathoracic esophagus; perform a laparotomy and neck incision and mobilize the stomach; resect the esophagus; transpose the stomach into the neck; establish an anastomosis between the esophagus or pharynx and the stomach; divide the pyloric muscle, if necessary; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drains and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
10.18	32100	Thoracotomy, major; with exploration and biopsy
27.50	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F10 is equal to the work of 43119 + a thoracotomy [$27.50 + 0.5(10.18) = 32.59$]. Although the combined survey median RVW of 30.00 does not reflect the additional work of a thoracotomy, the consensus committee recommends the survey median of 30.00.

FREQUENCY INFORMATION

It is estimated that F10 represents less than 5% of the previously reported cases for 43119. 1992 Medicare allowed frequency by all physician specialties for code 43119 was 339 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 330 min Low: 30 min High: 540 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 1 (range 0-30)

Estimated Frequency: Medicare Part B, NCH Files, 1992 - 339.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F11 Global Period: 090

CPT Descriptor: Total or near total esophagectomy, with thoracotomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year old women with prior subtotal gastrectomy presents with a six week history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion in the upper thoracic esophagus posterior to the mid trachea. Esophagoscopy demonstrates adenocarcinoma. Prior to operation, surgeon performs reevaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At thoracotomy, the cancer is separated from the trachea and the intrathoracic esophagus is mobilized. The gastroesophageal junction is then mobilized through a laparotomy. Finally, the entire esophagus is excised through a cervical incision. Intestinal continuity is re-established with colon interposition through the esophageal bed. Surgical maneuvers include Thoracotomy to mobilize cancer from trachea, laparotomy and neck incision to resect cancer and to isolate colon transplant, transposition of colon into neck; esophagocolostomy, gastrocolostomy, colocolostomy. Chest tubes are placed and the neck is drained. Following operation the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes are done to assure absence of hematoma and drainage. Communication with patient and family occurs. Chest tubes are removed on day three. Oral feeding is resumed on day six. Neck drains are removed on day seven and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracotomy and separate the lesion from the trachea; mobilize the intrathoracic esophagus; perform a laparotomy and neck incision and mobilize the gastroesophageal junction; resect the esophagus; complete an esophagocolostomy, gastrocolostomy, and colocolostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
27.50	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy
11.21	44130	Enteroenterostomy, anastomosis of intestine (separate procedure)
17.27	44140	Colectomy, partial; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F11 is equal to the work of 43119-52 + 44140 + 44130 $[0.9(27.50) + 0.5(17.27) + 0.25(11.25) = 36.19$.
The consensus committee recommends the survey median of 34.00.

FREQUENCY INFORMATION

It is estimated that F11 represents less than 0.1% of the previously reported cases for 43119. 1992 Medicare allowed frequency by all physician specialties for code 43119 was 339 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 360 min Low: 220 min High: 630 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (2); 99213 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-5)

Estimated Frequency: Medicare Part B, 1992 NCH file - 339.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F13 Global Period: 090

CPT Descriptor: Partial esophagectomy, cervical, with free intestinal graft; including microvascular anastomosis, obtaining the graft and intestinal reconstruction

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25-year-old man presents with a 6 year history of progressive cervical stricture now unresponsive to esophageal dilatation. Preoperatively, surgeon performs reevaluation of patient; review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. Through a cervical incision, the stricture is excised. A free segment of jejunum is obtained via laparotomy. Following implantation of the jejunal artery and vein in the neck, the jejunum is interposed between the cricopharyngeus muscle and upper thoracic esophagus. Neck drains are placed. Surgical maneuvers include cervical incision to resect proximal esophagus, laparotomy to isolate free segment of jejunum; jejunojejunostomy, implantation of jejunal artery and vein into branches of subclavian artery and vein; esophagojejunostomy, and jejunoesophagostomy. Postoperatively, surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics and fluid balance. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication is made with patient and family. Oral feeding is resumed on day six. Neck drains are removed on day seven and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a cervical incision; resect proximal esophageal stricture; perform a laparotomy and harvest a free segment of jejunum; microsurgically implant jejunal artery and vein into branches of subclavian artery and vein; interpose jejunum graft between the cricopharyngeus muscle and upper thoracic esophagus; complete an esophagojejunostomy and a jejunoesophagostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
28.65	15755	Free flap (microvascular transfer)
8.56	43100	Excision of local lesion, esophagus, with primary repair; cervical approach
11.21	44130	Enteroenterostomy, anastomosis of intestine (separate procedure)

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F13 is equal to the work of 15755 + 44130 + 43100 [28.65 + 0.5 (11.21) + 0.25 (8.56) = 36.40. Although the combined median survey RVW of 30.00 does not reflect the additional work of local excision of the esophagus and enteroenterostomy, the consensus committee recommends the survey median of 30.00.

FREQUENCY INFORMATION

F13 is rarely performed. Total number of Medicare patients per year is estimated to be less than 250.

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 300 min Low: 150 min High: 960 min

Median Pre-Service Time: 90 min Median Post-Service Time: 210 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-5)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F14 Global Period: 090

CPT Descriptor: Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with thoracic esophagogastronomy, with or without pyloroplasty (Ivor Lewis)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 65-year-old woman presents with one month history of progressive dysphagia. Esophagogram demonstrates constrictive lesion of the distal esophagus. Esophagoscopy confirms adenocarcinoma. Preoperatively surgeon conducts reevaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At laparotomy, the distal esophagus and stomach are mobilized. Through a separate thoracotomy the distal esophagus is resected. Esophageal continuity is established by transposition of the stomach into the thorax. Chest tubes are placed. Surgical maneuvers include laparotomy to mobilize distal esophagus and stomach, pyloromyotomy, right thoracotomy to resect cancer and transpose stomach into chest; esophagogastronomy. Postoperatively surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Chest tube is removed on day three. Oral feeding is resumed on day six and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a laparotomy and mobilize the distal esophagus and stomach; perform a thoracotomy and resect the distal esophagus; excise proximal stomach, if necessary; complete an esophagogastronomy; divide the pyloric muscle, if necessary; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
28.79	43110	Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus committee believes F14 is the same as 43110 and recommends that the RVW remain 28.79.

FREQUENCY INFORMATION

It is estimated that F14 represents more than 95% of the previously reported cases for 43110. 1992 Medicare allowed frequency by all physician specialties for code 43110 was 693 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 300 min Low: 120 min High: 480 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 3 (range 0-50)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F15 Global Period: 090

CPT Descriptor: Partial esophagectomy, distal two-thirds, with thoracotomy and separate abdominal incision, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis(es)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 65-year old woman with prior subtotal gastrectomy presents with one month history of progressive dysphagia. Esophagogram demonstrates constrictive distal esophageal lesion. Esophagoscopy confirms adenocarcinoma. Preoperatively, surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent, rediscusses procedure. At laparotomy, the distal esophagus is mobilized and divided at the gastroesophageal junction. The colon is now mobilized and anastomosed to the stomach. Through separate thoracotomy the distal esophagus is resected. Esophageal continuity is reestablished by colon interposition. Chest tubes are placed. Surgical maneuvers include laparotomy to mobilize distal esophagus and gastroesophageal junction, to perform pyloromyotomy, to isolate colon and to anastomose colon to stomach; gastrocolostomy and colocolostomy; right thoracotomy to resect cancer and to transpose stomach into chest; esophagocolostomy. Postoperatively, surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance, and chest thoracostomy drainage. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Chest tube is removed on day three. Oral feeding is resumed on day six and the patient is dismissed on day five. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a laparotomy; mobilize the distal esophagus and divide it at the gastroesophageal junction; create a gastrocolostomy and colocolostomy; perform a thoracotomy and resect the distal esophagus; create an esophagocolostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
28.79	43110	Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty
17.27	44140	Colectomy, partial; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F15 is equal to the work of 43110-52 + 44140 $[0.9(28.79) + 0.5(17.27) = 34.55]$. Although the median survey RVW of 32.00 does not reflect the additional work of colectomy, the consensus committee recommends the median RVW of 32.00.

FREQUENCY INFORMATION

It is estimated that F15 represents less than 5% of the previously reported cases for 43110. 1992 Medicare allowed frequency by all physician specialties for code 43110 was 693 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 360 min Low: 210 min High: 510 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-3)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F17 Global Period: 090

CPT Descriptor: Partial esophagectomy, distal two-thirds, with thoracotomy only, with or without proximal-gastrectomy, with thoracic esophagogastrostomy, with or without pyloroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 55-year old man presents with one month history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion of the gastroesophageal junction. Esophagoscopy confirms adenocarcinoma. Preoperatively surgeon performs re-evaluation of patient; review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At thoracotomy, the distal esophagus and proximal stomach are mobilized and the lesion is resected. Intestinal continuity is re-established by transposing the stomach into the chest. Chest tubes are placed. Postoperatively, the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes to assure absence of hematoma and drainage. Communication with patient and family. Chest tube is removed on day three. Oral feeding is resumed on day six and the patient is dismissed on day five. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracotomy and mobilize the distal esophagus and proximal stomach; resect the esophagus, as needed; transpose stomach into thorax, excising proximal stomach, if necessary, and complete the esophagogastrostomy; divide the pyloric muscle, if necessary; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
28.79	43110	Esophagectomy (at upper two-thirds level) and gastric anastomosis with vagotomy; with or without pyloroplasty

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

F17 is the same as 43110 without the abdominal incision. The consensus committee recommends the survey median RVW of 28.00.

FREQUENCY INFORMATION

It is estimated that F17 represents 1-2% of the previously reported cases for 43110. 1992 Medicare allowed frequency by all physician specialties for code 43110 was 693 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 240 Low: 170 min High: 390 min

Median Pre-Service Time: 90 min Median Post-Service Time: 200 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 99214 (1), 99213 (1), 99211 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-15)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F18 Global Period: 090

CPT Descriptor: Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with esophagogastrostomy, with or without pyloroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 55-year old man presents with one month history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion of the gastroesophageal junction. Esophagoscopy confirms adenocarcinoma. Preoperatively, the surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. Through a thoracoabdominal (or abdominal) incision, the distal esophagus and proximal stomach are mobilized and the lesion is resected. A pyloromyotomy is done. Intestinal continuity is reestablished by anastomosing the stomach to the esophagus. Chest tubes are placed if the thorax is entered. Intestinal continuity is reestablished with esophagogastrostomy. After operation the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes to assure absence of hematoma and drainage. Communication with patient and family. Chest tube is removed on day three. Oral feeding is resumed on day six and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracoabdominal or abdominal incision and mobilize the distal esophagus and stomach; resect the esophagus, as needed; anastomose stomach to the esophagus, excising proximal stomach, if necessary, and complete the esophagogastrostomy; divide the pyloric muscle, if necessary; place drains and chest tube, if necessary; close the wound with a layered closure; and apply sterile a dressing.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wound to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
26.35	43120	Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal with or without pyloroplasty

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

F18 is more difficult than 43120 because the thoracoabdominal incision markedly increases the morbidity and complication, and, therefore, intensifies the postoperative management work. This usually requires prolonged assisted ventilation and ICU stay. The consensus committee recommends rounding off the combined survey median to 28.00, which reflects the STS survey median RVW.

FREQUENCY INFORMATION

It is estimated that F18 represents 2-3% of the previously reported cases for 43120. 1992 Medicare allowed frequency by all physician specialties for code 43120 was 2033 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 270 min Low: 150 min High: 560 min

Median Pre-Service Time: 90 min Median Post-Service Time: 210 min

Length of Hospital Stay: 9 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-6)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F19 Global Period: 090

CPT Descriptor: Partial esophagectomy, thoracoabdominal or abdominal approach, with or without proximal gastrectomy; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 55-year old man with prior subtotal gastrectomy presents with one month history of progressive dysphagia. Esophagogram demonstrates a constrictive lesion of the distal esophagus. Esophagoscopy confirms adenocarcinoma. Preoperatively, surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. Through a thoracoabdominal incision where both the thorax and abdomen are entered (or an abdominal) incision, the distal esophagus is mobilized and the lesion is resected. A segment of colon is isolated. Intestinal continuity is re-established by colon interposition; esophagocolostomy, cologastrostomy, and colocolostomy. Chest tubes are placed if the thorax is entered. Postoperatively, surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Chest tube is removed on day three. Oral feeding is resumed on day three and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracoabdominal or abdominal incision; mobilize the distal esophagus; resect the distal esophagus; isolate segment of colon and complete an esophagocolostomy, cologastrostomy, and colocolostomy; place drains and chest tube; close the wound with a layered closure; and apply a sterile dressing.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wound to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
26.35	43120	Esophagogastrectomy (lower third) and vagotomy, combined thoracoabdominal with or without pyloroplasty
17.27	44140	Colectomy, partial; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work value of F19 is equal to 43120-52 + 44140 [0.9(26.35) + 0.5(17.27) = 32.34. The consensus committee recommends the survey median RVW of 32.00.

FREQUENCY INFORMATION

It is estimated that F19 represents less than 1% of the previously reported cases for 43120. 1992 Medicare allowed frequency by all physician specialties for code 43120 was 28, 317 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 360 min Low: 180 min High: 600 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-6)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F20 Global Period: 090

CPT Descriptor: Total or partial esophagectomy, without reconstruction (any approach), with cervical esophagostomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 38-year old man developed left pleuritic pain, fever, and septic shock following a single episode of vomiting 18 hours previously. Chest x-ray demonstrates pleural effusion. Esophagogram shows a large perforation 5 cm proximal to the gastroesophageal junction. Preoperatively, surgeon performs re-evaluation of patient; review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At thoracotomy, purulent pleuritis and a large necrotic esophageal perforation are encountered. The esophagus is now excluded and brought out through a separate neck incision as a cervical esophagostomy. (The gastroesophageal junction is divided and oversewn. Through a neck incision, the esophagus is excised and esophagostomy created.) Chest tubes are placed. Postoperatively, the surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance and chest thoracostomy drainage. Wound checks and dressing changes are done to assure absence of hematoma and drainage. Communication takes place with patient and family. Chest tubes are removed on day eight. Oral feeding is resumed on day 13 and the patient is dismissed on day 18. Office visits occur during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a thoracotomy and isolate the distal esophagus; divide and oversew the gastroesophageal junction; perform a neck incision; resect the esophagus, as needed; create a cervical esophagostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
27.50	43119	Total esophagectomy with gastropharyngostomy, without thoracotomy
11.04	43352	Esophagostomy, fistulization of esophagus, external; cervical approach

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F20 is equal to the work of 43119-52 + 43352. $[0.9(27.50) + 0.5(11.04) = 30.27]$. Although the median survey RVW of 25.00 is less than the combined work of esophagectomy plus esophagostomy, the consensus committee recommends the survey median RVW of 25.00.

FREQUENCY INFORMATION

It is estimated that F20 represents 1-2% of the previously reported cases for 43119. 1992 Medicare allowed frequency by all physician specialties for code 43119 was 339 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 210 min Low: 120 min High: 480

Median Pre-Service Time: 90 min Median Post-Service Time: 280 min

Length of Hospital Stay: 18

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-4)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F21 Global Period: 090

CPT Descriptor: Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with stomach, with or without pyloroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 38-year old man had previously undergone esophageal exclusion for an esophageal perforation. Preoperatively surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At laparotomy, the stomach is mobilized. Through a neck incision, the proximal esophagus is also mobilized. A tunnel is now made substernally. The stomach is now transposed through the tunnel into the neck and anastomosed to the esophagus (esophagogastrostomy). The neck is drained. After operation, surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics and fluid balance. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Oral feeding is resumed on day six and the patient is dismissed on day eight. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a laparotomy; mobilize the stomach; perform a neck incision; mobilize the proximal esophagus; create a substernal tunnel; transpose the stomach into the neck through the tunnel and complete an esophagogastrostomy; divide the pyloric muscle, if necessary; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
26.35	43120	Esophagogastrectomy (lower third) and vagotomy, combined thoracicoabdominal with or without pyloroplasty

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

F21 has been reported as 43120-22. The consensus committee recommends the survey median RVW of 26.35

FREQUENCY INFORMATION

1992 Medicare allowed frequency by all physician specialties for code 43120 was 28,317 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 270 min Low: 150 min High: 480 min

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (2); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-5)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F22 Global Period: 090

CPT Descriptor: Gastrointestinal reconstruction for previous esophagectomy, for obstructing esophageal lesion or fistula, or for previous esophageal exclusion; with colon interposition or small bowel reconstruction, including mobilization, preparation, and anastomosis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 38-year old man with prior subtotal gastrectomy had previously undergone esophageal exclusion for an esophageal perforation. Preoperatively surgeon performs reevaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At laparotomy, a segment of colon is isolated (colocolostomy). Through a neck incision, the proximal esophagus is also mobilized. A tunnel is now made substernally. The colon is transposed into the neck through the tunnel and interposed between esophagus and stomach (esophagocolostomy and cologastrostomy). The neck is drained. Postoperatively, surgeon sees to patient stabilization, including monitoring of ventilation, hemodynamics, fluid balance, and chest thoracostomy drainage. Wound checks and dressing changes are made to assure absence of hematoma and drainage. Communication occurs with patient and family. Oral feeding is resumed on day 6. Neck drains are removed on day 7 and the patient is dismissed on day 8. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; perform a laparotomy; mobilize the stomach; perform a neck incision; mobilize the proximal esophagus; create a substernal tunnel; transpose the stomach into the neck through the tunnel and complete an esophagogastronomy; complete an esophagocolostomy, cologastrostomy, and colocolostomy; place drains and chest tube; close the wounds with a layered closure; and apply sterile dressings.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor cardiopulmonary, fluid, and hemodynamic status; monitor and care of the wounds to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
26.35	43120	Esophagogastrectomy (lower third) and vagotomy, combined thoracicoabdominal with or without pyloroplasty
11.21	44130	Enterointerostomy, anastomosis of intestine (separate procedure)
17.27	44140	Colectomy, partial; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

F22 is a redo operation. The work value is equal to 43120-52 + 44140 + 44130 [0.9(26.35) + 0.5(17.27) + 0.25(11.21) = 35.16]. Although survey median RVW of 30.00 does not reflect the added work of colectomy and enteroenterostomy, the consensus committee recommends the survey median RVW of 30.00.

FREQUENCY INFORMATION

It is estimated that F22 represents 2-3% of the previously reported cases for 43120. 1992 Medicare allowed frequency by all physician specialties for code 43120 was 2033 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 345 min Low: 180 min High: 480

Median Pre-Service Time: 90 min Median Post-Service Time: 240 min

Length of Hospital Stay: 10 da

Post-Hospital Office Visits: 3 - 99214 (2); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-2)

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: F23 Global Period: 090

CPT Descriptor: Ligation or stapling at gastroesophageal junction for pre-existing esophageal perforation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 52-year old man developed chronic esophageal perforation at gastroesophageal junction following several attempts at repair. Preoperatively, surgeon performs re-evaluation of patient; re-review of laboratory and x-ray/imaging studies; obtains informed consent; rediscusses procedure. At operation, the perforation is isolated and the esophagus is stapled above and below. The wound is drained. Postoperatively, surgeon sees to patient stabilization, including monitoring of hemodynamics and fluid balance. Wound checks and dressing changes are done to assure absence of hematoma and drainage. Communication is made with patient and family. Nutrition is managed through alternative routes. Drains are removed on day 7 and the patient is dismissed on day 8. Office visits are conducted during follow up.

Pre-service Work: Hospital admission work-up; review of roentgenograms and laboratory studies; communication with other health care professionals; consultation with referring physician, if necessary; communication with patient and family; and obtaining informed consent.

Intra-service Work: Position, prep, and drape the patient; incise skin (??type of incision??); isolate area of perforation; staple esophagus above and below isolated area; place drains; close the wound with a layered closure; and apply a sterile dressing.

Post-service Work: Stabilization of the patient; communication with the patient, family, and other health care professionals (including written and telephone reports and orders); monitor fluid and hemodynamic status; monitor and care of the wound to assure absence of hematomas; monitor, care, and in-hospital removal of the drain and chest tube; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including suture removal and dressing changes.

KEY REFERENCE SERVICE(S): (1994 RVW Data)

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
14.89	43331	Esophagomyotomy ((Heller type) with or without hiatal hernia repair); thoracic approach

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work of F23 is similar to that of 43331. The consensus committee recommends the survey median RVW of 15.00.

FREQUENCY INFORMATION

1992 Medicare allowed frequency by all physician specialties for code 43331 was 124 (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty: General Surgery and Thoracic Surgery

Median Intra-Service Time: 150 min Low: 90 min High: 340 min

Median Pre-Service Time: 75 min Median Post-Service Time: 180 min

Length of Hospital Stay: 8 da

Post-Hospital Office Visits: 3 - 99214 (1); 99213 (1); 99212 (1)

Number of Times Provided in Past 12 months (Median): 0 (range 0-3)

The following frequency estimates were provided to RUC staff after revisions to the CPT crosswalks were approved by the CPT Editorial Panel. The RVW recommendations for the Esophageal Surgery codes remain budget neutral.

<u>Deleted code</u>	<u>Tracking number, crosswalk and percentage of cases</u>
43105	F8 (431XB) represents 95% of previously reported cases F13 (431XH) represents less than 1% of previously reported cases F20 (431XP) represents 5% of previously reported cases
43106	F13 (431XH) represents less than 1% of previously reported cases F20 (431XP) represents less than 1% of previously reported cases
43110	F8 (431XB) represents less than 1% of previously reported cases F10 (431XE) represents less than 5% of previously reported cases F14 (431XI) represents more than 85% of previously reported cases F17 (431XL) represents 10% of previously reported cases
43111	F8 (431XB) represents less than 1% of previously reported cases F10 (431XE) represents less than 5% of previously reported cases F14 (431XI) represents more than 85% of previously reported cases F17 (431XL) represents 10% of previously reported cases
43115	F9 (431XC) represents less than 15% of previously reported cases F11 (431XF) represents less than 1% of previously reported cases F13 (431XH) represents less than 1% of previously reported cases F15 (431XJ) represents 35% of previously reported cases F19 (431XN) represents 30% of previously reported cases F22 (431XR) represents 20% of previously reported cases
43119	F8 (431XB) represents 88-90% of previously reported cases F20 (431XP) represents 10% of previously reported cases
43120	F18 (431XM) represents 40% of previously reported cases F21 (431XO) represents 60% of previously reported cases

MAY 1994 RUC RECOMMENDATIONS
UPPER GI ENDOSCOPY WITH BALLOON DILATION - TAB I

At the June RUC meeting, the RUC approved the specialty society request that recommendations for a subset of GI endoscopy codes be based on a survey, but the remainder be based on accepted methods for "valuing the increment" of particular endoscopic procedures, such as biopsy. Since 4324X is part of that large coding revision, the specialty society did not separately survey this code.

CPT code 43245 [Upper gastrointestinal endoscopy including esophagus, stomach, and either the duodenum and/or jejunum as appropriate; diagnostic, with or without collection of specimen(s) by brushing or washing (separate procedure)] is considered the "basic" upper GI endoscopy code. CPT code 4324X [Upper gastrointestinal endoscopy including esophagus, stomach, and either the duodenum and/or jejunum as appropriate; with balloon dilation of esophagus (less than 30 mm diameter)] was added so that physicians could report the balloon dilation portion of this procedure. The work value for 4324X, describing a complete upper endoscopy with a through-the-scope balloon dilation, could be arrived at by adding the value of code 43235, an upper endoscopy with a work value of 2.42, to the difference between codes 43220 [esophagoscopy, rigid or flexible; with balloon dilation less than 30 mm diameter, (2.21 RVW)] and 43200 [esophagoscopy, rigid or flexible; diagnostic (1.61 RVW)]. The difference of 0.51 would represent the value of the balloon dilation itself. This would yield a work value for code 4324X of $2.42 + 0.51 = 2.93$ RVW. The RUC recommends a value of 2.93 for 4324X.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
	43235	Upper gastrointestinal endoscopy including esophagus, stomach, and either the duodenum and/or jejunum as appropriate; diagnostic, with or without collection of specimen(s) by brushing or washing (separate procedure)	000	2.42 (no change)
BH1	●4324X	with balloon dilation of esophagus (less than 30 mm diameter)	000	2.93

**MAY 1994 RUC RECOMMENDATIONS
ESOPHAGOGASTROSTOMY - TAB 20**

The recommended RVW for 43320 [Esophagogastrostomy (cardioplasty), with or without vagotomy and pyloroplasty, transabdominal or transthoracic approach] represents the median point between the two previous values for 43320 (abdominal approach) and 43321 (thoracic approach). Both procedures are performed infrequently, with BMAD data indicating fewer than 100 performed per year.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
X1	43320	Esophagogastrostomy (cardioplasty), with or without vagotomy and pyloroplasty, <u>transabdominal or transthoracic approach</u>	090	14.65
X2	43321	thoracic approach <u>(43321 has been deleted. To report, use 43320)</u>	090	N/A

THE SOCIETY OF THORACIC SURGEONS

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April 28, 1994

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Grant V. Rodkey, Chairman
AMA Relative Value Update Committee
c/o Department of Payment Systems
American Medical Association
515 N. State St.
Chicago, IL 60610

Dear Dr. Rodkey:

We would like to present recommendation for the relative work value for the following edited CPT code:

Tracking No. XI, 43320 Esophagogastrostomy (cardioplasty); with or without vagotomy and pyloroplasty, transabdominal or transthoracic approach.

Please note that Tracking No. X2, 43321 has been deleted. This code was formerly the esophagogastrostomy using the thoracic approach only.

Our recommended RVW is 14.65. Since 43320 now covers both the abdominal and thoracic approach, the recommended RVW represents a median point between the two previous codes. In 1994, the RVW for 43320 was 14.40 and the RVW for 43321 was 14.94.

We believe that this is essentially an editing change for CPT codes 43320 and 43321, both of which are very low volume procedures (less than 100 procedures per year each), and that there is no need for survey data.

Sincerely,

Sidney Levitsky MD/ff

Sidney Levitsky, M.D., RUC Advisor, STS/AATS

cc: John O. Gage, M.D.
Josef Fischer, M.D.
Pat Parks
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Don Turney
Peter Pairolero, M.D.
Benson Wilcox, M.D.
John Benfield, M.D.

MAY 1994 RUC RECOMMENDATIONS
GASTROTOMY - TAB 15

Compelling evidence was presented to the RUC regarding the increased level of intensity involved in code 43501 [Gastrotomy; with suture repair of bleeding ulcer] due to the greatly increased severity of the patient receiving this surgical procedure. The Harvard data supports this assertion as the Phase 3 data indicates an average hospital length of stay (LOS) of 3.5 days while the current RUC survey data indicates a LOS of 10.00 days. In addition, the Harvard study assumed there were no ICU days for these patient, but the RUC survey indicated there are 2-3 days in the ICU postoperatively. It was also noted that the frequency of 43501 has decreased as more procedures are done endoscopically. Ten years ago, 20% of all upper GI bleeds were treated surgically; today only 2-3% are treated surgically. The increasing use of endoscopic techniques and pharmacological management of gastric bleeding has selected out a sicker population of patients requiring this operation.

Code 4350X [Gastrotomy; with suture repair of pre-existing esophagogastric laceration (eg, Mallory-Weiss)] requires more intra- and post- service time than 43501, due to comorbid factors, and is therefore valued higher.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
G1	43501	Gastrotomy; with suture repair of bleeding ulcer or esophagogastric laceration	090	14.00
G2	●4350X	with suture repair of pre-existing esophagogastric laceration (eg, Mallory-Weiss)	090	16.00
G3	43510	with esophageal dilation and insertion of plastic permanent intraluminal tubes (eg, Celestin or Mousseaux-Barbin)	090	9.37 (no change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: G1 Global Period: 090

CPT Descriptor: Gastrotomy; with suture repair of bleeding ulcer ~~or esophagegastic laceration~~

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 64-year-old female presents with a history of Alzheimer's disease, treatment with NSAIDs for arthritis, and has had a previous vagotomy and antrectomy. She has had persistent bleeding from an isolated ulcer of the fundus, which has failed attempts at endoscopic control. After continued blood loss and transfusion of nine units of blood, she is ultimately taken to the operating room for exploration. She is explored via a laparotomy incision and a gastrotomy is performed and the bleeding ulcer is located and sutured. The gastrotomy is closed, as is the abdominal incision. The post-operative course is complicated by pulmonary problems and a mild ileus. The patient has no further bleeding and is discharged on the tenth post-operative day.

Pre-service Work:

Hospital admission work-up, with special attention to cardiopulmonary and hematologic status; reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from the patient or responsible family member; and coordination and supervision of transfusions of blood and coagulation factors prior to operation.

Intra-service Work:

Positioning, prepping, and draping the patient; midline incision with dissection and mobilization of the stomach; opening the stomach and identifying the bleeding ulcer; oversewing the bleeding ulcer and closure of the stomach in standard fashion; layered closure of the incision, including skin; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of fluid, cardiopulmonary, and coagulation status (including monitoring chest roentgenograms and laboratory values); ICU care and need for ventilator management; monitoring and care of the incision; monitoring, care, and removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

KEY REFERENCE SERVICE(S):

91 RVW	CPT	Descriptor
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy
14.43	43330	Esophagomyotomy ((Heller type) with or without hiatal hernia repair); abdominal approach
13.14	58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(s);
12.47	43501	Gastrotomy; with suture repair of bleeding ulcer or esophagogastric laceration
12.73	38115	Repair of ruptured spleen (splenorrhaphy) with or without partial splenectomy

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Code 43501 went through the HCFA refinement process in 1992, with the College contending that the code was undervalued. The increasing use of endoscopic techniques and pharmacological management of gastric bleeding has selected out a sicker population of patients coming to operation. The current survey result of a median RVW of 14.00 re-emphasizes this point. The College's committee, therefore, agrees with the survey results in their recommendation of a relative value of 14.00 work units.

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that G1 represents 85% of the previously reported cases for code 43501.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 43501 was 1.593* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 120 Low: 60 High: 210

Median Pre-Service Time: 98 Median Post-Service Time: 200

Length of Hospital Stay: 10

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28)

Number of Times Provided in Past 12 months: 2 (range = 0-6)

Other Data: Survey respondents used 1993 RVWs in providing their response to this survey.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: G2 Global Period: 090

CPT Descriptor: Gastrotomy; with suture repair of pre-existing esophagogastric laceration (eg, Mallory-Weiss)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 55-year-old male presents with a history of alcohol consumption of moderate to heavy usage over the past decade, and an acute onset of upper GI bleeding after a bout of retching and vomiting. At endoscopy, a typical Mallory-Weiss tear of the esophagogastric junction is found. The laceration continues to bleed despite attempts at endoscopic control, and the patient is taken to the operating room for repair after the tenth unit of blood. The patient is explored via a laparotomy incision, the stomach is opened, and the bleeding area of the esophagogastric junction is visualized with some difficulty and oversewn. The stomach and abdominal walls are closed in the usual fashion. The post-operative course is complicated by delirium tremens and aspiration pneumonia. He is discharged on the fourteenth post-operative day.

Pre-service Work:

Hospital admission work-up, with special attention to cardiopulmonary and hematologic status; reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from the patient or responsible family member; and coordination and supervision of transfusions of blood and coagulation factors prior to operation.

Intra-service Work:

Positioning, prepping, and draping the patient; midline incision with dissection and mobilization of the stomach; opening the stomach and identifying the esophagogastric tear; oversewing the tear and closure of the stomach in standard fashion; layered closure of the incision, including skin; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); ICU care and possible ventilator management; monitoring and treatment of delirium tremens; monitoring and care of the incision; monitoring, care, and removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

KEY REFERENCE SERVICE(S):

'94 RVW	CPT	Descriptor
15.72	45400	Ligation, direct, esophageal varices
14.43	43330	Esophagomyotomy ((Heller type) with or without hiatal hernia repair); abdominal approach
13.14	58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(s);
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy
12.73	38115	Repair of ruptured spleen (splenorrhaphy) with or without partial splenectomy
12.47	43501	Gastrotomy; with suture repair of bleeding ulcer or esophagogastric laceration

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Code 43501 went through the HCFA refinement process in 1992, with the College contending that the code was undervalued. The increasing use of endoscopic techniques and pharmacological management of gastroesophageal bleeding has selected out a sicker population of patients coming to operation. In comparison to G1, G2 represents a significant increase in intraoperative time and postoperative care because of the comorbid factors, justifying an increase in work units over G1. The College recommends the survey median RVW of 16.00.

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that G2 represents 0-15% of the previously reported cases for code 43501.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 43501 was 1,593* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 150 Low: 75 High: 240

Median Pre-Service Time: 100 Median Post-Service Time: 280

Length of Hospital Stay: 13

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28)

Number of Times Provided in Past 12 months: 0 (range = 0-3)

Other Data: Survey respondents used 1993 RVW's in providing their response to this survey.

MAY 1994 RUC RECOMMENDATIONS
GASTROPLASTY FOR MORBID OBESITY - TAB 22

There was some initial confusion regarding the status of the codes describing gastroplasty for morbid obesity, since the specialty society had the impression that there was a process outside the RUC process to address the relative values for this family of codes. The RUC recommendations are, therefore, provided as "interim" recommendations and address the rank ordering of the procedures relative to one another. At a future meeting the RUC will revisit these codes and evaluate whether they are appropriately valued relative to other families of procedures.

The RUC recommendations for the gastroplasty codes are based on a survey of bariatric surgeons. The specialty society representative noted that, although there was considerable variation among the RVW assigned by individual physicians, the median values displayed a relationship between the procedures, with 43843 assigned the lowest value and 438X2 assigned the highest value in the series of codes that were surveyed.

CPT code 43842 [Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical banded gastroplasty] describes a procedure that is performed on people that are considered morbidly obese, which is defined as at least 100 pounds or more than "ideal" body weight. The patient that usually undergoes this procedure has failed at other weight control interventions. The typical patient usually has symptoms of stress incontinence, gastroesophageal reflux, and pain in weight bearing joints. The physician work of this procedure involves the creation of a pouch from the stomach that is stapled or banded. The recommended RVW for this procedure is 11.99.

CPT code 43843 [Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical banded gastroplasty] is a similar procedure to code 43842, except that once the gastric pouch has been created it is not banded. The recommended RVW for this procedure is 11.99.

CPT code 43846 [Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (less than 100 cm) Roux-en-Y gastroenterostomy] is performed on patients that, in addition to being morbidly obese, also have other co-morbid conditions such as; disabling arthritis, obstructive sleep apnea, and hypertension. The physician work of the procedure involves the creation of a 30cc gastric pouch and 45cm gastrojejunostomy. This gastric bypass is complex and involves greater risk to the patient. The recommended value for this procedure is 12.90 RVW.

CPT code 438X1 [Gastric restrictive procedure, with gastric bypass for morbid obesity; with small bowel reconstruction to limit reabsorption] is a gastric stapling procedure performed via laparotomy. The procedure involves creation of a pouch and a Roux-en-Y limb that includes the majority of the small bowel with an anastomosis to the pancreatic/biliary limb. This procedure allows for food to be

extremely complicated, in part due to the fact that the anastomosis is hard to create because the mesentery is thickened in obese patients. The recommended RVW is 14.32.

CPT code 438X2 [Revision of gastric restrictive procedure for morbid obesity (separate procedure)] is a stand alone code for the primary procedure. If 438X2 is performed incidentally when performing another related procedure, 438X2 would not be separately reported. This procedure is performed on patients who have started to experience severe symptoms after they have had previous gastroplasty. Usually adhesions have devolved at the site of the gastric pouch or the staple line has broken down. This procedure is time consuming as the physician must take special care in lysing the adhesions without injuring adjacent organs such as the spleen. The recommended value for this code is 15.00 RVW.

Track- ing number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BI1	43842	<u>Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical- banded gastroplasty</u>	090	11.99
BI2	43843	Gastroplasty, other than vertical-banded gastroplasty, for morbid obesity	090	11.99
BI3	43844	Gastroplasty, other than with Roux-en-Y gastroenterostomy, for morbid obesity (43844 has been deleted. To report, see 438XX)	090	N/A
BI4	43846	<u>Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (less than 100 cm) Roux-en-Y gastroenterostomy</u>	090	12.90
BI5	●438X1	with small bowel reconstruction to limit absorption	090	14.32
BI6	●438X2	Revision of gastric restrictive procedure for morbid obesity (separate procedure)	090	15.00

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code/Tracking No. : 43842 / B11

Global Period: 090

CPT Descriptor: Gastric restrictive procedure, without gastric bypass, for morbid obesity; vertical-banded gastroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is a 38-year-old woman who weighs 275 pounds or is 150 pounds overweight. Family history and diet history confirm morbid obesity with obesity since childhood and multiple weight losses of up to 50 pounds in the past with no significant weight maintenance. History of gastroesophageal reflux symptoms, urinary stress incontinence, and pain in her weight bearing joints. In addition, she has symptoms of early sleep apnea with poor mental function and threatened job performance. Preoperatively, the surgeon re-evaluates history, laboratory, and physical findings and finalizes extensive informed consent. At laparotomy a vertical banded gastroplasty with a measured 20 cc pouch in a 5 cm banded outlet is created. A wound drain is placed. Postoperatively, the patient is stabilized in the ICU. Ventilation and oxygenation is monitored and supported due to the well established 10-30 mm Hg in PaO₂ in these patients postoperatively, secondary to increased A-B shunting because of the severely increased intra-abdominal pressure and high diaphragms. Vigorous pulmonary care is required for early development of atelectasis. The drains and tubes are discontinued. Oral fluids are begun on the 1st postoperative day and advanced appropriately. Discharged on the 4th or 5th postoperative day with extensive instructions concerning the dramatically altered gastric physiology, including inability to take foods and fluids simultaneously and avoidance of pure solids for several weeks. Techniques for taking vitamins and oral medications are explained. Three to four office visits are required within the first 90 days plus multiple phone calls.

Pre-service Work: Hospital admission work-up with special attention to cardiopulmonary status, skin care with antiseptic showers, antibiotics, and many-dose subcutaneous heparin; reviewing roentgenogram, cardiogram and laboratory studies, communicating with the patient, patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from the patient or responsible family members; arranging special bed and instrument needs.

Intra-service Work: Special positioning of patient with footboard and taping of ankles, and strapping of knees in preparation for a 50° tilt of the table; prepping and draping of patient and set-up of mechanical, table-mounted retractors; a vertical banded gastroplasty is performed, with or without an EEA stapled window, using a 5 cm band or ring with the creation of a pressure/volume-measured 15 ml pouch; the wound is drained and closed in layers; a bupivacaine wound and intercostal block is placed to aid postoperative pulmonary mechanics; the wound and tubes are dressed.

Post-service Work: Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including arrangement for continuous oximetry with strip recording and arterial blood gases with reference to probable sleep apnea); ICU care and monitoring of many-dose heparin, drains and tube losses, wounds, and dressing changes, with removal of drains at appropriate intervals; vigorous pulmonary reinflation measures are pressed due to the marked intra-abdominal obesity and high diaphragms; oral fluids are started on about the first day with special instructions on the markedly altered intake/gastric physiology with a 15 ml stomach capacity (including the inability to take food and fluids at the same time, with the avoidance of true solids for several weeks); techniques for taking vitamins and medications are taught; additionally, all hospital visits and post-discharge office visits, and phone calls for management and training for 90 days after the day of operation are considered part of the post-operative work for this procedure, including evaluation of lab reports and adjusting medications, and the training of techniques for advancing from liquids to solid food, whereby assuring protein intake of equal to or greater than 30 grams a day

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
11.99	43842	Gastroplasty, vertical-banded, for morbid obesity
17.27	44140	Colectomy, partial; with anastomosis
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

SURVEY DATA:

Specialty Society(s): Bariatric Surgery

Median Intra-Service Time: 120 Low: 90 High: 360

Median Pre-Service Time: 90 Median Post-Service Time: 120

Length of Hospital Stay: 5

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 28, 60

Median Number of Times Provided in Past 12 months: 8 (range: 0-150)

Median Number of Times Provided in Career: 300 (range: 2-4,000)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code/Tracking No. : 43843 / B12

Global Period: 090

CPT Descriptor: Gastroplasty, Gastric restrictive procedure, without gastric bypass, for morbid obesity; other than vertical-banded gastroplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is a 37-year-old woman who weighs 260 pounds or 115 pounds overweight with a life long history of obesity and with a family history and diet history that confirms morbid obesity with multiple weight losses of up to 50 pounds in the past with no significant weight maintenance. She is found to have hypertension on diuretics, arthritic pain of the weight bearing joints, amenorrhea and infertility. Preoperatively, the surgeon re-evaluates history, laboratory and physical findings and finalizes extensive informed consent. At laparotomy, a gastric restrictive procedure with an adjustable silicone gastric band with a right rectus sheath port is placed. A small proximal gastric pouch is thus created. Postoperatively, the patient is stabilized for 24-36 hours in the ICU. Ventilation and oxygenation is monitored and supported due to the well established 10-30 mm Hg drop PaO₂ in these patients postoperatively, secondary to their shunting due to high diaphragms and severely increased intra-abdominal pressure. Vigorous pulmonary care is required for early development of atelectasis. The drains and tubes are discontinued. Oral fluids are begun on the 1st postoperative day and advanced appropriately. The patient is discharged on the 4th or 5th postoperative day with extensive instructions concerning the dramatically altered gastric physiology, including inability to take foods and fluids simultaneously and avoidance of pure solids for several weeks. Techniques for taking vitamins and oral medications are explained. Three or four office visits are required within the first 90 days with complexity of visits similar to E/M codes 99214 (x2) and 99213 (x2). Multiple supporting phone calls are also necessary within this 90 period.

Pre-service Work: Upon hospital admission, complete laboratory work-up is done, including pregnancy testing, electrocardiogram, and chest x-ray. Routine pulmonary/internal medicine consultation is obtained. Laboratory work-up results are reviewed by the surgeon and pulmonary/medical specialist. Heparin, subcutaneously, is given every eight hours. The patient receives extensive instructions about behavior after the surgery, and the family is also informed. Prior to transferring the patient to the operating room, the antibiotic is given. The special beds, blood pressure cuffs and overhead trapeze are used for the obese patients.

Intra-service Work: In the operating room, an intermittent compression device is used on all patients. The patient is positioned in the reverse Trendelenburg position. Foley catheter is inserted when the patient is asleep. Routine prepping and draping is done on all patients, and special retractor for obese surgery is used. When stoma adjustable silicone gastric banding is performed, the dissection is completed and pouch and stoma are calibrated with special calibrating tube and electronic sensor. Pouch size is made 20 ml and the stoma size is 12.5 mm in the stoma adjustable silicone gastric banding. The wound is closed in layers, using a small drain placed into the wound between the sutures. Routine dressing is placed.

Post-service Work: Patient is transferred to the recovery room, where careful monitoring of cardiopulmonary status is carried out. Patients requiring ICU care are transferred to that unit, if necessary. On the first post-operative day, the patient is out-of-bed and is allowed to have sips of water. IV is continued as well as the antibiotic. On the second postoperative day, the IV antibiotic, Foley catheter and drain are all discontinued. Post-gastric banding second day diet is started and progressed daily. The evening prior to patient's discharge, extensive instructions are given about activities and food selection/food restrictions. All questions are answered. On the day of discharge, sutures are removed, additional instructions are given as well as a prescription for chewable multivitamins. The postoperative visits are scheduled, in general. All telephone calls for management are answered indefinitely.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
11.99	43843	Gastroplasty, other than vertical-banded, for morbid obesity
17.27	44140	Colectomy, partial; with anastomosis
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

SURVEY DATA:

Specialty Society(s): Bariatric Surgery

Median Intra-Service Time: 150 Low: 100 High: 220

Median Pre-Service Time: 120 Median Post-Service Time: 240

Length of Hospital Stay: 5

Office Visits on Post-Discharge Day(s) : 99214 on days 7, 21; 99213 on days 42, 60

Median Number of Times Provided in Past 12 months: 2 (range: 0-32)

Median Number of Times Provided in Career: 32 (range 20-400)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code/Tracking No. : 43846 / B14

Global Period: 090

CPT Descriptor: Gastric restrictive procedure, with gastric bypass for morbid obesity; with short limb (less than 100 cm) Roux-en-Y gastroenterostomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is a 40-year-old man weighing 390 pounds or 210 pounds overweight, is hypertensive on two medications without good control, has severe gastroesophageal reflux, and near disabling arthritis of his lower back and right knee. In addition, a recent sleep study showed severe obstructive sleep apnea and he has been placed on C-PAP with some limited improvement, but continued dependent edema suggestive of right heart failure. Family history and diet history confirm morbid obesity with obesity since childhood and multiple weight losses of up to 75 pounds in the past with no significant weight maintenance and rapid recent weight gain since sleep apnea symptoms have been present. Preoperatively, the surgeon re-evaluates history, laboratory, and physical findings and finalizes extensive informed consent. At laparotomy, a gastric bypass procedure with a measured 30 cc pouch and 45 cm Roux-en-Y gastrojejunostomy is fashioned and the small gastric pouch is divided from the remainder of the stomach. A gastrostomy tube is placed and the wound is drained. Postoperatively, the patient is stabilized in the ICU with careful monitoring of ventilation, hemodynamics, fluid balance, and also with nightly recorded oximetry with alteration of C-PAP pressure and O₂ volumes as needed. Vigorous pulmonary re-inflation measures are pressed due to the marked intra-abdominal obesity. Special bed with trapezes is used. Mini-dose heparin, drains and tube losses are monitored with wound checks and dressing changes. Drains and tubes are removed appropriately and oral fluids are begun on the 4th postoperative day and advanced. The patient is discharged on the 7th to 9th postoperative day with extensive instructions concerning the dramatically altered gastric physiology, including inability to take food and liquids simultaneously with avoidance of true solids for several weeks. Techniques of taking vitamins and medications orally are stressed. Arrangements are made for continued C-PAP and oxygen postoperatively. Three to four office visits are scheduled within the first 90 days with complexity of visits similar to E/M codes 99214 (x3) and 99213 (x1). Multiple supporting phone calls are also necessary within this 90 period.

Pre-service Work: Hospital admission work-up, with special attention to cardiopulmonary status including management of C-PAP and oximetry, and skin care with antiseptic showers and antibiotics, and many-dose subcutaneous heparin; reviewing roentgenogram, cardiogram and laboratory studies; communicating with the patient, patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from patient or responsible family member; arranging special bed and instrument needs.

Intra-service Work: Special positioning of patient with footboard, and tapping of ankles and strapping of knees in preparation for a 50° tilt of the table; prepping and draping of patient, and set-up of mechanical, table-mounted retractors; a gastric bypass procedure is performed with total division of the pressure/volume-measured 30 ml pouch from the remainder of the stomach with a 45 cm Roux limb and a 10 mm gastrojejunostomy; gastrostomy placed in the distal stomach, wound drained and closed in layers; a bupivacaine wound and intercostal block is placed to aid postoperative pulmonary mechanics; the wound and tubes are dressed.

Post-service Work: Patient stabilization, communicating with the patient, the patient's family, and other health care professionals (including arrangement for C-PAP and continuous oximetry with strip recording and blood gases); ICU care and monitoring; vigorous pulmonary re-inflation measures are pressed due to the marked intra-abdominal obesity and high diaphragms; many-dose heparin, drains and tube losses are monitored with wound checks and dressing changes, and removal of drains at appropriate intervals; oral fluids are started on about the fourth day with special instructions in the markedly altered intake/gastric physiology with a 30 ml stomach capacity (including the inability to take food and fluids at the same time, with the avoidance of true solids for several weeks); special techniques of taking vitamins and medications are taught; arrangements are made to continue C-PAP at home; additionally, all hospital visits and post-discharge office visits, and phone calls for management and training for 90 days after the day of operation are considered part of the postoperative work for this procedure, including evaluation of lab reports and adjusting medications, and techniques for advancing from liquids to solid foods, and assuring protein intake of greater than or equal to 30 grams a day.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
12.90	43846	Gastric bypass with roux-en-y gastroenterostomy for morbid obesity
17.27	44140	Colectomy, partial; with anastomosis
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

SURVEY DATA:

Specialty Society(s): Bariatric Surgery

Median Intra-Service Time: 180 Low: 75 High: 420

Median Pre-Service Time: 95 Median Post-Service Time: 170

Length of Hospital Stay: 7

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 14, 30; 99212 on day 60

Median Number of Times Provided in Past 12 months: 27 (range: 0-450)

Median Number of Times Provided in Career: 300 (range: 0-4,000)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code/Tracking No. : 438X1/B15

Global Period: 090

CPT Descriptor: Gastric restrictive procedure, with gastric bypass for morbid obesity; with small bowel reconstruction to limit absorption

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is a 35-year-old woman weighing 335 pounds or 200 pounds over ideal weight who has a history of obesity since childhood and a family history and diet history confirming morbid obesity over the past 10 years with weight losses of up to 75 pounds in the past with no significant maintenance and no significant weight losses since she has become an insulin dependent diabetic. She is hypertensive on three medications with poor control and also has gastroesophageal reflux and urinary stress incontinence. Preoperatively, the surgeon re-evaluates history, laboratory, and physical findings and finalizes extensive informed consent. At laparotomy, a gastric stapling procedure is performed with a small pouch and a Roux-en-Y limb that includes the majority of the small bowel with an anastomosis to the pancreatic/biliary limb at 50-100 cm above the ileocecal valve. A subphrenic drain tube, a nasogastric tube and variably a gastrostomy tube are placed and the wound drained. Postoperatively, the patient is stabilized in the ICU for 48-72 hours with a special bed with trapezes. Ventilation and oxygenation is monitored and supported with particular efforts to prevent/correct the atelectases from her severe intra-abdominal obesity. The increased intra-abdominal pressure and high diaphragms create arteriovenous shunting with resultant drop in PaO₂ of 20-40 mm Hg and variably increased PCO₂. Mini-dose heparin, drains and tube losses are monitored, and the wound is checked with dressing changes as appropriate. Oral fluids are begun on the 4th postoperative day and advanced appropriately. The patient is discharged on the 7th to 9th postoperative day with extensive instructions concerning the dramatically altered gastric physiology, including inability to take fluid and liquids simultaneously and the avoidance of pure solids for several weeks. Techniques for taking vitamins and medications orally are stressed. The patient is scheduled for three to four office visits within the first 90 days with complexity of visits similar to E/M codes 99214 (x3) and 99213 (x1). Multiple supporting phone calls are also necessary within this 90 period.

Pre-service Work: Hospital admission work-up, with special attention to cardiopulmonary and liver, gallbladder, renal and lipid status; reviewing roentgenogram and laboratory studies; communicating with the patient, the patient's family and other health care professionals; consulting with the referring physician; obtaining consent from the patient or responsible family member, with extensive explanation of operative risks and alternatives (gastroplasty, gastric bypass, gastroplasty distal gastric bypass); optimizing nutritional status (if diabetic, sleep apneic, fatty metamorphosis livers, etc.).

Intra-service Work: Positioning, prepping, and draping the patient; large midline incision with dissection, mobilization, and medial reflection of left liver lobe; opening the esophageal hiatus and creation of a tunnel behind gastric cardia; preparation of stapling device and passing around stomach; placing four staple lines; banding stoma and manipulation of nasogastric tube; creation of tunnel beneath gastric corpus; stapling corpus times four; division of jejunum and creation of gastrojejunostomy; creation of distal enteroenterostomy; subdiaphragmatic drain; interrupted layer closure of abdominal wall and skin; subcutaneous drain; application of sterile dressing.

Post-service Work: Patient stabilization; communicating with patient, family and other health care professionals (including written and telephone reports and orders); careful monitoring of fluid including ins and outs and daily weights, cardiopulmonary status; ICU care and ventilator management, if needed; monitoring incisions; care and removal of all tubes and drains; monitoring institution of oral intake; discharge day, extensive advice about activity, advancing diet, wound and tube care; additionally, all hospital visits and post-discharge office visits for 90 days after the day of the operation are considered a part of the postoperative work for this procedure: including advancing diet, evaluating laboratory reports and adjusting medications (diabetes and hypertension).

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.14	35082	Direct repair of aneurysm or excision (partial or total) and graft insertion, with or without patch graft; for ruptured aneurysm, abdominal aorta
24.27	35646	Bypass graft, with other than vein; aortofemoral or bifemoral
17.27	44140	Colectomy, partial; with anastomosis
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

SURVEY DATA:

Specialty Society(s): Bariatric Surgery

Median Intra-Service Time: 240 Low: 105 High: 500

Median Pre-Service Time: 100 Median Post-Service Time: 200

Length of Hospital Stay: 9

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 14, 30, 60

Median Number of Times Provided in Past 12 months: 10 (range: 0-97)

Median Number of Times Provided in Career: 94 (range: 2-900)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code/Tracking No. : 438X2 / B16

Global Period: 090

CPT Descriptor: Revision of gastroplasty or gastric bypass procedure for morbid obesity (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Four years ago, a 65-year-old female underwent vertical banded gastroplasty for morbid obesity. She was very compliant, and her weight fell from 385 to 205 pounds. In the last three months, she has suddenly gained 35 pounds, and has developed severe gastroesophageal reflux symptoms. Barium swallow and upper GI endoscopy confirm break down of the staple line with restoration of gastric continuity. At re-operation, after difficult and extensive lysis of adhesions in the left upper quadrant, a 30 ml gastric pouch with a Roux-en-Y gastrojejunostomy is fashioned. The pouch is completely divided from the remainder of the stomach. She develops a wound hematoma, which becomes infected and requires bedside incision and drainage. This patient is discharged on the 14th postoperative day.

Pre-service Work: Hospital admission work-up with special attention to cardiopulmonary status and severe gastroesophageal reflux symptoms; skin care with antiseptic showers and antibiotics and many-dose subcutaneous heparin; reviewing roentgenogram, cardiogram and lab studies; communicating with the patient, patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from the patient or responsible family member; arranging special bed and instrument needs.

Intra-service Work: Special positioning of the patient with footboard and taping of ankles, strapping of knees, and preparation for 50° tilt of the operating table; prepping and draping of patient and set-up of mechanical, table-mounted retractors; lysis of adhesions are accomplished in the mid-abdomen and a 45 cm Roux limb is created; the severe adhesions between the left lobe of the liver and the stomach, and distal esophagus, colon and spleen are painstakingly taken down in a time-consuming manner; a pressure/volume-measured 30 ml pouch is created and divided from the remainder of the stomach; a 10 mm gastroenterostomy is created and a gastrostomy placed in the distal stomach; the wound is drained and closed in layers; a bupivacaine wound and intercostal block is placed to aid postoperative pulmonary mechanics; the wound and tubes are dressed.

Post-service Work: Patient stabilization, communication with the patient, family and other health care professionals (including written and telephone reports and orders); ICU care with careful monitoring of cardiopulmonary status, drains and tube losses, many-dose heparin, and the wound, with special attention to signs of non-specific sepsis because of increased chance of leak under the diaphragm; vigorous pulmonary reinflation measures are pressed due to marked intra-abdominal obesity and high diaphragms; drains and tubes removed when appropriate; oral fluids are started on about the fourth postoperative day with special instructions on the markedly altered intake/gastric physiology with a 30 ml stomach capacity (including the inability to take food and fluids at the same time with the avoidance of true solids for several weeks); special techniques necessary to take vitamins and medications orally; additionally all hospital visits and post-discharge office visits and phone calls for management and training for 90 days after the day of operation are considered part of the postoperative work for this procedure, including evaluating laboratory reports and adjusting medications, and teaching techniques for advancing from oral liquids to solid foods, assuring protein intake of greater than or equal to 30 grams a day.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
29.14	35082	Direct repair of aneurysm or excision (partial or total) and graft insertion, with or without patch graft; for ruptured aneurysm, abdominal aorta
24.27	35646	Bypass graft, with other than vein; aortofemoral or bifemoral
10.55	43820	Gastrojejunostomy;
17.27	44140	Colectomy, partial; with anastomosis
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

SURVEY DATA:

Specialty Society(s): Bariatric Surgery

Median Intra-Service Time: 200 Low: 120 High: 360

Median Pre-Service Time: 85 Median Post-Service Time: 160

Length of Hospital Stay: 7

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 14, 28, 60

Median Number of Times Provided in Past 12 months: 22 (range: 0-115)

Median Number of Times Provided in Career: 120 (range: 1-625)

MAY 1994 RUC RECOMMENDATIONS
ENTERECTOMY - TAB 19

4412X [Enterectomy, resection of small intestine; each additional resection and anastomosis] was valued by applying the multiple surgery payment rules to 44120 assuming that 80% of the time there would be a single resection and anastomosis performed, 15% of the time there would be two resections and anastomosis performed, and very rarely would more than two resections and anastomosis be performed. The recommendation of 4.50 per hour would be consistent with other RUC recommendations for add-on procedures based on time and intensity. For example, 441XX [Mobilization (take down) of splenic flexure performed in conjunction with partial colectomy (list separately in addition to primary procedure)] valued at 2.25 per half hour.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
H9	44120	Enterectomy, resection of small intestine; with <u>single resection and</u> anastomosis	090	13.30 (no change)
H10	●4412X	each additional resection and anastomosis	ZZZ	4.50
H15	44125	with double-barrel enterostomy	090	13.30 (no change)

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 Not considered in the refinement process.

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: H10

Global Period: ~~090~~

Recommended Global Period: ZZZ

CPT Descriptor: Enterectomy, resection of small intestine; each additional resection and anastomosis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

[Note: while reading the following vignette, keep in mind that you are being asked to estimate an RVW ONLY for each additional resection and anastomosis.] A 67-year-old male with enterocutaneous fistula following low anterior resection and post-operative radiation for a Duke's C1 carcinoma of the upper rectum. Three months ago, the patient developed intestinal obstruction and was operated on under emergency circumstances for compromised bowel. There were numerous adhesions in the irradiated pelvis, and the irradiated pelvis was involved in the point of obstruction. On the 6th post-operative day, a wound abscess was drained and enteral contents subsequently appeared. After several months of non-healing, a fistulogram was carried out and it is seen that the fistula is not suitable for spontaneous closure. It is believed that there is a communication with the sigmoid colon as well. Operation, which takes 7 hours, is undertaken. Three small bowel anastomoses and a sigmoid sleeve resection are necessary. [The survey respondent should calculate only the intraoperative work that is associated with an additional resection and anastomosis. This is an add-on code for the original operation and should reflect that be referring to intraoperative work only.]

Pre-service Work:

Not applicable.

Intra-service Work:

Positioning, prepping, and draping the patient, including draping fistulas from the main operative field; operatively exploring the abdomen with the difficulties of obtaining entry; total lysis of adhesions from the ligament of Treitz to the rectum, taking three hours; culture of previously undrained abscesses; protection of blood supply to the sigmoid; identification of the ureters; an additional small bowel resection is necessary because of several communications by the fistula with small bowel; end-to-end anastomosis is carried out; and the incision is closed in layers.

Post-service Work:

Not applicable.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
13.30	44120	Enterectomy, resection of small intestine; with anastomosis

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

A review of the survey data revealed a misunderstanding by some of the survey respondents that this procedure was intended as an "add-on" to 44120. Consequently, the College's committee will not recommend the survey median RVW, and, instead, recommends an RVW of 5.75, which applies the multiple procedure payment rule to the RVW of 13.30 for the parent code 44120, and takes into consideration that single additional resections are more common than multiple additional resections at a ratio of approximately 9:1, respectively, which consequently equates with an RVW of 5.75.

Additionally, it is recommended that the global period be changed from 090 to ZZZ, consistent with the global period for add-on procedures.

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that H10 represents 75% of the previously reported cases for code 44120-51.
 - 1992 Medicare Part B allowed frequency by all physician specialties for code 44120-51 was 5,991* (*1992 NCH File, HCFA, 3/31/93).
-

SURVEY DATA:

Specialty Society(s): General Surgery/Obstetrics and Gynecology

Median Intra-Service Time: 60 Low: 30 High: 480

Median Pre-Service Time: 0 Median Post-Service Time: 0

Length of Hospital Stay: n/a

Post-Hospital Office Visits: n/a

Number of Times Provided in Past 12 months: 2 (range = 0-20)

Other Data: Survey respondents used 1993 RVWs in providing their response to this survey.

**MAY 1994 RUC RECOMMENDATIONS
PARTIAL COLECTOMY - TAB 17**

Code 441XX [Mobilization (take-down) of splenic flexure performed in conjunction with partial colectomy] is similar in intensity to 4412X [Enterectomy, resection of small intestine; each additional resection and anastomosis] with a RUC recommended RVW of 4.50 per hour. The committee felt that a recommendation of 2.25 would be consistent with this and earlier RUC recommendations for add-on procedures based on time and intensity.

Mobilization of the splenic flexure is performed approximately 5% of the time when performing partial colectomy codes 44140-44144 and 25% of the time when performing 44145-44147. The RUC considered whether or not this procedure might have been considered to be a part of the colectomy procedure in establishing their values, but concluded that this procedure was previously coded using a -22 modifier or not reported. As a result, no changes are recommended in the partial colectomy values.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BK8	●441XX	Mobilization (take-down) of splenic flexure performed in conjunction with partial colectomy (list separately in addition to primary procedure) (Use 441XX only for codes 44140-44147)	ZZZ	2.25

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: BK8

Global Period: ZZZ

CPT Descriptor: Mobilization (take-down) of splenic flexure performed in conjunction with partial colectomy (list separately in addition to primary procedure)

(Use 441XX with 44140-44147 only)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

[Note: while reading the following vignette, keep in mind that you are being asked to estimate an RVW ONLY for this "add-on" procedure (i.e., mobilization of the splenic flexure).]

At operation, diverticula are present from below the descending colon to the rectum. The area of the descending colon is very scarred and mobilized with some difficulty. After resection, an end-to-end colorectal anastomosis between the splenic flexure and the rectum is performed, which requires mobilization of the entire splenic flexure.

Pre-service work:

Not applicable.

Intra-service work:

Mobilization of the splenic flexure involves extending the operative incision and changing retractors to expose the left upper quadrant. The spleen is partially mobilized and a pack is placed posterior to the spleen. The dissection of the colon extends cephalade along the line of Toldt, lateral to the descending colon. The omentum is preserved by tediously separating it from the colon, the appendix epiploicae, and the colonic mesentery. This allows exposure to the lienocolic ligament, which is carefully divided to free the splenic flexure from the lower pole of the spleen and the splenic hilum. After this dissection, the retroperitoneal attachments of the splenic flexure mesentery are divided up to the ligament of Trietz.

Post-service work:

Not applicable.

KEY REFERENCE SERVICE(S):
RVW CPT Code CPT Descriptor

1.55 44955 Appendectomy; when done for indicated purpose at time of other major procedure (not as separate procedure)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The survey median service time for BK8 is 30 minutes. Based on surveyed intra-service time in the Harvard study, the time necessary to perform BK8 is 1.5 times the intra-service time for 44955. However, the risk of an incidental appendectomy does not compare to the risk of splenic injury in mobilization of splenic flexure. In addition, the dissection involves removing the greater omentum from the splenic flexure. Therefore, the consensus committee recommends the survey median RVW of 4.00.

SURVEY DATA:

Specialty Society(s): Colon and Rectal Surgery/General Surgery

Median Intra-Service Time: 30 Low: 15 High: 60

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: n/a

Office Visits on Post-Discharge Day(s) : n/a

Median Number of Times Provided in Past 12 months: 10 (range: 3-65)

Median Number of Times Provided in Career: 100 (range: 20-500)

FEBRUARY/MAY 1994 RUC RECOMMENDATIONS
RECTAL SURGERY - TAB 18

The RUC developed recommendations for the new codes in this section. Revisions in existing codes were considered to be editorial and no change is recommended. Codes 4511X [Proctectomy, partial, with rectal mucosectomy, ileoanal anastomosis, creation of ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy] and 4512X [Proctectomy, partial, without anastomosis, perineal approach] describe services which could not be reported using existing CPT codes. It is estimated that 4511X represents 80% of services previously reported as code 45112 [Proctectomy, combined abdominoperineal, pull-through procedure, 24.29 RVW] with modifier -22. The recommendation for 4511X is based on a survey of the colon and rectal surgeons who have the most experience with this procedure. This procedure is difficult as it requires preservation of the ileum and requires taking down the previous ileostomy in order to prepare the rectum for partial resection and subsequent anastomosis. Code 4512X is more difficult than 58150, total abdominal hysterectomy, because of extensive scarring from previous operation and the difficulty of post-operative wound management. This procedure would not be performed in the global period of the primary procedure, as it typically occurs at least six months later.

Compelling evidence was presented to the RUC to increase the current RVW for 45170 [Excision of rectal tumor, transanal approach] to 9.50, which is based on survey data from general surgeons and colon and rectal surgeons and the building block method (45383, Colonoscopy [flexible, proximal to splenic flexure; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique] (RVW = 5.94) + [(2 x 99231) = 1.04] + [99238 = 1.07] + [(3 X 99212) = 1.14] = 9.19). 45170 will now be used only for the excision of large benign, pre-malignant, and malignant tumors. Small tumors (up to 3 cm) are removed via endoscopy. Additionally, Harvard data for 45170 estimates intra-service time at 57 minutes, while RUC data estimates intra-service time at 90 minutes. Phase III of the Harvard study also established an RVW of 7.82 for 45170. 4518X [Destruction of rectal tumor, any method (eg, electrodesiccation) transanal approach, will be used to report destruction of benign and malignant rectal tumors]. 4518X requires less intra-service time than 45170 and this is reflected in the recommended values.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
11	45110	Proctectomy; complete, combined abdominoperineal, with colostomy, one or two stages	090	21.92 (no change)

I2	45111	partial resection of rectum, <u>transabdominal approach</u>	090	15.14 (no change)
I3	45112	Proctectomy, combined abdominoperineal, pull-through procedure, one or two stages	090	24.29 (no change)
I4	●4511X	Proctectomy, partial, with rectal mucosectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy	090	24.96
I5	45114	Proctectomy, partial, with anastomosis; abdominal and transsacral approach, one or two stages	090	21.44 (no change)
I6	45116	transsacral approach only (Kraske type)	090	19.30 (no change)
I7	45120	Proctectomy, complete; (eg, for congenital megacolon) <u>abdominal and perineal approach; with pull-through procedure and anastomosis (eg, Swenson, Duhamel, or Soave type operation)</u>	090	23.03 (no change)
I8	45121	with subtotal or total colectomy, with multiple biopsies (eg, for colonic agangli- onosis)	090	25.24 (no change)
I9	●4512X	Proctectomy, partial, without anastomosis, perineal approach	090	13.42
I10	45170	Excision of rectal tumor, transanal approach	090	9.50
I11	45180	Excision and/or electrodesiccation of malignant tumor of rectum, transanal approach (45180 has been deleted. To report, see 45170, 45182)	090	7.82 (no change)
I12	●4518X	Destruction of rectal tumor, any method (eg, electrodesiccation) transanal approach	090	8.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: 14

Global Period: 090

CPT Descriptor: Proctectomy, partial, with rectal mucosectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 28-year-old female with longstanding ulcerative colitis was managed successfully for many years with steroids and diet modification. She underwent a prior total abdominal colectomy and ileostomy with oversewing of the rectal stump. Recently, she has had a flare-up of rectal bleeding and has chosen to have a completion proctectomy with rectal mucosectomy, creation of an ileal reservoir (S or J type), and ileal-anal anastomosis and protecting ileostomy.

Pre-service Work:

Hospital admission work-up, with special attention to ordering a steroid prep; reviewing laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient. Appropriate counseling for this patient includes verification that this is a two-stage procedure with significant morbidity. The counseling will also include informing the patient of longterm functional expectations of the pouch, dietary counseling, and the potential problems that might arise from a pregnancy after the pouch formation. The patient must also be marked for a new ileostomy site.

Intra-service Work:

Positioning, prepping, and draping the patient, with special attention to padding the legs prior to placing them in the stirrups in order to prevent a peripheral neuropathy; a midline incision with lysis of adhesions and mobilization of the ileostomy and formation of the pouch; from a perineal approach, submucosal injection of the inuosa with Epinephrine solution and a careful mucosectomy to a level above the levator muscles; a completion proctectomy is then performed, followed with a positioning of the pouch into the pelvis and formation of the ileoanal anastomosis; and the operation is completed with the formation of a protecting ileostomy and placement of a soft closed suction drain to the pelvic area, followed by a layered closure of the incision, including skin, and application of a sterile dressing over the wound with a protective drape to allow ileostomy maturation without contaminating the midline wound.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of fluids, cardiopulmonary, and hemodynamic status (including monitoring chest roentgenograms and laboratory values); careful ostomy management and attention to steroid administration; monitoring and care of the incision; monitoring, care, and removal of all drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medications.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
24.96	44153	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy
24.29	45112	Proctectomy, combined abdominoperineal, pull-through procedure, one or two stages
23.24	44152	Colectomy, total, abdominal, without proctectomy; with rectal mucosectomy, ileoanal anastomosis, with or without loop ileostomy

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Procedure I4 is performed on a patient who has had a previous colectomy and requires taking down the previous ileostomy and lysis of multiple adhesions in order to prepare the rectum for partial resection and subsequent anastomosis. The overall work of I4 is slightly more than the work for 44153. Because ASCRS members perform this procedure frequently, ACS and ASCRS recommend the ASCRS median value of 25.29 work units.

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that I4 represents 80% of the previously reported cases for code 45112-22.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 45112-22 was 18* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

General Surgery

Median Intra-Service Time: 240 Low: 160 High: 600

Median Pre-Service Time: 80 Median Post-Service Time: 198

Length of Hospital Stay: 10

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 0 (range = 0-30)

SURVEY DATA:

Colon and Rectal Surgery

Median Intra-Service Time: 240 Low: 54 High: 360

Median Pre-Service Time: 120 Median Post-Service Time: 240

Length of Hospital Stay: 8

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 5 (range = 0-24)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Specialty Society(s): American College of Surgeons (ACS)
American Society of Colon and Rectal Surgeons (ASCRS)

Presenter(s) at RUC Meeting: Paul Collicott, MD, FACS (ACS); Frank Opelka, MD, FACS (ASCRS)

Tracking Number: 19 Global Period: 090 Recommended RVW: 13.60

CPT Descriptor: Proctectomy, partial, without anastomosis, perineal approach

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A white male with longstanding inflammatory bowel disease had undergone an emergency operation for bleeding, at which time a total abdominal colectomy with a partial proctectomy was performed, with formation of an end ileostomy. After the patient recovered from his initial operation, his nutritional status improved, and he was successfully weaned from his steroid medication. The patient was informed of the necessity to remove the rectal remnant because it would be a nidus for bleeding and subsequent cancer formation. The patient was informed that the options for accomplishing this goal were either an abdominoperineal approach for a proctectomy, mucosectomy and pouch formation with ileoanal anastomosis, versus a completion perineal-proctectomy, making the ileostomy permanent. The patient was comfortable with permanent ileostomy and underwent a perineal-proctectomy.

Pre-service Work:

Hospital admission work-up, with special attention to a possible steroid prep; ordering and reviewing roentgenogram and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient and/or responsible family member.

Intra-service Work:

Positioning, prepping, and draping the patient, with careful attention to padding the lower extremities to prevent peripheral nerve damage; making a perineal excision with adequate hemostasis; placement of drains, layered closure of perineal wound, including skin; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of drains, fluids, electrolyte, and cardiopulmonary status (including monitoring chest roentgenograms and laboratory values); monitoring and care of the perineal incision; monitoring, care, and removal of all drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medications.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
13.14	58150	Total abdominal hysterectomy (corpus and cervix), with or without removal of tube(s), with or without removal of ovary(s);
11.52	58260	Vaginal hysterectomy;
11.66	47605	Cholecystectomy; with cholangiography
15.14	45111	Proctectomy; partial resection of rectum

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The work involved in 19 is more than the work of 58150 because of extensive scarring from previous operations. The consensus committee agreed to recommend the ACS survey median RVW of 13.60, which reflects the increased work over 58150.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- The College's committee is unable to estimate a frequency for 19.

SURVEY DATA:

General Surgery

Median Intra-Service Time: 120 Low: 30 High: 350

Median Pre-Service Time: 60 Median Post-Service Time: 120

Length of Hospital Stay: 6

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 21, 45)

Number of Times Provided in Past 12 months: 0 (range = 0-4)

SURVEY DATA:

Colon and Rectal Surgery

Median Intra-Service Time: 180 Low: 45 High: 300

Median Pre-Service Time: 90 Median Post-Service Time: 180

Length of Hospital Stay: 5

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 1 (range = 0-6)

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No. (CPT Code): 110 (45170)

Global Period: 090

CPT Descriptor: Excision of rectal tumor, transanal approach

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 75-year-old female with a 3.5 x 4.5 cm biopsy-proven villous adenoma of the posterior rectal wall, with the lower margin at 4 cm from the anal verge, presents with rectal bleeding and watery diarrhea. She is admitted for elective transanal excision.

Pre-service Work:

Hospital admission work-up, with special attention to the patient's cardiovascular, respiratory, renal, and peripheral vascular systems; ordering and reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient and/or responsible family member.

Intra-service Work:

Positioning the patient, with careful attention to padding the lower extremities to prevent peripheral nerve damage; placing sequential compression devices; prepping the operative area; rectal irrigation; submucosal injection of epinephrine; placement of stay sutures to delineate margin of resection and facilitate excision and closure; excision of lesion; and suture closure of wound.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); monitoring of blood sugars; monitoring of rectal discharge for potential post-operative bleeding; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medications.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy
5.09	45170	Excision of rectal tumor, transanal approach
7.82	45180	Excision and/or electrodesiccation of malignant tumor of rectum, transanal approach
6.77	46260	Hemorrhoidectomy, internal and external, complex or extensive;
5.94	45383	Colonoscopy, flexible, proximal to splenic flexure; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The following rationale considers the relationship between I10 and I12. In current practice, both I10 (45170) and I12 (new) now represent excision of large benign, pre-malignant, or malignant lesions. Small tumors are removed via endoscopy. The intra-operative work of I10 (excision) is greater than the intra-operative work of I12 (destruction). The Harvard study results confirm that I10 intra-service work is greater than I12. Reference service 45383 (RVW = 5.94), which represents removal of benign tumors/polyps, has no global period (does not include pre- and post-operative work) and removes lesions that are not as extensive as those which remain to be removed by I10 and I12. The post-operative hospital visits (2x99231; RVW = 1.04); discharge day management (99238; RVW = 1.07); and the post-discharge office visits (3x99212; RVW = 1.14) add to the total work for both I10 and I12. Based on this information, the consensus committee recommends the survey median RVW of 9.5 for I10 and recommends an RVW of 9.0 for I12 based on its slightly less intra-operative work.

SURVEY DATA:

Specialty Society(s): Colon and Rectal Surgery/General Surgery

Median Intra-Service Time: 90 Low: 45 High: 125

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 2

Office Visits on Post-Discharge Day(s) : 99212 on days 7, 21, 42

Median Number of Times Provided in Past 12 months: 3 (range: 0-10)

Median Number of Times Provided in Career: 20 (range: 4-70)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: 112

Global Period: 090

CPT Descriptor: Destruction of rectal tumor, any method (eg, electrodesiccation) transanal approach

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 75-year-old female with a 3.5 x 4.5 cm biopsy-proven villous adenoma of the posterior rectal wall, with the lower margin at 4 cm from the anal verge, presents with rectal bleeding and watery diarrhea. She is admitted for elective transanal electrodesiccation.

Pre-service Work:

Hospital admission work-up, with special attention to the patient's cardiovascular, respiratory, renal, and peripheral vascular systems; ordering and reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient and/or responsible family member.

Intra-service Work:

Positioning the patient, with careful attention to padding the lower extremities to prevent peripheral nerve damage; placing sequential compression devices; prepping the operative area; rectal irrigation; sequential fulguration and curettage until lesion is ablated and hemostasis is assured.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); monitoring of blood sugars; monitoring of rectal discharge for potential post-operative bleeding; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medications.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
8.14	15100	Split graft, trunk, scalp, arms, legs, hands, and/or feet (except multiple digits); 100 sq cm or less, or each one percent of body area of infants and children (except 15050)
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy
5.09	45170	Excision of rectal tumor, transanal approach
7.82	45180	Excision and/or electrodesiccation of malignant tumor of rectum, transanal approach
6.77	46260	Hemorrhoidectomy, internal and external, complex or extensive;
5.94	45383	Colonoscopy, flexible, proximal to splenic flexure; with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery or snare technique

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The following rationale considers the relationship between I10 and I12. In current practice, both I10 (45170) and I12 (new) now represent excision of large benign, pre-malignant, or malignant lesions. Small tumors are removed via endoscopy. The intra-operative work of I10 (excision) is greater than the intra-operative work of I12 (destruction). The Harvard study results confirm that I10 intra-service work is greater than I12. Reference service 45383 (RVW=5.94), which represents removal of benign tumors/polyps, has no global period (does not include pre- and post-operative work) and removes lesions that are not as extensive as those which remain to be removed by I10 and I12. The post-operative hospital visits (2x99231; RVW= 1.04); discharge day management (99238; RVW= 1.07); and the post-discharge office visits (3x99212; RVW= 1.14) add to the total work for both I10 and I12. Based on this information, the consensus committee recommends the survey median RVW of 9.5 for I10 and recommends an RVW of 9.0 for I12 based on its slightly less intra-operative work.

SURVEY DATA:

Specialty Society(s): Colon and Rectal Surgery/General Surgery

Median Intra-Service Time: 60 Low: 25 High: 130

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 2

Office Visits on Post-Discharge Day(s) : 99212 on days 7, 21, 42

Median Number of Times Provided in Past 12 months: 1 (range: 0-10)

Median Number of Times Provided in Career: 5 (range: 0-85)

1992 NCH Medicare File Frequency Data to Supplement 5/94 RUC Presentation

Tracking				Allowed Frequency	COMMENTS
No	CPT	Modifier(s)			
S5	35211	No Modifiers		18	S5 most likely reported as 35211 in the past.
	35211	-82 two surgeons		(2/2)	
	35211	-51 multiple		44	
	35211	TOTAL		61	

I10 / I12	45170	No Modifiers		5,178
	45170	-22 unusual		84
	45170	-22 unusual/-51 multiple		2
	45170	-51 multiple		448
	45170	-52 reduced		49
	45170	-54 surg. care only		12
	45170	-82 two surgeons		(2/2)
	45170	-55 postop/-56 prep only		6
45170	TOTAL		5,779	

Old Descriptors:
 45170 = excision
 45180 = excision / destruction - malignant
 New Descriptors:
 I10 = excision
 I12 = destruction

I10 and I12 were most likely reported using 45170 and 45180, however, the change in the descriptors imply that some percentage of 45180 frequency now would be reported under I10 (i.e., excision taken out of descriptor).

I10 / I12	45180	No Modifiers		2,267
	45180	-22 unusual		31
	45180	-22 unusual/-51 multiple		1
	45180	-51 multiple		130
	45180	-52 reduced		22
	45180	-52 reduced/-51 multiple		1
	45180	-54 surg. care only		3
	45180	-82 two surgeons		1
	45180	TOTAL		2,456

L2 / L3	47710	No Modifiers		118
	47710	-22 unusual		4
	47710	-22 unusual/-51 multiple		1
	47710	-22 unusual/-54 surg care		1
	47710	-51 multiple		34
	47710	-52 reduced/-51 multiple		1
	47710	-52 reduced/-82 two surg		(2/2)
47710	TOTAL		160	

L2 represents a majority of the services previously reported under 47710.

L2 / L3	47780	No Modifiers		1,775
	47780	-22 unusual		54
	47780	-22 unusual/-51 multiple		42
	47780	-22 unusual/-54 surg care		2
	47780	-22 unusual/-54 surg care		2
	47780	-51 multiple		119
	47780	-51 multiple/-54 surg. car		2
	47780	-52 reduced		3
	47780	-52 reduced/-51 multiple		21
	47780	-54 surg. care only		6
	47780	-55 postop mgmt only		1
	47780	-82 two surgeons		(10/2)
	47780	-88 surgical team		1
	47780	TOTAL		1,979

L3 would have been reported using 47710-22 plus 47780-51 for the anastomosis.

**FEBRUARY 1994 RUC RECOMMENDATIONS
EXPLORATION AND DRAINAGE FOR RECTAL INJURY - TAB 24**

The recommendations for 458XA and 458XB are based on a survey median of nearly 60 general surgeons and colon and rectal surgeons. Code 458XA [Exploration, repair, and presacral drainage for rectal injury] is more work than 43420 [Closure of esophagostomy or fistula; cervical approach] because the injury is more difficult to locate. This procedure is also more difficult than exploration of anal fissures or abscess as intra-abdominal exploration is frequently required. The RUC recommends 17.75 RVW for 458XB [Exploration, repair, and presacral drainage for rectal injury; with colostomy]. Not only is there additional work in performing the colostomy, but the significance of the injury that requires the colostomy to be performed makes the primary procedure more difficult. The RUC discussed the vignette used to survey for J2 and concluded that the typical patient undergoing this procedure would be a post-resuscitation patient in shock. There is a 5-6% mortality rate for these patients.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation (in 1994 RVWs)
J1	●458XA	Exploration, repair, and presacral drainage for rectal injury;	090	11.25
J2	●458XB	with colostomy	090	17.75

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: J1 Global Period: 090

CPT Descriptor: Exploration, repair, and presacral drainage for rectal injury;

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 43-year-old male presents to the endoscopy suite for an outpatient colonoscopy/polypectomy. The only lesion identified was a 3 cm pedunculated polyp located at 7 cm from the anal verge. During the snare excision of this lesion, the rectum was perforated at approximately 10 cm (below the peritoneal reflection). The patient is taken directly to the operating room, where the perforation is repaired and the presacral area is drained. The patient recovers without sequelae and is discharged on the sixth post-operative day.

Pre-service Work:

Hospital admission work-up, with special attention to cardiopulmonary status; reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; obtaining consent from the patient or responsible family member; and coordination of transport to the operating room and preparation of the operating room for emergent operation.

Intra-service Work:

Positioning, prepping, and draping the patient; debriding and repairing the rectal laceration and placement of drains; layered closure of the incision, including skin; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); monitoring and care of the incision; monitoring, care, and removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

KEY REFERENCE SERVICE(S):

'94 RVW	CPT	Descriptor
14.25	44160	Colectomy with removal of terminal ileum and ileocolostomy
13.46	45820	Closure of rectourethral fistula;
12.48	45160	Excision of rectal tumor by proctotomy, transacral or transcoccygeal approach
10.30	43420	Closure of esophagostomy or fistula; cervical approach

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Procedure J1 is less work than 45160, but more work than 43420 because the injury is more difficult to locate. The consensus committee agreed to recommended the ACS survey median RVW of 11.25, which is consistent with the RVWs for 45160 and 43420.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

It is estimated that the frequency for J1 is low, however, the consensus committee is unable to quantify the estimate.

SURVEY DATA:

General Surgery

Median Intra-Service Time: 90 Low: 30 High: 240

Median Pre-Service Time: 48 Median Post-Service Time: 120

Length of Hospital Stay: 6

Post-Hospital Office Visits: 99212 (days 7, 21, 30)

Number of Times Provided in Past 12 months: 0 (range = 0-6)

SURVEY DATA:

Colon and Rectal Surgery

Median Intra-Service Time: 120 Low: 60 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 120

Length of Hospital Stay: 7

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 0 (range = 0-1)

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: J2

Global Period: 090

CPT Descriptor: Exploration, repair, and presacral drainage for rectal injury; with colostomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 24-year-old male presents with a history of a gun shot wound to his lower abdominal area with the entrance supra-pubically and exit at the posterior buttock level. He is resuscitated in the emergency room and has undergone x-rays and stabilization. Exam reveals blood in the rectal vault. The patient is explored via an abdominal approach, with the rectal laceration being debrided and repaired. The peritoneal cavity is carefully debrided and lavaged, and the presacral area is drained. Because of the extent of injury, the presence of unprepared bowel, and blood loss/shock, a proximal colostomy is performed to protect the low-lying rectal repair. The patient recovers and is discharged on the sixth post-operative day.

Pre-service Work:

Hospital admission work-up, with special attention to resuscitation and pre-operative stabilization and assessment for the trauma patient; ordering and reviewing the appropriate roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; communicating with law-enforcement officials; and obtaining consent from the patient and/or responsible family member.

Intra-service Work:

Positioning, prepping, and draping the patient; making the midline incision and exploring the peritoneal cavity and retro-peritoneal space; debriding and repairing of the rectal laceration; placement of drains; culturing of the abdominal cavity and wound; layered closure of the incision, including skin; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals and law enforcement officials (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); monitoring and care of the incision; monitoring, care, and removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
17.27	44140	Colectomy, partial; with anastomosis
14.06	44605	Suture of large intestine (colorrhaphy) for perforated ulcer, diverticulum, wound, injury or rupture (single or multiple perforations); with colostomy
12.73	38115	Repair of ruptured spleen (splenorrhaphy) with or without partial splenectomy
15.28	44143	Colectomy, partial; with end colostomy and closure of distal segment (Hartmann type procedure)
23.03	44146	Colectomy, partial; with coloproctostomy (low pelvic anastomosis); with colostomy

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

J2 involves more work than J1 due to the addition of a colostomy and due to the fact that the procedure is performed on unprepared bowel as an emergency. The damage to the rectum is more extensive and less likely to heal without the colostomy. The performance of this procedure frequently is associated with pelvic hematoma, which complicates the surgical dissection. The postoperative care is much more intense, and infection complications frequently result in a significant increase in mortality in patients. Therefore, the consensus panel recommends an RVW of 17.75, which is halfway between the recommendations from the ACS survey and the ASCRS survey. This value also lies halfway between 44143 and 44146, which is the appropriate relationship to work.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that J2 represents less than 5% of the previously reported cases for codes 44605-22 and 45000.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 44605-22 was 13* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

General Surgery

Median Intra-Service Time: 140 Low: 90 High: 310

Median Pre-Service Time: 60 Median Post-Service Time: 140

Length of Hospital Stay: 6

Post-Hospital Office Visits: 99213 (day 7); 99212 (day 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 1 (range = 0-5)

SURVEY DATA:

Colon and Rectal Surgery

Median Intra-Service Time: 180 Low: 120 High: 360

Median Pre-Service Time: 60 Median Post-Service Time: 240

Length of Hospital Stay: 7

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28); 99213 (day 60)

Number of Times Provided in Past 12 months: 0 (range = 0-10)

FEBRUARY 1994 RUC RECOMMENDATIONS
LIVER SURGERY - TAB 25

The RUC recommendation for the new code 4702X [Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cysts(s) or abscess(es)] is based on a comparison to codes 47010 [Hepatotomy for drainage of abscess or cyst, one or two stages] and 47300 [Marsupialization of cyst or abscess of liver], both with an RVW of 8.85. 4702X is slightly more work than 47010 and 47300 as more care is required to avoid spillage and to protect the remaining abdominal contents. 4702X is estimated to represent 1% of services previously reported with code 47010 and modifier -22, which had a 1992 Medicare frequency of 12.

The other coding revisions in this section were considered editorial and no change in relative value is recommended.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
K1	47000	Biopsy of liver, percutaneous needle; <u>percutaneous</u>	000	1.95 (no change)	1.92 (no change)
K2	47001	when done for indicated purpose at time of other major procedure (not as a separate procedure)	ZZZ	1.95 (no change)	1.92 (no change)
K3	47100	Biopsy of liver, wedge (separate procedure)	090	6.92 (no change)	6.83 (no change)
K4	●4702X	Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cyst(s) or abscess(es)	090	9.00	8.88

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: K4 Global Period: 090

CPT Descriptor: Laparotomy, with aspiration and/or injection of hepatic parasitic (eg, amoebic or echinococcal) cyst(s) or abscess(es)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 50-year-old male, presenting with fever and right upper quadrant pain; had a CT scan that showed a 10 cm in diameter cyst in the right lobe of the liver. The lesion was diagnosed as an echinococcal cyst. Laparotomy was performed, and the cyst was aspirated using a 60 ml syringe, 18 gauge needle, and 3-way stopcock. The cyst was then injected with hypertonic saline. The endocyst was excised and the cavity obliterated.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing imaging studies and laboratory reports; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, and obtaining informed consent; and coordinating anti-parasitic therapy.

Intra-service Work:

Positioning, prepping, and draping the patient; performing an abdominal incision; excluding the peri-hepatic area from the remainder of the abdomen with scolicedal-soaked packs; aspirating the cyst and then performing multiple irrigations and aspirations with hypertonic saline; incising the exocyst and excising the endocyst; obliterating the resulting cavity with a flap of omentum; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); evaluating lab reports; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
9.09	49000	Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)
8.85	47300	Marsupialization of cyst or abscess of liver
8.85	47010	Hepatotomy for drainage of abscess or cyst, one or two stages

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Although the survey median RVW was 15.00, the College's committee recommends an RVW of 9.00, feeling that the work of K9 is only slightly less than 49000 due to the fact that the surgeon can use a limited approach. In addition, it is slightly more work than 47300 and 47010 due to the care required to avoid spillage and to protect the remaining abdominal contents. It should be noted that the frequency for this procedure is low and many of the survey respondents had limited experience.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that K4 represents 1% of the previously reported cases for code 47010-22.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 47010-22 was 12* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

General Surgery

Median Intra-Service Time: 120 Low: 60 High: 300

Median Pre-Service Time: 60 Median Post-Service Time: 140

Length of Hospital Stay: 7

Post-Hospital Office Visits: 99212 (day 7); 99211 (days 21, 28)

Number of Times Provided in Past 12 months: 0 (range = 0-4)

Other Data: Survey respondents used 1993 RVWs in providing their response to this survey.

MAY 1994 RUC RECOMMENDATIONS
BILE DUCT SURGERY - TAB 16

The RUC adopted recommendations for five new codes 477XA, 477XB, 4774X, 4778X, and 4790X based on a survey of general surgeons. Other coding revisions in this section were considered editorial and no change in relative value is recommended. 4774X [Cholecystoenterostomy; Roux-en-Y with gastroenterostomy] is performed on patients that have pancreatic and/or bowel cancer. During this procedure the Roux-en-Y loop is mobilized and anastomosis is performed. The recommended RVW of 16.41 for this procedure is less than the survey median and is calculated by adding the difference between the work involved in cholecystoenterostomy, direct (12.03) and Roux-en-Y (14.08) to the work of cholecystoenterostomy with gastroenterostomy (14.57). The recommended RVW is also higher than the reference services due to the additional work that is required to mobilize the Roux-en-Y loop and the additional anastomosis. Previously 4774X was reported as a multiple procedure using CPT codes 47740 [Cholecystoenterostomy; Roux-en-Y] and 43820 [Gastrojejunostomy] with modifier -51.

4778X [Anastomosis, Roux-en-Y, of intrahepatic biliary ducts and gastrointestinal tract] is performed primarily on patients with biliary cancer, as a secondary surgery on patients that have had previous resection of the of the common bile duct with anastomosis. During the secondary surgery the right and left hepatic ducts are anastomosed by developing a Roux-en-Y jejunal loop. The recommended RVW for 4778X of 24.48 is lower than the RVW of the key reference service for this code, which is 47701 [Portoenterostomy (eg, Kasai procedure), 26.87 RVW].

4790X [Suture of extrahepatic biliary duct for pre-existing injury (separate procedure)] is performed on patients that are septic due to advanced peritonitis and may also have extensive bowel injury. The recommended RVW of 15.80 falls in between RVW for the reference procedures because 4790X involves more physician work than 47420 [Choledochotomy or choledochostomy with exploration, drainage, or removal of calculus, with or without cholecystotomy, 15.48 RVW], due to sepsis and bile drainage, but is less physician work than 47800 [Reconstruction, plastic, of extrahepatic biliary ducts with end-to-end anastomosis, 17.91 RVW] because the physician is not reconstructing the extrahepatic biliary ducts.

477XA and 477XB are performed infrequently, with a total of 160 reported for 1992. The physician work involved in performing the procedure described by 477XA [Excision of bile duct tumor, with or without primary repair of bile duct; extrahepatic] is characterized by the extensive dissection of a choledochal cyst, excision of the cyst, and resection and anastomosis of a segment of the common bile duct. Previously, physicians have not had a specific code to report this service. 95% of these procedures were reported using CPT code 47710 [Excision of bile duct tumor, with repair], which is also the key reference service for this procedure. CPT code 47710, which had an RVW of 18.64, has been deleted and the new code 477XA was split so that each component of this service could be reported accurately. The specialty society proposed an RVW of 18.64 for 477XA since the overwhelming majority of this surgery was reported using CPT code 47710 which has an RVW of 18.64. The initial recommended value of 477XA was lowered from 18.64 RVW to 18.36 RVW to achieve work neutrality within the family of codes. The specialty society noted that this code includes the following E/M services: postoperative ICU care for 24 hours (99291; RVW=3.68); subsequent hospital care including nutritional support management for five days (5x99233; RVW= 6.30); discharge day management (99238; RVW=1.07); and post-discharge office

visits(99214; RVW=0.95 + 2x99213; RVW=1.12). The RVW for these services alone, without the surgery, would equal 13.12, which is 71% of the total recommended RVW of 18.36.

477XB [Excision of bile duct tumor, with or without primary repair of bile duct; intrahepatic] was also reported previously using CPT code 47710. The physician work in this procedure includes resection of the hepatic bile ducts and preservation of the portal vein and hepatic artery. It was noted by the specialty society that there is a significant increase in morbidity and mortality rates from this procedure. Due to the complexity of this procedure, the -22 modifier was appended to the code resulting in additional payment of 25% according to current payment guidelines. The RUC adopted the recommended value for this code of 24.00 RVW, which represents the median value from the survey data. The specialty society noted that this code includes the following E/M services: postoperative ICU care for 48 hours (2x99291; RVW=7.36); subsequent hospital care including nutritional support management for seven days (7x99233; RVW= 8.82); discharge day management (99238; RVW= 1.07); and post-discharge office visits (99214; RVW=0.95+ 3x99213; RVW=1.68). The RVW for these services alone, without the surgery, would equal 19.88, which is 83% of the total recommended RVW of 24.00.

Tracking Number	CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
L13	47420	Cholecystectomy or choledochostomy with exploration, drainage, or removal of calculus, with or without cholecystostomy; <u>without transduodenal sphincterotomy or sphincteroplasty</u>	090	15.48 (no change)
L17	47425	with transduodenal sphincterotomy or sphincteroplasty	090	14.95 (no change)
L16	47440	Duodenocholecystectomy, transduodenal-choledocholithotomy (47440 has been deleted)	090	N/A
L14	47460	Transduodenal sphincterotomy or sphincteroplasty (separate procedure) , <u>with or without transduodenal extraction of calculus (separate procedure)</u>	090	14.57 (no change)
L15	47530	Revision and/or reinsertion of transhepatic T-tube	090	5.47 (no change)
L1	47710	Excision of bile duct tumor, with repair (47710 has been deleted. To report, see 477XX, 47XXX)	090	N/A
L2	•477XA	Excision of bile duct tumor, with or without primary repair of bile duct; extrahepatic	090	18.36

L3	●477XB	intrahepatic (For anastomosis, see 47760-47800)	090	24.00
L4	47720	Cholecystoenterostomy; direct	090	12.03 (no change)
L5	47721	with gastroenterostomy	090	14.57 (no change)
L6	47740	Roux-en-Y	090	14.08 (no change)
L7	●4774X	Roux-en-Y with gastroenterostomy	090	16.41
L8	47760	Anastomosis, direct , of extrahepatic biliary ducts and gastrointestinal tract	090	20.15 (no change)
L9	47765	Anastomosis, direct , of intrahepatic ducts and gastrointestinal tract	090	19.25 (no change)
L10	47780	Anastomosis, Roux-en-Y, of extrahepatic biliary ducts and gastrointestinal tract	090	20.63 (no change)
L11	●4778X	Anastomosis, Roux-en-Y, of intrahepatic biliary ducts and gastrointestinal tract	090	24.68
L12	●4790X	Suture of extrahepatic biliary duct for pre-existing injury (separate procedure)	090	15.80

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: L7 Global Period: 090

CPT Descriptor: Cholecystoenterostomy; Roux-en-Y with gastroenterostomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 72-year-old man is admitted with jaundice, a 10 pound weight loss, and recent difficulty retaining solid food. The liver is enlarged and there is a palpable mass in the right upper quadrant. CT scan shows a mass in the head of the pancreas and dilated biliary ducts and gallbladder. At exploration, the mass is unresectable, and there is critical narrowing of the duodenum. To keep well clear of the tumor, a Roux-en-Y loop is constructed and anastomosed to the gallbladder, followed by an antecolic gastrojejunostomy. Post-operatively, the patient becomes confused and goes into congestive failure. Eventually, he is discharged on the twelfth post-operative day in a weakened condition.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing roentgenograms, laboratory, and special imaging studies; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, with extensive explanation of operative alternatives (pancreaticoduodenectomy); obtaining informed consent; optimizing nutritional, hemodynamic, and coagulation status; and coordinating intra-operative imaging studies.

Intra-service Work:

Positioning, prepping, and draping the patient; operatively exploring the inferior surface of the pancreas, which reveals invasion of the superior mesenteric vein precluding resection; performing a biopsy of the pancreatic mass and/or regional lymph nodes; reviewing a frozen section; performing a cholecystoenterostomy (Roux-en-Y) with gastroenterostomy; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient in ICU for 48 hours; communicating with the patient, family, and other health care professionals, (including written and telephone reports, orders, and oncologic consultation); arranging for hospice care, which takes considerable time; removing the sutures at the appropriate time in the hospital; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including evaluation of lab reports and adjustment of medication.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
12.03	47720	Cholecystoenterostomy; direct
14.57	47721	Cholecystoenterostomy; with gastroenterostomy
14.08	47740	Cholecystoenterostomy; Roux-en-Y

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The recommended RVW of 16.62, which is less than the survey median RVW, was determined by adding 2.05 work units for the additional work to mobilize a Roux-en-Y jejunal loop and perform an additional anastomosis to 47721. The additional 2.05 work units is equal to the difference between the RVW's for 47720 and 47740. This procedure is performed primarily for unresectable pancreatic and bile duct carcinoma.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that L7 represents 20% of the previously reported cases for the combination of codes 47740 plus 43820-51.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 47740 was 1,012* and for code 43820-51 was 2,004*
(*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 178 Low: 90 High: 260

Median Pre-Service Time: 60 Median Post-Service Time: 205

Length of Hospital Stay: 12

Post-Hospital Office Visits: 99213 (day 7); 99212 (days 14, 28)

Number of Times Provided in Past 12 months: 2 (range = 0-20)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: L11 Global Period: 090

CPT Descriptor: Anastomosis, Roux-en-Y, of intrahepatic biliary ducts and gastrointestinal tract

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 50-year-old female presents with a history of previous cholecystectomy with stones, followed two months later by re-operation for jaundice which revealed a narrowing of the common bile duct. A resection and primary anastomosis was performed. Two years later, she reappears with recurrent jaundice and cholangitis. ERCP reveals an obstruction of the bile duct. At operation, the distal bile duct is obliterated with marked fibrosis to the level of the bifurcation of the right and left hepatic ducts and the right and left hepatic ducts are anastomosed Roux-en-Y to the jejunum. She goes to ICU for 48 hours post-operatively, has a subsequent uneventful recovery, and is discharged on the twelfth post-operative day.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing roentgenograms, laboratory, and special imaging studies; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, with an explanation of operative alternatives; obtaining informed consent; optimizing nutritional, hemodynamic, and coagulation status; and coordinating intra-operative imaging studies.

Description of Intra-Service Work:

Positioning, prepping, and draping the patient; performing extensive lysis of adhesions, which is necessary to obtain access to a scarred right upper quadrant; identifying the bile duct, with difficulty, and dissecting the intra-hepatic bile ducts; obtaining bile cultures; developing a Roux-en-Y jejunal loop, which is anastomosed to the right and left hepatic ducts and stented; placing drains; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient in ICU for 48 hours; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); removing drains at the appropriate time in the hospital, but leaving the stents in place; evaluating lab reports; removing sutures while in the hospital; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including required laboratory evaluations.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: L12 Global Period: 090

CPT Descriptor: Suture of extrahepatic biliary duct for pre-existing injury (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 67-year-old female develops fever and jaundice one week post laparoscopic cholecystectomy. CT scan shows a large subhepatic fluid collection, and ERCP demonstrates extravasation from the common bile duct. At exploration, a 3mm tear at the previous cystic duct-common duct junction is found. The duct is repaired over a T-tube. An operative cholangiogram is obtained and interpreted by the surgeon as normal. Post-operatively, jaundice and fever slowly resolve and bowel function returns at three days. The patient is discharged with T-tube in place on the seventh post-operative day. A T-tube cholangiogram performed at ten days shows no leak.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing roentgenograms, laboratory, and special imaging studies; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, with an explanation of operative alternatives; obtaining informed consent; optimizing nutritional, hemodynamic, and coagulation status; and coordinating intra-operative imaging studies.

Intra-service Work:

Positioning, prepping, and draping the patient; performing lysis of adhesions, which is necessary to obtain access to an inflamed right upper quadrant; identifying the bile duct, with difficulty, and identifying a 3 mm tear in the mid bile duct, which is repaired over a T-tube; obtaining bile cultures; obtaining and interpreting an intra-operative cholangiogram; placing drains; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); removal of the drains at the appropriate time in the hospital, but leaving the T-tube in place; evaluating lab reports; obtaining and reviewing a post-operative T-tube cholangiogram; removing sutures while in the hospital; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including required post-discharge laboratory and radiographic evaluations and pre-removal T-tube cholangiogram.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No.: L2

Global Period: 090

CPT Descriptor: Excision of bile duct tumor, with or without primary repair of bile duct; extrahepatic

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 28-year-old male presents with a history of an intermittent fever, jaundice, and vague upper right quadrant fullness. CT scan of the abdomen reveals a cystic lesion near the mid-portion of the common bile duct and no evidence of metastatic disease. Preoperative ERCP confirms a small choledochal cyst and mild intrahepatic biliary ductal dilatation. At laparotomy, the cyst is excised and frozen section reveals adenocarcinoma *in situ* with clear margins. A primary extrahepatic common duct repair is performed over a T-tube.

Pre-service work:

Hospital admission work-up, with attention to cardiopulmonary and hematologic status; reviewing roentgenograms and laboratory studies; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient or responsible family member.

Intra-service work:

Positioning, prepping, and draping the patient; planning and making an incision in the abdominal wall; exposing the hepatic duct at the liver hilum; performing extensive dissection of the choledochal cyst with exposure of the common bile duct from the superior border of the pancreas to the common hepatic duct; excision of the choledochal cyst, with frozen section evaluation, with resection of a segment of the common bile duct with primary anastomosis over a T-tube; placement of drain; layered closure of the incision, including skin; and application of sterile dressing.

Post-service work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); ICU care (24 hours); monitoring and care of the incision; monitoring and care of tubes and drain; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including: evaluating laboratory reports and T-tube cholangiogram; and maintenance and removal of T-tube and drain.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
18.64	47710	Excision of bile duct tumor, with repair

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus committee recommends the existing RVW for 47710 of 18.64 because L2 represents the overwhelming majority of the services previously reported under 47710.

However, the American College of Surgeons would like to make the observation that this code includes the following E/M services: postoperative ICU care for 24 hours (99291; RVW=3.68); subsequent hospital care including nutritional support management for five days (5x99233; RVW=6.30); discharge day management (99238; RVW=1.07); and post-discharge office visits (99214; RVW=0.95 + 2x99213; RVW=1.12). These E/M work codes equate to an RVW of 13.12 that presumably represents 49% of the total work, resulting in a calculated total RVW of 26.78 for this service. Based on the building block methodology previously accepted and used by the RUC, this calculation illustrates the undervaluation of general surgery services.

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 180 Low: 90 High: 420

Median Pre-Service Time: 68 Median Post-Service Time: 150

Length of Hospital Stay: 7

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 21, 42

Median Number of Times Provided in Past 12 months: 0 (range: 0-3)

Median Number of Times Provided in Career: 2 (range: 0-30)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Tracking No. : L3

Global Period: 090

CPT Descriptor: Excision of bile duct tumor, with or without primary repair of bile duct; intrahepatic
(For anastomosis, see 47760-47800)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 65-year-old male presents with painless jaundice of two weeks duration and a 20 pound weight loss. CT scan reveals intrahepatic biliary ductal dilatation without evidence of pancreatic or intrahepatic masses. Transhepatic percutaneous cholangiography reveals an obstruction at the junction of the left and right hepatic ducts and an intrahepatic ductal catheter is left in the right hepatic duct for drainage. The patient is taken to the operating room and undergoes common hepatic and common bile duct resection of a cholangiocarcinoma with intrahepatic resection of the distal portion of the right and left hepatic ducts. No metastases were evident. The reconstruction will require a Roux-en-Y left and right intrahepatic cholangiojejunostomy. [Note: the Roux-en-Y is a separate code and not to be considered as part of L3].

Pre-service work:

Hospital admission work-up, with special attention to cardiopulmonary and hematologic status; reviewing roentgenograms and laboratory studies, including assessment of the nutritional status and supervision of TPN and associated laboratory abnormalities; communicating with the patient, the patient's family, and other health care professionals; consulting with the referring physician, if necessary; and obtaining consent from the patient or responsible family member.

Intra-service work:

Positioning, prepping, and draping the patient; planning and making an incision in the abdominal wall; exposing the hepatic duct at the liver hilum, with extended intrahepatic dissection of both the left and right ducts; performing extensive dissection of the common hepatic and common bile ducts from the portal vein down to the superior edge of the pancreas; mobilizing by process of an extended Kocher maneuver; layered closure of the incision, including skin; and application of sterile dressing.

Post-service work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of cardiopulmonary status (including monitoring chest roentgenograms); ICU care, ventilator management, and nutritional management, either by enteral or venous hyperalimentation; monitoring and care of the incision; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including evaluating laboratory reports.

KEY REFERENCE SERVICE(S):

<u>RVW</u>	<u>CPT Code</u>	<u>CPT Descriptor</u>
31.91	47130	Hepatectomy, resection of liver; total right lobectomy
18.64	47710	Excision of bile duct tumor, with repair
26.87	47701	Poroenterostomy (eg, Kasai procedure)

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus committee recommends the survey median RVW of 24.00 based on a significant increase in time and intensity of work over L2. The increase in work entails a much more extensive resection and dissection, with isolation of the left and right intrahepatic bile ducts, as well as the identification and preservation of the right and left branches of the portal vein and hepatic artery. The survey shows, appropriately, at least an hour more intraoperative time. Additionally, it should be noted that this service was likely to be reported as 47710-22. Using current payment guidelines of 25% additional payment for -22 modifier, the calculated RVW would be 23.30.

However, the American College of Surgeons would like to make the observation that this code includes the following E/M services: postoperative ICU care for 48 hours (2x99291; RVW=7.36); subsequent hospital care including nutritional support management for seven days (7x99233; RVW=8.82); discharge day management (99238; RVW=1.07); and post-discharge office visits (99214; RVW=0.95 + 3x99213; RVW=1.68). These E/M work codes equate to an RVW of 19.88 that presumably represents 49% of the total work, resulting in a calculated total RVW of 40.57 for this service. Based on the building block methodology previously accepted and used by the RUC, this calculation illustrates the undervaluation of general surgery services.

SURVEY DATA:

Specialty Society(s): General Surgery

Median Intra-Service Time: 240 Low: 90 High: 480

Median Pre-Service Time: 85 Median Post-Service Time: 180

Length of Hospital Stay: 10

Office Visits on Post-Discharge Day(s) : 99214 on day 7; 99213 on days 21, 42, 75

Median Number of Times Provided in Past 12 months: 0 (range: 0-4)

Median Number of Times Provided in Career: 2 (range: 0-24)

1992 NCH Medicare File Frequency Data to Supplement 5/94 RUC Presentation

Tracking				Allowed Frequency	COMMENTS
No	CPT	Modifier(s)			
S5	35211	No Modifiers		16	← S5 most likely reported as 35211 in the past.
	35211	-82 two surgeons		(2/2)	
	35211	-51 multiple		44	
	35211	TOTAL		61	

I10 / I12	45170	No Modifiers		5,178
	45170	-22 unusual		84
	45170	-22 unusual/-51 multiple		2
	45170	-51 multiple		446
	45170	-52 reduced		49
	45170	-54 surg. care only		12
	45170	-82 two surgeons		(2/2)
	45170	-55 postop/-56 prep only		6
	45170	TOTAL		5,778

Old Descriptors:
 45170 = excision
 45180 = excision / destruction - malignant
 New Descriptors:
 I10 = excision
 I12 = destruction

I10 and I12 were most likely reported using 45170 and 45180, however, the change in the descriptors imply that some percentage of 45180 frequency now would be reported under I10 (i.e., excision taken out of descriptor).

I10 / I12	45180	No Modifiers		2,267
	45180	-22 unusual		31
	45180	-22 unusual/-51 multiple		1
	45180	-51 multiple		130
	45180	-52 reduced		22
	45180	-52 reduced/-51 multiple		1
	45180	-54 surg. care only		3
	45180	-82 two surgeons		1
45180	TOTAL		2,456	

L2 / L3	47710	No Modifiers		118
	47710	-22 unusual		4
	47710	-22 unusual/-51 multiple		1
	47710	-22 unusual/-54 surg care		1
	47710	-51 multiple		34
	47710	-52 reduced/-51 multiple		1
	47710	-52 reduced/-62 two surg		(2/2)
47710	TOTAL		160	

L2 represents a majority of the services previously reported under 47710.

L2 / L3	47780	No Modifiers		1,775
	47780	-22 unusual		54
	47780	-22 unusual/-51 multiple		42
	47780	-22 unusual/-54 surg care		2
	47780	-22 unusual/-54 surg care		2
	47780	-51 multiple		119
	47780	-51 multiple/-54 surg. car		2
	47780	-52 reduced		3
	47780	-52 reduced/-51 multiple		21
	47780	-54 surg. care only		6
	47780	-55 postop mgmt only		1
	47780	-82 two surgeons		(10/2)
	47780	-88 surgical team		1
	47780	TOTAL		1,979

L3 would have been reported using 47710-22 plus 47780-51 for the anastomosis.

**FEBRUARY 1994 RUC RECOMMENDATIONS
PERITONEAL SHUNTS - TAB 27**

The RUC recommendations for the following peritoneal shunt codes are based on a survey of general surgeons and obstetricians/gynecologists. 4942X, 494XA, and 494XB are new codes that will adequately describe all of the aspects of peritoneal shunt management which were previously not identified in CPT.

4942X describes the removal of a permanent intraperitoneal catheter due to intractable infection of the vascular access site. The RUC recommended the adoption of 5.92 RVW for 4942X, which is comparable to the RVW of the reference service 62256 [Removal of complete CSF shunt system; without replacement, 5.97 RVW]. The RUC adopted an RVW that was higher than the reference service 49421 [Insertion of intraperitoneal cannula or catheter for drainage or dialysis; permanent, 4.94 RVW] for this code because it was noted that removal of the catheter which involves dissection is more work than catheter insertion.

494XA describes the ligation of a peritoneal-venous shunt following the surgery for the placement of a peritoneal shunt. The ligation is recommended 5 days post-op if the shunt is rendered dysfunctional due to extensive bleeding. The recommended RVW for 494XA is lower than that of reference service 62256 [Removal of complete CSF shunt system; without replacement, 5.97 RVW], and comparable to reference service 32020 [Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure)]. The recommended RVW 494XA is also higher than reference service 37700 [Ligation and division and complete stripping of long or short saphenous veins], because the underlying condition of the patient makes the procedure more complex.

494XB describes the removal of a peritoneal-venous shunt, a procedure that is performed due to shunt malfunction and/or infection. The RUC recommendations for ligation [494XA, 3.99] and removal [494XB, 6.42] for peritoneal-venous shunt are both well below the current value of 8.67 for revision of peritoneal-venous shunt [49426].

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation	RVW Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
M1	49420	Insertion of intraperitoneal cannula or catheter for drainage or dialysis; temporary	000	2.27 (no change)	2.24 (no change)
M2	49421	permanent	090	5.00 (no change)	4.94 (no change)

M2	49421	permanent	090	5.00 (no change)	4.94 (no change)
M3	●4942X	Removal of permanent intraperitoneal cannula or catheter <u>(For removal of a temporary catheter/cannula, use appropriate E/M code)</u>	010	6.00	5.92
M4	49425	<u>Insertion of peritoneal-venous shunt (eg, LeVeen shunt)</u>	090	10.47 (no change)	10.33 (no change)
M5	49426	Revision of peritoneal-venous shunt	090	8.78 (no change)	8.67 (no change)
M6	●494XA	Ligation of peritoneal-venous shunt	010	4.04	3.99
M7	●494XB	Removal of peritoneal-venous shunt	010	6.50	6.42

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: M3 Global Period: 010

CPT Descriptor: Removal of permanent intraperitoneal cannula or catheter
(For removal of a temporary catheter/cannula, use appropriate E/M code)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 68-year-old female presents with a history of chronic renal failure, repeated infections of vascular access sites, and a permanent intraperitoneal catheter inserted six months ago for peritoneal dialysis. Infection has now been confirmed by culture of the dialysate and has not responded to antibiotic therapy. Removal of the catheter is advised. She undergoes successful removal of the contaminated catheter and is discharged on the third post-operative day after an uneventful recovery.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing culture and laboratory reports; communicating with other health care professionals; communicating with referring physician and other consultants; communicating with patient and family, and obtaining informed consent; and coordinating subsequent hemodialysis.

Intra-service Work:

Positioning, prepping, and draping the patient; excising the previous abdominal scar; performing a dissection which is carried into the subcutaneous and fascia level, where both subcutaneous and fascia cuffs are sharply dissected free of surrounding tissue; removing the catheter; closing the fascial defect; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); evaluating lab reports; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 10 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of sutures at an office visit within this period.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
5.97	62256	Removal of complete CSF shunt system; without replacement
4.94	49421	Insertion of intraperitoneal cannula or catheter for drainage or dialysis; permanent
8.67	49426	Revision of peritoneal-venous shunt

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

An RVW of 6.00 is recommended, instead of the survey median because the removal of a peritoneal catheter is comparable in complexity to 62256 (RVW = 5.97) and general anesthesia is almost always required.

Additionally, it should be noted that this procedure is more work than insertion (49421) because it includes dissection and fascial repair, which is not included in the work of 49421.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that the frequency for M3 is low, however, the College's committee is unable to quantify the estimate.

SURVEY DATA:

Specialty Society(s): General Surgery
Obstetrics and Gynecology

Median Intra-Service Time: 48 Low: 20 High: 180

Median Pre-Service Time: 30 Median Post-Service Time: 60

Length of Hospital Stay: 3

Post-Hospital Office Visits: 99212 (day 7)

Number of Times Provided in Past 12 months: 0 (range = 0-20)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: M6 Global Period: 010

CPT Descriptor: Ligation of peritoneal-venous shunt

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 68-year-old male presents with a history of long-standing cirrhosis that has not responded to medical measures to control ascites. A peritoneal-venous shunt (LaVeen type or other) is inserted. Five days post-insertion, there is extensive bleeding with a fulminant coagulopathy. The patient is taken to the operating room where the shunt is exposed and ligated temporarily in anticipation of the defect resolving and allowing resumption of shunt function. The patient is returned to the ICU and discharged from the hospital.

Pre-service Work:

Resuscitation and ICU monitoring of the patient; obtaining and reviewing culture and laboratory reports; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family, and obtaining informed consent; and coordinating transfusion and other coagulation component therapy.

Intra-service Work:

Positioning, prepping, and draping the patient; making an incision over the shunt, which is then ligated; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing and monitoring the patient in the ICU; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); evaluating lab reports; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 10 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of sutures at an office visit within this period.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
5.97	62256	Removal of complete CSF shunt system; without replacement
4.02	32020	Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure) (global=000)
3.56	37700	Ligation and division of long saphenous vein at saphenofemoral junction, or distal interruptions

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Procedure M6 is similar to 37700, however, additional pre- and postoperative work is required because of the critical underlying condition of the patients presenting for this operation. The survey median RVW of 4.04 is recommended and reflects this fact.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that the frequency for M6 is low, however, the College's committee is unable to quantify the estimate.

SURVEY DATA:

Specialty Society(s): General Surgery
Obstetrics and Gynecology

Median Intra-Service Time: 45 Low: 15 High: 120

Median Pre-Service Time: 45 Median Post-Service Time: 90

Length of Hospital Stay: 3

Post-Hospital Office Visits: 99212 (day 7)

Number of Times Provided in Past 12 months: 0 (range = 0-1)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: M7 Global Period: 010

CPT Descriptor: Removal of peritoneal-venous shunt

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 67-year-old female presents with a history of cirrhosis and ascites that was responsive to insertion of a peritoneal-venous shunt six months prior to this visit. She is found to have infected ascites and is subjected to a period of unsuccessful antibiotic therapy and removal of the shunt is recommended. She is taken to the operating room, where the shunt is removed both from the peritoneal cavity and the jugular vein. She is taken to the ICU where antibiotic therapy is continued, and she is monitored for further development of ascites and possible multi-system organ failure. She is discharged on the eighth post-operative day.

Pre-service Work:

Hospital admission work-up; obtaining and reviewing culture and laboratory reports; communicating with other health care professionals; communicating with referring physicians and other consultants; communicating with patient and family; and obtaining informed consent.

Intra-service Work:

Positioning, prepping, and draping the patient; opening the neck incision; removing the catheter from the internal jugular vein; suture approximation of the venotomy because the bleeding cannot be controlled by direct pressure; making an incision over the shunt and removing the shunt; closing with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing the patient in the ICU and monitoring for appropriateness of antibiotic therapy; communicating with the patient, family, and other health care professionals, (including written and telephone reports and orders); evaluating lab reports; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 10 days after the day of the operation are considered part of the post-operative work for this procedure, including removal of sutures at a office visit within this period.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
5.97	62256	Removal of complete CSF shunt system; without replacement
9.00	35201	Repair blood vessel, direct; neck
3.94	37565	Ligation of internal jugular vein
10.33	49425	Peritoneal-venous shunt (eg, LeVeen shunt)
8.67	49426	Revision of peritoneal-venous shunt
6.13	44950	Appendectomy;

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Removal of a peritoneal-venous shunt requires slightly less intraoperative work than 44950 and M3, however the patient requires pre- and postoperative work due to the severe nature of their underlying disease. These patients are frequently suffering from some complication of the shunt, such as sepsis, DIC, or thrombocytopenia. The survey median RVW of 6.50 is recommended.

FREQUENCY INFORMATION

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that the frequency for M7 is low, however, the College's committee is unable to quantify the estimate.

SURVEY DATA:

General Surgery
Obstetrics and Gynecology

Specialty Society(s):

Median Intra-Service Time: 60 Low: 30 High: 120

Median Pre-Service Time: 53 Median Post-Service Time: 120

Length of Hospital Stay: 8

Post-Hospital Office Visits: 99212 (day 7)

Number of Times Provided in Past 12 months: 0 (range = 0-4)

MAY 1994 RUC RECOMMENDATIONS
ELECTROMYOGRAPHY OF ANAL OR URETHRAL SPHINCTER - TAB 13

The RUC has not yet been able to conduct a complete survey of the work in these two codes. In addition, the CPT Editorial Panel is continuing to review this issue. The RUC recommends that, on an interim basis, codes 51785 [Needle EMG of anal or urethral sphincter] and 517XX [EMG of anal or urethral sphincter, other than needle] be valued the same as the current published value of 51785, which is 1.55. The RUC will revisit this issue in the Fall.

The technical component of 51785 is currently 0.00 which implies that there is no physician work involved in applying the electrodes. The professional work for this service is the interpretation and is the same, regardless of the application of the electrodes.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BL1	51785	<u>Needle</u> electromyography studies (EMG) of anal or urethral sphincter, any technique	000	1.55
BL2	●517XX	Electromyography studies (EMG) of anal or urethral sphincter, other than needle, any technique	000	1.55

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: BL1 Global Period: 000

CPT Descriptor: Needle electromyography studies (EMG) of anal or urethral sphincter

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

35-year old male with spinal cord injury presents with a voiding dysfunction. One or two needles are placed in the pelvic floor muscles (external sphincter) to determine whether the muscles are coordinated during filling and voiding. The urologist reads the graphic recordings measuring EMG activity during a series of filling and voiding trials. He/she interprets the level of activity and determines whether the muscle activity is increasing and decreasing at appropriate times.

Description of Pre-Service Work:

see vignette

Description of Intra-Service Work:

see vignette

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>Rvw</u>
51785	Electromyography studies (EMG) of anal or urethral sphincter, any technique	1.55
51726	Complex cystometrogram	1.73

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Time, skill, effort and stress are all identical to key reference service 51785.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Urology

Median Intra Service Time: 20 minutes Low: 2 minutes High: 60 minutes

Median Pre-Service Time: 10 minutes Median Post-Service Time: 10 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: BI.2 Global Period: 000

CPT Descriptor: Electromyography studies (EMG) of anal or urethral sphincter, other than needle, any technique

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Child (any sex) (any age) presenting with a voiding dysfunction. Self-adhesive electrodes are placed perianally to determine whether the muscles are coordinated during filling and voiding. The urologist reads the graphic recordings measuring EMG activity during a series of filling and voiding trials. The urologist ensures the signal is reliable at all times by replacing electrodes as necessary. He/she interprets the level of activity and determines whether the muscle activity is increasing and decreasing at appropriate times.

Description of Pre-Service Work:

see vignette

Description of Intra-Service Work:

see vignette

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
51785	Electromyography studies (EMG) of anal or urethral sphincter, any technique	1.55
51726	Complex cystometrogram	1.73

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Time, skill, effort and stress are practically identical to the key reference service 51785.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Urology

Median Intra-Service Time: 20 minutes Low: 2 minutes High: 60 minutes

Median Pre-Service Time 10 minutes Median Post-Service Time 10 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 50

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
CYSTOURETHROSCOPY - TAB 11

Code 5233X [Cystourethroscopy (including ureteral catheterization); with subureteric injection of implant material] describes a procedure to treat vesicoureteral reflux in children. This condition was previously treated with ureter reimplantation (codes 50780 - 50800). Only 10 pediatric urologists in the United States could be identified that are currently performing this service.

The pediatric urologists who are performing this procedure rated it similar in work to 51065 [Cystotomy, with stone basket extraction and/or ultrasonic or electro-hydraulic fragmentation of ureteral calculus] (RVW = 8.14). The intra-service work for this new procedure is greater than code 52283 [Cystourethroscopy, with steroid injection into stricture] (RVW = 3.78), as a cystourethrogram is typically performed after each injection to ensure that the proper amount of collagen was injected and the reflux is gone. The urologists recommended a value of 5.51 for this service, which the RUC lowered to 5.25.

The committee discussed the duration of time that would be required for repeat collagen injections. It was noted that children experience ingrowth of their own ureter, therefore, there is less need for repeat injections. The committee decided that the number of injections required should have no bearing on the work value of a single episode.

The RUC expressed concern about the global period of 000 for a therapeutic procedure. However, no change is recommended as the other codes in the family currently have a global period of 000. The RUC may review the issue of global periods during the refinement process.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
(The insertion of a stent is included in 52329-52339 when used, and should not be reported separately)				
AOI	●5233X	Cystourethroscopy (including ureteral catheterization); with subureteric injection of implant material	000	5.25

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AOI Global Period: 000

(The insertion of a stent is included in 52320-52339 when done and should not be reported separately)

CPT Descriptor: **Cystourethroscopy (including ureteral catheterization); with subureteric injection of implant material**

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A four-year old girl manifesting breakthrough recurrent urinary infections is noted to have Grade III (Int. Class.) vesicoureteral reflux, unilateral or bilateral. Her renal scan identifies renal scars in the kidney associated with reflux. Upon discussing the medical and surgical options, her parents select endoscopic correction of the reflux. Under general anesthesia the patient is prepped and draped for an endoscopic procedure. A pediatric cystoscope with a working element is inserted transurethrally and the bladder and ureteral orifices are inspected. A Williams Needle is inserted through the working element and is placed submucosally into the trigone below the ureteral orifice. The implant material is then injected through the Williams Needle until a bulking affect is noted. The same procedure may be performed on the opposite side if the procedure is bilateral in nature. The cystoscope is removed after the bladder is emptied of the irrigating fluid. This procedure is performed either on an ambulatory basis or for an overnight stay depending upon the age and condition of the patient.

Description of Pre-Service Work:

Consultation with anesthesia, making sure x-rays and Contigen are available; waiting for general anesthetic, positioning of the patient, scrubbing, draping.

Description of Intra-Service Work:

As above in the vignette, plus cystogram after injection of implant material (30 cc increments) to assess if reflux is gone (under fluoroscopy)

Description of Post-Service Work:

Patient stabilization in recovery room. Patient must be able to void before dismissal.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
52283	Cystourethroscopy, with steroid injection into stricture	3.78
52005	Cystourethroscopy, with ureteral catheterization, with or without irrigation, instillation, or ureteropyelography, exclusive of radiologic service	2.40
516(X)	Injection procedure for cystography or voiding urethrocytography	.89

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

52283 is the reference service used by all of the respondents. This pediatric procedure is roughly twice the work of cystoscopy with steroid injection. More intra-service time is involved due to the need for a cystourethrogram after the injection to assess if reflux is gone.

SURVEY DATA:

Specialty Urology

Median Intra Service Time: 60 minutes Low: 30 minutes High: 90 minutes

Median Pre-Service Time: 45 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 3 level 3 (99213)

Number of Times Provided in Past 12 months (Median): Not Applicable

Other Data: Only ten of our respondents have performed this procedure because the implant material, Collagen, was only recently approved. This is a fairly common procedure in other countries. The median RVW from these ten doctors was 6.0

MAY 1994 RUC RECOMMENDATIONS
LASER SURGERY OF THE PROSTATE - TAB 12

Classical surgical intervention for diseased prostate is the surgical removal of the prostate, more recently 52601 [TURP]. Laser prostatectomy has been performed since 1989 and has been coded under 52601. BMAD Frequency information was presented to emphasize the decrease in the number of TURPS performed between 1987 (580,000) and 1992 (200,000).

Code 526X2 [Contact laser vaporization of prostate], which describes a procedure in which prostate tissue is vaporized at twenty different points within the prostatic fossa, ultimately creating a resected cavity, is similar to 52601 [TURP] (RVW = 11.64). It is possible to save more of the bladder neck with contact laser versus TURP. Contact laser may require more time and there are also more technical problems with the equipment.

Code 526X1 [Non-contact laser coagulation of prostate] involves passing a right-angle Nd: Yag laser fiber into the prostatic fossa through a continuous flow resectoscope and 40-60 watts of laser energy is delivered for 90 seconds to each of four quadrants and to the median lobe. Non-contact laser is somewhat less difficult than contact laser, however, the risks of each procedure are different. Non-contact laser presents the risk of coagulation of the bladder sphincter. Contact laser produces temperatures up to 400 degrees (versus 60-100 degrees for non-contact) and actually vaporizes the tissue. Prior to the institution of treatment utilizing laser it is necessary to evaluate the patient for prostate cancer as this procedure will leave no specimen. Patients tend to require longer periods of catheterization with both non-contact and contact laser treatment compared to TURP.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AP1	52601	Transurethral <u>electrosurgical</u> resection of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)	090	11.64 (no change)
AP2	●526X1	Non-contact laser coagulation of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)	090	10.25
AP3	●526X2	Contact laser vaporization with or without transurethral resection of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)	090	11.64

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**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AP2 Global Period: 090

CPT Descriptor: **Non-contact laser coagulation of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)**

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 70-year old male has severe, obstructive symptoms secondary to BPH. During cystoscopic examination under anesthesia, a 25-gram obstructive prostate is noted. A right-angle Nd: Yag laser fiber is passed into the prostatic fossa through a continuous flow resectoscope and 40-60 watts of laser energy is delivered for 90 seconds to each of four quadrants and to the median lobe. The procedure is approximately 30 minutes in duration. A suprapubic tube may be inserted prior to the procedure or a Foley catheter inserted following the procedure. The procedure is performed on an ambulatory basis or for a one day stay. The patient returns to the office on the 5th post-operative day and the Foley catheter is removed or the patient is instructed to turn the valve on the suprapubic tube to initiate a voiding trial. He may be placed on an intermittent catheter until successful voiding begins, a process that may take up to two weeks.

Description of Pre-Service Work:

Consultation with anesthesia, make sure laser has been tested and calibrated. Position patient, make sure video system is working. Waiting for spinal or general anesthetic. Prep patient. Test fire laser fiber.

Description of Intra-Service Work:

As per vignette. May also have to place suprapubic tube (Not for all patients)

Description of Post-Service Work:

Recovery room, orders, talk with family, explain use of suprapubic tube or foley catheter.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
52601	Transurethral Prostatectomy	11.64
52(X)0	Cystoscopy (separate procedure)	2.03
52235	Cystourethroscopy, with fulguration (including cryosurgery or laser surgery) and/or resection of medium bladder tumor(s) 2 to 5cm	5.93

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This procedure requires a little less intra-service and a little more pre and post service time than the key reference service, TURP. We believe that all the other components of work (technical skill, mental effort, etc.) are similar.

SURVEY DATA:

Specialty: Urology

Median Intra Service Time: 45 minutes Low: 10 minutes High: 180 minutes

Median Pre Service Time: 60 minutes Median Post-Service Time: 45 minutes

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 3 level 3 (99213)

Number of Times Provided in Past 12 months (Median): 12

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AP3 Global Period: 090

CPT Descriptor:

Contact laser vaporization with or without transurethral resection of prostate, including control of postoperative bleeding, complete (vasectomy, meatotomy, cystourethroscopy, urethral calibration and/or dilation, and internal urethrotomy are included)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 75-year old male has severe obstructive symptoms secondary to BPH. During cystoscopic examination under anesthesia, a 65 gram obstructive prostate is noted. A right-angle Nd: Yag laser fiber is passed into the prostatic fossa through a continuous flow resectoscope utilizing up to 80 watts of laser energy for 45 seconds at a time. Prostate tissue is vaporized at twenty different points within the prostatic fossa ultimately creating a resected cavity similar to a transurethral resection of the prostate. After completion of the laser procedure a resectoscope sheath may be inserted transurethrally to resect debris and remaining prostate tissue. The procedure is approximately one hour in duration. A catheter is placed and the patient is discharged on the second post-op day. He returns to the office on the 5th post-op day and his catheter is removed with a voiding trial.

Description of Pre-Service Work:

Consultation with anesthesia, make sure laser has been tested and calibrated. Position patient, make sure video system is working, wait for spinal or general anesthetic, prep patient, test fire laser.

Description of Intra-Service Work:

As per vignette. May also have to place suprapubic tube (Not for all patients)

Description of Post-Service Work:

Recovery room, orders, talk with family, explain use of suprapubic tube or foley catheter.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
52601	Transurethral Prostatectomy	11.64
52235	Cystourethroscopy, with fulguration (including cryosurgery or laser surgery) and/or resection of medium bladder tumor(s) 2 to 5cm	5.93
52000	Cystoscopy (separate procedure)	2.03

AP3

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The intra-service time for this service is similar to the key reference service TURP. But, the pre and post service time is longer. The intra service work involves more effort because the urologist must carve and sculpt out the prostatic fossa with the laser.

SURVEY DATA:

Specialty: Urology

Median Intra-Service Time: 60 minutes Low: 10 minutes High: 180 minutes

Median Pre-Service Time: 60 minutes Median Post-Service Time: 60 minutes

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 3 level 3 (99213)

Number of Times Provided in Past 12 months (Median): 6

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
CONIZATION OF CERVIX - TAB 23

The RUC recommendation for the following code is based on a survey of obstetricians and gynecologists. 5752X [Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair; with loop electrode excision procedure of the cervix] is a new code that was added to alleviate confusion among physicians regarding how to report conization when performed with loop electrode excision. Previously this service was reported using CPT code 57520 [Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair (any method)]. With the addition of CPT code 5752X, the language of CPT code 57520 was changed so that the terminology "any method" was deleted and the language "cold knife or laser" added so that physicians can report the services that they provide more accurately.

The physician work involved in performing 5752X is more difficult than the key reference, which is the LEEP procedure CPT code 57460 [Colposcopy (vaginocopy); with loop electro-surgical excision(s) of the cervix (LEEP) (2.86 RVW)]. 5752X is more complicated than 57460 because more cervical tissue is removed. In addition 57460 has a global period of 000, while 5752X has a 90 day global period. The recommended value for this 5752X is 3.30 RVW.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AC1	57520	Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair (any method) , cold knife or laser;	090	3.45 (no change)
AC2	●5752X	loop electrode excision procedure of the cervix	090	3.30

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AC2 Global Period: 090

CPT Descriptor: Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair; with loop electrode excision procedure of the cervix

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 35-year-old gravida 2 para 2 sexually active woman is referred for an abnormal Pap smear. A colposcopic examination reveals a lesion on the anterior cervix consistent with cervical intraepithelial neoplasia-2 (CIN2). The limits of the lesion cannot be seen as it extends up into the canal. The endocervical portion and ectocervical portion of the cervix are removed using a loop electrode. The patient is given instructions and told to return in 4 weeks.

Description of Pre-Service Work:

Pre-service work consists of an evaluation and interpretation of the original Pap smear report, a colposcopic examination to determine the nature of the cervical pathology and extent of disease. If the patient has had a biopsy prior to scheduling the electrosurgical excision, this report must be carefully reviewed. An assessment of the patient's ability to tolerate a procedure under local anesthesia in an outpatient setting must be made. A comprehensive history and physical examination is performed as a separate procedure to determine the patient's medical status.

Description of Intra-Service Work:

Under local anesthesia with 1% lidocaine injected into the cervix in 4 quadrants, a conization of the cervix using a loop electrode excision procedure is performed. The endocervical portion is removed with a loop electrode followed by the ectocervical portion with a square electrode. Hemostasis is secured with a ball electrode and Monsell's paste.

Since this procedure includes removal of a portion of endocervical tissue, the chances of bleeding and complications are greater than when only an ectocervical specimen is removed. The procedure requires the operator to be trained and experienced in colposcopy and the loop electrode excision procedure.

Description of Post-Service Work:

The patient is observed for 15-20 minutes following the procedure. The patient is seen again in 4 weeks to evaluate the condition of the cervix.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RW</u>
57520	Conization of cervix, with or without fulguration, with or without dilation and curettage, with or without repair (any method)	3.45
57460	Colposcopy (vaginocopy); with loop electrosurgical excision(s) of the cervix (LEEP)	2.86

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RWV RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

AC2 requires slightly less time and physical effort than 57520 since no sutures are required. AC2 requires more time and physical effort and entails greater risk than 57460 because more cervical tissue is removed. In addition, AC2 would typically include a follow-up visit, while 57460 has a 000 global period. Therefore the survey median of 3.30 seems appropriate.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Obstetrics and Gynecology

Median Intra-Service Time: 20 Low: 10 High: 90

Median Pre-Service Time: 15 Median Post-Service Time: 120

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: 99212 14 days after

Number of Times Provided in Past 12 months (Median): 12

Other Data: _____

FREQUENCY AND REPORTING OF CODES

Currently this procedure is coded using 57520 or 58999. It is not possible to estimate precisely the percentage of services reported using 57520 or 58999 that will be reported using AC2.

This code will be reported by obstetrician-gynecologists, gynecologic oncologists, family physicians and some pathologists.

Conization of the cervix (all methods) would be performed on about 1 million patients each year. It is not possible to estimate precisely how many of these would be coded using AC2 and how many would be coded using 57520.

MAY 1994 RUC RECOMMENDATIONS
FETAL MONITORING - TAB 24

The specialty recommendation submitted to the RUC for the revised codes for fetal monitoring were withdrawn because the specialty believes further CPT revisions are required. As an "interim" recommendation, the RUC recommends that the current value of code 59050 be maintained. The RUC will revisit these codes at its September meeting after the coding issues have been resolved.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AR1	59050	Initiation and/or supervision of internal Fetal monitoring during labor by consulting physician (ie, non-attending physician) with written report (separate procedure); supervision and interpretation	XXX	No Recommendation at this time
AR2	●5905X	interpretation only	XXX	No Recommendation at this time

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 Not considered in the refinement process.

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AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

IN VITRO FERTILIZATION

The recommended median survey values for CPT codes 58970(3.70 RVW) and 58976(4.00 RVW) were based on a survey that included 70 obstetricians/gynecologists and reproductive endocrinologists for code 58970 and 65 obstetricians/gynecologists and reproductive endocrinologists for code 58976, which is more than the number of responses required by the RUC.

Follicle puncture for oocyte retrieval, any method CPT code - 58970, is performed for the retrieval of eggs and assumes that the patient has undergone ovarian stimulation, with hormonal therapy to increase oocyte production. During the procedure an multiple follicles on an ovary are stimulated using ultrasonic guidance or laparoscopy. The vagina is inspected for bleeding and after the inspection the patient is transferred to a recovery room to monitored for complications. It was noted that this procedure is performed both laparoscopically and open. Although the open procedure is more difficult CPT code 58970 would used to report both.

CPT code 59872 can be performed 2 ways. During the Gamete intra-fallopian tube transfer (GIFT) procedure, a mixture of ova and sperm is placed into a catheter, and the ova/sperm mixture is then injected directly into one or both fallopian tube(s), via laparoscopy. This procedure is performed immediately following oocyte retrieval. The Zygote intra-fallopian transfer (ZIFT) is performed the day after oocyte retrieval. The oocytes are combined with sperm and allowed to reach the pronuclear stage. At this time the sperm/zygote combination is placed into a catheter and injected into one or both fallopian tube(s), via laparoscopy.

The specialty society Advisor clarified for the RUC that the decision for a patient to undergo intra-fallopian vs. intra-uterine insemination is patient preference unless clinically indicated. The specialty society Advisor also confirmed for the RUC that since CPT codes 58970 and 58976 are usually performed laparoscopically, a separate code for laparoscopy would not be separately reported.

Recommendations for CPT codes 58972 - Culture and Fertilization of oocyte(s) and 58974 - Embryo transfer, any method, will be provided after the May RUC meeting.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
58970	Follicle puncture for oocyte retrieval, any method	000	3.70	3.57
58976	Gamete or zygote intrafallopian transfer, any method	000	4.00	3.87

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 58970

Global Period: 000

CPT Descriptor:

Follicle puncture for oocyte retrieval, any method

CLINICAL DESCRIPTION OF SERVICE:**Vignette Used in Survey:**

Infertile female patient for whom other methods of treatment for infertility have been exhausted or are not indicated or woman donating ova for use in IVF. Patient has already undergone ovulation induction. Follicles are punctured with a needle. Contents are aspirated and inspected for the presence of ova. (Note: If ultrasound guidance for aspiration of ova is used, CPT 76948 is coded in addition to 58970.)

Description of Pre-Service Work

Pre-service work includes evaluation of patient, counseling of patient and partner, and consultation with laboratory personnel to ensure readiness to receive retrieved oocytes. If an ultrasound-guided method is to be used, intravenous analgesia is administered. If a laparoscopic approach is used, general anesthesia is administered.

Description of Intra-Service Work

The vast majority of patients undergo ultrasound-guided transvaginal follicle puncture. A small percentage of patients, though, undergo laparoscopic follicle puncture.

Ultrasound-guided: Typically the ultrasound probe is inserted through the vagina. When a mature follicle is identified, a needle is guided through the vagina to puncture the follicle and aspirate the oocyte. Less frequently, a percutaneous-transvesicular or trans-urethral puncture and aspiration is performed. The patient has undergone ovulation enhancement, so multiple follicles (sometimes as many as 30 or 40) are punctured and aspirated. The needle must be removed and re-inserted at least once to aspirate follicles on the second ovary and must often be removed and reinserted to gain access to all follicles on each ovary.

Laparoscopic approach: The ovary is directly visualized with the laparoscope and each mature follicle is punctured and aspirated. The patient has undergone ovulation enhancement, so multiple follicles (sometimes as many as 30 or 40) are punctured and aspirated.

Post-Service Work

The patient is monitored for excessive bleeding. Instructions for follow-up care and possible complications are provided. In addition, the patient and partner are counseled regarding the next steps in the process.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
56306	Laparoscopy, surgical; with aspiration (single or multiple)	3.89
59012	Cordocentesis	3.54

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The ultrasound-guided approach is comparable to 59012. Technical skill and mental effort are similar for 58970 and 59012. Stress and risk are somewhat greater for 59012, but intraservice time is greater for 58970 because multiple punctures are made. Therefore the survey median of 3.70 seems appropriate for the ultrasound-guided technique.

The laparoscopic follicle puncture is very similar to 56306 in terms of technical skill, mental effort and stress. Intra-service time for 58970 is probably greater because the typical patient requires more aspirations. Post-service time for 58970 is less than for 56306, though, because there is a 000 global period associated with 58970, while 56306 has a 010 global period. The survey median of 3.70 is reasonable for the laparoscopic technique also.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly x Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 33,000

Source: Society for Assisted Reproductive Technology and The American Fertility Society. Assisted reproductive technology in the United States and Canada: 1991 results from the Society for Assisted Reproductive Technology generated from The American Fertility Society Registry. Fertility and Sterility, Vol, 59, No. 5, May 1993.

Is this service performed by many physicians across the United States? x Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable

SURVEY DATA:

Median Intra-Service Time: 45 minutes Low: 15 minutes High: 120 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 77.5

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 58976 Global Period: 000

CPT Descriptor: Gamete or zygote intrafallopian transfer, any method

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Infertile female patient for whom other methods of treatment for infertility have been exhausted or are not indicated. Patient has already undergone oocyte retrieval. Ova and sperm are placed in the fallopian tube through a catheter without incubation in culture medium or an early fertilized ovum (zygote) is placed in the fallopian tube through a catheter after co-incubation of sperm and ova.

Description of Pre-Service Work

Gamete intra-fallopian transfer (GIFT): The procedure is performed immediately following the follicle puncture for oocyte retrieval (58970). The retrieved eggs are examined for maturity. Selected eggs are combined with prepared sperm. The patient and partner are counseled about the number of eggs to be replaced in the fallopian tube(s).

Zygote intrafallopian transfer (ZIFT): The procedure is performed the day following oocyte retrieval. The retrieved eggs are examined for maturity, cultured, combined with prepared sperm, and allowed to reach the pronuclear stage. The patient is prepared for the procedure and she and her partner are counseled about the number of zygotes to be transferred and the potential risk of multiple pregnancy.

Description of Intra-Service Work

GIFT: The sperm-egg combination is loaded into a catheter. The sperm and egg(s) are injected directly into one or both fallopian tube(s) via laparoscopy. Extreme care must be taken when introducing the catheter to avoid either damaging the healthy fallopian tube or losing the eggs in the pelvic cavity.

ZIFT: The zygote(s) are placed in a catheter and are injected directly into the fallopian tube(s) via laparoscopy. Extreme care must be taken when introducing the catheter to avoid either damaging the healthy fallopian tube or losing the zygote(s) in the pelvic cavity.

Post-Service Work

The patient is monitored for excessive bleeding and adverse reaction to the procedure. Instructions for follow-up care and possible complications are given. The physician counsels the patient about what to expect and plans for monitoring to determine establishment of pregnancy.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
56306	Laparoscopy, surgical; with aspiration (single or multiple)	3.89

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Pre-service and intra-service time are similar for 58976 and 56306. Physical effort/technical skill required to successfully guide the catheter into the fallopian tube is greater than the technical skill required for 56306. The mental effort and stress associated with 58976 is greater due to the risk of pregnancy loss. Post-service time is less for 58976 because the global period is 000, while the global period for 56306 is 010. Therefore, the survey median of 4.00 seems reasonable.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly x Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 7,500

Source: Society for Assisted Reproductive Technology and The American Fertility Society. Assisted reproductive technology in the United States and Canada: 1991 results from the Society for Assisted Reproductive Technology generated from The American Fertility Society Registry. Fertility and Sterility, Vol, 59, No. 5, May 1993.

Is this service performed by many physicians across the United States? x Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable

SURVEY DATA:

Median Intra-Service Time: 60 minutes Low: 5 minutes High: 120 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 9

MAY 1994 RUC RECOMMENDATIONS
SECOND TRIMESTER ABORTIONS - TAB 25

The RUC recommendation for the following code is based on a survey of obstetricians and gynecologists. Three new second trimester abortion codes were added to CPT with the intent of making the codes more consistent for this procedure, and to make it easier to report the use of prostaglandin for these procedures. Second trimester abortions are relatively rare procedures and, when done using the technique described by the new codes, are always performed in the hospital setting with direct physician supervision.

CPT code 598X1 [Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines;] is the parent code in this series. Physician work for this procedure includes the insertion of suppositories every 3-4 hours and managing the patient during the onset of labor. The physician work related to this procedure is considered more difficult than induction of abortion by intra-amniotic injections [CPT code 59850 (5.52 RVW)], but 598X1 involves less risk to the patient. The recommended value for 598X1 is 5.80.

CPT codes 598X2 [Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines; with dilation and curettage and/or evacuation], and 598X3 [Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines; with hysterotomy (failed medical evacuation)] are add-on codes to 598X1. 598X2 is performed in those cases where the use of prostaglandin resulted in the expulsion of the fetus but the placenta was retained. The RUC felt that the additional work required in performing a D&E would warrant a higher RVW for this procedure. The average RVWs for procedure codes 58120 [Dilation and curettage, diagnostic and/or therapeutic (non-obstetric) (2.48 RVW)] and 59841 [Induced abortion, by dilation and evacuation (3.28 RVW)] were divided by 2 with a result of 1.44 RVWs. The 1.44 RVW was added to the RVW of the parent code 598X1 5.80 RVW, yielding the recommended value for 598X2 of 7.24 RVW. 598X3 is performed when the prostaglandin fails to induce labor and D&E is not an option. Hysterotomy is a major operation that is similar to performing a caesarean section, except that in this case the fetus is not viable. The relative value of the additional work was calculated by dividing the RVW assigned to 59100 [Hysterotomy, abdominal (eg, for hydatiform mole, abortion) (6.03 RVW)] in half (= 3.015 RVW) and adding this to the base code RVW of 5.80. The recommended value for 598X3 is 8.82 RVW.

Track- ing Number	CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
AS1	•598X1	Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines;	090	5.80
AS2	•598X2	with dilation and curettage and/or evacuation	090	7.24
AS3	•598X3	with hysterotomy (failed medical evacuation)	090	8.81

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AS1 Global Period: 090

CPT Descriptor: Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines;

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 28-year-old woman at 20 weeks gestation has a prenatal sonogram. The study reveals that the fetus has anencephaly. Anencephaly is considered to be incompatible with life. The woman chooses to have an abortion. The abortion is performed using prostaglandin E2 vaginal suppositories. The woman is admitted to the hospital and a suppository is placed in the vagina by her physician every four hours. After 20 hours of labor, the conceptus (fetus, membranes, and placenta) is delivered intact. She has an uneventful postpartum recovery and is discharged home on the second hospital day.

Description of Pre-Service Work:

A second trimester abortion is usually performed in a hospital setting for pregnancy termination between 18 and 24 weeks gestation for either fetal or maternal indications. Pre-service work consists largely of maternal risk assessment, fetal assessment, extensive counseling, and order writing. A sonogram is usually performed to assess gestational age. Intravenous fluids are given, preoperative blood work is reviewed, and anti-emetic and anti-diarrheal medications are administered. Vital signs of the patient are monitored. Often times, a passive cervical dilator is placed (eg, laminaria) into the patient's cervix.

Description of Intra-Service Work:

A prostaglandin E2 suppository is placed into the vagina every 3-4 hours by the attending physician. Vital signs are monitored much like a laboring patient. If a separate passive cervical dilator has been previously placed, it is removed. The patient will develop "labor pains" and anesthesia may vary from intravenous sedation to regional anesthesia. Delivery of the conceptus usually takes place 12-24 hours after the first suppository was placed. During this time, the physician must be readily available as with any laboring patient. After the delivery of the fetus, membranes, and placenta, the cervix and vagina are inspected for lacerations. Any lacerations are repaired. The patient is monitored for excessive bleeding.

Description of Post-Service Work:

Maternal surveillance is continued for a variable time after delivery. In the case of a vaginal delivery, the physician will provide hospital care 6 hours to 2 days post-partum. The patient is monitored for signs of infection and anemia. Rh status is determined and immune globulin given if indicated.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
59850	Induced abortion by one or more intra-amniotic injections (amniocentesis-injections), including hospital admissions and visits, delivery of fetus and secundines;	5.52

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The use of prostaglandin suppositories in AS1 requires more physician work related to inserting the suppositories, monitoring the patient and managing side effects than the use of intra-amniotic injections in 59850. Therefore the survey median of 5.80 seems reasonable.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AS2 Global Period: 090

CPT Descriptor: Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines; with dilation and curettage and/or evacuation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 28-year-old woman at 20 weeks gestation is carrying a fetus with Trisomy 18. She chooses to have an abortion. The abortion is performed using prostaglandin E2 suppositories. After 12 hours of labor, the fetus is delivered. The placenta does not deliver spontaneously. After 2 hours of observation, the woman is taken to the operating room where a dilation and curettage is performed under spinal anesthesia. She is discharged home on the first post-operative day.

Description of Pre-Service Work:

A second trimester abortion is usually performed in a hospital setting for pregnancy termination between 18 and 24 weeks gestation for either fetal or maternal indications. Pre-service work consists largely of maternal risk assessment, fetal assessment, extensive counseling, and order writing. A sonogram is usually performed to assess gestational age. Intravenous fluids are given, preoperative blood work is reviewed, and anti-emetic and anti-diarrheal medications are administered. Vital signs of the patient are monitored. Often times, a passive cervical dilator is placed (eg, laminaria) into the patient's cervix.

Description of Intra-Service Work:

A prostaglandin E2 suppository is placed into the vagina every 3-4 hours by the attending physician. Vital signs are monitored much like a laboring patient. If a separate passive cervical dilator has been previously placed, it is removed. The patient will develop "labor pains" and anesthesia may vary from intravenous sedation to regional anesthesia. Delivery of the conceptus usually takes place 12-24 hours after the first suppository was placed. During this time, the physician must be readily available as with any laboring patient. Many times the fetus will deliver but the placenta will be retained. In these instances, a dilation and curettage is performed in an operating room under sedation, regional, or general anesthesia. Less commonly, the cervix will dilate but the conceptus is not expelled. Under these circumstances, some physicians opt to perform a dilation and evacuation of the fetus, membranes, and placenta in an operating room under similar anesthesia.

Description of Post-Service Work:

Maternal surveillance is continued for a variable time after delivery. In the case of a vaginal delivery, the physician will provide hospital care 6 hours to 2 days post-partum. The patient is monitored for signs of infection and anemia. Rh status is determined and immune globulin given if indicated.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
59850	Induced abortion by one or more intra-amniotic injections (amniocentesis-injections), including hospital admissions and visits, delivery of fetus and secundines;	5.52
58120	Dilation and curettage, diagnostic and/or therapeutic (non-obstetric)	2.48
59841	Induced abortion, by dilation and evacuation	3.28

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The survey median of 8.45 seemed unreasonably high. The committee decided to recommend that AS2 be assigned the same base value as AS1, 5.80 (see Relationship to Key Reference Service for AS1). The relative value of the additional work entailed in performing the dilation and curettage and/or evacuation was calculated by dividing the average of the RVWs for 58120 and 59841 by 2, yielding 1.44 $(((2.48 + 3.28)/2)/2)$. Adding 1.44 for the dilation and curettage and/or evacuation to the base value results in the recommended RVW of 7.24.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Obstetrics and Gynecology

Median Intra-Service Time: 90 Low: 40 High: 960

Median Pre-Service Time: 40 Median Post-Service Time: 30

Length of Hospital Stay: 1 Number & Level of Post-Hospital Visits: 99213 14 days post-hospital

Number of Times Provided in Past 12 months (Median): 5

Other Data: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AS3 Global Period: 090

CPT Descriptor: Induced abortion, by one or more vaginal suppositories (eg, prostaglandin) with or without cervical dilation (eg, laminaria), including hospital admission and visits, delivery of fetus and secundines; with hysterotomy (failed medical evacuation)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 36-year-old woman at 22 weeks gestation is carrying an anencephalic fetus. The woman has opted for termination of the pregnancy. She is admitted to the hospital and labor is induced using prostaglandin E2 suppositories. After 36 hours of this medication, no progress towards delivery has been made despite rupture of membranes and adequate contractions. The attending physician feels this is a failed induction of labor, but does not consider dilation and evacuation an option in this case. A hysterotomy is performed under general anesthesia to deliver the fetus. The woman's post-operative course is uncomplicated and she is discharged home on the fourth post-operative day.

Description of Pre-Service Work:

A second trimester abortion is usually performed in a hospital setting for pregnancy termination between 18 and 24 weeks gestation for either fetal or maternal indications. Pre-service work consists largely of maternal risk assessment, fetal assessment, extensive counseling, and order writing. A sonogram is usually performed to assess gestational age. Intravenous fluids are given, preoperative blood work is reviewed, and anti-emetic and anti-diarrheal medications are administered. Vital signs of the patient are monitored. Often times, a passive cervical dilator is placed (eg, laminaria) into the patient's cervix.

Description of Intra-Service Work:

A prostaglandin E2 suppository is placed into the vagina every 3-4 hours by the attending physician. Vital signs are monitored much like a laboring patient. If a separate passive cervical dilator has been previously placed, it is removed. The patient will develop "labor pains" and anesthesia may vary from intravenous sedation to regional anesthesia. If the prostaglandin induction fails to induce delivery and D&E is not an option, then a hysterotomy must be performed. A hysterotomy is a major operation done under general or regional anesthesia. It is practically identical to performing a cesarean section, but the fetus is considered non-viable. This situation would be very similar to following a very long labor then performing a cesarean section for failure to progress or cephalopelvic disproportion.

Description of Post-Service Work:

Maternal surveillance is continued for a variable time after delivery. In the case of a vaginal delivery, the physician will provide hospital care 6 hours to 2 days post-partum. If a hysterotomy is performed, this care may extend for 3 to 5 days post-operatively. The patient is monitored for signs of infection and anemia. Rh status is determined and immune globulin given if indicated.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
59850	Induced abortion by one or more intra-amniotic injections (amniocentesis-injections), including hospital admissions and visits, delivery of fetus and secundines;	5.52
59100	Hysterotomy, abdominal (eg, for hydatiform mole, abortion	6.03

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time: technical skill & physical effort: mental effort and judgement: and stress):

The survey median of 12.00 seemed unreasonably high. The committee decided to recommend that AS2 be assigned the same base value as AS1, 5.80 (see Relationship to Key Reference Service for AS1). The relative value of the additional work of the hysterotomy was calculated by dividing in half the RVW assigned to 59100, yielding 3.015 RVW. Adding 3.015 to the base value of 5.80 results in the recommended 8.81 RVW.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Obstetrics and Gynecology

Median Intra-Service Time: 180 Low: 90 High: 2280

Median Pre-Service Time: 45 Median Post-Service Time: 60

Length of Hospital Stay: 4 days Number & Level of Post-Hospital Visits: 99212 10 days post, 99212 42 days post

Number of Times Provided in Past 12 months (Median): mean of once in career

Other Data: _____

FREQUENCY AND REPORTING OF CODES (Second Trimester Abortion)

The procedures described by AS1, AS2, and AS3 currently are coded using a combination of 59899 (unlisted maternity procedure), 59200-22, 59410-52 and 2-3 hospital and office visits. It is not possible to estimate the percentage of services currently coded in this manner that will be coded using AS1, AS2, and AS3.

According to CDC figures for 1990, about 5.1% of all abortions, or 73,000 abortions, were performed in the second trimester, that is after 12 weeks gestation. Of these second trimester abortions, only about 9% were performed after 20 weeks gestation, when the procedures described by AS1, AS2, and AS3 are most likely to be used. Therefore, overall use of these codes will be relatively infrequent.

FEBRUARY 1994 RUC RECOMMENDATIONS
ENDOCRINE SURGERY - TAB 28

The RUC adopted the recommendations for the following endocrine surgery codes based on a survey of otolaryngologists and general surgeons. Additional descriptive information about this group of services is attached, and frequency information is provided on each of the attached recommendation forms. It is notable that for two of these services, codes 6000X and 6050X, the RUC is recommending changes in the estimated global periods.

6000X [Aspiration and/or injection, thyroid cyst] is a complicated procedure due to the risk of injury. The aspiration in the neck region puts the patient at risk for damage to the airways or great vessels. The work that is done for this procedure is very similar to CPT code 60100* [Biopsy thyroid, percutaneous core needle, 0.98 RVW]. The RUC noted that this procedure was also similar in nature to CPT code 19100 [Biopsy of breast; needle core (separate procedure), 1.30 RVW]. The RUC also compared the physician work for CPT code 88170 [Fine needle aspiration with or without the preparation of smears; superficial tissue (eg, thyroid, breast, prostate), 0.52 RVW] to 6000X, which would also be reported for the injection of sclerosing solution, a more complicated procedure than aspiration. Since 6000X would be reported for aspiration and/or injection the higher RVW is justified.

602XA [Partial thyroid lobectomy, unilateral; with or without isthmusectomy] involves working within the capsule that encases the thyroid gland. The patient has usually experienced difficulty in swallowing which is the result of a thyroid nodule that is surgically removed. The recommended RVW for 602XA is 10.63. The work that is done is 602XA, including the isthmusectomy, is more complicated than the most similar reference service 60220 [Total thyroid lobectomy, unilateral, RVW 9.97]. The work for 602XA is considered less complicated than 60245 [Thyroidectomy, subtotal or partial, 12.16 RVW], because the physician is not performing a partial thyroidectomy.

602XB [Partial thyroid lobectomy, unilateral; with contralateral subtotal lobectomy, including isthmusectomy] is considered an extremely intense procedure. The surgeon must take special care not to damage the parathyroid. In addition the surgeon is performing this procedure bilaterally, including bilateral isthmusectomies. Increasingly, this operation is being performed on a younger patient population, usually as the result of Graves Disease. Patients who have Graves disease are usually free of the significant disease pathology to the organs that are near the thyroid and the surgeon must use extra precaution to ensure that these other organs are not damaged. It was noted that the patients put themselves at potentially great surgical risk by undergoing surgery as opposed to radiation therapy which may have been refused by the patient or was ineffective. The recommended RVW for 602XB is 15.65, which is slightly lower than 60240 [Thyroidectomy, total or complete, 15.83 RVW].

6050X [Parathyroid autotransplantation], is a new procedure that was previously reported using an unlisted CPT code. The patients that undergo this procedure are in renal failure complicated by hyperparathyroidism. This procedure is an add-on procedure to parathyroidectomy.

6050X [Parathyroid autotransplantation], is a new procedure that was previously reported using an unlisted CPT code. The patients that undergo this procedure are in renal failure complicated by hyperparathyroidism. This procedure is an add-on procedure to parathyroidectomy.

RUC recommendations for the new thymectomy codes are approximately work neutral. Codes 60520 [revised to read Thymectomy, partial or total; transcervical approach (separate procedure)] and 605XA [Thymectomy, partial or total; sternal split or transthoracic approach, without radical mediastinal dissection (separate procedure)] are reported according to the specific approach that the surgeon took to perform the operation. Both 60520 (16.00 RVW) and 605XA (18.00 RVW) are similar in work to the key reference service, which is code 60520 prior to revision [Thymectomy, partial or total (separate procedure), 17.30 RVW]. The difference in the RVW is based on the complexity of the approach, with a transcervical approach rated less difficult than a sternal split. 605XB is also a code for thymectomy that is performed via sternal split or transthoracic approach. The RVW for 605XB is greater than that of 60520 and 605XA because the surgeon is also performing a radical mediastinal dissection.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation (1994 RVWs)
P1	60000*	Incision and drainage of thyroglossal cyst, infected	010	1.73 (no change)
P2	●6000X	Aspiration and/or injection, thyroid cyst	010 (recom- mended: 000)	0.98
P18	60100*	Biopsy thyroid, percutaneous <u>core</u> needle	000	0.98 (no change)
P3	●602XA	Partial thyroid lobectomy, unilateral; with or without isthmusectomy	090	10.63
P4	●602XB	with contralateral subtotal lobectomy, including isthmusectomy	090	15.65
P5	60220	Total thyroid lobectomy, unilateral; <u>with or without isthmusectomy</u>	090	9.97 (no change)

P6	60225	with contralateral subtotal lobectomy, including isthmus	090	11.78 (no change)
P7	60245	Thyroidectomy, subtotal or partial; (60245 has been deleted. To report, see 60201-60225)	090	12.16 (no change)
P8	60246	with removal of substernal thyroid gland, cervical approach (60246 has been deleted. To report, use 60271)	090	14.32 (no change)
P9	60260	Thyroidectomy, <u>removal of all remaining thyroid tissue following previous removal of a portion of thyroid secondary</u>	090	14.65 (no change)
P10	60270	Thyroidectomy, including substernal thyroid gland, ; sternal split or transthoracic approach	090	16.62 (no change)
P11	●6027X	cervical approach	090	14.32 (same as deleted code 60246)
P12	60280	Excision of thyroglossal duct cyst or sinus;	090	5.61 (no change)
P13	60281	recurrent (For thyroid ultrasonography, see 76536)	090	8.09 (no change)
P14	●6050X	Parathyroid autotransplantation	090 (recom- mended: ZZZ)	4.50
P15	60520	Thymectomy, partial or total; <u>transcervical approach</u> (separate procedure)	090	16.00
P16	●605XA	sternal split or transthoracic approach, without radical mediastinal dissection (separate procedure)	090	18.00
P17	●605XB	sternal split or transthoracic approach, with radical mediastinal dissection (separate procedure)	090	22.00

THYROIDECTOMY CODE RATIONALES INTRODUCTION

The primary indications for thyroidectomy are: 1. Exclusion of malignancy/delineating the histopathology of a nodule. 2. Treatment of thyrotoxicosis. 3. Relief of tracheal, esophageal, and/or vascular compression.

The introduction and wide application of fine needle aspiration cytology to thyroid nodules has markedly changed indication 1. While formerly only 10-20% of resected nodules were malignant and many were non-neoplastic, most are now neoplastic and many are malignant. With neoplastic and often malignant nodules, the most common finding, the preoperative counseling is increased, the intraoperative judgments are more complex, and the postoperative follow-up is lengthier and more involved.

The treatment of Graves' disease continues to shift from operation to medical management, primarily radioiodine (RAI). RAI is also now used as definitive treatment of some cases of toxic adenomas or toxic multinodular goiters. The patients currently coming to operation for thyrotoxicosis, therefore, differ from previous years in that: 1. Patients with Graves' disease have more advanced disease (e.g., severe ophthalmopathy) or have failed RAI (scarring and fibrosis within the gland due to RAI, increasing technical complexity and risks). 2. Patients with toxic adenomas coming to operation more often have very large (>4cm) nodules, responding poorly to RAI (large nodules increase technical complexity by being of increased vascularity and/or distorting the anatomy of surrounding structures) or have failed RAI (scarring and fibrosis . . .). 3. Patients with multinodular toxic goiters who are likely to fail RAI (and are sent for operation) tend to have larger goiters which are more difficult to remove and have a higher complication risk or they have failed RAI (scarring and fibrosis . . .). 4. Children constitute a bigger proportion of those operated for thyrotoxicosis as they are considered by many to be unsuitable for RAI; their operations are more difficult as parathyroid glands are smaller and more delicate and thereby more easily injured. 5. Pregnant women comprise a larger segment of operated thyrotoxic patients as they are unsuitable for RAI; their perioperative care is quite complex, and their glands are very vascular due to both thyrotoxicosis and pregnancy. 6. As the proportion operated for Graves' disease declines with respect to those with toxic adenomas or toxic goiters, the proportion of older patients having a more severe form of disease increases and therefore the perioperative care of older patients is often more involved.

Most operated nontoxic goiter patients are operated for indication 3, and most often for tracheal deviation and/or airway compromise. Their intraoperative management is complicated by difficulties with establishing and maintaining airway access and by increased technical difficulty due to anatomic distortions due to the large and frequently asymmetric goiters. Their postoperative care often includes especially close observation for airway compromise as occult tracheomalacia may have resulted from tracheal compression by the goiter.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION**

Tracking Number: P2 Global Period: 010

CPT Descriptor: Aspiration and/or injection, thyroid cyst

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 65-year-old female, taking digoxin for control of atrial fibrillation and a history of congestive heart failure, presents with a 2.0 cm palpable and visible thyroid nodule that is solitary and cystic by sonography. The trachea is somewhat deviated by the nodule. Aspiration is performed for cytologic exam and the nodule resolves. The cytology is benign.

Pre-service Work:

Reviewing records, including diagnostic studies; consulting with referring physicians regarding treatment plan; counseling of patient and family; and obtaining informed consent.

Intra-service Work:

Positioning the patient and preparing the operative site; administering local anesthetic; aspirating the cyst; applying pressure; and applying a sterile dressing.

Post-service Work:

Preparing the slide; consulting with the pathologist; monitoring the patient in the office for 30 minutes; providing the patient with post-operative care instructions; communicating with other health care professionals (including written and/or telephone reports and orders); and communicating with patient regarding pathology results.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: P3 Global Period: 090

CPT Descriptor: Partial thyroid lobectomy, unilateral; with or without isthmusectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 37-year-old female presents with dysphagia and a 1.5 cm palpable thyroid nodule in the lower pole of the right lobe that is cold on radionuclide scan, solid by sonography, and fine needle aspiration cytology is nondiagnostic. The esophagus is deviated by the nodule on barium swallow. The intra-operative findings are consistent with benign colloid nodule. The lower half of right lobe, including the nodule, is removed. The frozen section confirms benign colloid nodule.

Pre-service Work:

Hospital admission work-up; reviewing of roentgenograms and laboratory studies; communicating with other health care professionals; consulting with referring physician, if necessary; and communicating with patient and family and obtaining informed consent.

Intra-Service Work:

Positioning, prepping, and draping the patient; partial thyroid excision; reviewing the frozen section with the pathologist; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing the patient; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including evaluating lab reports and adjusting medication.

KEY REFERENCE SERVICE(S):

<u>'94 RVW</u>	<u>CPT</u>	<u>Descriptor</u>
8.93	60200	Excision of cyst or adenoma of thyroid, or transection of isthmus
9.97	60220	Total thyroid lobectomy, unilateral;
12.16	60245	Thyroidectomy, subtotal or partial;

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The intensity of the intraoperative work of P3 is similar to 60220 because of the added dissection and work associated with the isthmusectomy. The recommended RVW of 10.63 is based on the ratio of the estimated frequency of previous cases reported for 60220 (RVW=9.97) and 60245 (RVW=12.16).

FREQUENCY INFORMATION:

Estimate the number of times this service might be provided nationally in a one-year period?

- It is estimated that P3 represents 30% of the previously reported cases for code 60245 and 70% of the previously reported cases for code 60220.
- 1992 Medicare Part B allowed frequency by all physician specialties for code 60245 was 2,724* and for code 60220 was 4,637* (*1992 NCH File, HCFA, 3/31/93).

SURVEY DATA:

General Surgery
Otolaryngology

Specialty Society(s):

Median Intra-Service Time: 105 Low: 30 High: 200

Median Pre-Service Time: 60 Median Post-Service Time: 60

Length of Hospital Stay: 2

Post-Hospital Office Visits: 99213 (day 7); 99212 (day 21)

Number of Times Provided in Past 12 months (Median): 3 (range = 0-40)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: P4 Global Period: 090

CPT Descriptor: Partial thyroid lobectomy, unilateral; with contralateral subtotal lobectomy, including isthmusectomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 22-year-old female presents with Graves' disease that is poorly controlled despite PTU and beta-blockers. She desires more children and, despite extensive counseling, she refuses radioactive iodine treatment. Although the patient receives pre-operative Lugol's solution, the thyroid is very vascular and considerable time is required for safe dissection. Bilateral partial (subtotal) thyroidectomy is performed. Post-operative care includes close observation for airway distress and hypocalcemia. Also, treatment of transient hypocalcemia is required.

Pre-service Work:

Hospital admission work-up; reviewing of roentgenograms and lab studies; communicating with other health care professionals; consulting with the referring physician, if necessary; communicating with the patient and family; and obtaining informed consent.

Intra-Service Work:

Positioning, prepping, and draping the patient; bilateral partial (subtotal) excision of thyroid, with careful estimation of size of thyroid remnants, while avoiding damage to the parathyroids and recurrent laryngeal nerves; closing the incision with a layered closure; and applying a sterile dressing.

Post-service Work:

Stabilizing the patient; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); monitoring closely for airway distress and hypocalcemia, as well as hypermetabolism, with treatment as required throughout the hospitalization; monitoring for transient hypocalcemia with necessary parenteral medication therapy; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure, including evaluating laboratory reports and adjustment of medication.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION**

Tracking Number: P14 Global Period: 090

CPT Descriptor: Parathyroid autotransplantation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

[Note: while reading the following vignette, keep in mind that you are being asked to estimate an RVW ONLY for the parathyroid autotransplantation portion of the operation.] A 50-year-old male with hypertension and on hemodialysis for end-stage renal disease has secondary hyperparathyroidism and suffers from intractable pruritus. He has sustained a pathologic humerus fracture in the recent past due to hyperparathyroid bone disease. Four hyperplastic parathyroid glands are identified in the neck and are removed. Approximately 60 mg of parathyroid tissue is diced and reimplanted in muscle pockets in the forearm; muscle implantation is difficult due to scarring from prior hemodialysis vascular access operations in the arm.

Pre-service Work: Not applicable.

Intra-Service Work:

Prepping and draping of the implantation site (eg, arm or leg); back table preparation of parathyroid tissue for reimplantation; waiting for frozen section confirmation of parathyroid tissue; implanting multiple segments of parathyroid tissue into individual muscle pockets; closing the incision; applying a sterile dressing; and preparing remaining parathyroid tissue for cryopreservation.

Post-service Work: Not applicable.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: P15 Global Period: 090

CPT Descriptor: Thymectomy, partial or total; transcervical approach (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 60-year-old male presents with a history of myasthenia gravis with severe generalized muscle weakness and prior hospitalization for pneumonia. He is wheelchair-bound. Chest roentgenogram and chest CT scan are without evidence of thymoma. Pre-operative pulmonary function tests show moderate decreases in inspiratory volumes and minute ventilation. A pre-operative plasmapheresis is performed. Transcervical thymectomy is chosen to minimize pulmonary complications. He is admitted to ICU post-operatively where mechanical ventilation is necessary for 24 hours followed by 48 hours of intensive respiratory therapy and oximetric or capnographic monitoring.

Pre-service Work:

Hospital admission work-up, with special attention to neuromuscular function, coagulation factors, and adrenal status; reviewing roentgenograms and laboratory studies; communicating with other health care professionals; consulting with referring physician; communicating with patient and family; and obtaining informed consent.

Intra-Service Work:

Positioning, prepping, and draping the patient; cervical exploration, with removal of thymus (partial or total); layered closure of incision; and application of sterile dressing.

Post-service Work:

Stabilizing the patient; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of neuromuscular, adrenal, and pulmonary status (including monitoring chest roentgenogram); ICU care and ventilator management and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: P16 Global Period: 090

CPT Descriptor: Thymectomy, partial or total; sternal split or transthoracic approach, without radical mediastinal dissection (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 55-year-old male has myasthenia gravis with generalized moderate muscle weakness. Chest roentgenogram and chest CT scan suggest thymic enlargement. Pulmonary function tests show mild decreases in minute ventilation. A pre-operative plasmapheresis is performed. Median sternotomy discloses thymic hyperplasia and mild thymic enlargement. Post-operatively, he is admitted to ICU and requires mechanical ventilation for 48 hours followed by 48 hours of intensive respiratory therapy and oximetric or capnographic monitoring.

Pre-service Work:

Hospital admission work-up, with special attention to neuromuscular, pulmonary, and adrenal status; reviewing roentgenograms and laboratory studies; communicating with other health care professionals; consulting with referring physician; communicating with patient and family; and obtaining informed consent.

Intra-Service Work:

Positioning, prepping, and draping the patient; sternotomy or thoracotomy; removal of thymus (partial or total), without removal of adjacent structures; placement of thoracic and/or mediastinal drainage tubes; layered closure of incision, including sternum; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of neuromuscular, adrenal, and pulmonary status (including monitoring chest roentgenogram); ICU care and ventilator management; removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF CONSENSUS RECOMMENDATION

Tracking Number: P17 Global Period: 090

CPT Descriptor: Thymectomy, partial or total; sternal split or transthoracic approach, with radical mediastinal dissection (separate procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 54-year-old male has myasthenia gravis with ocular and mild generalized muscle weakness. Chest roentgenogram and chest CT scan suggest thymoma. At operation thymoma is confirmed and is adherent to pleura and pericardium. Thymus and perithymic tissue are removed from the thoracic inlet to the diaphragm. Intra-operative blood transfusion is required. Post-operatively, he is admitted to ICU, requiring 48 hours of mechanical ventilation and then 48 hours of intensive respiratory therapy and oximetric and/or capnographic monitoring.

Pre-service Work:

Hospital admission work-up, with special attention to neuromuscular, pulmonary, and adrenal status; reviewing roentgenograms and laboratory studies; communicating with other health care professionals; consulting with referring physician, if necessary; communicating with patient and family; and obtaining informed consent.

Intra-Service Work:

Positioning, prepping, and draping the patient; sternotomy or thoracotomy; removal of thymus (partial or total), with removal of adjacent structures; mediastinal and/or thoracic drainage; layered closure of incision, including sternum; and application of sterile dressing.

Post-service Work:

Patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); careful monitoring of neuromuscular, adrenal, and pulmonary status (including monitoring chest roentgenogram); ICU care and ventilator management; removal of all tubes and drains; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this problem for 90 days after the day of the operation are considered part of the post-operative work for this procedure; including evaluating laboratory reports and adjusting medication.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

PEDIATRIC NEUROSURGERY

In contrast to the Harvard study that developed proposed values for these services, the specialty societies who developed the RUC recommendations for pediatric neurosurgery procedures made a concerted effort to identify those physicians who actually provide these relatively infrequent to rare services to their patients. Key reference services for these recommendations are the craniectomy codes 61550, 61552, 61312, and 61510, with published values between 14.59 and 23.96 RVW. Each subsequent code reflects a different, progressively more complicated level of the same basic procedure. The specialties noted that many neurosurgery codes are more heterogeneous than other CPT codes, covering a wide spectrum of services for small and large defects. In the specialty surveys, respondents who are maxillofacial surgeons tended to give higher values than neurosurgeons because they typically become involved with a patient when the problems were more advanced. Recommendations for two additional codes in this section will be provided after the February RUC meeting.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
61556	Craniotomy for craniosynostosis; frontal or parietal bone flap	090	21.87	21.59
61557	bifrontal bone flap	090	22.00	21.71
61558	Extensive craniectomy for multiple cranial suture craniosynostosis (eg, cloverleaf skull); not requiring bone grafts	090	25.00	24.68
61559	recontouring with multiple osteotomies and bone autografts (eg, barrel-stave procedure) (includes obtaining grafts)	090	No Recommendation at this time	No Recommendation at this time
61563	Excision, intra and extracranial, benign tumor of cranial bone (eg, fibrous dysplasia); without optic nerve decompression	090	26.50	26.16
61564	with optic nerve decompression	090	No Recommendation at this time	No Recommendation at this time

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
62115	Reduction of craniomegalic skull (eg, treated hydrocephalus); not requiring bone grafts or cranioplasty	090	21.00	20.73
62116	with simple cranioplasty	090	23.00	22.70
62117	requiring craniotomy and reconstruction with or without bone graft (includes obtaining grafts)	090	26.00	25.66
62120	Repair of encephalocele, skull vault, including cranioplasty	090	22.89	22.59
63700	Repair of meningocele; less than 5 cm diameter	090	16.00	15.79
63702	larger than 5 cm diameter	090	18.00	17.77
63704	Repair of myelomeningocele; less than 5 cm diameter	090	20.00	19.74
63706	larger than 5 cm	090	23.00	22.70

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY

CPT Code: 61536

Global Period: 090

CPT Descriptor: Craniotomy for craniosynostosis; frontal or parietal bone flap

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant with fusion of multiple cranial sutures with gross deformity of skull and ear, brain compression.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformities. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the head, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Scalp incision planned to expose cranial bone to permit frontal or parietal bone flap elevation while maintaining adequate blood supply to scalp. Technique equivalent to exposure for a subdural hematoma or tumor without opening of dura. Use of special equipment to cut bone slot in cranium while minimizing blood loss from bone, scalp, and dura. Layered closure of incision.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major cranial surgery. Usually requires several wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains when utilized. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 5 days with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

Note for all Key Reference Tables: RVW=the relative work value from the Medicare Fee Schedule 11/92
Hsiao 3/92 Phase III Time=estimates of time in minutes from the Harvard/Hsiao Phase III Study Final Report
RVW Recommended=the relative work value recommended for a procedure based upon the Specialty analysis
Survey Results Time=the median time values in minutes derived from the Specialty survey

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92 Phase III		
			Pre	Intra	Time Post
61550	craniectomy for craniostenosis, single suture	14.59	61	108	74
61552	craniectomy for craniostenosis, multiple sutures, one stage	19.48	61	156	83
61312	craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial except meningioma	23.96	91	203	194

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

CPT Code	CPT DESCRIPTOR	RVW Recommendation	Survey		
			Pre	Results Intra	Time Post
Craniosynostosis & Remodeling/Reconstruction Procedures					
61556	CRANIOTOMY/CRANIOSTENOSIS, FRONTAL OR PARIETAL BONE FLAP	21.87	115	225	150
61557	CRANIOTOMY/CRANIOSYNOSTOSIS, BIFRONTAL BONE FLAP	22.00	110	200	150
61558	EXTENSIVE CRANIECTOMY/MULT. CRANIAL SUTURE SYNOSTOSIS W/O GRAFTS	25.00	120	300	180
61559	EXTENSIVE CRANIECTOMY/MULT. CRAN. SYNOSTOSIS/CLOVERLEAF W GRAFTS	28.88	120	240	150

Key reference is 61312 with RVW of 21.04 and Intra- time of 140 minutes. The techniques are similar to identical except for the age and size of the patient with craniostenosis and the absence of a hematoma. The time difference between survey of 225 min. and the Harvard/Hsiao intra- time of 140 min. indicates that this group of patients requires additional work in surgery. The pre and post times balance out and the stress/risk factors are slightly higher for all of the pediatric codes due to the relative fragility of infants and children, and the long term (up to 21 years) on liability.

Recommend that the RVW be valued slightly higher than 61312.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 500
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 20.07

Recommend increase in RVW from Harvard proposed value in view of the above considerations.

SURVEY DATA:

Median Intra-Service Time: 225 Low: 120 High: 420

Median Pre-Service Time: 115 Median Post-Service Time: 150

Length of Hospital Stay: 5 Number & Level of PostHospital Visits: 3

Number of Times Provided in Past 12 months (Median): 5

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 61557

Global Period: 090

CPT Descriptor: Craniotomy for craniosynostosis; bifrontal bone flap

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant with marked skull deformity, frontal deformities, and coronal/metopic suture closure.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformities. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning patient, assurance of adequate monitoring and temperature control; preparation of the head, scrubbing of anesthesia.

Description of Intra-Service Work:

Expose cranial bone to permit bilateral frontal bone flap elevation while maintaining scalp. Use of special equipment to cut bone slot in cranium while minimizing blood loss. Special attention to protection of anterior portion of sagittal sinus in midline incision.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major cranial surgery. Usually requires several wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains when utilized. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 5 days with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92 Phase III		
			Pre	Intra	Post
61550*	craniectomy for craniostenosis, single suture	14.59	61	108	74
61552*	craniectomy for craniostenosis, multiple sutures, one stage	19.48	61	156	83
61312	craniectomy or craniotomy for evacuation of hematoma, supratentorial, extradural or subdural	21.04	75	140	253
61510	craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial except meningioma	23.96	91	203	194

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

CPT Code	CPT DESCRIPTOR	RVW Recommendation	Survey		
			Pre	Results Intra	Time Post
Craniosynostosis & Remodeling/Reconstruction Procedures					
61556	CRANIOTOMY/CRANIOSTENOSIS, FRONTAL OR PARIETAL BONE FLAP	21.87	115	225	150
61557	CRANIOTOMY/CRANIOSTENOSIS; BIFRONTAL BONE FLAP	22.00	110	200	150
61558	EXTENSIVE CRANIOTOMY/MULT. CRANIAL SUTURE SYNOSTOSIS W/O GRAFTS	25.00	120	300	180
61559	EXTENSIVE CRANIOTOMY/MULT. CRAN. SYNOSTOSIS (CLOVERLEAF) W GRAFTS	28.88	120	240	150

Key reference is 61312 with RVW of 21.04 and Intra- time of 140 minutes. The techniques are similar to identical except for the age and size of the patient with craniostenosis and the absence of a hematoma. The time difference between survey of 200 min. and the Harvard/Hsiao intra- time of 140 min. indicates that this group of patients requires additional work in surgery. The pre and post times balance out and the stress/risk factors are slightly higher for all of the pediatric codes due to the relative fragility of infants and children, and the long time (up to 21 years) on liability.

Recommend that the RVW be valued slightly higher than both 61312 and 61556 due to the additional complexity of crossing the sagittal sinus and bone removal in the lateral portions of the anterior cranial fossa bilaterally that requires elevation of the brain and dura from the lateral orbital roofs and sphenoid bone.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 100
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 21.01

SURVEY DATA:

Median Intra-Service Time: 200 Low: 120 High: 420
 Median Pre-Service Time: 110 Median Post-Service Time: 150
 Length of Hospital Stay: 5 Number & Level of PostHospital Visits: 3/3
 Number of Times Provided in Past 12 months (Median): 6

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 61558

Global Period: 090

CPT Descriptor: Extensive craniectomy for multiple cranial suture craniosynostosis (eg, cloverleaf skull) not requiring bone grafts

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant with fusion of multiple cranial sutures with cloverleaf skull, temporal bulging, no open sutures, proptosis, increased intracranial pressure.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformities. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the head, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Scalp incision planned to expose cranial bone to permit craniectomies while maintaining adequate blood supply to scalp. Use of special equipment to cut multiple bone slots in cranium while minimizing blood loss from bone, scalp, and dura. Technique similar to elevating bone flap for removal of subdural hematoma. May require changes in head position to allow craniectomy in other areas for proper recontouring of skull. Layered closure of incision.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance and possible seizures, since infants tend to be labile in response to volume shifts and cranial decompression that may occur following major cranial surgery. Usually requires several wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains when utilized. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 7 days with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92 Pre	Phase III Intra	Time Post
61550*	craniectomy for craniostenosis, single suture	14.59	61	108	74
61552*	craniectomy for craniostenosis, multiple sutures, one stage	19.48	61	156	83
61312	craniectomy or craniotomy for evacuation of hematoma, supratentorial, extradural or subdural	21.04	75	140	253
61510	craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial except meningioma	23.96	91	203	194
61518	craniectomy for excision of brain tumor, intratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

CPT Code	CPT DESCRIPTOR	RVW Recom- mend	Survey Pre	Results Intra	Time Post
Craniosynostosis & Remodeling/Reconstruction Procedures					
61556	CRANIOTOMY/CRANIOSTENOSIS, FRONTAL OR PARIETAL BONE FLAP	21.87	115	225	150
61557	CRANIOTOMY/CRANIOSTENOSIS, BIFRONTAL BONE FLAP	22.00	110	200	150
61558	EXTENSIVE CRANIECTOMY/MULT CRANIAL SUTURE SYNOSTOSIS W/O GRAFTS	25.00	120	300	180
61559	EXTENSIVE CRANIECTOMY/MULT CRAN. SYNOSTOSIS(CLOVERLEAF)W GRAFTS	28.88	120	240	150

The Key Reference is 61552 with a RVW of 19.48 and intra- time from Harvard/Hsiao of 156 min. This procedure requires multiple craniectomies but is more complex due to the need to decompress the entire skull including the orbits and anterior basal regions. The survey intra- time of 300 min. is almost double the time for the simpler procedure and reflects the additional work required to do the decompression. This also exceeds some of the cases of 61510 with a RVW of 23.96 in complexity, even without entering the brain for a tumor. The values support this evaluation, and we recommend the median RVW from our survey of 25.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 10
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 24.47

SURVEY DATA:

Median Intra-Service Time: 300 Low: 200 High: 490
 Median Pre-Service Time: 120 Median Post-Service Time: 180
 Length of Hospital Stay: 7 Number & Level of PostHospital Visits: 3/3
 Number of Times Provided in Past 12 months (Median): 2

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 61563

Global Period: 090

CPT Descriptor: Excision, intra and extracranial, benign tumor of cranial bone (eg, fibrous dysplasia); without optic nerve decompression

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Child with slow progressive bony growth of temple and proptosis; fibrous dysplasia fronto-orbital region.

Description of Pre-Service Work:

Evaluation of the patient before surgery, including informed consent from parents; reviewing the nature of the lesion and the steps required to correct the deformities; hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; positioning and draping of patient; assuring adequate monitoring and temperature control; preparation of the patient's head; scrubbing; and induction of anesthesia.

Description of Intra-Service Work:

Incision of scalp to expose cranial bone to permit frontal-temporal bone flap elevation, while maintaining adequate blood supply to scalp (technique is equivalent to exposure for intracranial aneurysm). Cut bone slot in cranium, using special equipment, while minimizing blood loss from bone, scalp, and dura. Removal of involved bone from orbital temporal bone and sphenoid ridge. Protection of dura and frontal and temporal lobes. Layered closure of incision after replacement of bone flap. Application of sterile dressing.

Description of Post-Service Work:

Patient stabilization, including monitoring of patient's hemodynamics and fluid balance (infants tend to be labile in response to volume shifts that may occur with major cranial surgery). Wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains, when utilized, and for possible progressive proptosis. Communication with family and other providers, including all written and telephone reports and orders. Patient is usually in hospital 5 days, with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	1993 CPT Descriptor	1992 RVW	Hsiao Phase III Service Time in minutes		
			Pre-	Intra-	Post-
61550	Craniectomy for craniosynostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniosynostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	23.96	91	203	194
61512	Craniectomy, trephination, bone flap craniotomy; for excision of meningioma, supratentorial	24.85	84	209	182
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress):

The primary key reference is 61512 with an RVW of 24.85 and an intra-service time from the Harvard study of 209 minutes. The techniques are similar to resection of a sphenoid ridge meningioma except for the age and size of the patient and the invasion of the orbit. The time difference between survey medians and the Harvard intra-service time indicates that this group of patients requires some additional work in surgery. The survey medians for the participating specialties were 240 and 375 minutes, with ranges of 200 to 540 minutes and 180 to 720 minutes, reflecting the range of complexity these cases may present. The pre- and post-times are similar, but the stress/risk factors are slightly higher for all of the pediatric codes due to the relative fragility of infants and children undergoing surgery, along with the long tail (up to 21 years) on liability. The recommended RVW of 26.50 is slightly higher than 61512 due to the additional complexity of the intra-service work.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 8 (1992 NCH File, HCFA, 3/31/93).
- Overall annual frequency is estimated at 20.

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 23.70

(See discussion above under rationale for key reference service.)

Please complete this page if more than one specialty society was involved in developing the recommendation.

Median Intra-Service Time: 240 Low: 200 High: 540

Median Pre-Service Time: 105 Median Post-Service Time: 150

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 3 x 99213

Number of Times Provided in Past 12 months (Median): 2

Other Data:

Median Intra-Service Time: 375 Low: 180 High: 720

Median Pre-Service Time: 90 Median Post-Service Time: 120

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 1 x 99214; 2 x 99213; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-18

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Proposed Harvard Value: 15.94

Recommended RVW: 21.00

CPT Code: 62115

Global Period: 090

CPT Descriptor: Reduction of craniomegalic skull (eg, treated hydrocephalus); not requiring bone grafts or cranioplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Hydrocephalic child with craniocerebral disproportion following shunting and persistent subdural fluid collections and markedly enlarged skull.

Description of Pre-Service Work:

Evaluation of the patient before surgery, including informed consent from parents; reviewing the nature of the deformity and the steps required to correct the deformities; hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; positioning and draping the patient; assuring adequate monitoring and temperature control; preparation of the patient's head; scrubbing; and induction of anesthesia.

Description of Intra-Service Work:

Incision of scalp to expose cranial bone and permit craniectomies, while maintaining adequate blood supply to scalp. Cut multiple bone slots in cranium, using special equipment, while minimizing blood loss from bone, scalp, and dura. This may require changes in the head position to allow craniectomy in other areas for proper recontouring of skull. Protection of venous dural sinuses. Possible drainage, including external, of subdural fluid collections to allow for reduction in intracranial volume. Layered closure of incision, including possible plastic revision of scalp to remove excess scalp tissue. Application of sterile dressing.

Description of Post-Service Work:

Patient stabilization, including monitoring of patient's hemodynamics, fluid balance, and possible seizures (infants tend to be labile in response to volume shifts and cranial decompression that may occur with major cranial surgery). Several wound checks and dressing changes to assure absence of scalp hematomas. May require one or more blood replacements. Monitoring of subdural drains when utilized. Communication with family and other providers, including all written and telephone reports and orders. Patient is usually in hospital 7 days, with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	1993 CPT Descriptor	1992 RVW	Hsiao Phase III Service Time in minutes		
			Pre-	Intra-	Post-
61550	Craniectomy for craniosynostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniosynostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	23.96	91	203	194
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress).

The primary key reference is 61552 with an RVW of 19.48 and an intra-service time from the Harvard study of 156 minutes. Procedure 62115 requires multiple craniectomies and is more complex due to the need to reconstruct the entire skull by removal and remodeling of several different parts of the cranium. The survey medians for the intra-service time for the participating specialties were 270 and 390 minutes, which is two to three times the time for 61552 and reflects the additional work required to do the decompression and deal with the intracranial contents, including drainage of subdural fluid accumulations, when present. In this context, 61312 (RVW=21.04) should be compared, since this is the procedure for primary evacuation of subdural hematomas. The elements of greater skill, effort and risk/stress (seizures, subdural or epidural bleeding, intracranial hypertension, and shunt malfunction) support this evaluation, and an RVW of 21.00 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 0 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency for "birth defect reconstruction" patients, craniofacial defects other than cleft lip/palate = 1.675 (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]
- Overall annual frequency for this procedure is estimated at 5.

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 15.94

(See discussion above under rationale for key reference service.)

Median Intra-Service Time: 270 Low: 140 High: 440

Median Pre-Service Time: 95 Median Post-Service Time: 150

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 3 x 99213

Number of Times Provided in Past 12 months (Median): 2

Other Data:

Median Intra-Service Time: 390 Low: 240 High: 600

Median Pre-Service Time: 105 Median Post-Service Time: 150

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 1 x 99214; 2 x 99213; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Specialty Society(s): American Association of Neurological Surgeons (AANS)
American Society of Maxillofacial Surgeons (ASMS)
American Society of Plastic and Reconstructive Surgeons, Inc. (ASPRS)

Presenter(s) at RUC Meeting: Byron C. Pevehouse, MD (AANS), Peter W. Carmel, MD (AANS),
Jeffrey Resnick, MD (ASMS), Patricia Gomuwka, MD (ASPRS)

Proposed Harvard Value: 17.91

Recommended RVW: 23.00

CPT Code: 62116

Global Period: 090

CPT Descriptor: Reduction of craniomegalic skull (eg. treated hydrocephalus); with simple cranioplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Hydrocephalic child with craniocerebral disproportion following shunting and persistent subdural fluid collections and markedly enlarged skull plus cranial defects requiring closure.

Description of Pre-Service Work:

Evaluation of the patient before surgery, including informed consent from parents; reviewing the nature of the deformity and the steps required to correct the deformities; hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; positioning and draping the patient; assuring adequate monitoring and temperature control; preparation of the patient's head; scrubbing; and induction of anesthesia.

Description of Intra-Service Work:

Incision of scalp to expose cranial bone and permit craniectomies, while maintaining adequate blood supply to scalp. Cut multiple bone slots in cranium, using special equipment, while minimizing blood loss from bone, scalp, and dura. This may require changes in the head position to allow craniectomy in other areas for proper recontouring of skull. Protection of venous dural sinuses. Possible drainage, including external, of subdural fluid collections to allow for reduction in intracranial volume. Use of cranioplasty for closure of larger bone defects. Layered closure of incision, including possible plastic revision of scalp to remove excess scalp tissue. Application of sterile dressing

Description of Post-Service Work:

Patient stabilization, including monitoring of patient's hemodynamics, fluid balance, and possible seizures (infants tend to be labile in response to volume shifts and cranial decompression that may occur with major cranial surgery). Several wound checks and dressing changes to assure absence of scalp hematomas. May require one or more blood replacements. Monitoring of subdural drains when utilized. Communication with family and other providers, including all written and telephone reports and orders. Patient is usually in hospital 5 days, with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	1993 CPT Descriptor	1992 RVW	Hsiao Phase III Service Time in minutes		
			Pre-	Intra-	Post-
61550	Craniectomy for craniosynostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniosynostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The primary key reference is 61552 with an RVW of 19.48 and an intra-service time from the Harvard study of 156 minutes. Procedure 62116 requires multiple craniectomies, but is more complex due to the need to reconstruct the entire skull by removal and remodeling of several different parts of the cranium, and to cover defects with a cranioplasty. The survey medians for the intra-service time for the participating specialties were 240 and 360 minutes, which is 1.5 to 2.5 times the intra-service time for 61552 and reflects the additional work required to do the decompression and deal with the intracranial contents, including drainage of subdural fluid accumulations, when present. In this context, 61312 (RVW=21.04) should be compared, since this is the procedure for primary evacuation of subdural hematoma. An additional element of cranioplasty is included in this procedure, which as a separate procedure has an RVW of 12.94 and would add significant work to the total RVW. The elements of greater skill, effort and risk/stress (seizures, subdural or epidural bleeding, intracranial hypertension, and shunt malfunction) support this evaluation, and an RVW of 23.00 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 1 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency for "birth defect reconstruction" patients, craniofacial defects other than cleft lip/palate = 1,675 (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure.]
- Overall annual frequency for this procedure is estimated at 3.

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 17.91

(See discussion above under rationale for key reference service.)

Median Intra-Service Time: 240 Low: 120 High: 360

Median Pre-Service Time: 90 Median Post-Service Time: 150

Length of Hospital Stay: 5

Number & Level of Post-Hospital Visits: 4 x 99213

Number of Times Provided in Past 12 months (Median): 2

Other Data:

Median Intra-Service Time: 360 Low: 120 High: 480

Median Pre-Service Time: 105 Median Post-Service Time: 150

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 1 x 99214; 2 x 99213; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 62117

Global Period: 090

CPT Descriptor: Reduction of craniomegalic skull (eg, treated hydrocephalus); requiring craniotomy and reconstruction with or without bone graft (includes obtaining grafts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Older hydrocephalic child with craniocerebral disproportion following shunting and persistent subdural fluid collections and markedly enlarged skull plus cranial defects requiring closure and adequate autologous donor source.

Description of Pre-Service Work:

Evaluation of the patient before surgery, including informed consent from parents; reviewing the nature of the deformity and the steps required to correct the deformities, as well as discussion of harvesting bone grafts; hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; positioning and draping the patient; assuring adequate monitoring and temperature control; preparation of the patient's head; scrubbing; and induction of anesthesia.

Description of Intra-Service Work:

Incision of scalp to expose cranial bone and permit craniectomies, while maintaining adequate blood supply to scalp. Cut multiple bone slots in cranium, using special equipment, while minimizing blood loss from bone, scalp, and dura. This may require changes in the head position to allow craniectomy in other areas for proper recontouring of skull. Protection of venous dural sinuses. Possible drainage, including external, of subdural fluid collections to allow for reduction in intracranial volume. Use of bone grafts, separately harvested, for closure of larger bone defects. Layered closure of incision, including possible plastic revision of scalp to remove excess scalp tissue. Application of sterile dressing.

Description of Post-Service Work:

Patient stabilization, including monitoring of patient's hemodynamics, fluid balance, and possible seizures (infants tend to be labile in response to volume shifts and cranial decompression that may occur with major cranial surgery). Several wound checks and dressing changes to assure absence of scalp hematomas. May require one or more blood replacements. Monitoring of subdural drains when utilized. Communication with family and other providers, including all written and telephone reports and orders. Patient is usually in hospital 6-7 days, with one visit per day, followed by office visits after discharge up to 90 days after the procedure. Additional time and work involved in caring for two operative sites.

KEY REFERENCE SERVICE(S):

CPT Code	1993 CPT Descriptor	1992 RVW	Hsiao Phase III Service Time in minutes		
			Pre-	Intra-	Post-
61550	Craniectomy for craniosynostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniosynostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	23.96	91	203	194

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The primary key reference is 61552 with an RVW of 19.48 and an intra-service time from the Harvard study of 156 minutes. Procedure 62117 requires multiple craniectomies, but is more complex due to the need to reconstruct the entire skull by removal and remodeling of several different parts of the cranium, and to anchor the bone and grafts to assure healing. The survey medians for the intra-service time for the participating specialties were 300 and 420 minutes, which is two to three times the intra-service time for 61552 and reflects the additional work required to do the decompression and deal with the intracranial contents, including drainage of subdural fluid accumulations, when present. In this context, 61312 (RVW=21.04) should be compared, since this is the procedure for primary evacuation of subdural hematomas. An additional element of reconstruction with bone grafting is included in this procedure, which, as a separate procedure with an RVW of 2.86, would add work to the total RVW. The elements of greater skill, effort and risk/stress (seizures, subdural or epidural bleeding, intracranial hypertension, and shunt malfunction) support this evaluation, and an RVW of 26.00 is recommended.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes X Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

- 1992 Medicare frequency by all physician specialties = 1 (1992 NCH File, HCFA, 3/31/93).
- 1992 national frequency for "birth defect reconstruction" patients, craniofacial defects other than cleft lip/palate = 1.675 (1992 report prepared by Healthcare Information Group Market Facts, Inc. 4/93). [NOTE: This frequency may apply to more than one procedure]
- Overall annual frequency for this procedure is estimated at 5.

Is this service performed by many physicians across the United States? ___ Yes X No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (if Applicable): Harvard RVW = 20.31

(See discussion above under rationale for key reference service.)

Median Intra-Service Time: 300 Low: 240 High: 540

Median Pre-Service Time: 108 Median Post-Service Time: 170

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 3 x 99213

Number of Times Provided in Past 12 months (Median): 2.5

Other Data:

Median Intra-Service Time: 420 Low: 300 High: 530

Median Pre-Service Time: 105 Median Post-Service Time: 150

Length of Hospital Stay: 7

Number & Level of Post-Hospital Visits: 1 x 99214; 2 x 99213; 1 x 99211

Number of Times Provided in Past 12 months (Median): 0; range 0-3

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 62120

Global Period: 090

CPT Descriptor: Repair of encephalocele, skull vault, including cranioplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant with mass on skull with cerebral hernia and midline defect.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformity. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient (frequently face down); assurance of adequate monitoring and temperature control; preparation of the head, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Scalp incision planned to expose cranial bone to permit exposure of the bone margins around the cerebral hernia while maintaining adequate blood supply to scalp. Technique requires mobilization of the protruding cerebral tissue, once separated from the scalp tissue, and careful dissection to either replace inside calvarium or remove if non-functional. Attention to minimizing blood loss from bone, scalp, and dura. Layered closure of incision.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major cranial surgery. Also monitoring for signs of intracranial hypertension which may occur following repair of these lesions. Usually requires several wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains when utilized. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 5 days with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92	Phase III	Time
			Pre	Intra	Post
61154	burr hole(s) with evacuation and/or drainage of hematoma, extradural or subdural	14.00	65	60	176
61550*	craniectomy for craniostenosis, single suture	14.59	61	108	74
61552*	craniectomy for craniostenosis, multiple sutures, one stage	19.48	61	156	83
61312	craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial except meningioma	23.96	91	203	194
61518	craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; ar stress):

CPT Code	CPT DESCRIPTOR	RVW Recom- mend	Survey	Results	Time
			Pre	Intra	Post
62120	REPAIR/ENCEPHALOCELE, INCL CF, ANIDPLASTY	22.89	120	180	120

Key References include 61312 with a RVW of 21.04 and Intra- time of 140 min, and 61510 with a RVW of 23.96 and a Intra- time of 203 min. The median survey RVW is 21.87 and the median intra-service time is 225 min. The various elements of work including time, skill and effort, judgement and stress/risk all tend to place this procedure in the 22-23 range, and the HCFA proposed value of 22.89 is consistent with these parameter. We recommend the HCFA proposed value of 22.89.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes X Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 200
 Is this service performed by many physicians across the United States? Yes No X

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 22.89

SURVEY DATA:

Median Intra-Service Time: 180 Low: 120 High: 450

Median Pre-Service Time: 120 Median Post-Service Time: 120

Length of Hospital Stay: 5 Number & Level of Post-Hospital Visits: 4/3

Number of Times Provided in Past 12 months (Median): 3

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 63700

Global Period: 090

CPT Descriptor: **Repair of meningocele; less than 5 cm diameter**

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant/child with lumbar midline protrusion of skin covered sac.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformities. Discussion of the possibility of malfunction of the lower extremities and bladder. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the back, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Back incision planned to expose the defect while maintaining adequate blood supply to skin flaps with adequate mobilization to permit low tension closure over primary defect. Technique requires careful dissection to minimize risk of damage to dural contents, and a multi-layered closure to prevent postoperative CSF leakage.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major surgery. Usually requires several wound checks and dressing changes to assure absence of wound drainage. Monitoring of patients positioning and handling to prevent pressure effects on wound healing. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 5 days with one visit per day, followed by office visits after discharge up to 9 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92 Pre	Pha... III Intra	Time Post
63030	laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk, one interspace, lumbar	12.40	64	87	125
62223	creation of shunt; ventriculo-peritoneal, -pleural; other terminus	13.12	55	85	150
63017	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments, lumbar	16.24	72	164	152
63015	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments, cervical	16.99	59	161	142
63042	laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk, re-exploration; lumbar	17.69	66	133	131
63075	diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophylectomy; cervical, single interspace	20.25	64	116	115

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; ar stress):

CPT Code	CPT DESCRIPTOR	RVW Recom- mend	Survey Pre	Results Intra	Time Post
Repair of Spinal Midline Dysraphic Defects					
63700	REPAIR OF MENINGOCELE, < 5 CM DIAM.	16.00	90	120	120
63702	REPAIR OF MENINGOCELE, > 5 CM DIAM.	18.00	90	180	130
63704	REPAIR OF MYELOMENINGOCELE, < 5 CM DIAM	20.00	112	180	150
63706	REPAIR OF MYELOMENINGOCELE, > 5 CM DIAM	23.00	120	240	150

Key References are 63030 with RVW of 12.40 and intra- time of 87-min, 63017 and 63015 with RVWs at 16.24 & 16.99 and intra- times of 161+min. The median RVW from the survey is 16.00 and the median intra- time is 120 min. The work involved in repair can vary substantially, as reflected in the wide spread of intra-service times from a low of 45 to a high of 420 minutes. The particular differences from the reference procedures center upon the elements of skill, judgement and stress as related to the nature of the lesion. Repair while sparing neural elements and securing a well healed wound that definitively covers the congenital defect requires additional skills and judgement. The stress and risk relate to the tender age of the patients and the dangers of major surgical procedures on the very young, coupled with the long period of exposure to potential liability action. Recommend the median survey RVW of 16.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 100
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 12.05

SURVEY DATA:

Median Intra-Service Time: 120 Low: 45 High: 420
 Median Pre-Service Time: 90 Median Post-Service Time: 120
 Length of Hospital Stay: 5 Number & Level of PostHospital Visits: 3/3
 Number of Times Provided in Past 12 months (Median): 3

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 63702

Global Period: 090

CPT Descriptor: Repair of meningocele; larger than 5 cm diameter

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant/child with large midline lumbar defect thinly covered with skin.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the deformity. Discussion of the possibility of malfunction of the lower extremities and bladder. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the back, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Back incision planned to expose the defect while maintaining adequate blood supply to skin flaps with wide mobilization to permit low tension closure over primary defect. Technique requires careful dissection to minimize risk of damage to dural contents, and a multi-layered closure to prevent postoperative CSF leakage.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major surgery. Usually requires several wound checks and dressing changes to assure absence of wound drainage. Monitoring of patients positioning and handling to prevent pressure effects on wound healing. Monitoring for post-operative signs of intracranial pressure. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 5 days with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hsiao3/92 Phase III		
			Pre	Intra	Time Post
63030	laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk; one interspace; lumbar	12.40	64	87	125
62223	creation of shunt; ventriculo-peritoneal, -pleural; other terminus	13.12	55	85	150
63017	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; lumbar	16.24	72	164	152
63015	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; cervical	16.99	59	161	142
63042	laminotomy(hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk, re-exploration; lumbar	17.69	66	133	131
63075	diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including neurophytectomy; cervical, single interspace	20.25	64	116	115

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; an stress):

CPT Code	CPT DESCRIPTOR	RVW Recommendation	Survey		
			Pre	Results Intra	Time Post
Repair of Spinal Midline Dysraphic Defects					
63700	REPAIR OF MENINGOCELE, < 5 CM DIAM	16.00	90	120	120
63702	REPAIR OF MENINGOCELE, > 5 CM DIAM.	18.00	90	180	130
63704	REPAIR OF MYELOMENINGOCELE, < 5 CM DIAM	20.00	112	180	150
63706	REPAIR OF MYELOMENINGOCELE, > 5 CM DIAM	23.00	120	240	150

Key References are 63030 with RVW of 12.40 and intra- time of 87 min, 63015 and 63042 with RVWs at 16.24 & 17.69 and intra- times of 161 min. The median RVW from the survey is 16.62 and the median intra- time is 180 min. which is one hour more than the smaller procedure 63700. The work involved in repair can vary substantially, as reflected in the wide spread of intra-service times from a low of 45 to a high of 480 minutes. The particular differences from the reference procedures center upon the elements of skill, judgement and stress as related to the nature of the lesion. Repair while sparing neural elements and securing a well healed wound that definitively covers the congenital defect requires additional skills and judgement. The stress and risk relate to the age of the patients and the dangers of major surgical procedures on the very young, coupled with the long period of exposure to potential liability action. Recommend a RVW of 18.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 50
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 14.20

SURVEY DATA:

Median Intra-Service Time: 180 Low: 45 High: 480
 Median Pre-Service Time: 90 Median Post-Service Time: 130
 Length of Hospital Stay: 5 Number & Level of PostHospital Visits: 3/3
 Number of Times Provided in Past 12 months (Median): 2.5

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 63704

Global Period: 090

CPT Descriptor: Repair of myelomeningocele ; less than 5 cm diameter

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Newborn with transparent lumbar sac containing neural tissue, paraparetic, with enlarged head.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the defect. Discussion of the nature of malfunction of the lower extremities and bladder, plus the possibility of associated hydrocephalus. Monitor for risk of meningitis or ventriculitis. Includes hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the back, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Back incision planned to expose the defect while maintaining adequate blood supply to skin flaps with wide mobilization to permit low tension closure over primary defect. Technique requires careful dissection to minimize risk of damage to dural contents, and a multi-layered closure to prevent postoperative CSF leakage. Generally requires dissection under magnification to protect neural elements.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major surgery. Usually requires several wound checks and dressing changes to assure absence of wound drainage. Monitoring of patients positioning and handling to prevent pressure effects on wound healing. Monitoring for post-operative signs of intracranial pressure and infection. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 10 days with one or two visits per day, followed by office visits after discharge up to 90 days after the procedure. Requires prolonged followup for possible hydrocephalus.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Phase III		
			Hsiao3/92 Pre	Intra	Time Post
63030	laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk; one interspace; lumbar	12.40	64	87	125
62223	creation of shunt; ventriculo-peritoneal, -pleural; other terminus	13.12	55	85	150
63017	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; lumbar	16.24	72	164	152
63015	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; cervical	16.99	59	161	142
63042	laminotomy(hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk, re-exploration; lumbar	17.69	66	133	131
63075	diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophylectomy; cervical, single interspace	20.25	64	116	115

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; ar stress):

CPT Code	CPT DESCRIPTOR	RVW Recommendation	Survey		
			Pre	Results Intra	Time Post
Repair of Spinal Midline Dysraphic Defects					
63700	REPAIR OF MENINGOCELE, < 5 CM DIAM	16.00	90	120	120
63702	REPAIR OF MENINGOCELE, > 5 CM DIAM	18.00	90	180	130
63704	REPAIR OF MYELOMENINGOCELE, < 5 CM DIAM	20.00	112	180	150
63706	REPAIR OF MYELOMENINGOCELE, > 5 CM DIAM	23.00	120	240	150

Key References are 63030 with RVW of 12.40 and intra- time of 87 min, 63015 and 63042 with RVWs at 16.99 & 17.69 and intra- times of 161 min. The median RVW from the survey is 20.00 and the median intra- time 180 min. which is one hour more than the smaller procedure 63700. The work involved in repair can vary substantially, as reflected in the wide spread of intra-service times from a low of 90 to a high of 480 minutes. The particular differences from the reference procedures center upon the elements of skill, judgement and stress as related to the nature of the lesion. Repair while handling neural elements within the sac and securing a well healed wound that definitively covers the congenital defect requires additional skills and judgement. Additional time is spent in the post-service period as reflected in the jump from 5 to 10 days LOS, and the increase in number of visits. The stress and risk relate to the age of the patients and the dangers of major surgical procedures on the very young, coupled with the long period of exposure to potential liability action. Recommend the median survey RVW of 20.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 1500
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 15.84

SURVEY DATA:

Median Intra-Service Time: 180 Low: 90 High: 480
 Median Pre-Service Time: 112 Median Post-Service Time: 150
 Length of Hospital Stay: 10 Number & Level of PostHospital Visits: 4/3
 Number of Times Provided in Past 12 months (Median): 6.5

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF SPECIALTY SOCIETY
RECOMMENDATION

CPT Code: 63706

Global Period: 090

CPT Descriptor: **Repair of myelomeningocele; larger than 5 cm diameter**

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Newborn with leaking thoracolumbar sac and protruding neural tissue, paraplegic with hydrocephalus +/- kyphosis.

Description of Pre-Service Work:

Evaluation of the patient before surgery including informed consent from parents reviewing the nature of the congenital anomaly and the steps required to correct the defect. Discussion of the nature of malfunction of the lower extremities and bladder, plus the possibility of associated hydrocephalus. Monitor for risk of meningitis (ventriculitis). Includes hospital workup, usually in newborn ICU; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; pre-surgical time for dressing, positioning of patient, assurance of adequate monitoring and temperature control; preparation of the back, scrub, and induction of anesthesia.

Description of Intra-Service Work:

Back incision planned to expose the defect while maintaining adequate blood supply to skin flaps with wide mobilization to permit low tension closure over primary defect. Technique requires careful dissection to minimize risk of damage to dural contents, and a multi-layered closure to prevent postoperative CSF leakage. Generally requires dissection under magnification to protect neural elements. May require removal of malformed spinal bone(s) to provide adequate space in spinal canal, i.e., kyphectomy.

Description of Post-Service Work:

Monitoring of patient's hemodynamics and fluid balance, since infants tend to be labile in response to volume shifts that may occur with major surgery. Usually requires several wound checks and dressing changes to assure absence of wound drainage and proper early wound healing. Monitoring of patients positioning and handling to prevent pressure effects on wound healing. Monitoring for post-operative signs of intracranial pressure and infection. Communication with family and other providers including all written and telephone reports and orders. Patient usually in hospital 10 days with one or two visits per day, followed by office visits after discharge up to 90 days after the procedure. Requires prolonged followup for possible hydrocephalus.

KEY REFERENCE SERVICE(S):

CPT Code	CPT DESCRIPTOR	RVW	Hslao3/92 Phase III		
			Pre	Intra	Post
62223	creation of shunt; ventriculo-peritoneal, -pleural; other terminus	13.12	55	85	150
63017	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; lumbar	16.24	72	164	152
63015	laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or diskectomy, (eg, spinal stenosis), more than 2 vertebral segments; cervical	16.99	59	161	142
63042	laminotomy(hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk, re-exploration; lumbar	17.69	66	133	131
22554	arthrodesis, anterior interbody technique; cervical below C2, with bone graft	18.58	66	142	121
63075	diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophylectomy; cervical, single interspace	20.25	64	116	115
61512	craniectomy, trephination, bone flap craniotomy; for excision of meningioma, supratentorial	24.85	84	209	182

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

CPT Code	CPT DESCRIPTOR	RVW Recommendation	Survey		
			Pre	Results Intra	Time Post
Repair of Spinal Midline Dysraphic Defects					
63700	REPAIR OF MENINGOCELE, < 5 CM DIAM	16.00	90	120	120
63702	REPAIR OF MENINGOCELE, > 5 CM DIAM.	18.00	90	180	130
63704	REPAIR OF MYELOMENINGOCELE, < 5 CM DIAM	20.00	112	180	150
63706	REPAIR OF MYELOMENINGOCELE, > 5 CM DIAM	23.00	120	240	150

Key References are 63042 with RVW of 17.69 and intra- time of 133 min, 63075 and 61512 with RVWs at 20.25 & 24.85 and intra- times of 116 & 209 min. The median RVW from the survey is 23.00 and the median intra- time is 240 min. which is 2.5 hours more than the smaller procedure 63700. The work involved in repair can vary substantially, as reflected in the wide spread of intra-service times from a low of 120 to a high of 530 minutes. The particular differences from the reference procedures center upon the elements of skill, judgement and stress as related to the nature of the lesion. Repair while handling neural elements within the sac and securing a well healed wound that definitively covers the congenital defect requires additional skills and judgement. Additional time is spent in the post-service period as reflected in the jump from 5 to 10 days LOS, and the increase in number of visits. The stress and risk relate to the age of the patients and the dangers of major surgical procedures on the very young, coupled with the long period of exposure to potential liability action. Recommend the median survey RVW of 23.00.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely
 Estimate the number of times this service might be provided nationally in a one-year period? 3000
 Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 18.57
 SURVEY DATA:

Median Intra-Service Time: 240 Low: 120 High: 530
 Median Pre-Service Time: 120 Median Post-Service Time: 150
 Length of Hospital Stay: 10 Number & Level of PostHospital Visits: 4/3
 Number of Times Provided in Past 12 months (Median): 5

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

PEDIATRIC NEUROSURGERY

CPT codes 61559 and 61564 had a survey response level of 100%. The recommended median survey value of 28 pediatric neurosurgeons is for CPT code 61559 is 32.00 RVW and for 61564 33.00 RVW. CPT code 61564 was previously surveyed with an incorrect CPT code undervalued. The CPT descriptor did not include optic nerve decompression which represents a good portion of the work, and poses a significant amount of risk for this procedure.

The primary key reference service for 61559 is 61552 with an RVW of 19.48. 61559 requires multiple craniectomies but is more complex due to the need to decompress the entire skull, including orbits and anterior basal regions. The key reference services for 61564 are 61512, 61518, and 61700 which have RVW's ranging from 24.85-35.68. The techniques of the key reference services are similar to resection of a sphenoid ridge meningioma except for the age and size of the patient and the invasion of the orbit. Additional dissection, usually with the microscope, is required for exposure and decompression of the optic nerve.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
61559	Extensive craniectomy for multiple cranial suture craniosynostosis (eg, cloverleaf skull); recontouring with multiple osteotomies and bone autografts (eg, barrel-stave procedure) (includes obtaining grafts)	090	32.00
61564	Excision, intra and extracranial, benign tumor of cranial bone (eg, fibrous dysplasia); with optic nerve decompression	090	33.00

Page 1 of 3

CPT Code Number: 61559

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 61559

Global Period: 090

CPT Descriptor: Extensive craniectomy for multiple cranial suture craniosynostosis (eg, cloverleaf skull); recontouring with multiple osteotomies and bone autografts (eg, barrel-stave procedure) (includes obtaining grafts)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Infant with fusion of multiple cranial sutures with severe cranial deformity and possible frontal bossing with variable indentations in temporal and/or occipital region.

Description of Pre-Service Work:

Evaluation of the patient before surgery, including informed consent from parents; reviewing the nature of the congenital anomaly and the steps required to correct the deformities; hospital admission workup; review of lab and x-ray/imaging studies; preparation of equipment required for surgery; positioning and draping of patient; assuring adequate monitoring and temperature control; preparation of the patient's head: scrubbing; and induction of anesthesia.

Description of Intra-Service Work:

Incision of scalp to expose cranial bone to permit craniectomies, while maintaining adequate blood supply to scalp. Cut multiple bone slots in cranium, using special equipment, while minimizing blood loss from bone, scalp, and dura. May require changes in head position or turning patient over to allow second scalp incision and craniectomy in another area for proper recontouring of skull. Layered closure of incision after replacement of bone flap. Application of sterile dressing.

[PLEASE REFER TO DIAGRAM ON ATTACHMENT 61559A]

Description of Post-Service Work:

Patient stabilization, including monitoring of patient's hemodynamics and fluid balance (infants tend to be labile in response to volume shifts that may occur with major cranial surgery). Wound checks and dressing changes to assure absence of scalp hematomas. Monitoring of subgaleal drains, when utilized. Communication with family and other providers, including all written and telephone reports and orders. Patient is usually in hospital 6 days, with one visit per day, followed by office visits after discharge up to 90 days after the procedure.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW	Harvard Phase III Service Time in minutes		
			Pre	Intra	Post
61550	Craniectomy for craniosynostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniosynostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	23.96	91	203	194
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress);

The primary key reference is 61552 with an RVW of 19.48 and an intra-service time from the Harvard study of 156 minutes. This procedure requires multiple craniectomies but is more complex due to the need to decompress the entire skull, including the orbits and anterior basal regions. The survey intra-service time of 300 minutes is almost twice the time of the Harvard study time for 61552 and reflect the additional work required to do the decompression and recontouring plus grafting. The additional work of using multiple grafts would increase the RVW by at least 2.86 based on the RVW for 22820 (2.86) for harvesting of bone graft. The recommended RVW of 32.00 is much more in conformity with the survey data from the American Society of Maxillofacial Surgeons (ASMS) reported in November (35.00) and more closely approximates the work and effort required of a major cranial reconstruction. The re-survey median time of 300 is also more consistent with the median time from ASMS of 420, while the length of stay increased to 6 days. The range of RVWs increased from a low/high of 20/35 to a current range of 28/45, again more closely approximating the RVWs from ASMS of 29/65.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period?

o1992 Medicare frequency by all physician specialties = 2 (1992 NCH File, HCFA, 3/31/93).

oOverall annual frequency is estimated at 300.

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): Harvard RVW = 28.88

(See discussion above under rationale for key reference service.)

Page 3 of 3

CPT Code Number: 61559

Specialty Society(s): American Association of Neurological Surgeons

Median Intra-Service Time: 300 Low: 180 High: 420

Median Pre-Service Time: 120 Median Post-Service Time: 150

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 4 3

Number of Times Provided in Past 12 months (Median): 4

ATTACHMENT 61559A

3036 *Craniofacial Anomalies*

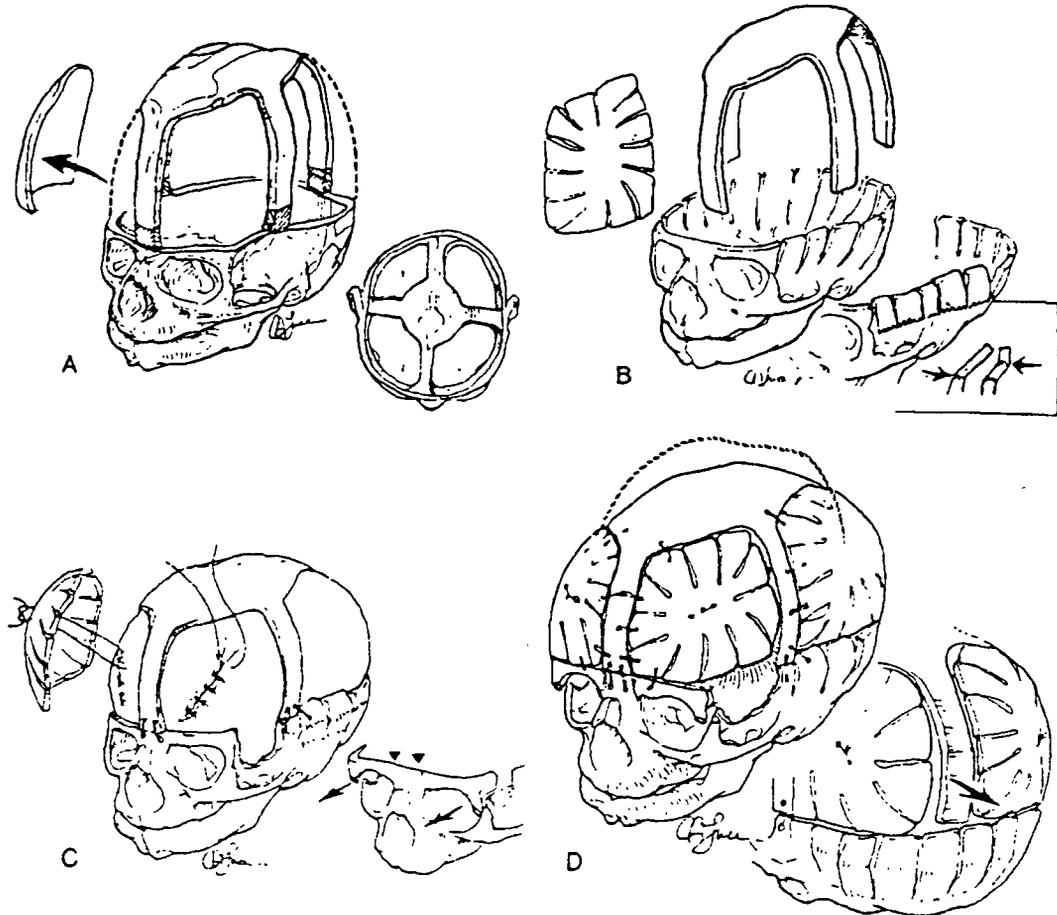


Figure 61-30. Barrel stave osteotomy. A, B, Preoperative turribrachycephaly. The cranial vault (circumferential) is removed and lowered (diagonal lines). Calvarial quadrants are also removed to be remodeled. C, The frontal bone (brow and orbital roof) is advanced to increase the anteroposterior dimension. The dura is plicated and the quadrants are replaced with dural suspension sutures. D, Final appearance with reduction of the vertical and increase in the anteroposterior dimensions of the cranial vault. (From Persing, J. A., Edgerton, M. T., Park, T. S., and Jane, J. A.: Barrel stave osteotomy for correction of turribrachycephaly craniosynostosis deformities. *Ann. Plast. Surg.*, 18:488, 1967.)

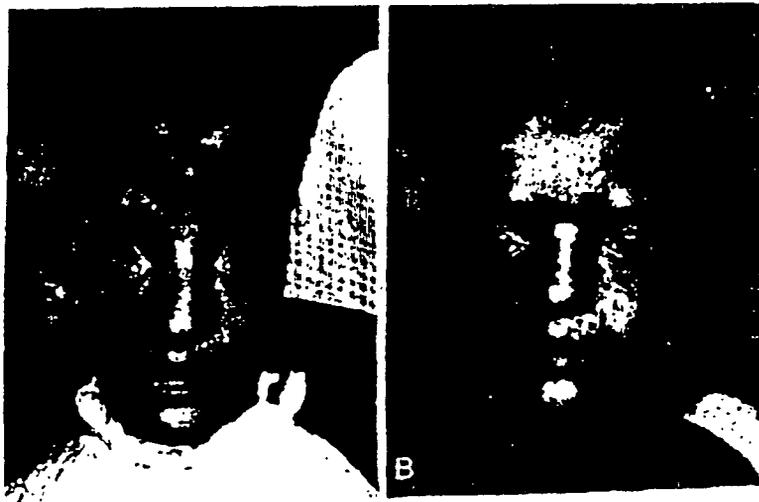


Figure 61-31. Three year old girl with craniosynostosis (pan-synostosis). A, Preoperative appearance. B, After cranial vault remodeling (see Fig. 61-29).

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW	Hsiao Phase III Service Time in minutes		
			Pre-	Intra-	Post-
61550	Craniectomy for craniostyostosis; single cranial suture	14.59	61	108	74
61552	Craniectomy for craniostyostosis; multiple cranial sutures	19.48	61	156	83
61312	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	21.04	75	140	253
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	23.96	91	203	194
61512	Craniectomy, trephination, bone flap craniotomy; for excision of meningioma, supratentorial	24.85	84	209	182
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	33.06	103	254	241

CPT Code	CPT Descriptor	RVW Recommended	Survey	Result	Time
			Pre-	Intra-	Post-
	Excision benign tumor (fibrous dysplasia) from skull				
61563	Excision, intra/extracranial, benign tumor cranium wo optic nerve surg	26.50	105	240	150
61564	Excision, intra/extracranial, benign tumor cranium with optic nerve surg	33.00	128	360	150

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and Stress); Key references are 61512, 61518, and 61700. The RVWs range from 24.85 to 35.68 and Intra- times from 209 to 263 min. The techniques are similar to resection of a sphenoid ridge meningioma except for the age and size of the patient and the invasion of the orbit. Additional dissection, usually with the microscope, is required for exposure and decompression of the optic nerve. This increases the risk factors into the range of surgery for aneurysm of the carotid artery. The time difference between survey median of 360 min. and the Harvard Hsiao intra- time of 209-263 min indicates that this group of patients requires additional work in surgery. The survey average was 366 min. and the range of 240 to 480 min. reflects the range of complexity these cases may present. The pre and post times balance out and the stress/risk factors are slightly higher for all pediatric codes due to the relative fragility of infants and children, and the long tail (up to 21 years) on liability. Recommend that the re-surveyed RVW be valued comparable to 61518 due to the additional complexity of the intra service work and the additional skill and risk factors involved.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely X

Estimate the number of times this service might be provided nationally in a one-year period? 5

- o1992 Medicare frequency for code 61564 by all physician specialties = 2 (1992 NCH File, HCFA, 3/31/93).
- oOverall annual frequency is estimated at

Is this service performed by many physicians across the United States? Yes No X

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): 29.12

Page 3 of 3

CPT Code Number: 61564

Specialty Society(s): American Association of Neurological Surgeons (AANS)

Median Intra-Service Time: 360 Low: 240 High: 480

Median Pre-Service Time: 120 Median Post-Service Time: 150

Length of Hospital Stay: 6

Number & Level of Post-Hospital Visits: 4.5 3

Number of Times Provided in Past 12 months (Median): 2

FIBROUS DYSPLASIA INVOLVING THE CRANIOFACIAL SKELETON

JAMES T. GOODRICH, M.D., PH.D.
CRAIG D. HALL, M.D.

INTRODUCTION

This chapter will deal with fibrous dysplasia of the craniofacial complex, in particular the forehead, orbital rim, lateral and medial orbital walls, the orbital roof, and the optic foramen. The discussion will involve the "worst case scenario," assuming that, if the surgeon can handle this type of case, the simpler cases will be easier to treat.

Fibrous dysplasia can involve the calvarium and any of the upper facial bones. Its etiology is unknown but the pathology involves a replacement of normal bone with a fibro-osseous matrix. The surgical principle involves removing all of the dysplastic bone (or as much as possible) and replacing it with normal calvarial bone harvested from other parts of the head. Fibrous dysplasia can be of a simple type called monostotic, where only one bone unit is involved, or polyostotic, where two or more bones are involved. In this chapter we will deal with the more complicated polyostotic type.

The most common presenting complaints in fibrous dysplasia of the craniofacial complex are proptosis (Figs. 1 and 2), diplopia and headaches, and, in severe cases, progressive blindness due to optic nerve compression.

An x-ray film of the skull will show a sclerotic mass expanding the calvarial and orbital bones. The radiologists typically describe a "ground glass" appearance. There will also be sclerosis or even a cystic appearance to the bone. It is not uncommon to see complete obliteration of the frontal and nasal sinuses. The proptosis is secondary to the orbital fibrous dysplasia compressing the globe and forcing the eye forward. As a result of this, an early presenting complaint can be diplopia.

The principle behind the surgical treatment of fibrous dysplasia of the craniofacial complex is threefold: 1) Since neural compression is common, particularly of the optic nerve, decompression of the nerve is

essential. 2) Removal of *all* dysplastic bone is essential, as any residual can form a new dysplastic center. 3) Use of the patient's own bone for grafts to achieve a satisfactory cosmetic result is preferred.

At the Montefiore Medical Center we have elected to do the reconstruction with calvarial bone which is membranous, because we have found that this significantly lessens the risk of resorption which occasionally occurs with rib (endochondral bone) grafts placed in the craniofacial region. Another advantage of using calvarial bone is the reduction in operative exposure. This technique also avoids the complications that can occur with rib harvesting, such as pneumothorax and chest wall pain.

PREOPERATIVE EVALUATION

All patients should have x-ray films of the skull in the routine views to document the extent of dysplastic involvement of the skull and surrounding orbital and nasal structures. Computed tomography scanning with bone windows in the axial and coronal views is also performed. If three-dimensional reconstruction is available, it can be extremely helpful in determining preoperatively the amount of bony removal that will be required. We have not found magnetic resonance imaging to be helpful, so we do not use it routinely.

If the optic nerve is compressed, we routinely do visual acuity and visual field testing to have baseline values. Damage to the optic apparatus and to the nerves supplying the extraocular muscles are the most significant complications to be avoided. Subtle damage may already have occurred preoperatively, and it is best to document this prior to any surgical intervention.

Since an extensive resection can involve the frontal and paranasal sinuses we culture the nasal passageways to look for virulent organisms. If any are detected, the patient is placed on an appropriate antibiotic coverage 24 hours before surgery. We routinely start an anti-staphylococcal antibiotic at the time of



Figures 1 and 2. Frontal and lateral view of a patient with orbital proptosis secondary to fibrous dysplasia. Typical proptosis is evident with fibrous dysplasia involving the right orbital unit including rim, lateral, and medial walls. As a

result, the eye is pushed forward and downward. Interestingly, the only visual symptom was double vision; the visual acuity was normal.

anesthetic induction in the operating room. Because the surgical manipulations are extradural, we do not routinely use anticonvulsant medications.

PREPARATION FOR OPERATION

Fibrous dysplastic bone can be and usually is, highly vascular. As a result, the blood loss in these procedures can be quite high. We routinely plan for a blood loss of 3 to 5 units. If the family is cooperative, we ask for pedigree blood donations from the family members one week in advance. If available, a "cell saver" unit can rescue up to 50% of the patient's lost blood volume. Because of the risk of extensive blood loss, all patients require at least two large-bore intravenous lines of 16 gauge or larger. If there is any history of cardiac or pulmonary problems, we routinely put in a central venous pressure line. An arterial line is mandatory for monitoring blood gases, hematocrit, electrolytes, etc. during the procedure. We request an osmotic diuresis, usually with mannitol (0.5 g/kg), at the time of anesthetic induction. A spinal drainage system is placed in the lumbar region to assist in cerebrospinal fluid (CSF) withdrawal and brain relaxation. Because of the extensive exposure and brain relaxation that will be needed (remembering that surgical exposure back to the optic foramen is often necessary), every effort at relaxation must be done to reduce retraction pressure on the frontal lobes. A simple removal of 35 to 50 ml of CSF can cause a dramatic relaxation of the frontal lobes.

The use of steroids is always an issue in these types of cases. On our service we do not routinely use ste-

roids as part of our preoperative management. If there is evidence of postoperative brain or optic nerve edema, the patient will be placed on dexamethasone at that time.

OPERATIVE POSITIONING

The patient is placed in the supine position with the head resting on a cerebellar (horseshoe) headrest (Fig. 3). The head is placed in a slightly extended, brow-up position. Rigid fixation devices like a Mayfield clamp are specifically avoided, as the surgeon will need to move the head (usually never more than 10 to 15 degrees); this flexibility can prove to be very useful.

We also reverse the table so that the head of the patient is at the foot end of the operating table. This allows the surgeon and his assistant to sit with their knees comfortably under the table and not obstructed by the table pedestal or foot unit.

Anesthesia equipment is placed on the side opposite the lesion and parallel to the table. Routine orotracheal intubation is performed. All lines are run off to the side of the anesthesia unit. The operating surgeon is placed at the head of the patient with the assistant to the side. The nurse comes in over the patient's abdomen but is positioned no higher than the mid-thoracic region. This allows the surgeon to be able to move around to see the patient's face fully for cosmetic evaluation. For this reason we also avoid the use of bulky overhead tables, such as the Fallon table.

All of the patients have bilateral tarsorrhaphies prior to formal draping. This prevents unintentional injury to the globe and cornea.

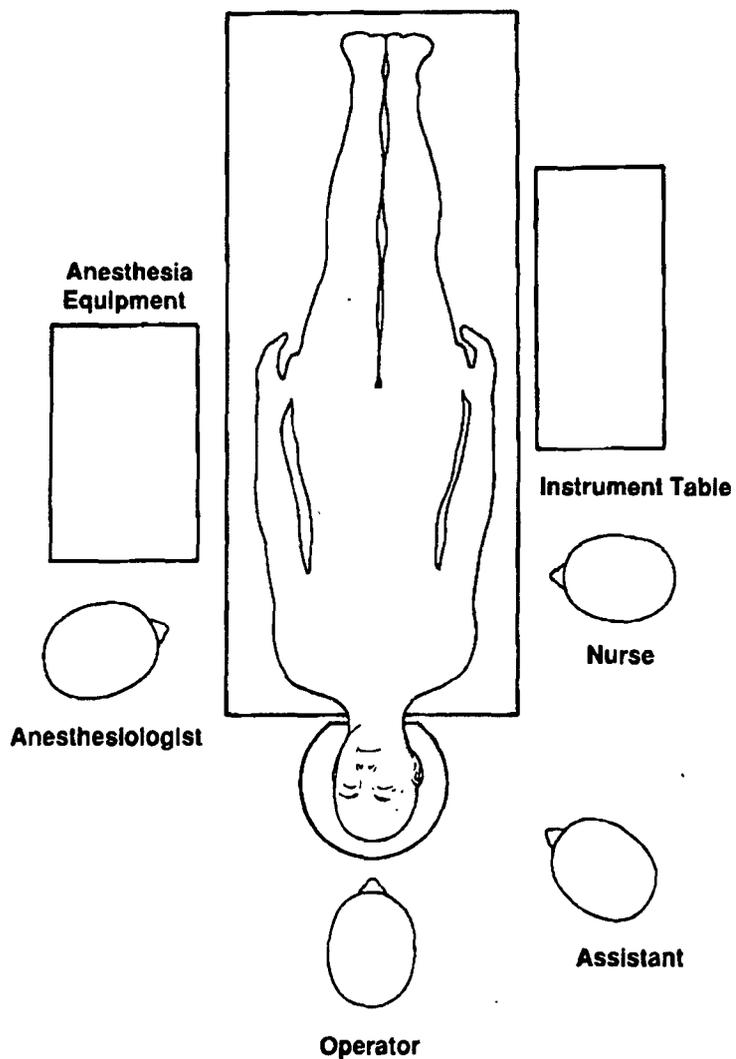


Figure 3. Schematic showing the location of the surgical and anesthesia teams.

SURGICAL DRAPING TECHNIQUES

The head is fully shaved and draped for a bicoronal incision. In addition, both eyes with their tarsorrhaphies must be visible. The facial drape is placed over the nose and nares, but well below the lower orbital rim. This allows the eyes to be visualized during the reconstruction. The rest of the draping can be done according to the surgeon's preference. An important additional point is to keep the drapes reasonably loose, so that the head can be moved.

We routinely run all our suction lines, cautery cords, etc. past the foot of the patient. As both surgeons are sitting, this allows easy mobility of the chair; i.e., they are not rolling over the cords and tubes.

Because the operative site is usually copiously irrigated during the procedure, it is important to have waterproof outer drapes. Some of the newer drapes have large plastic bags for fluid collection; we have found these to be quite useful.

OPERATIVE TECHNIQUE

Skin Incision

Because an extensive exposure of the calvarium and orbits is required, we routinely use a bicoronal incision from tragus to tragus. The incision must be well behind the hairline, both for cosmetic closure and to allow for a large pericranial flap that can be used in the subsequent repair.

Flap Elevation

A full thickness flap is turned following the standard subgaleal plane. It is important to leave the pericranium intact. This is then elevated as a second, separate layer. The flaps are carried down to the orbital rim to the level of the supraorbital nerve and artery. These are frequently encased in a small notch of bone. This notch can be opened with a small Kerrison rongeur or osteotome. It is easier to elevate the artery and nerve with the pericranial layer. It is important to preserve these structures or there will be anesthesia in the forehead postoperatively. The flap must also expose the entire belly of the temporalis muscle and the zygomatic arch. In the midportion of the face the nasal suture should be fully exposed. Using the small periosteal dissector or a Penfield dissector it is possible to come under the orbital rim and dissect it safely back approximately 1 to 2 cm. The temporalis muscle has to be elevated as a unit. Starting at its squamosal insertion, it is elevated using a Bovie electrocautery with a fine needle tip. The dissection is carried out in such a fashion that the temporalis muscle will be elevated from the zygoma back to the ear, fully exposing the pterional "keyhole."

Craniotomy

The craniotomy is carried out to incorporate all of the dysplastic bone in the removal. It is easiest to do the frontal craniotomy by first taking out a forehead bone flap that encompasses as much of the forehead dysplasia as possible (labeled A in Fig. 4). This provides the window which will allow exposure to the orbital roof and walls. We prefer to use a high-speed drill system with a craniotome (e.g., Midas Rex with a B-1 footplate) as this gives a speedy bone removal, thereby decreasing blood loss. We next elevate the frontal lobe with gentle retraction to see how far into the orbital roof the dysplastic bone extends. Then, by further dissecting under the orbital roof, the dysplastic portion can be completely visualized (Fig. 5). There is usually extensive blood supply crossing these planes, so the bleeding can be quite copious. Keep plenty of Avitine and Gelfoam available for packing in these spaces to control the oozing. Once the limits of the dysplastic bone have been determined and the brain is adequately relaxed and retracted, we proceed with the bone resection. Using a combination of osteotomes and a small cutting burr, like the Midas Rex C-1 attachment, the roof is removed as a unit (Fig. 5). It is helpful to have the assistant place a malleable retractor under the orbital roof. This will prevent the drill or osteotome from damaging the orbital contents. On occasion, the dysplasia can go back to the clinoids and orbital foramen. In these cases, the entire roof must be removed (Fig. 5). A small diamond burr on a high-speed drill unit is the best method for removing this part of the bone. It allows the surgeon to remove the bone without injury to the underlying structures. Once this is completed, attention is turned to the lateral orbital wall and zygoma (labeled B in Fig. 4). This portion of the procedure can be done quite easily. The only important points are to have adequate exposure of the zygomatic arch and a good dissection of the orbit. The lateral canthal ligament must be sectioned and then reattached at the end of the procedure. Doing this prior to the medial part will allow easy mobilization of the eye and surrounding structures with minimal trauma.

Next, attention is turned to the most difficult phase—resecting the medial nasal structures (labeled C in Fig. 4). By removing the orbital roof and lateral orbital wall, the surgeon now has some mobility and freedom in moving the eye. If the dysplastic bone involves the nasal bone and medial orbital wall, the medial canthal ligament must be cut. The assistant then retracts the eye laterally, and the bone is removed with an osteotome and fine cutting burr. The frontal sinuses are usually occluded with bone, which can complicate matters. If the sinuses are not occluded, the frontal sinus can be entered and used as an operating

space within which to work. Once all the dysplastic bone is removed, the reconstruction is started.

Calvarial Bone Harvesting

By using a bicoronal skin flap, a large amount of normal calvarial bone is exposed. Once the surgeon has resected the dysplastic bone and determined how much bone is needed to reconstruct the defect, a craniotomy is performed on the opposite calvarium (labeled *D* in Fig. 4). Remember that the most useful

bone is over the convexity, where the diploë is well formed. In the squamosal area, the bone thins out and is hard to split. The bone is taken to a sterile table set up next to the operating field. Using a combination of small osteotomes, a fine cutting tip like a Midas Rex C-1, and a reciprocating saw, the bone is split along the diploic space. Copious irrigation is essential, because the bone must not be allowed to heat up; this would lead to dead bone and subsequent necrosis. Once the bone has been split, the inner table of the

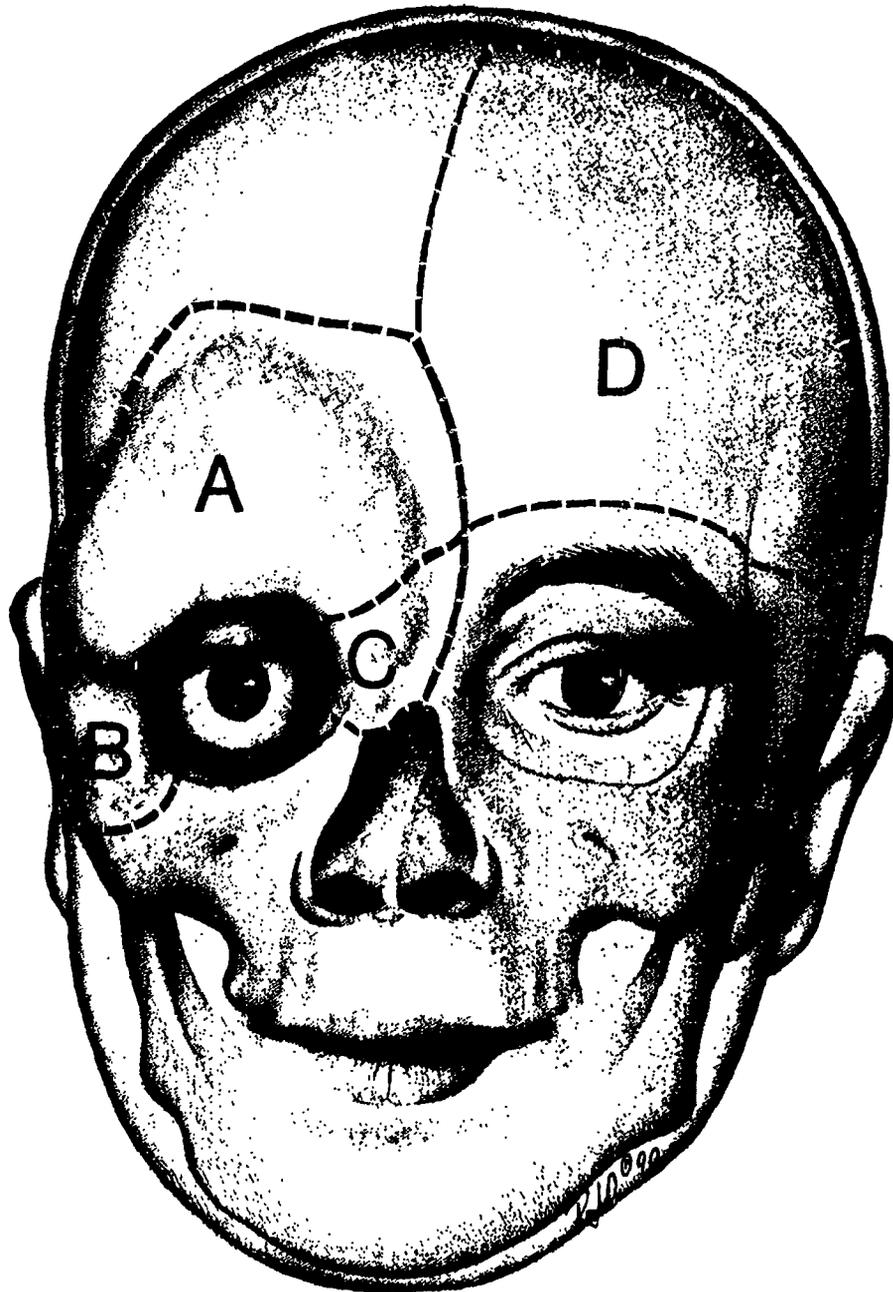


Figure 4. Frontal view showing four-piece bone removal. *A*, frontal bone maximally involved with fibrous dysplasia; *B*, lateral orbital wall; *C*, medial orbital wall. The orbital wall roof

which is also removed is not shown in this drawing. *D*, graft from the opposite calvarium.

calvarium is placed back in the harvest site. The outer table, because of its smooth contours, is used as the reconstructing bone.

Craniofacial Reconstruction

The reconstruction is done in the reverse order from the resection. The medial orbital wall is constructed

first and wired or plated into position (labeled C in Fig. 6). The nasal bone and cribriform plate are usually the most solid structures to work with. The medial canthal ligament also has to be reattached, which can be done easily through a small drill hole. Next, a piece of bone is fashioned to form the orbital roof. This is an important structure which must be solidly placed (Fig.

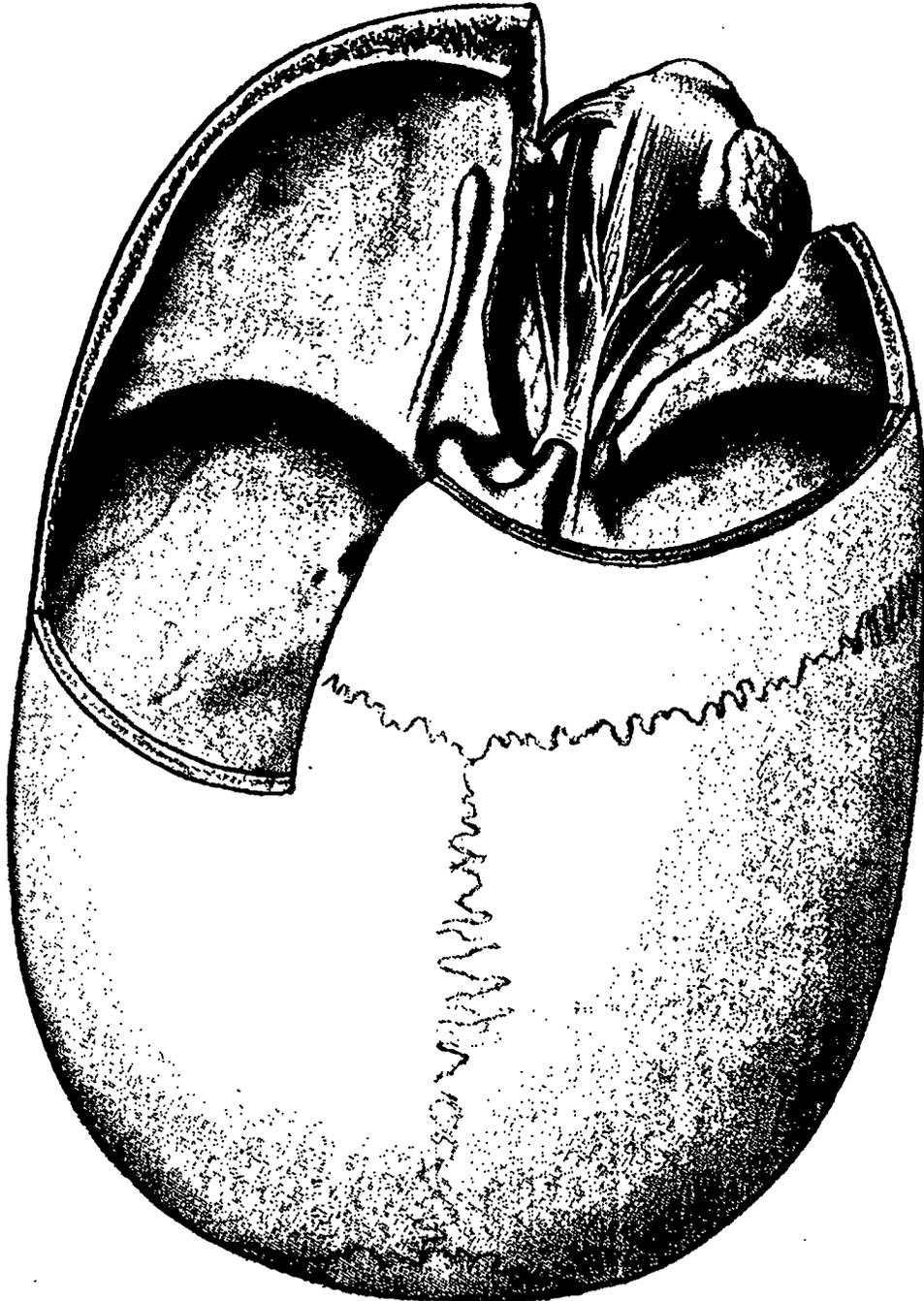
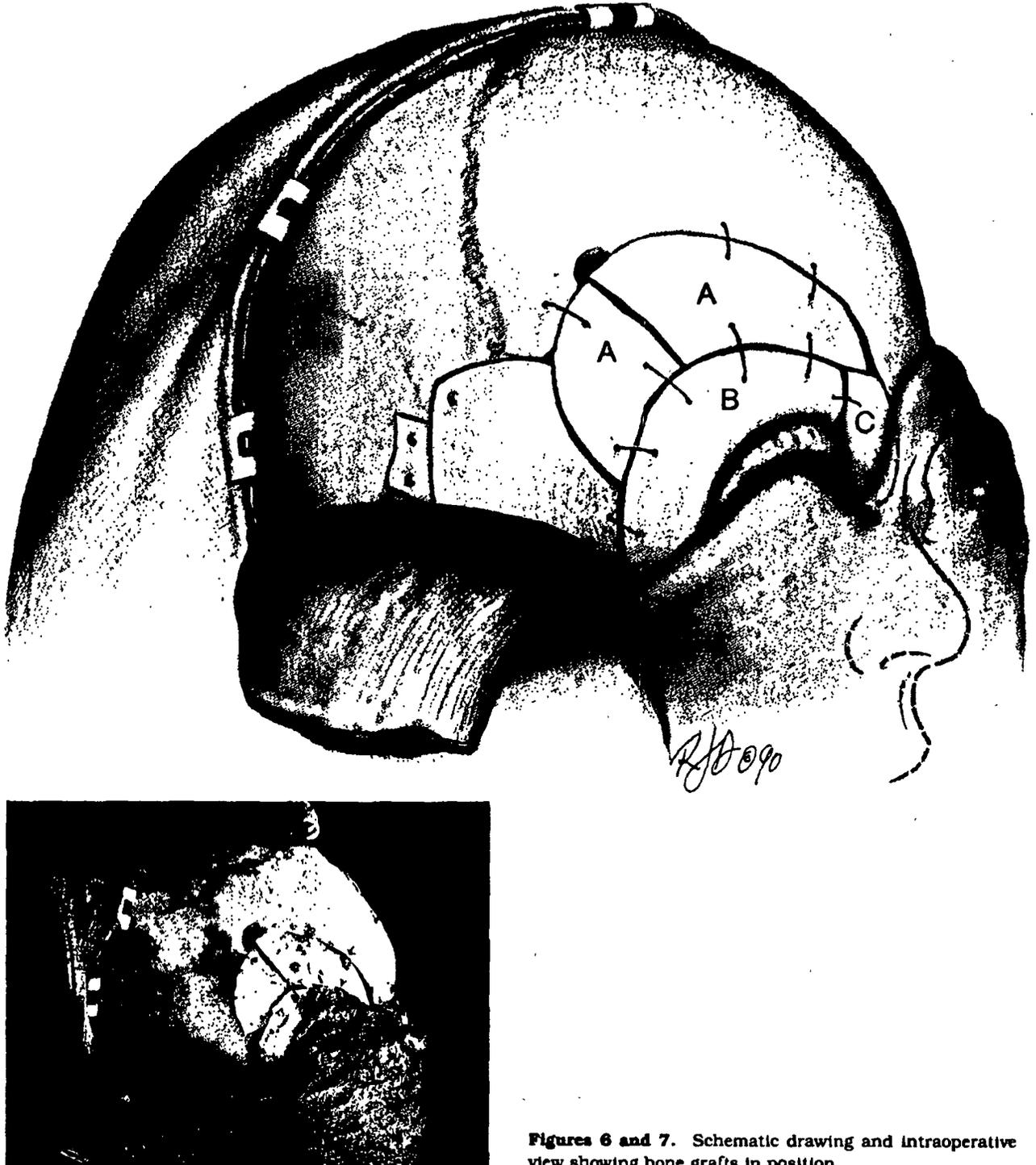


Figure 5. Schematic drawing showing the frontal fossa after removal of the dysplastic orbital roof and decompression of the optic nerve.

8). If it is not, subsequent proptosis of the eye can occur due to downward pressure of the frontal lobe. The bone used to reconstruct the lateral orbital wall is attached to the roof with either wires or miniplates (labeled A in Fig. 6). The squamosal portion of the temporal bone can also act as an excellent place to anchor this bone. The orbital rim is then fashioned

and attached medially to the nasal unit and opposite orbital rim (labeled B in Fig. 6). This is the key cosmetic unit and must be perfectly placed to avoid facial asymmetry. The rest of the craniotomy is then closed in a mosaic fashion using the remaining pieces of bone. Miniplates have proved to be extremely useful in stabilizing these various bone units.



Figures 6 and 7. Schematic drawing and intraoperative view showing bone grafts in position.



Figures 6 and 7. Schematic drawing and intraoperative view showing bone grafts in position.

ation. Because of the extensive exposure and brain relaxation that will be needed (remembering that surgical exposure back to the optic foramen is often necessary), every effort at relaxation must be done to reduce retraction pressure on the frontal lobes. A simple removal of 35 to 50 ml of CSF can cause a dramatic relaxation of the frontal lobes.

The use of steroids is always an issue in these types of cases. On our service we do not routinely use ste-

assistant to the side. The nurse comes in over the patient's abdomen but is positioned no higher than the mid-thoracic region. This allows the surgeon to be able to move around to see the patient's face fully for cosmetic evaluation. For this reason we also avoid the use of bulky overhead tables, such as the Fallon table.

All of the patients have bilateral tarsorrhaphies prior to formal draping. This prevents unintentional injury to the globe and cornea.

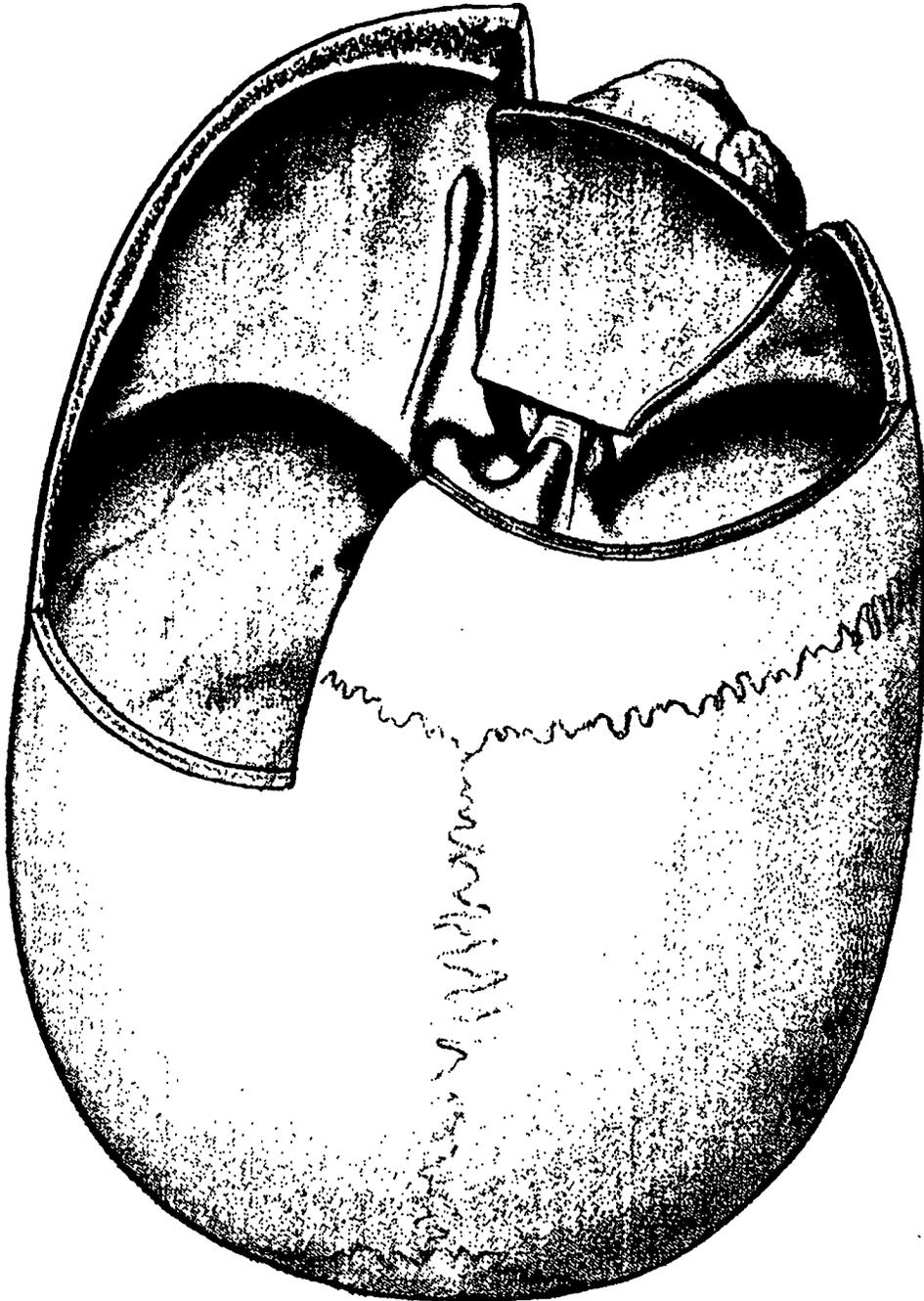


Figure 8. Schematic drawing showing the split thickness calvarial bone graft in position in the orbital roof region.

Repair of Frontal Sinus

One of the most devastating postoperative complications is infection arising from the sinus. If the frontal sinus is not obliterated by dysplastic bone, it must be cleaned and exenterated of mucosal lining. We routinely cover the sinus with the pericranial flap to isolate it from the epidural space. The same principle applies to the other paranasal sinuses if they are violated.

Pericranial Tissue

The pericranial tissue is a most useful repair structure. It not only provides additional vascularity to the bone but it also helps smooth out the rough contours of the bone that has been harvested and used as grafts. Therefore, we make every effort to use this structure and place it back into its natural anatomical position.

Temporalis Muscle

To prevent a postoperative depressed concavity over the temporal unit, the temporalis muscle is laid back into position. Sometimes a relaxing incision must be made posteriorly to allow the muscle to be advanced forward to cover the keyhole and to be reattached to the zygoma. This is critical or there will be a significant depression over this region postoperatively.

Closure

The closure is done in a routine fashion. Hemostasis must be meticulous because of the amount of dead

space that can form. A drain to light suction is placed for at least 24 to 48 hours. A fluid collection next to sinus spaces can lead to a devastating postoperative infection. Scalp closure is done in a routine fashion closing both the subgaleal and skin layers.

POSTOPERATIVE CARE

We routinely place the patients on antibiotics to cover skin organisms and possible nasal contaminants for at least 72 hours. The risk of osteomyelitis is high and can be quite devastating to the patient, so every attempt must be made to avoid it. There may be significant periorbital swelling postoperatively; ice packs are applied to the eye and periorbital regions for symptomatic relief. If there is significant swelling at the end of the operation, we ordinarily leave the tarsorrhaphy in place for about two days. Intensive care for at least 48 hours is mandatory with close monitoring for hemodynamic changes from excessive blood loss and for the development of an epidural hematoma.

The surgeon must always be attentive to postoperative CSF leaks. If any dural tears have occurred they must be repaired meticulously. Should a postoperative CSF leak occur, then placement of a lumbar CSF drain may be necessary to divert the fluid. These usually need to be left in place for five to seven days. However, close attention to dural tears and verifying dural integrity by asking the anesthesiologist to perform Valsalva's maneuver at the end of the case should prevent this problem from occurring.

space within which to work. Once all the dysplastic bone is removed, the reconstruction is started.

Calvarial Bone Harvesting

By using a bicoronal skin flap, a large amount of normal calvarial bone is exposed. Once the surgeon has resected the dysplastic bone and determined how much bone is needed to reconstruct the defect, a craniotomy is performed on the opposite calvarium (labeled *D* in Fig. 4). Remember that the most useful

bone is over the convexity, where the diploë is well formed. In the squamosal area, the bone thins out and is hard to split. The bone is taken to a sterile table set up next to the operating field. Using a combination of small osteotomes, a fine cutting tip like a Midas Rex C-1, and a reciprocating saw, the bone is split along the diploic space. Copious irrigation is essential, because the bone must not be allowed to heat up; this would lead to dead bone and subsequent necrosis. Once the bone has been split, the inner table of the

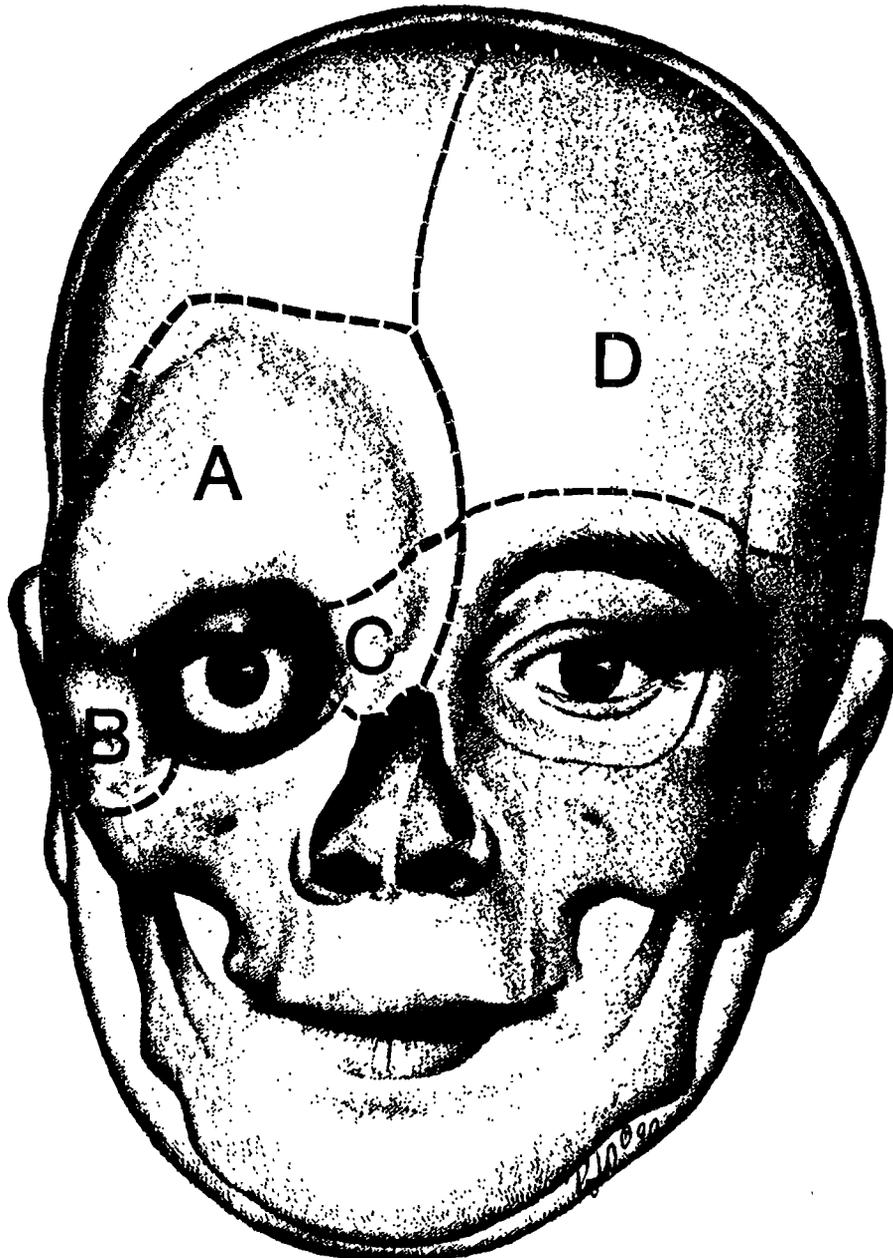


Figure 4. Frontal view showing four-piece bone removal. **A**, frontal bone maximally involved with fibrous dysplasia; **B**, lateral orbital wall; **C**, medial orbital wall. The orbital wall roof

which is also removed is not shown in this drawing. **D**, graft from the opposite calvarium.

MAY 1994 RUC RECOMMENDATIONS
NEUROSURGERY - TAB N

The RUC adopted the Harvard proposed values for the following neurosurgery codes: 61530 [Craniectomy for excision of cerebellopontine angle tumor via a middle fossa and posterior approach]; 64872 [Suture of nerve, requiring secondary/delayed suture (add to primary code)]; 64874 [Suture of nerve; requiring extensive mobilization or transposition (add to primary code)]; and 64876 [Suture of nerve; requiring shortening of bone or limb (add to primary code)]. The specialty society did not survey these codes, but did consider the appropriateness of the Harvard proposed values in developing the neurosurgery recommendations presented to the RUC in November 1993.

The recommended work values are based on the those that were published in the July Rule and have not been re-scaled to the 1994 RVS.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
61530	Craniectomy, bone flap craniotomy, transtemporal (mastoid) for excision of cerebellopontine angle tumor; combined with middle/posterior fossa craniotomy/craniectomy	090	43.39
64872	Suture of nerve; requiring secondary or delayed suture (list separately in addition to code for primary neurorraphy)	ZZZ	2.04
64874	Suture of nerve; requiring extensive mobilization, or transposition of nerve (list separately in addition to code for nerve suture)	ZZZ	3.05
64876	Suture of nerve; requiring shortening of bone of extremity (list separately in addition to code for nerve suture)	ZZZ	3.46



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Sherry L. Smith
AMA/Specialty Society RVS Update Committee
515 N. State Street
Chicago, IL 60610

April 13, 1994

Dear Sherry:

In response to your telephone request that the AANS Advisory Committee to the AMA RVS Update Committee offer comment and explanation about the several CPT codes that were not surveyed or revalued at the last cycle of the RUC Committee, I have reviewed the information and opinion solicited and will address the four codes below.

61530 Craniectomy for excision of cerebellopontine angle tumor via a middle fossa and posterior fossa combined approach. RVW = 43.39

This code was not challenged or subjected to a survey and review by the Specialty Society Advisory Committee because the proposed relative value for work (RVW) offered by HCFA in the July 1993 proposed rule was 43.39 units and this was an accurate translation from the Harvard Phase III data as proposed by HCFA. This was an acceptable relative valuation of the work for this procedure and therefore we advise that this value be forwarded to HCFA as the recommended RVW for procedure 61530.

64872 Suture of nerve; requiring secondary/delayed suture (add to primary code) RVW = 2.04

64874 Suture of nerve; requiring extensive mobilization or transposition (add to primary code) RVW = 3.05

64876 Suture of nerve; requiring shortening of bone or limb (add to primary code) RVW = 3.46

All three of these procedures were reviewed by specialists in peripheral nerve surgery and as add-on codes, were felt to be acceptable as valued by HCFA in the July 1993 proposed rule, with values based upon reasonable translation from the Harvard Phase III data. We advise that the published values be forwarded to HCFA as the recommended RVWs for this group of procedures.

Sincerely,

Robert E. Florin, M.D.
AANS Specialty Advisor to the RUC

cc: J. Charles Rich, M.D.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1994

MODIFICATION OF OCULAR IMPLANT

The RUC adopted the facilitation committee's recommendation to reduce the specialty's original recommendation from 5.55 to 3.00 RVW. This reduction represents a of 50% decrease in the work value when compared to the key reference service 65920 - removal of implanted material, anterior segment eye (8.10 RVW). In addition the RUC suggested that the specialty society work with the CPT Editorial Panel on clarification of the nomenclature of the code so that it better reflects that the actual replacement of the ocular prosthesis occurs at a separate operative setting.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
65125	Modification of ocular implant (eg, drilling receptacle for prosthesis appendage) (separate procedure)	090	3.00

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 65125 Global Period: 90 days

CPT Descriptor: Modification of ocular implant (eg drilling receptacle for prosthesis)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A receptacle is drilled in a previously implanted, vascularized hydroxyapatite sphere and a temporary flat-surfaced peg inserted that enables further integration with the ocular prosthesis.

Description of Pre-Service Work: Check the bone or CT scan to determine vascularization of implant, coordinate with ocularist to have template prosthesis made. Examination of socket for suitability for drilling.

Description of Intra-Service Work: Topical anesthesia, marking the drill site through the template, cauterizing the drill site aligning the drill to assure centering, and drilling to the desired depth, inserting temporary flat head peg. Topical antibiotics applied and temporary prosthesis is inserted.

Description of Post-Service Work: Removal of temporary prostheses, inspection temporary flat head peg then switch pegs and once healing process is evident the flat head peg is exchanged for a round head peg. This is typically done under topical anesthesia in the office. Coordinate revisits with ocularist for integrating permanent prosthesis with round head peg.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
65920	Removal of implanted material, anterior segment eye	8.10
21385	Open treatment of orbital floor "blowout" fracture transantral approach (caldwell-luc type operation)	8.77
65235	Removal of foreign body, intraocular; from anterior chamber or lens resection of uveal tissue	7.29
65865	Severing adhesions of anterior segment of eye, incisional technique (with or without injection of air or liquid) (separate procedure)	5.55

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 2,400

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

N/A

SURVEY DATA:

Median Intra-Service Time: 40 min Low: 20 min High: 60 min

Median Pre-Service Time: 30 min Median Post-Service Time: 30 min

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: 3 level 2 visits

Number of Times Provided in Past 12 months (Median): 6

MAY 1994 RUC RECOMMENDATIONS
DEXA - TAB J

Dual energy x-ray absorptiometry (DEXA) (code 76075) is used to evaluate bone density, which in turn can be used to evaluate fracture risk, most commonly in the spine or hip of menopausal women with a family history of osteoporosis. The typical patient and description of work is identical to dual photon absorptiometry (code 78351). However, DEXA relies on an x-ray tube, rather than a radioisotopes, as the photon source. When compared to radioisotopic source absorptiometry, DEXA provides better image resolution and greater accuracy. There is more work involved in DEXA than single photon absorptiometry (code 78350) and computerized tomography (code 76070) as this service requires a two-dimensional bone density study. The physician work includes:

- discussion of procedure with patient and review of history,
- confirming that the tracings are precisely placed over vertical body,
- evaluating for osteophyte in front of spine and calcification of aorta,
- interpretation of data,
- generation of written report, and
- communication with referring physician/patient.

The American College of Radiology had initially planned to present a recommendation for this code at the June 1993 RUC meeting, but the recommendation was withdrawn. In the interim, HCFA assigned a value of 0.28 in the December 2 Federal Register. At the November RUC meeting, the RUC considered the radiologists' recommendation of 0.30, derived from their survey, and adopted this recommendation. The specialty Advisor noted that these survey results appeared to him to be somewhat low, but recommended the value anyway.

After publication of the December Rule, however, the American College of Rheumatology asked the RUC and the RUC agreed to reconsider its recommendation so that rheumatologists could also be surveyed about the work of the code. The survey process suggested to the rheumatologists that physicians in their specialty defined the service described by this new code differently than radiologists, and also confirmed that the principal problem with the published value was in the technical component and practice expense component, not the physician work component. They will, therefore, be submitting a proposal to CPT for coding changes to better describe the service they provide. The RUC thus reaffirms its original recommendation that code 75075 be valued at 0.30 RVW.

CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
●76075	Dual energy x-ray absorptiometry (DEXA), bone density study	XXX	.30

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Proposed Harvard Value: None

CPT Code: 7607X Global Period: XXX

CPT Descriptor: Dual energy x-ray absorptiometry (DEXA), bone density study

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 50 year old menopausal woman with a family history of osteoporosis, considering estrogen therapy.

Description of Pre-Service Work: Discussion of procedure with patient and review of clinical data (e.g. patient history) and other pertinent radiologic studies.

Description of Intra-Service Work: Calibration and quality control (e.g. measurement of phantom) of device and assure anatomic markings are appropriately displayed and are in proper position.

Description of Post-Service Work: Assure quantitative data are valid, interpretation of data, generation of written report, and communication of report to referring physician and/or patient.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
76070	Computerized tomography, bone density study	0.25
78350	Bone density (bone mineral content) study; single photon absorptiometry	0.22
78006	Thyroid imaging, with uptake, single determination	0.51
76091	Mammography; bilateral	0.42
72100	Radiologic examination, spine, lumbosacral; anteroposterior and lateral	0.22

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The median RVW was accepted on the basis of comparison of physician time and effort to the key reference services. The DEXA bone study includes measurement of bone mineral content and bone mineral density done at various skeletal sites. The thoroughness of the study is accurately reflected in the median RVW which is slightly higher than the references.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Data not available

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable): None

SURVEY DATA: Radiology

Median Intra-Service Time: N/A Low: N/A High: N/A

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 175

Other Data: Total Procedure Time: 15 min. (median) Low: 4 min. High: 68 min.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Tracking Number: AU1 Global Period: XXX

CPT Descriptor: Magnetic resonance imaging, breast, without and/or with contrast material(s); unilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

1. 49 year old female with silicone breast implants one of which is suspected of leaking.
2. 62 year old female with a palpable 1.5 cm mass in the breast that does not visualize on routine mammography and does not appear to be cystic on ultrasound evaluation.

Description of Pre-Service Work:

- Consultation with referring clinician.
- Review previous imaging studies.
- Evaluate clinical situation.
- Development/selection of MR protocol (e.g. silicone implant evaluation, cancer evaluation, or implant and cancer evaluation vs. unilateral or bilateral study).

Description of Intra-Service Work:

- Explanation of study to the patient.
- Identifying mass or lump with oil marker.
- After image acquisition and processing, evaluation of:
 1. pre-and post-contrast images,
 2. fat suppression and/or silicone specific images,
 3. calculation of reformation images (2D rendering of 3D data).and
 4. maximum intensity projection (MIP) images.

Description of Post-Service Work:

- Findings are conveyed to referring clinician.
- Issuance of written report.
- Schedule and coordination of biopsy, if needed.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
72142	Magnetic resonance (eg, proton) imaging, spinal canal and contents, cervical; with contrast material(s)	1.94
70551	Magnetic resonance (eg, proton) imaging, brain (including brain stem); without contrast material	1.50
70553	Magnetic resonance (eg, proton) imaging, brain (including brain stem); without contrast material, followed by contrast material(s) and further sequences	2.39
71550	Magnetic resonance (eg, proton) imaging, chest (eg, for evaluation of hilar and mediastinal lymphadenopathy)	1.62

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

In terms of physician work, unilateral breast MRI is considered equal to both bilateral breast MRI and MRI of the cervical spine with contrast (code 72142). The unilateral procedure results in approximately the same number of images as the bilateral study -- which are more than that associated with code 72142. The interpretation of these images is more physician demanding because the unilateral exam's better resolution (compared to the bilateral procedure) conveys more information to be evaluated by the interpreting physician. The unilateral breast MRI is more frequently used for cancer evaluation than for determining silicone implant integrity for which the bilateral study is usually done. Since the unilateral procedure is more frequently performed for cancer evaluation, it requires the injection of contrast along with obtaining pre- and post-injection images.

SURVEY DATA:

Specialty: Radiology

Median Total Procedure Time: 50 Low: 15 High: 135

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 25

Other Data:

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Tracking Number: AU2 Global Period: XXX

CPT Descriptor: Magnetic resonance imaging, breast, without and/or with contrast material(s); bilateral

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

1. 49 year old female with silicone breast implants one of which is suspected of leaking.
2. 62 year old female with a palpable 1.5 cm mass in the breast that does not visualize on routine mammography and does not appear to be cystic on ultrasound evaluation.

Description of Pre-Service Work:

- Consultation with referring clinician.
- Review previous imaging studies.
- Evaluate clinical situation.
- Development/selection of MR protocol (e.g. silicone implant evaluation, cancer evaluation, or implant and cancer evaluation vs. unilateral or bilateral study).

Description of Intra-Service Work:

- Explanation of study to the patient.
- Identifying mass or lump with oil marker.
- After image acquisition and processing, evaluation of:
 1. pre-and post-contrast images,
 2. fat suppression and/or silicone specific images,
 3. calculation of reformation images (2D rendering of 3D data),and
 4. maximum intensity projection (MIP) images.

Description of Post-Service Work:

- Findings are conveyed to referring clinician.
- Issuance of written report.
- Schedule and coordination of biopsy, if needed.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
72142	Magnetic resonance (eg, proton) imaging, spinal canal and contents, cervical; with contrast material(s)	1.94
72156	Magnetic resonance (eg, proton) imaging, spinal canal and contents, without contrast material, followed by contrast material(s) and further sequences; cervical	2.60
70553	Magnetic resonance (eg, proton) imaging, brain (including brain stem); without contrast material, followed by contrast material(s) and further sequences	2.39

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

In terms of physician work, bilateral breast MRI was judged to be equal to both unilateral breast MRI and MRI of the cervical spine with contrast (code 72142). Bilateral breast MRI results in approximately the same number of images as an unilateral exam.

SURVEY DATA:

Specialty: Radiology

Median Total Procedure Time: 55 Low: 15 High: 180

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 28

Other Data:

MAY 1994 RUC RECOMMENDATIONS
ULTRASOUND GUIDANCE FOR FETAL TRANSFUSION OR CORDOCENTESIS - TAB 28

The recommendation is based on a survey of 35 obstetricians and radiologists. 7694X [Ultrasound guidance for intrauterine fetal transfusion or cordocentesis, radiological supervision and interpretation] typically takes more time and requires a greater degree of technical skill than 75989 [Radiological guidance for percutaneous drainage of abscess or specimen collection (ie, fluoroscopy, ultrasound, or computed tomography), with or without placement of indwelling catheter, radiological supervision and interpretation] because the target is smaller and moving. In addition, 7694X entails the risk of fetal loss.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AV1	36460	Transfusion, intrauterine, fetal (For radiological supervision and interpretation, see 7694X)	XXX	6.66 (November RUC Meeting)
AV2	59012	Cordocentesis (intrauterine), any method (For radiological supervision and interpretation, see 7694X)	000	3.49 (no change)
AV3	●7694X	Ultrasonic guidance for intrauterine fetal transfusion or cordocentesis, radiological supervision and interpretation (For procedure, see 36460, 59012)	XXX	1.35

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AV3 Global Period: XXX

CPT Descriptor: Ultrasonic guidance for intrauterine fetal transfusion or cordocentesis, radiological supervision and interpretation

(For procedure, see 36460, 59012)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 31-year-old woman at 28 weeks gestation has Rh isoimmunization. Sonographic findings are consistent with fetal hydrops. A cordocentesis is performed under ultrasonic guidance (second operator). Test results reveal that the fetus is severely anemic. An intrauterine fetal transfusion is performed by infusing red blood cells into the fetal umbilical vein under ultrasonic guidance (second operator). *(Note: Cordocentesis (CPT 59012) and fetal transfusion (CPT 36460) are coded separately. If both procedures are performed during the same session, the ultrasonic guidance is only coded once.)*

Description of Pre-Service Work:

Cordocenteses under ultrasonic guidance are usually performed between 18 and 40 weeks gestation for a variety of diagnostic and therapeutic indications (e.g., genetic studies, isoimmunization). Fetal intrauterine transfusions using ultrasonic guidance are most commonly performed between 18 and 34 weeks gestation for treatment of fetal anemia due to a variety of causes.

Pre-service work consists of inspection of the sonography equipment for the appropriate settings and transducers. The procedures are usually performed in a sterile setting so transducers must be draped for this environment. Counseling and informed consent is done as part of the decision to do the fetal transfusion, but the patient is informed about the reasons for the ultrasonic guidance.

Description of Intra-Service Work:

The pregnant patient is placed in the supine position with lateral uterine displacement. A sonogram is performed to determine fetal positioning, placental location, and vascular access for cordocentesis. The maternal abdomen is prepared and draped in a sterile fashion as with any sterile procedure. The ultrasound transducer is placed on the maternal abdomen in close proximity to the site for insertion of the needle. Under ultrasonic guidance the heparinized spinal needle is placed percutaneously into the maternal abdomen and through the uterine wall into the fetal umbilical vein. Ultrasonic guidance is crucial to this procedure and is most commonly performed and interpreted by a second operator who is also gowned and gloved. Fetal blood is withdrawn into a syringe attached to the spinal needle and sent for ordered tests. Ultrasound is used to watch withdrawal of the needle and for evidence of excessive bleeding. It is often necessary to reposition the needle by ultrasonic guidance during the procedure to obtain an adequate blood sample. Fetal intrauterine transfusions are often performed after the cordocentesis. With the spinal needle ultrasonically guided into the umbilical vein and the ultrasound transducer placed in close proximity to the needle, red blood cells are infused under ultrasonic guidance. In a similar fashion, ultrasonic guidance can be used to transfuse red blood cells into the fetal abdomen for a fetal intraperitoneal transfusion. A second operator to perform ultrasonic guidance is usually required in all fetal intrauterine transfusions.

Description of Post-Service Work:

Post-service work consists of writing or dictating a procedural report describing the ultrasonic guidance and interpretation.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RW</u>
75989	Radiological guidance for percutaneous drainage of abscess or specimen collection (ie, fluoroscopy, ultrasound, or computed tomography), with or without placement of indwelling catheter, radiological supervision and interpretation	1.20

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The median of the pooled survey results was 1.35. This seemed reasonable because AV3 typically takes more time and requires a greater degree of technical skill than 75989 because the target is smaller and moving. In addition, AV3 entails the risk of fetal loss.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Obstetrics and Gynecology

Median Total Time: 75 Low: 25 High: 460

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 6

Other Data: _____

Sample Size: 58 Response Rate (%): 18 (31%) Median RVW: 1.85

25th Percentile RVW: .74 75th Percentile RVW: 3.87 Low: .50 High: 18.43

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Radiology _____

Median Total Time: 67.5 Low: 22 High: 105

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 7

Other Data: _____

FREQUENCY AND REPORTING OF CODES (Ultrasound Guidance)

AV3

Currently this procedure is coded using 76999 (unlisted ultrasound procedure). It is not possible to estimate the percentage of services now coded using 76999 that will be coded using AV3.

This code will be reported by obstetrician gynecologists who subspecialize in maternal-fetal medicine or by radiologists.

Medicare claims data are of little use in predicting the frequency with which this code will be used because very few Medicare beneficiaries receive pregnancy-related services. However, data from the Centers for Disease Control indicate that Rh sensitization -- the major indication for this procedure -- occurs in .6% of all births, or approximately 24,000 live births. An unknown fraction of those pregnancies would require cordocentesis or fetal transfusion.

AW2

Currently this procedure is coded using 76999 (unlisted ultrasound procedure) or 76942 (ultrasonic guidance for needle biopsy). It is not possible to estimate the percentage of services now coded using 76999 or 76942 that will be coded using AW2.

This code will be reported by obstetrician gynecologists who subspecialize in maternal-fetal medicine or by radiologists.

Chorionic villus sampling is most likely to be recommended for pregnant women who are over the age of 35 or have a family or personal history of genetic disorders. In 1991, 9% of all live births -- about 384,000 births -- were to mothers 35 or older.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

FETAL TRANSFUSION

In presenting the recommendation for code 36460 [Transfusion, intrauterine, fetal], the Advisor noted that the procedure is performed rarely and is generally limited to tertiary medical centers. The procedures were much more common in the 1960s and 1970s, but with the advent of Rhogam (anti D immunoglobulin), better neonatal intensive care units, and better antenatal surveillance techniques, the frequency of these procedures has decreased over the last two decades. The RUC's recommendation is based on both the results of the specialty survey and the comparison to key reference service code 49000 [Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)], with an RVW of 9.21. Pre-service work for the transfusion is somewhat greater than pre-service work for the exploratory laparotomy, requiring both maternal and fetal assessment. Time required to perform the intra-service portion of both procedures is similar, but the intrauterine fetal transfusion requires a greater level of technical skill and physical effort and entails more stress than 49000. Post-service work is less for 36460 because there is no global period associated with the procedure. Taking into account the published post-service work percentage of 35% for exploratory laparotomy and the higher level of pre- and intra-service work associated with the transfusion, the RUC considered the survey median of 6.75 appropriate.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
36460	Transfusion, intrauterine, fetal	XXX	6.75	6.66

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 36460

Global Period: XXX

CPT Descriptor: Transfusion, intrauterine, fetal**CLINICAL DESCRIPTION OF SERVICE:****Vignette Used in Survey:**

A 31 year old woman at 28 weeks gestation has Rh isoimmunization. Serial biochemical and sonographic findings indicate the need for an intrauterine fetal transfusion. A percutaneous intravascular (or intraabdominal) transfusion is performed. (Note: This does not include ultrasound guidance which is coded separately.)

Description of Pre-Service Work:

Fetal intrauterine transfusions are performed for the treatment of fetal anemia due to a variety of causes, including Rh and atypical antibody isoimmunization, fetal viral infections, and idiopathic causes. These procedures are most commonly performed between 18 weeks and 34 weeks' gestation.

Pre-service work consists largely of risk assessment, fetal assessment, extensive counseling of the patient, and order writing. Fetal intrauterine transfusions usually are performed in an operating room, in a labor and delivery unit, or other hospital unit dedicated to this procedure. The pregnant patient is placed in the supine position with lateral uterine displacement. A sonogram is performed as a separate procedure to determine fetal positioning, the placental positioning and vascular access for the proposed transfusion. Blood products have been previously obtained to the specifications indicated by the attending physician. After the complete sonography is performed, the maternal abdomen is prepped and draped in a sterile manner as with any surgical procedure. Maternal anesthesia ranges from a regional anesthetic such as spinal or epidural to maternal sedation with intravenous narcotics and/or barbiturates, and less commonly, general anesthesia. Occasionally, it is necessary to give the fetus a paralyzing agent by percutaneous intramuscular injection. The usual monitoring, as with any surgical procedure, is carried out by an anesthesiologist, anesthetist, or other designated person.

Description of Intra-Service Work:

Under ultrasonic guidance, a heparinized small gauge spinal needle is placed percutaneously through the maternal abdomen and uterine wall into the fetal umbilical vein. The exact placement of this needle is dependent on positioning of the placenta and umbilical cord. Ideally, the needle is placed into the umbilical vein at its insertion into the body of the placenta. On occasion, the umbilical vein can be accessed at the fetal umbilicus or as the vein traverses the fetal liver. After the needle is placed into the umbilical vein, a sample of fetal blood is withdrawn through the needle. This blood is tested to document entry into the fetal vasculature. A fetal hematocrit or hemoglobin is determined in order to calculate the appropriate amount of packed red blood cells to be transfused. With continued sonographic surveillance, packed red blood cells are then transfused into the fetal circulation through the previously placed needle. During the procedure, the fetal heart rate is monitored continuously or intermittently using sonographic surveillance. At the end of the procedure all instruments and needles are removed.

At times it is technically impossible to place a needle percutaneously into the fetal circulation. In these cases it is necessary to perform the transfusion by the intraperitoneal route. Under sonographic guidance, a larger bore needle is placed percutaneously through the maternal abdomen and uterine wall and, subsequently, through the fetal abdominal wall into the fetal peritoneal cavity. The needle is directed sonographically to the area between the fetal umbilicus and the dome of the fetal bladder. The blood products are transfused using syringes or gravity drainage into the peritoneal cavity. The amount of blood transfused is calculated prior to the procedure. During the procedure, the fetal heart rate is monitored continuously or intermittently using sonographic surveillance. With an intraperitoneal transfusion, some physicians advocate placement of radiopaque dye at the beginning and end of the procedure to document that the transfusion has indeed taken place in the peritoneal cavity and not in a fetal viscus. At the end of the procedure all instruments and needles are removed.

The fetal intrauterine transfusion normally requires two operators. The first is responsible for passage of the needle as previously described. The second operator performs the radiologic supervision and interpretation (coded separately) and may assist with needle placement. Often, a third person is needed to actually perform the transfusion as the needle is steadied by the first operator and the sonographic surveillance is performed by the second operator.

Description of Post-Service Work:

Fetal surveillance is continued using sonography or electronic fetal monitoring. Sometimes it is necessary to monitor the patient for a long period of time for evidence of maternal and/or fetal compromise.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
49000	Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)	9.21

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Pre-work for 36460 is somewhat greater than pre-work for 49000, requiring both maternal and fetal assessment. Time required to perform the intra-service portion of both procedures is probably similar, but 36460 requires a greater level of technical skill and physical effort and entails more stress than 49000. Post-service work is clearly less for 36460 because there is no global period associated with the procedure. Taking into account an estimated post-service work percentage of 35.1% for 49000 (see HCFA, Percentage Distributions of Proposed Total Work Components - Pre, Intra, and Post - for Surgical Procedures Surveyed by Harvard University) and the higher level of intra-service work, the survey median of 6.75 seems reasonable.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Not available

Data from the Centers for Disease Control indicate that Rh sensitization, the primary indication for the procedure occurs in about 0.6% of the approximately 4 million births that occur each year. A small subset of this group of about 24,000 pregnancies will require fetal intrauterine transfusion. 1991 BMAD data show no claims submitted for this procedure.

Is this service performed by many physicians across the United States? Yes No

Fetal intrauterine transfusions are generally performed only by maternal fetal medicine specialists in tertiary care centers. These procedures were much more common in the 1960's and 1970's. With the advent of Rhogam (anti D immunoglobulin), better neonatal intensive care units, and better antenatal surveillance techniques, the number of these procedures has decreased over the last two decades.

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable

SURVEY DATA:

Median Intra-Service Time: 60 minutes Low: 45 minutes High: 120 minutes

Median Pre-Service Time: 60 minutes Median Post-Service Time: 60 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 4

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
ULTRASOUND GUIDANCE FOR CHORIONIC VILLUS SAMPLING - TAB 29

The recommended RVW for 7694X [Ultrasonic guidance for chorionic villus sampling, radiological supervision and interpretation] is equivalent to the work in 76942 [Ultrasonic guidance for needle biopsy, radiological supervision and interpretation] as these services are equal in time, technical skill, and mental effort.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AW1	59015	Chorionic villus sampling, any method (For radiological supervision and interpretation, see 7694X)	000	2.22 (no change)
AW2	●7694X	Ultrasonic guidance for chorionic villus sampling, radiological supervision and interpretation (For procedure, see 59015)	XXX	0.68

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AW2 Global Period: XXX

CPT Descriptor: Ultrasonic guidance for chorionic villus sampling, radiological supervision and interpretation

(For procedure, see 59015)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 42-year-old pregnant woman requests prenatal testing for genetic disorders. A transcervical chorionic villus sampling is performed at 10 weeks gestation using ultrasonic guidance. *(Note: Chorionic villus sampling is coded separately using CPT 59015.)*

Description of Pre-Service Work:

Chorionic villus sampling (CVS) is procedure performed between 9 and 12 weeks gestation to obtain placental tissue for fetal karyotyping. CVS is performed by either the transcervical or transabdominal route. Transcervical CVS involves passing a pliable plastic catheter through the uterine cervix into the placental tissue. Transabdominal CVS is performed by placing a percutaneous needle through the maternal abdominal and uterine walls into the placenta. Ultrasonic guidance and interpretation is required to appropriately place the catheter/needle during a CVS procedure.

Pre-service work consists of verifying that the appropriate equipment and transducers are available and in working order. Counseling and informed consent are done as part of the decision to do CVS, but the patient is informed about the reasons for the ultrasonic guidance.

Description of Intra-Service Work:

After a complete sonogram performed as a separate procedure demonstrates the viability of the fetus, number of fetuses, gestational age, and placental location, the pregnant patient is placed in the lithotomy position. The uterine cervix and vagina are prepared with antiseptic solution. The ultrasound transducer is placed on the maternal abdomen and the plastic catheter is directed using ultrasonic guidance (second operator) through the cervix into the placental tissue. The stylet is withdrawn and placental tissue is aspirated into a syringe as the catheter is withdrawn.

The transabdominal CVS is performed with the patient in the supine position. The maternal abdomen is prepared in sterile fashion. The ultrasound transducer is placed on the abdomen and a spinal needle is directed by ultrasonic guidance through the abdominal and uterine walls into the placental tissue. Tissue is aspirated into a syringe and the needle is removed under sonographic guidance.

Description of Post-Service Work:

Post-service work consists of writing or dictating a procedural report describing the ultrasonic guidance and interpretation.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
76942	Ultrasonic guidance for needle biopsy, radiological supervision and interpretation	0.68

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The median of the pooled survey responses was 0.90. This estimate seemed too high in comparison to 76942 because time, technical skill and mental effort are similar for AW2 and 76942. Therefore the ACOG/ACR consensus committee recommends that AW2 be assigned the same RVW as 76942.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Obstetrics and Gynecology

Median Total Time: 30 Low: 10 High: 210

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 30

Other Data: _____

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Radiology

Median Total Time: 30 Low: 10 High: 105

Median Pre-Service Time: NA Median Post-Service Time: NA

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 24

Other Data: _____

FREQUENCY AND REPORTING OF CODES (Ultrasound Guidance)

AV3

Currently this procedure is coded using 76999 (unlisted ultrasound procedure). It is not possible to estimate the percentage of services now coded using 76999 that will be coded using AV3.

This code will be reported by obstetrician gynecologists who subspecialize in maternal-fetal medicine or by radiologists.

Medicare claims data are of little use in predicting the frequency with which this code will be used because very few Medicare beneficiaries receive pregnancy-related services. However, data from the Centers for Disease Control indicate that Rh sensitization – the major indication for this procedure – occurs in .6% of all births, or approximately 24,000 live births. An unknown fraction of those pregnancies would require cordocentesis or fetal transfusion.

AW2

Currently this procedure is coded using 76999 (unlisted ultrasound procedure) or 76942 (ultrasonic guidance for needle biopsy). It is not possible to estimate the percentage of services now coded using 76999 or 76942 that will be coded using AW2.

This code will be reported by obstetrician gynecologists who subspecialize in maternal-fetal medicine or by radiologists.

Chorionic villus sampling is most likely to be recommended for pregnant women who are over the age of 35 or have a family or personal history of genetic disorders. In 1991, 9% of all live births – about 384,000 births -- were to mothers 35 or older.

**MAY 1994 RUC RECOMMENDATIONS
CLOSURE OF FALSE ANEURYSMS - TAB 31**

CPT code 7698X [Ultrasound guided compression repair of arterial pseudo-aneurysm or arteriovenous fistulae (includes diagnostic ultrasound evaluation, compression of lesion and imaging)], is a procedure that requires occlusion at the neck of a false aneurysm. This is a new technology that will partially replace open repair of an arterial pseudo-aneurysm currently reported as CPT code 35141 which has a 90 day global period and an RVW of 13.43.

The RUC recommendation is based on survey of radiologists, cardiologists, interventional radiologists, and vascular surgeons. Each survey reported a median intra-service time ranging from 60 to 80 minutes. The median recommended work value of the 4 surveys was 2.96, and the reference services frequently selected by the surveyed physicians groups were 93978 (0.68 RVW) and 99254 (2.30 RVW). It was noted that 99254 was chosen as a reference service because physicians typically spend 80 minutes providing this service.

The RUC recommendation is based on adding the sum of 50% of the work value of 93978 [Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; complete study], plus the work value of 99254 [Initial inpatient consultation for a new or established patient] [93978] $.50(0.68) + [99254] (2.30) = 2.64$

The recommended value falls within the range of survey medians from each specialty society that was surveyed.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
AF1	●7698X	Ultrasound guided compression repair of arterial pseudo-aneurysm or arteriovenous fistulae (includes diagnostic ultrasound evaluation, compression of lesion and imaging)	000	2.64

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Tracking Number: AF1 Global Period: 000

CPT Descriptor: **Ultrasound guided compression repair of arterial pseudo-aneurysm or arteriovenous fistulae (includes diagnostic ultrasound evaluation, compression of lesion and imaging)**

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 58 year-old patient underwent diagnostic coronary angiography using a transfemoral approach on the day preceding the discovery of a pulsatile groin hematoma (3x4 cm in diameter by physical examination). Objective confirmation/ultrasound-guided compression of an iatrogenic pseudoaneurysm is undertaken. Doppler ultrasound (duplex) scanning reveals a unilocular pseudoaneurysm with a patent femoral puncture site. The available coagulation studies and the peripheral pulses in the ipsilateral lower extremity are assessed. The compression site is anesthetized and the transducer is applied at a variety of angles. The angle which procedures compression without disturbing the native arterial flow is pursued. Under continuous ultrasound visualization, the neck of the pseudoaneurysm is compressed until the pseudoaneurysm is obliterated. The distal circulation and pulses are then re-evaluated.

Description of Pre-Service Work:

Physical examination of patient and evaluation of distal pulses; review of patient record and prior ultrasound imaging or arteriographic studies; consultation with patient and an explanation of procedure.

Description of Intra-Service Work:

Localization of pseudoaneurysm under ultrasound guidance, confirmation of orientation of tract from underlying normal vessels; repeated graded compression of pseudoaneurysm to occlude flow and allow flow to continue in native vessel; maintain firm pressure on lesion with the transducer for several 15 to 20 minute cycles; confirm thrombosis of pseudoaneurysm by physical examination and ultrasound study; evaluate distal pulses for any changes.

Description of Post-Service Work:

Discuss procedure with patient and referring physician; write a procedural note and post-procedural orders; dictate ultrasound report.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93978	Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; complete study	0.68
99254	Initial inpatient consultation for a new or established patient, which requires three key components: <ul style="list-style-type: none">• a comprehensive history;• a comprehensive examination; and• medical decision making of moderate complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of moderate to high severity. Physicians typically spend 80 minutes at the bedside and on the patient's hospital floor or unit.	2.30

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

Ultrasound guided compression repair of arterial pseudoaneurysm or arteriovenous fistulae is an unique service -- one that requires a pre-service evaluation, intra-service technical skill and physical effort, considerable physician time, and post-service evaluation with follow-up. The references services from the four specialty societies (ACC, ACR, SCVIR, and SVS) represented a broad range of procedures, including codes for ultrasound, catheterizations, and evaluation/management services. However, the sum of codes 93978 and 99254 was thought by the consensus panel to best represent this procedure. This conclusion is well supported by the consistency in the time estimates and the RVWs from the societies' survey results.

The recommended RVW is the weighted average (weight = number of respondents) of each specialty societies' median RVW from their survey.

SURVEY DATA:

Specialty: Radiology

Median Total Procedure Time: 70 minutes Low: 22 minutes High: 150 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 7

Other Data:

SUMMARY FORM - TRACKING NUMBER AFI
PAGE 3 OF 3

Specialty: Cardiology

Median Intra-Service Time: 60 minutes Low: 20 minutes High: 240 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 27.5 minutes

Length of Hospital Stay: 1 day Number & Level of Post-Hospital Visits: 2 of 99213 + 2 of 99212

Number of Times Provided in Past 12 months (Median): 4

Other Data: CPT Codes as References: 76934, 93880, 93978

Specialty: Interventional Radiology

Median Intra-Service Time: 60 minutes Low: 30 minutes High: 120 minutes

Median Pre-Service Time: 15 minutes Median Post-Service Time: 10 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 15

Other Data:

Specialty: Vascular Surgery

Median Intra-Service Time: 60 minutes Low: 5 minutes High: 120 minutes

Median Pre-Service Time: 20 minutes Median Post-Service Time: 15 minutes

Length of Hospital Stay: 0.9 day Number & Level of Post-Hospital Visits: mean 1.08 (range 0-3 Level 2)

Number of Times Provided in Past 12 months (Median): 6

Other Data:

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

DUAL PHOTON ABSORPTIOMETRY

Dual photon absorptiometry (code 78351) is used to evaluate bone density which in turn can be used to evaluate fracture risk, most commonly in the spine or hip of menopausal women with a family history of osteoporosis. The typical patient and description of work is identical to code 76075 [Dual energy x-ray absorptiometry, or DEXA]. Code 78351 relies on radioisotopes, rather than an x-ray tube, as the photon source. This service is being replaced by DEXA, which provides a better image resolution and greater accuracy. There is more work involved in dual photon absorptiometry than single photon absorptiometry (code 78350) and computerized tomography (code 76070) as this service requires a two-dimensional bone density study. The physician work includes: discussion of procedure with patient and review of history; confirming that the tracings are precisely placed over vertical body; evaluating for osteophyte in front of spine and calcification of aorta; interpretation of data; generation of written report; and communication with referring physician/patient. The RUC recommendation is based on both the specialty's survey median and comparison to the two key reference procedures as described above.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
78351	Bone density (bone mineral content) study; dual photon absorptiometry	XXX	.30	.30

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

CPT Code: 78351

Global Period: XXX

CPT Descriptor:

Bone density (bone mineral content) study; dual photon absorptiometry

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: 50 year old menopausal woman with a family history of osteoporosis, considering estrogen therapy.

Description of Pre-Service Work: Discussion of procedure with patient and review of clinical data (e.g. patient history) and other pertinent radiologic studies.

Description of Intra-Service Work: Calibration and quality control (e.g. measurement of phantom) of device and assure anatomic markings are appropriately displayed and are in proper position.

Description of Post-Service Work: Assure quantitative data are valid, interpretation of data, generation of written report, and communication of report to referring physician and/or patient.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
78350	Bone density (bone mineral content) study; single photon absorptiometry	0.22
76070	Computerized tomography, bone density study	0.25
78306	Bone and/or joint imaging; whole body	0.88
78006	Thyroid imaging, with uptake, single determination	0.51
72100	Radiologic examination, spine, lumbosacral; anteroposterior and lateral	0.22

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgment; and stress):

The median RVW was accepted on the basis that the recommended RVW is slightly higher than the top two key reference services accurately reflecting the additional physician time and effort required to perform a two-dimensional bone density study.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Data not available

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Survey data gives a median RVW of 0.30 which is below the Harvard RVW of 0.34. Our surveys indicate that the physician time, effort, and risk for dual photon absorptiometry are identical to the dual energy x-ray absorptiometry.

SURVEY DATA:

Median Intra-Service Time: N/A Low: N/A High: N/A

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 74

Other Data: Total Procedure Time: 15 min (median) Low: 3 min. High: 68 min.

**MAY 1994 RUC RECOMMENDATIONS
PSYCHOTHERAPY - TAB O**

The RUC recommendation for multi-family group medical psychotherapy was based on a survey of psychiatrists. CPT code 90849 [Multiple-family group medical psychotherapy by a physician, with continuing medical diagnostic evaluation, and drug management when indicated], is usually performed in an inpatient adolescent psychiatric unit. The purpose of this type of psychotherapy is to identify family dynamics which may perpetuate the pathology of the patient. The service is performed infrequently, in part because family members that are concerned about social stigmatization are unwilling to participate. This code is reported once per family in the group. The RUC accepted the specialty's rationale that the ratio between CPT codes 90847 [Family medical psychotherapy (conjoint psychotherapy) by a physician, with continuing medical diagnostic evaluation, and drug management when indicated (2.21 RVW)] and 90849 should be equal to the ratio between 90844 [Individual medical psychotherapy by a physician, with continuing medical diagnostic evaluation, and drug management when indicated, including insight oriented, behavior modifying or supportive psychotherapy, 40-50 minutes (1.74 RVW)] and 90853 [Group medical psychotherapy (other than of a multiple-family group) by a physician, with continuing medical diagnostic evaluation and drug management when indicated (0.44 RVW)]. The fees for 98049 are divided evenly between the therapists, therefore, if two physicians were providing service at the same time, the payment would be divided.

CPT Code	CPT Descriptor	Global Period	Harvard Proposed RVW	RVW Recommendation
90849	Multiple-family group medical psychotherapy by a physician, with continuing medical diagnostic evaluation, and drug management when indicated	XXX	None	.60 per family

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Proposed Harvard Value: None

CPT Code: 90849 Global Period: XXX

CPT Descriptor: Multiple-family group medical psychotherapy by a physician, with continuing medical diagnostic evaluation, and drug management when indicated.

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Group of families, each which contains an identified patient in a multi-disciplinary treatment program, that meet to share experiences, give and receive support, acquire insight, and develop new ways of coping/behaving under the direction of co-leaders who foster therapeutic interaction and maintain a safe, supportive environment. The identified patient may be any age from childhood to senior citizen.

Description of Pre-Service Work: Co-therapists review together: (1) who the participants will be and their respective position in their course of treatment in the continually evolving group; (2) what interaction among participants can be expected; (3) how leaders will relate to each other and the participants in the group; (4) How to best use group composition strengths to promote participants helping each other.

Description of Intra-Service Work: Co-therapists: (1) establish and maintain therapeutic structure and expectations for the group and all participants; (2) listen, respond and facilitate participation of all attendees by (a) promoting direct communication, (b) pointing out common patterns and experiences of interaction within and among families, (c) providing support for the feelings and needs of participants, (d) promoting connectedness between participants and their families and (e) helping participants to view themselves and others as capable of higher levels of functioning by increasing their capacity for objectivity and positive regard.

Description of Post-Service Work: Co-therapists: (1) review process of session noting--(a) what gains were made by whom, (b) what problems arouse and how they were resolved, with attention to possibilities for alternative action that would improve outcome, and (c) what was revealed about problems/strengths of individual participants, how these were worked on/utilized, and how they may be addressed/built upon in the future.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
90847	Family medical psychotherapy (conjoint psychotherapy) by a physician, with continuing medical diagnostic evaluation, and drug management when indicated.	2.21
90853	Group medical psychotherapy (other than of a multiple-family group) by a physician, with continuing medical diagnostic evaluation and drug management when indicated.	.44
90846	Family medical psychotherapy (without the patient present).	1.86
90844	Individual medical psychotherapy by a physician, with continuing medical diagnostic evaluation, and drug management when indicated, including insight oriented, behavior modifying or supportive psychotherapy, 45 to 50 minutes.	1.74

90887 Interpretation or explanation of results of psychiatric, other 1.52
 medical examinations and procedures, or other accumulated data
 to family or other responsible persons, advising them how to
 assist patient.

99223 Initial hospital care, per day, for the evaluation and management 2.65
 of a patient.

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The ratio between CPT codes 90847 and 90849 should be equal to the ratio between 90844 and 90853, with the fees for 90849 divided evenly between the therapists.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 50

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable.

SURVEY DATA: Psychiatry

Median Intra-Service Time: 90 minutes Low: 40 minutes High: 90 minutes

Median Pre-Service Time: 10 minutes Median Post-Service Time: 15 minutes

Length of Hospital Stay: 35 days Number & Level of Post-Hospital Visits: 11 visits

Number of Times Provided in Past 12 months (Median): 52

Other Data: Not applicable.

Please complete this page if more than one specialty society was involved in developing the recommendation.

Psychiatry - Child

Median Intra-Service Time: 85 minutes Low: 50 minutes High: 90 minutes

Median Pre-Service Time: 15 minutes Median Post-Service Time: 15 minutes

Length of Hospital Stay: 29 days Number & Level of Post-Hospital Visits: 11

Number of Times Provided in Past 12 months (Median): 59

Other Data: Not applicable

Psychiatry

Median Intra-Service Time: 83 minutes Low: 40 minutes High: 90 minutes

Median Pre-Service Time: 8 minutes Median Post-Service Time: 13 minutes

Length of Hospital Stay: 33 days Number & Level of Post-Hospital Visits: 10

Number of Times Provided in Past 12 months (Median): 50

Other Data: Not applicable

MAY 1994 RUC RECOMMENDATIONS
MONTHLY END STAGE RENAL DISEASE SERVICES - TAB Q

A facilitation committee was formed to consider the specialty recommendations for the five codes for monthly end stage renal disease (ESRD) services (codes 90918-90922). This committee was able to meet with the nephrologists, pediatric nephrologists, and HCFA staff attending the meeting and evaluate the physician work involved in these services in a very in-depth manner.

The specialty recommendations submitted to the RUC were developed using the standard RUC survey instrument. The Renal Physicians Association had also conducted two other surveys of the work involved in code 90921, the adult ESRD code, and had obtained results similar to those from the RUC survey. In addition, the committee considered the survey conducted as part of the Harvard RBRVS study in Phase II. The committee concluded that the Harvard study of code 90921 lacked validity. The methodology was flawed because it placed the vignettes for 90921 in a list of 20 other services that are not monthly capitation codes, because these vignettes implied that service might not be provided to a patient, and because there was little agreement at that time about what services were included in or excluded from the monthly capitation payment. In addition, an analysis of the Harvard data was provided to the committee which showed that there were multiple points where responses clustered, in sharp contrast to the RPA survey which had a normal distribution.

The specialty surveys conducted to develop the RUC recommendations improved upon the Harvard study in all three of these areas: appropriate vignettes were used describing typical patients and services; a federal regulation was included detailing what services were included in and excluded from the codes being rated; and the distribution of responses was more reliable. Despite these factors, however, the committee was also concerned about the validity of the results from the specialties' surveys. In addition to the uncertainty surrounding the estimates of total physician work from the surveys, the RUC survey instrument that was used did not involve collection and reporting of sufficient information about the actual services provided to each patient to allow the RUC to judge the appropriateness of the specialty recommendations. The surveys did, however, provide a great deal of useful information. In addition, there is an extensive database on ESRD services.

The facilitation committee deliberated at length and developed an alternative method for valuing each of the services. These RUC recommendations are provided as "interim" recommendations. The RUC's Research Subcommittee has been directed to develop an alternate survey instrument that will allow a more reliable assessment of the work involved in these capitated services. Once this new survey has been conducted, the RUC will reconsider the interim recommendations and make a final recommendation to HCFA.

At the facilitation committee, Mr. Bob Neiman from HCFA explained the history of the monthly capitation payment and what is included in and excluded from this payment. The RPA, HCFA, and RUC thus worked from a common understanding of code 90921. The RUC also concluded that there was more work, and in the case of infants and small children, substantially more physician work, involved in the care of each pediatric ESRD patient than in the adult and adolescent patients. In addition to the information on work that was presented, this conclusion is also supported by their respective patient loads: pediatric nephrologists manage a much smaller number of patients in a given month. Infants are generally only cared for under the capitation program for 6-8 months, until they are big enough to get a transplant, and the average number of infants under any one physician's care in a year is eight.

The approach ultimately adopted by the facilitation committee and the RUC, and accepted by the nephrologists and pediatric nephrologists attending the meeting, involved listing the average number and level of services provided to each patient group in an average month and summing their work relative values. ESRD patients are extremely sick, with an annual mortality rate of 20%. They have many comorbid conditions, such as diabetes and hypertension, and often present with nonspecific complaints, such as headaches and chest pain, which could represent serious diagnoses. For example, chest pain may be due to pericarditis or coronary artery disease, or it could be a minor chest wall symptom of no importance. The nephrologist must work up the patient for each of these possibilities. ESRD patients are hospitalized an average of 1.8 times per year and have complications such as peritonitis. They are very unstable over time, even though they may be stable in any given month. The services provided include frequent visits that may not be long in duration but require extremely complex medical decision making. For example, the nephrologist must regularly:

- assess the patient's dialysis needs, nutritional needs, fluid needs, and appropriateness for renal transplant;
- determine whether or not the patient has significant renal failure-related anemia, hyperparathyroidism, renal osteodystrophy secondary to chronic renal failure, and dialysis-related arthropathy or neuropathy, and prescribe appropriate therapy, which may include oral and parenteral therapy, calcium and phosphate binders, fluid removal independent of dialysis, and antihypertensive medications;
- prescribe the parameters of intradialytic management, including the type of dialysis access, type and amount of anticoagulant to be employed, blood flow rates, dialysate flow rate, ultrafiltration rate, dialysate temperature, type of dialysate and composition of electrolytes, size of dialyzer and composition of dialyzer membrane, duration and frequency of treatments, and intradialytic medications; and

- periodically assess whether the dialysis is working well and whether the patient is tolerating it well, the adequacy of the dialysis access, and whether any alterations in the patient's care are necessary.

Likewise, pediatric nephrologists must manage a large number of problems in their patients, whose most common renal disease diagnoses are aplastic/hypoplastic/dysplastic kidneys, focal segmental glomerulosclerosis, obstructive uropathy, systemic immunologic disease, and hemolytic uremic syndrome. Pediatric patients have additional problems such as compliance with prescribed therapies and nutritional requirements, interaction between their school and dialysis schedules, and developmental problems related to their renal disease. In addition to dialysis visits and office visits, other commonly provided services for patients of all ages are case management, writing monthly orders, team meetings with other professionals, reviewing lab results, managing complications, and all services related to patients' renal disease.

The description of patient needs and services provided to pediatric patients addresses a question raised by HCFA of whether pediatric nephrologists may be providing "social" services to their ESRD patients which involve physician work but would not be considered covered benefits under Medicare's ESRD program. The pediatric nephrologists made it clear that this is not the case. Noncompliance with prescribed therapies, whether they be medications or nutrition, is a major problem in the pediatric ESRD population because it makes the patients much sicker, and the nephrologist must therefore make every effort to ensure proper nutrition and compliance with therapeutic regimens. For infants and children, lack of proper nutrition can prevent them from reaching the necessary size to be candidates for renal transplant and have long-term effects such as dentition abnormalities, difficulties with self alimentation, and speech impediments. For adolescents, their chronic disease leads to a variety of problems that are well-documented in the medical literature. For example, adolescents on dialysis are likely to be shorter than their peers and have other physiologic, neurologic, and developmental problems that can affect their school performance and family life. The nephrologist may need to assess these problems and change therapy and/or refer patients to and coordinate care with occupational and physical therapists, speech therapists, child life therapists, home health agencies, visiting nurses, and dieticians. Compliance with the nephrologist's prescribed care and interventions by these other professionals have a direct effect on treatment outcomes.

To estimate the relative work for each of the four monthly codes, the committee determined for each age group and for the two major types of patients (hemodialysis and peritoneal dialysis) the average number of physician visits each month in the office, in the dialysis unit, and for any complications. Because of the severity of the patients, the nature of the examination and medical decision making required, and the time, the office visits were judged to generally be appropriately reported as 99214. For adult patients, one office visit per month was estimated as a 99215 and 1.5 as a 99214. The visits in the dialysis unit require less

face-to-face time but a great deal of medical decision making and pre- and post-service work, including review of a large amount of data and phone calls from both patients, caregivers, and other professionals, so they were judged to be 99213. Hospitalizations and complications for patients receiving home dialysis involve up to an additional two 99215 visits per year (four for children and infants), which were calculated per month at 1/6 or 1/3 of their value, as appropriate. The RUC also estimated a physician work value for the extensive case management involved in these patients, particularly those on home peritoneal dialysis. For code 90921, a frequency-weighted average of the work involved in treating hemodialysis and peritoneal dialysis patients was calculated. For children and adolescents, neither the differences in the physician work of caring for the two types of patients nor the frequency of the two types were as pronounced, so approximate simple averages were used. Most infants are on peritoneal dialysis. Also, since the frequency of visits for pediatric patients was higher, no additional work was added for case management since this was thought to be covered in the pre- and post-work of the visits. The RUC recommendations are as follows:

Code	Descriptor/Type	Office 99214=.95	Dialysis 99213=.56	Complication 99215=1.53	Case Mgmt	RUC Recommendation
90921	End stage renal disease (ESRD) related services per full month; for patients twenty years of age and over Hemodialysis (85%)	1.5 x .95 =1.42	4 x .56 =2.24	1 x 1.53 =1.53	.50	5.69x.85 plus 2.68x.15 = <u>5.24</u>
	Peritoneal Dialysis (15%)	1.5 x .95 =1.43		1/6 x 1.53 =.26	1.00	
90920	through age nineteen to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	2 x .95 =1.90	7.7-H & 8-P avg'd to 8 x .56 =4.48	1/6 x 1.53 =.26		<u>6.64</u>
90919	between the second and twelfth birthdays to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	2 x .95 =1.90	12.2-H & 11-P avg'd to 12 x .56 =6.72	1/3 x 1.53 =.51		<u>9.13</u>
90918	for patients under 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	4 x .95 =3.80	16 x .56 =8.96	1/3 x 1.53 =.51		<u>13.27</u>
90922	End stage renal disease (ESRD) related services (less than full month, per day)	1/30 of 90921				<u>.17</u>

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 90918 Global Period: XXX Recommended RVW: 14.07

Evaluation and management services unrelated to the dialysis procedure that cannot be rendered during the dialysis session may be reported in addition to the dialysis procedure.

CPT Descriptor: End stage renal disease (ESRD) related services per full month, for patients under 2 years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A two month old, 4 kg male, is on peritoneal dialysis to correct uremia, acidosis, and hyperkalemia. He has GE reflux and is fed via a gastrostomy for malnutrition and for prevention of mental retardation associated with renal failure in infancy. The intake and output of fluids, sodium, and other minerals are monitored daily. His parents are often provided support for his complex care and poor prognosis.

Description of Pre-/Post-Service Work:

The patient's dialysis records are reviewed periodically throughout the month and indices of clearance are assessed. As required by the federal government, a team meeting is held once per month to discuss the care of the patient. Short- and long-term care is reviewed and coordinated with the primary care physician and other providers. Numerous phone consultations are provided including counseling of parents, interpretation of lab results, and coordination with the primary care physician.

Description of Intra-Service Work:

Assessments are performed regarding the appropriate dialysis access and parameters of intradialytic management. The adequacy and function of the dialysis access are reviewed. Physical assessments of the patient are performed to assess patient tolerance (physiologically and psychologically), the effectiveness of the dialysis, and maintenance of vascular access. The patient is monitored for the adequacy of nutrition, chemical homeostasis, hematologic status, neurologic development, growth and development, and parental psychosocial issues including compliance. Of special concern in this population of patients are neonatal caloric needs, infection, and hypertension. Counseling of parents is provided.

For a more detailed description of physician work, please refer to the enclosed document, *Description of Services Monthly Capitation Payment (MCP) for Pediatric Dialysis Patient*.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99214	Level 4 Office Visit, Established Patient	0.95
99215	Level 5 Office Visit, Established Patient	1.53
99244	Level 4 Office Consultation	2.25
99245	Level 5 Office Consultation	2.99

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The infant is evaluated by the physician during approximately four visits per month. The survey respondents equated this to the reference services listed. However, the physician work performed during these visits is much more intense than established patient office visits or office consultations due to the severity of the condition of the infant and the highly specialized care required to treat this condition. The physician work performed during the follow-up visits requires much more technical skill & physical effort, mental effort and judgment, and stress than the care provided during office visits or consultations, and is comparable to the intensity of physician work performed during an hour of critical care. In addition to the intra-service follow-up visits, there is additional physician work in the form of pre-/post-service time. The physician work performed during the pre-/post-service time is comparable to the intensity of the work performed during an office consultation.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

The consensus panel felt that the survey respondents overvalued this service due to unfamiliarity with the RBRVS fee schedule. Therefore, the panel felt it was appropriate to adjust the RVWs based on their evaluation of the physician work involved in performing this service. The panel felt the median survey pre-/intra-/post-service times accurately reflect physician time. Therefore, based on the evaluation of intensity of physician work, the panel developed the following formula for calculating the RVW:

$$[(\text{median intra-service time} \times \text{critical care intensity}) + (\{\text{median pre-} + \text{post-service time}\} \times \text{avg. office consult intensity})] = \text{RVW}$$

The panel felt this methodology was appropriate since the intensity of the intra-service work of caring for an infant who is effectively without an organ is comparable to the intensity of physician work performed during an hour of critical care; and, the intensity of the pre- and post-service work is comparable to the intensity of physician work performed during an office consultation.

SURVEY DATA:

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 185 minutes Low: 15 minutes High: 610 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 45 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 8

Other Data: Median Number of Dialyses/Month: 30 dialyses

Sample Size: 62 Response Rate (%): 66% Median RVW: 18.71

25th Percentile RVW: 13.92 75th Percentile RVW: 24.35 Low: 5.30 High: 53.59

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 90919 Global Period: XXX Recommended RVW: 11.06

Evaluation and management services unrelated to the dialysis procedure that cannot be rendered during the dialysis session may be reported in addition to the dialysis procedure.

CPT Descriptor: End stage renal disease (ESRD) related services per full month: between the second and twelfth birthdays to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

#1. A four year old, s/p repair of posterior urethral valves, is on home Continuous Cycler Peritoneal Dialysis (CCPD). He has poor bladder function (s/p vesicostomy), needs intermittent catheterization four times daily, is growth retarded due to renal tubular acidosis, and has renal osteodystrophy. Family problems secondary to the stress of a child with chronic disease are being addressed.

#2. An eight year old on hemodialysis has rejected one previous transplant. He receives single needle dialysis through a partially stenotic femoral gortex graft. He has anemia, osteodystrophy, and poor nutritional intake. His nutritional status is monitored regularly. He has multiple school and social problems, secondary to his chronic disease, requiring intervention.

Description of Pre-/Post-Service Work: The patient's dialysis records are reviewed periodically throughout the month and indices of clearance are assessed. As required by the federal government, a team meeting is held once per month to discuss the care of the patient. Short- and long-term care is reviewed and coordinated with the primary care physician and other providers. Numerous phone consultations are provided including counseling of parents, interpretation of lab results, and coordination with the primary care physician and the appropriate specialists (urologist for vignette #1, and immunologist for vignette #2).

Description of Intra-Service Work: Assessments are performed regarding the appropriate dialysis access and parameters of intradialytic management. The adequacy and function of the dialysis access are reviewed. Physical assessments of the patient are performed to assess patient tolerance (physiologically and psychologically), the effectiveness of the dialysis, and maintenance of vascular access. The patient is monitored for the adequacy of nutrition, chemical homeostasis, hematologic status, neurologic development, growth and development, and parental psychosocial issues including compliance. Of special concern in this population of patients are fluid overload, diet and prescription non-compliance, childhood development, academic issues, and transplantation concerns. Counseling of the patient and parents is provided, including discussions regarding transplantation

For a more detailed description of physician work, please refer to the enclosed document, *Description of Services Monthly Capitation Payment (MCP) for Pediatric Dialysis Patient*.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99205	Level 5 Office Visit, New Patient	2.31
99213	Level 3 Office Visit, Established Patient	0.56
99214	Level 4 Office Visit, Established Patient	0.95
99215	Level 5 Office Visit, New Patient	1.53

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99244	Level 4 Office Consultation	2.25

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The child is evaluated by the physician during approximately one to three visits per month. The survey respondents equated this to the reference services listed. However, the physician work performed during these visits is much more intense than established patient office visits or office consultations due to the severity of the condition of the child and the highly specialized care required to treat this condition. The physician work performed during the follow-up visits requires much more technical skill & physical effort, mental effort and judgment, and stress than the care provided during office visits or consultations, and is comparable to the intensity of physician work performed during an hour of critical care. In addition to the intra-service follow-up visits, there is additional physician work in the form of pre-/post-service time. The physician work performed during the pre-/post-service time is comparable to the intensity of the work performed during an office consultation.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

The consensus panel felt that the survey respondents overvalued this service due to unfamiliarity with the RBRVS fee schedule. Therefore, the panel felt it was appropriate to adjust the RVWs based on their evaluation of the physician work involved in performing this service. The panel felt the median survey pre-/intra-/post-service times accurately reflect physician time. Therefore, based on the evaluation of intensity of physician work, the panel developed the following formula for calculating the RVW:

$$[(\text{median intra-service time} \times \text{critical care intensity}) + (\{\text{median pre-} + \text{post-service time}\} \times \text{avg. office consultation intensity})] = \text{RVW}$$

The panel felt this methodology was appropriate since the intensity of the intra-service work of caring for a child who is effectively without an organ is comparable to the intensity of physician work performed during an hour of critical care; and, the intensity of the pre- and post-service work is comparable to the intensity of physician work performed during an office consultation.

The two RVWs were then frequency weighted based on current data indicating the number of dialysis patients on peritoneal dialysis (69%) and hemodialysis (31%) for the 2 - 12 year old age group. This data is presented in the enclosed article, *Maintenance dialysis in North American children and adolescents: A preliminary report*.

SURVEY DATA (FREQUENCY WEIGHTED):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 147.75 minutes Low: 30 minutes High: 450 minutes

Median Pre-Service Time: 28.28 minutes Median Post-Service Time: 35.18 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 27.93

Other Data: Median Dialyses/Month: 24.42 dialyses

Sample Size: 61 Response Rate (%): 66% Median RVW: 13.68

25th Percentile RVW: 10.37 75th Percentile RVW: 16.86 Low: 4.85 High: 37.06

SURVEY DATA (VIGNETTE #1 - Peritoneal Dialysis):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 135 minutes Low: 30 minutes High: 450 minutes

Median Pre-Service Time: 27.50 minutes Median Post-Service Time: 37.50 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 27

Other Data: Median Number of Dialyses/Month: 30

Sample Size: 61 Response Rate (%): 66% Median RVW: 13.16

25th Percentile RVW: 10.00 75th Percentile RVW: 15.90 Low: 5.00 High: 27.62

SURVEY DATA (VIGNETTE #2 - Hemodialysis):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 160 minutes Low: 30 minutes High: 450 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 30 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 30

Other Data: Median Number of Dialyses/Month: 12

Sample Size: 61 Response Rate (%): 66% Median RVW: 14.84

25th Percentile RVW: 11.18 75th Percentile RVW: 19.00 Low: 4.50 High: 58.08

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 90920 Global Period: XXX Recommended RVW: 10.98

Evaluation and management services unrelated to the dialysis procedure that cannot be rendered during the dialysis session may be reported in addition to the dialysis procedure.

CPT Descriptor: End stage renal disease (ESRD) related services per full month; through age nineteen to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

#1. A fifteen year old is on home peritoneal dialysis (CCPD). She has bilateral hydronephrosis with poor bladder function requiring intermittent catheterization two to four times daily. She is intermittently non-compliant with medications, and requires IV medications during dialysis. She has multiple social, adolescent, and sexuality issues, secondary to her chronic disease, requiring intervention.

#2. A sixteen year old is on hemodialysis. He is non-compliant and has an increased serum phosphate and acidosis. He has anemia, bone disease, and is often fluid overloaded. The intake and output of fluids and various minerals is monitored regularly. He has multiple school, family, and social problems, secondary to his chronic disease, requiring intervention.

Description of Pre-/Post-Service Work: The patient's dialysis records are reviewed periodically throughout the month and indices of clearance are assessed. As required by the federal government, a team meeting is held once per month to discuss the care of the patient. Short- and long-term care is reviewed and coordinated with the primary care physician and other providers. Numerous phone consultations are provided including counseling of parents, interpretation of lab results, and coordination with the primary care physician and the appropriate specialists (urologist for vignette #2, and immunologist for both vignettes).

Description of Intra-Service Work: Assessments are performed regarding the appropriate dialysis access and parameters of intradialytic management. The adequacy and function of the dialysis access are reviewed. Physical assessments of the patient are performed to assess patient tolerance (physiologically and psychologically), the effectiveness of the dialysis, and maintenance of vascular access. The patient is monitored for the adequacy of nutrition, chemical homeostasis, hematologic status, neurologic development, growth and development, sexual development, and parental psychosocial issues including compliance and adolescent rebellion. Of special concern in this population of patients are sexuality issues, diet and prescription non-compliance, academic issues, and transplantation concerns. Counseling of the patient and parents is provided, including discussions regarding transplantation.

For a more detailed description of physician work, please refer to the enclosed document, *Description of Services Monthly Capitation Payment (MCP) for Pediatric Dialysis Patient*.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99205	Level 5 Office Visit, New Patient	2.31
99213	Level 3 Office Visit, Established Patient	0.56
99214	Level 4 Office Visit, Established Patient	0.95

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99244	Level 4 Office Consultation	2.25

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The adolescent is evaluated by the physician during approximately one to three visits per month. The survey respondents equated this to the reference services listed. However, the physician work performed during these visits is much more intense than established patient office visits or office consultations due to the severity of the condition of the adolescent and the highly specialized care required to treat this condition. The physician work performed during the follow-up visits requires much more technical skill & physical effort, mental effort and judgment, and stress than the care provided during office visits or consultations, and is comparable to the intensity of physician work performed during an hour of critical care. In addition to the intra-service follow-up visits, there is additional physician work in the form of pre-/post-service time. The physician work performed during the pre-/post-service time is comparable to the intensity of the work performed during an office consultation.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

The consensus panel felt that the survey respondents overvalued this service due to unfamiliarity with the RBRVS fee schedule. Therefore, the panel felt it was appropriate to adjust the RVWs based on their evaluation of the physician work involved in performing this service. The panel felt the median survey pre-/intra-/post-service times accurately reflect physician time. Therefore, based on the evaluation of intensity of physician work, the panel developed the following formula for calculating the RVW:

$$[(\text{median intra-service time} \times \text{critical care intensity}) + (\{\text{median pre-} + \text{post-service time}\} \times \text{avg. office consult intensity})] = \text{RVW}$$

The panel felt this methodology was appropriate since the intensity of the intra-service work of caring for an adolescent who is effectively without an organ is comparable to the intensity of physician work performed during an hour of critical care; and, the intensity of the pre- and post-service work is comparable to the intensity of physician work performed during an office consultation.

The two RVWs were then frequency weighted based on current data indicating the number of dialysis patients on peritoneal dialysis (57%) and hemodialysis (43%) for the 13 - 20 year old age group. This data is presented in the enclosed article, *Maintenance dialysis in North American children and adolescents: A preliminary report*.

SURVEY DATA (FREQUENCY WEIGHTED):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 139.33 minutes Low: 30 minutes High: 300 minutes

Median Pre-Service Time: 22.13 minutes Median Post-Service Time: 45 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 24.43

Other Data: Median Dialyses/Month. 22.26 dialyses

Sample Size: 62 Response Rate (%): 66% Median RVW: 11.28

25th Percentile RVW: 8.43 75th Percentile RVW: 14.33 Low: 3.25 High: 24.35

SURVEY DATA (VIGNETTE #1 - Peritoneal Dialysis):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 127.50 minutes Low: 30 minutes High: 300 minutes

Median Pre-Service Time: 27.50 minutes Median Post-Service Time: 45 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 22.5

Other Data: Median Number of Dialyses/Month: 30 dialyses

Sample Size: 62 Response Rate (%): 66% Median RVW: 10.76

25th Percentile RVW: 8.00 75th Percentile RVW: 13.99 Low: 3.25 High: 22.18

SURVEY DATA (VIGNETTE #2 - Hemodialysis):

Specialty: Pediatric Nephrology (AAP and ASPN)

Median Intra-Service Time: 155 minutes Low: 30 minutes High: 300 minutes

Median Pre-Service Time: 15 minutes Median Post-Service Time: 45 minutes

Length of Hospital Stay: NA Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 27

Other Data: Median Number of Dialyses/Month: 12 dialyses

Sample Size: 62 Response Rate (%): 66% Median RVW: 17.97

25th Percentile RVW: 9.00 75th Percentile RVW: 14.79 Low: 3.25 High: 27.22

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

CPT Code Number: 90921 Global Period: XXX Recommended RVW: 6.64

CPT Descriptor: End stage renal disease (ESRD) related services per full month; for patients twenty years of age and over

CLINICAL DESCRIPTION OF SERVICE:

Vignettes Used in Survey:

Patient #1 of 2: A 64-year-old diabetic male on hemodialysis for 5 years following a failed renal transplant. He frequently experiences chest pain and headaches, and is mildly non-compliant with diet. He has occasional problems with his fistula and often requires a longer session for fluid control. Intradialytic hemodynamic status is variable with occasional severe hypotensive episodes requiring colloid infusions and post dialysis "broth."

Patient #2 of 2: A 54-year-old hypertensive male on CCPD. His lifestyle has him frequently eating at restaurants. There are remarkable changes in intake from day to day, and his phosphorus is rarely controlled. Despite no prior history of diabetes, glucose rises to 180 mg% when 4.25% exchanges are used. He has had only one episode of peritonitis in the past 12 months.

Description of Physician Work:

Pre-, Intra-, Post-:

Given the nature of this code -- capitation for a variety of outpatient physician's services (evaluation/management and procedures) rendered to a patient with End-Stage Renal Disease (ESRD) for an entire month -- establishing a clear pre-, intra-, or post period was not appropriate since a single service was not surveyed. Global period does not apply. This description is for capitated services for a one-month period to a single patient on dialytic support. A single month's series of interactions were evaluated to include 13 hemodialysis treatments per month (three hemodialysis therapies per week), or 30 days of continuous peritoneal dialysis therapy per month, physician work in both face-to-face and "other" activities related to the provision of dialysis, and the usual ancillary physician's services related to the patient's ESRD.

The physician continually assesses the patient for adequacy of dialysis vascular/peritoneal access, adequacy of delivered dialysis therapy, and evaluates and treats intradialysis complications. The physician prescribes the parameters of intradialysis management, treats patient changes induced during and by dialysis, and periodically visits the patient during dialysis to ascertain the effectiveness of the dialysis treatment and the physiological and psychological tolerance of the patient to that therapy. The physician performs periodic physical assessments based on the patient's clinical stability related to both the dialysis therapy as well as the patient's end-stage renal failure. The physician reviews periodic laboratory data and changing physiological status and alters dialysis or other therapy based upon such reviews. The physician is responsible for the coordination of the multi-disciplinary treatment team, and is the primary referral source for each team member.

For a more detailed description of physician work, please refer to the two enclosed documents:

- (a) Renal Physicians Association *Description of Services: Monthly Capitation Payment (MCP)*; and
- (b) Code of Federal Regulations (42 CFR, 10-1-92 Edition), Health Care Financing Administration, *End-Stage Renal Disease Program; §414.314 Monthly Capitation Payment Method.*

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99211	Level 1 Office Visit, Established Patient	0.17
99213	Level 3 Office Visit, Established Patient	0.56
99215	Level 5 Office Visit, Established Patient	1.53
59425	Antepartum care only; 4-6 visits	4.08
59426	Antepartum care only; 7 or more visits	6.99
90935	Hemodialysis; one physician evaluation	1.19
90945	Dialysis procedure other than hemodialysis (e.g., peritoneal, hemofiltration); one physician evaluation	1.24

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The services rendered to patients with ESRD on dialysis support have both evaluation/management and procedural aspects. The survey respondents seemed to depend upon E/M services when describing physician activity during the median 6.5 patient interactions per month. Given the established nature of these patients, and the outpatient environment, those codes predominated. The level of decision making encountered with the typical ESRD patient falls into the moderate complexity to high complexity range. Data from the United States Renal Data System (USRDS) shows this trend to continue with older and more complex patients being supported on dialysis for renal failure. High level of mental effort and judgement are required to care for these dialysis-dependent patients, not only from the lack of renal function but also the unique nature of their reaction to standard medical interaction.

Each individual dialysis procedure carries with it a set of physician services which have been well described and are quite familiar to the respondents. The physician services rendered during chronic outpatient dialysis are, however, reduced from an acute dialysis service. The codes 90935 and 90945 have been used to describe the procedure. It is understood that the median frequency (13 treatments per month for hemodialysis and 30 days of therapy for peritoneal dialysis) are accounted for by both physician/nurse as well as physician/patient interaction. Technical skill and stress are utilized in this area. The non-physiological state of dialysis frequently creates specific and acute changes in patient status which fall directly under the care of the physician. The codes 59425 and 59426 were utilized as reference services, as these are perhaps the only example of multiple physician interactions over the course of time.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

The Nephrology RVS Committee reviewed a total of three evaluation techniques to arrive at a final value. The first was the RUC survey, designed with the help of the RUC Subcommittee on Research representative. The original submission contained eight (8) vignettes which was subsequently reduced to two "representative" scenarios with the input of the RUC Research Subcommittee (one representing hemodialysis and one peritoneal dialysis). This final survey tool was sent to 104 nephrologists randomly chosen from the Renal Physicians Association Nephrology database, following the RUC procedure for survey and reporting.

A second survey, conducted using a series of patient vignettes developed by the Committee from the USRDS database (patient age, sex, race, primary renal disease, co-morbidity, and dialysis support type), was administered to a different group of nephrologists (n=70) electronically and recently reported (please see enclosed article). The data received from this survey seemed to parallel and reflect the same work values obtained from the RUC survey (median RVW ranged from 7.55 to 8.25).

A third evaluation of the MCP work value was approached using the various components of the month's activities as documented in the RPA *MCP Description of Services* document, asking twenty (20) nephrologists to assign an RVW to each MCP component physician service. Again, the physician work values obtained were in close agreement with the RUC survey (median RVW = 7.01).

SURVEY DATA - FREQUENCY WEIGHTED:

Resolving the differences noted between the RVW for hemodialysis and that obtained for peritoneal dialysis (see below) was done using the median values obtained from the RUC survey for each vignette, and applying a weighted score based again upon the current distribution of patients as described by the USRDS. Thus, the hemodialysis (85.6% of patients nationwide) value of 6.92 and the peritoneal (14.4% of patients nationwide) value of 5.00 were placed in a weighted formula to obtain the final submission as follows:

$$\begin{aligned} \text{FINAL RVW} &= (\text{Hemodialysis RVW value} \times 0.856) + (\text{Peritoneal RVW value} \times 0.144) \\ &= (6.92 \times 0.856) + (5.00 \times 0.144) \\ &= 6.64 \end{aligned}$$

The two non-RUC surveys were used by the Committee as supporting material for the recommended RVW. Since all values were within a close range of agreement, the Committee decided to follow the RUC data process and submit the final RVW based on that process.

SURVEY DATA - VIGNETTE #1 - HEMODIALYSIS:

Specialty: Nephrology - Renal Physicians Association

Median Service Time: 120 minutes Low: 20 minutes High: 600 minutes

25th Percentile Time: 70 minutes 75th Percentile Time: 180 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 54.5 patients

Other Data: _____

Sample Size: 100 Response Rate (%): 43% Median RVW: 6.92

25th Percentile RVW: 3.77 75th Percentile RVW: 8.95 Low: 1.9 RVW High: 23.8 RVW

SURVEY DATA - VIGNETTE #2 - PERITONEAL DIALYSIS:

Specialty: Nephrology - Renal Physicians Association

Median Service Time: 90 minutes Low: 15 minutes High: 300 minutes

25th Percentile Time: 45 minutes 75th Percentile Time: 125 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 20.0 patients

Other Data: _____

Sample Size: 100 Response Rate (%): 43% Median RVW: 5.00

25th Percentile RVW: 3.16 75th Percentile RVW: 7.41 Low: 0.9 RVW High: 20.0 RVW

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

CPT Code Number: 90922 Global Period: XXX Recommended RVW: SEE 90921

CPT Descriptor: End stage renal disease (ESRD) related services (less than full month), per day

CLINICAL DESCRIPTION OF SERVICE:

Vignettes Used in Survey:

Patient #1 of 2: A 64-year-old diabetic male on hemodialysis for 5 years following a failed renal transplant. He frequently experiences chest pain and headaches, and is mildly non-compliant with diet. He has occasional problems with his fistula and often requires a longer session for fluid control. Intradialytic hemodynamic status is variable with occasional severe hypotensive episodes requiring colloid infusions and post dialysis "broth."

Patient #2 of 2: A 54-year-old hypertensive male on CCPD. His lifestyle has him frequently eating at restaurants. There are remarkable changes in intake from day to day, and his phosphorus is rarely controlled. Despite no prior history of diabetes, glucose rises to 180 mg% when 4.25% exchanges are used. He has had only one episode of peritonitis in the past 12 months.

Description of Physician Work:

This is a pure mathematical conversion to the daily charge = 1/30 of the monthly MCP charge. Please refer to CPT code 90921 for description.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
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Please see description for 90921.

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Please see description for 90921.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

Please see description for 90921.

SURVEY DATA:

Specialty: Nephrology - Renal Physicians Association

Median Service Time: see 90921 Low: see 90921 High: see 90921

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): see 90921

Other Data: _____

Sample Size: see 90921 Response Rate (%): see 90921 Median RVW: _____

25th Percentile RVW: see 90921 75th Percentile RVW: see 90921 Low: see 90921 High: see 90921

Please complete the following if more than one specialty society was involved in developing the recommendation:

NOT APPLICABLE

Specialty: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____



AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
NOVEMBER 1993

OPHTHALMOLOGY

The RUC recommendations for fitting of spectacles and contact lenses are based on a survey of ophthalmologists, optometrists, and opticians. The RUC agreed with these groups that 92390 and 92391 are supply codes and should not have physician work values assigned to them. The RUC reduced the value for code 92015 [Determination of refractive state] to the survey median from the optometrists because the ophthalmologists' believed their survey results were too high. The service was also compared with code 92353 as a key reference service [fitting of spectacle prosthesis for aphakia; multifocal -- 0.52 RVW].

CPT Code	CPT Descriptor	Global Period	RVW Recommendation	RUC Recommendation Adjusted to Reflect the 1994 MFS 1.3% Reduction
92015	Determination of refractive state	XXX	0.54	0.53
92310	Prescription of optical and physical characteristics of and fitting of contact lens, with medical supervision of adaptation; corneal lens, both eyes, except for aphakia	XXX	1.2	1.18
92314	Prescription of optical and physical characteristics of contact lens, with medical supervision of adaptation and direction of fitting by independent technician; corneal lens, both eyes, except for aphakia	XXX	0.80	0.79
92340	Fitting of spectacles, except for aphakia; monofocal	XXX	0.37	0.37
92341	bifocal	XXX	0.52	0.51
92342	multifocal, other than bifocal	XXX	0.60	0.59
92370	Repair and refitting spectacles; except for aphakia	XXX	0.50	0.49
92390	Supply of spectacles, except prosthesis for aphakia and low vision aids	XXX	N/A	N/A
92391	Supply of contact lenses, except prosthesis for aphakia	XXX	N/A	N/A

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92015 Global Period: XXX

CPT Descriptor: Determination of refractive state

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 14 year old boy presents because he cannot see the blackboard at school.

Description of Pre-Service Work: Read old glasses, explain nature of the subjective refraction.

Description of Intra-Service Work: Retinoscopy performed subjective refinement of both eyes as needed prescription written out.

Description of Post-Service Work: Write out prescription and explain how glasses are to be worn, and any sensory changes a patient may experience.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the present problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and family.	.59
92312	Prescription of optical and physical characteristics of and fitting of contact lens, with medical supervision of adaption; corneal lens for aphakia, both eyes.	1.29
92352	Fitting of spectacle prosthesis for aphakia; monofocal	.37
92353	Fitting of spectacle prosthesis for aphakia; multifocal	.52

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? X Commonly ___ Sometimes ___
Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 8 million

Is this service performed by many physicians across the United States? X Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 17 min. Low: 5 min. High: 40 min

Median Pre-Service Time: 5 min. Median Post-Service Time: 5 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 100

Other Data: _____

Optometry

Median Intra-Service Time: 11 Low: 4 High: 25

Median Pre-Service Time: 2 Median Post-Service Time: 2

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 1100

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92310 Global Period: XXX

CPT Descriptor: Prescription of optical and physical characteristics of and fitting of contact lens, with medical supervision of adaptation; corneal lens, both eyes, except for aphakia

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 21 year old woman presents for a cosmetic contact lens fit. Her current spectacle prescription (low myope) requires no changes.

Description of Pre-Service Work: Interview patient with reference to intended lens use/wear; verify and interpret the prescription; review with patient the types of lenses available to meet use and prescription requirements.

Description of Intra-Service Work: Observe external eye and adnexa using fluorescein and slit lamp; measure and record visible iris diameter, vertical palpebral fissure and pupil, position of lower lid margin, corneal topography and curves; compute necessary front lens surface; design lens; prepare and issue work order specifying design parameters.

Description of Post-Service Work: Examine finished lenses for errors or imperfections and verify all parameters; deliver lenses to wearer; instruct wearer in care regimen and wearing schedule; adapt lenses as indicated by corneal changes; report to prescribing doctor; arrange for follow up evaluation; assist wearer with insurance claim if appropriate.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92311	Prescription of optical and physical characteristics of and fitting of contact lens, with medical supervision of adaptation; corneal lens for aphakia, one eye.	1.10
92312	Prescription of optical and physical characteristics of and fitting of contact lens, with medical supervision of adaptation; corneal lens for aphakia, both eyes.	1.29
92316	Prescription of optical and physical characteristics of contact lens, with medical supervision of adaptation and direction of fitting by independent technician; corneal lens for aphakia, both eyes.	.70

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

A variety of lenses fall under the variety of corneal these include contact lenses for corneal scars keratomas and other severe refractive errors that can not be corrected with spectacles.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 14.2 million

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not Applicable.

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 25 min. Low: 10 min High: 100 min.

Median Pre-Service Time: 8 min. Median Post-Service Time: 24 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 150

Opticians

Median Intra-Service Time: 45 min. Low: 25 min. High: 120 min.

Median Pre-Service Time: 10 min Median Post-Service Time: 20 min

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 40

Optometry

Median Intra-Service Time: 20 Low: 15 High: 90

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 200

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Code: 92314

Global Period: XXX

CPT Descriptor:

Prescription of optical and physical characteristics of contact lens, with medical supervision of adaptation and direction of fitting by independent technician; corneal lens, both eyes, except for aphakia

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 21 year old woman presents for a cosmetic contact lens fit. Her current spectacle prescription (low myope) requires no changes. Fitting is done by an independent technician.

Description of Pre-Service Work: Interview patient with reference to intended lens use/wear; interpret the prescription; review with patient the type of lenses available to meet use and prescription requirements.

Description of Intra-Service Work: Observe external eye and adnexa using fluorescein and slit lamp; measure and record visible iris diameter, vertical palpebral fissure and pupil position of lower lid margin, corneal topography and curves; communicate pertinent findings with independent technician; compute necessary front lens surface; design lens; prepare and issue work order specifying design parameters.

Description of Post-Service Work: Examine finished lenses for errors or imperfections and verify all parameters; deliver lenses to wearer; instruct wearer in care regimen and wearing schedule; adapt lenses as indicated by corneal changes; report to prescribing doctor. Assist wearer with insurance claim if appropriate.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92316	Prescription of optical and physical characteristics of contact lens, with medical supervision of adaptation and direction of fitting by independent technician; corneal lens for aphakia, both eyes.	.70
92014	Ophthalmological services: medical examination and evaluation, with initiation or continuation of diagnostic and treatment program; comprehensive, established patient, one or more visits.	1.08
92311	Prescription of optical and physical characteristics of fitting of contact lens, with medical supervision of adaptation; corneal lens for aphakia; one eye.	1.10

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Not applicable.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 14 million

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not Applicable.

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 23 min. Low: 7 min. High: 45 min.

Median Pre-Service Time: 5 min. Median Post-Service Time: 5 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 20

Other Data: _____

Opticians

Median Intra-Service Time: 38 min. Low: 20 min. High: 60 min.

Median Pre-Service Time: 13 min. Median Post-Service Time: 18 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 40

Other Data: _____

Optometry

Median Intra-Service Time: 20 Low: 5 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 10

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 25

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92340 Global Period: XXX

CPT Descriptor: Fitting of spectacles, except for aphakia; monofocal

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 23 year old women is found to have a refractive error after a complete eye examination including a refraction. Spectacles would improve her vision. She presents for a fitting of a pair of monofocal spectacles.

Description of Pre-Service Work: Interview patient to determine eyewear needs; analyze prescription relative to lens and frame designs.

Description of Intra-Service Work: Take interpupillary and facial measurement; guide selection of lenses and frames to fit prescription and patients vocational and avocational needs; prepare work order.

Description of Post-Service Work: Verify finished lenses and frame with the lenses mounted; fit, adjust and adapt eyeglasses to face and eyes; instruct wearer on use and care of lenses and frames; assist wearer with insurance claims if appropriate.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92352	Fitting of spectacle prosthesis for aphakia; monofocal	.37
99243	Office consultation for a new or established patient, which requires these three key components: a detail history; a detail examination; and medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the present problem(s) are of moderate severity. Physicians typically spend 40 minutes face-to-face with the patient and/or family.	1.53

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes
Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 39 million

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

Not applicable.

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 10 min. Low: 5 min. High: 30 min.

Median Pre-Service Time: 5 min. Median Post-Service Time: 4 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 75

Other Data: _____

Opticians

Median Intra-Service Time: 20 min. Low: 15 min. High: 60 min.

Median Pre-Service Time: 20 min. Median Post-Service Time: 15 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 400

Other Data: _____

Optometry

Median Intra-Service Time: 10 Low: 3 High: 25

Median Pre-Service Time: 2 Median Post-Service Time: 2

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 860

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92341 Global Period: XXX

CPT Descriptor: Fitting of spectacles, except for aphakia; bifocal

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 46 year old woman is found to have a refractive error after a complete eye examination including a refraction. She requires both a distance and near prescription. Spectacles would improve her vision. She presents for a fitting of a pair of bifocal spectacles.

Description of Pre-Service Work: Interview patient to determine eyewear needs; analyze prescription relative to lens and frame designs, review lens options with customer.

Description of Intra-Service Work: Take interpupillary and facial measurement; guide selection of lenses and frames to fit prescription and patients vocational and avocational needs; prepare work order.

Description of Post-Service Work: Verify finished lenses and frame with lenses mounted; fit, adjust and adapt eyeglasses to face and eyes; instruct wearer on use and care of lenses and frames; assist wearer with insurance claims if appropriate.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92353	Fitting of spectacle prosthesis for aphakia; multifocal	.52
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 26 million

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

N/A

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 15 min. Low: 5 min. High: 30 min.

Median Pre-Service Time: 5 min. Median Post-Service Time: 5 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 100

Opticians

Median Intra-Service Time: 30 min. Low: 15 min. High: 70 min.

Median Pre-Service Time: 20 min. Median Post-Service Time: 17 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 280

Optometry

Median Intra-Service Time: 14 Low: 3 High: 30

Median Pre-Service Time: 2 Median Post-Service Time: 4

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 750

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92342 Global Period: XXX

CPT Descriptor: Fitting of spectacles, except for aphakia; multifocal, other than bifocal

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 50 year old carpenter has trouble working above his head with his bifocals. he requires a superiorly placed intermediate add.

Description of Pre-Service Work: Interview customer to determine eyewear needs; analyze prescription relative to lens and frame designs, review lens options and safety concerns with customer.

Description of Intra-Service Work: Take interpupillary and facial measurements; guide selection of lenses and frames to fit prescription and customer's vocational and avocational needs; prepare work order.

Description of Post-Service Work: Verify finished lenses and frame with lenses mounted; fit, adjust and adapt eye glasses to face and eyes; instruct wearer on use and care of lenses and frames; in follow up visits, verify lens alignment and refit frame if necessary; assist wearer with insurance claims if necessary.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92353	Fitting of spectacle prosthesis for aphakia; multifocal	.52
99213	Office or other outpatient visit for the evaluation and management of an established patient, which requires at least two of these three key components: an expanded problem focused history; an expanded problem focused examination; medical decision making of low complexity. Counseling and/or coordination of care with other providers or agencies are provided consistent with the nature of the problem(s) and the patient's and/or family's needs. Usually, the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	.59

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 31 million

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

N/A

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 15 min. Low: 6 min. High: 30 min.

Median Pre-Service Time: 10 min. Median Post-Service Time: 10 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 25

Other Data: _____

Opticians

Median Intra-Service Time: 30 min. Low: 15 min. High: 60 min.

Median Pre-Service Time: 20 min. Median Post-Service Time: 20 min

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 8

Other Data: _____

Optometry

Median Intra-Service Time: 15 Low: 4 High: 35

Median Pre-Service Time: 3 Median Post-Service Time: 5

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 20

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

CPT Code: 92370 Global Period: XXX

CPT Descriptor: Repair and refitting spectacles; except for aphakia

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 65 year old women accidentally sits on her glasses distorting the frame and breaking one of the nose pieces. She presents for repair and refitting of her spectacles.

Description of Pre-Service Work: Interview patient to determine eyewear needs; examine frame, determine repair feasibility; review safety concerns with patient.

Description of Intra-Service Work: Verify lens alignment, axis, optical center measurements from original prescription; re-form frame and repair or replace broken parts as needed; verify lens alignment and refit frame.

Description of Post-Service Work: Instruct wearer on use and carer of lenses and frames.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
92352	Fitting of spectacle prosthesis for aphakia; monofocal	.37
92353	Fitting of spectacle prosthesis for aphakia; multifocal	.52

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? X Commonly ___ Sometimes ___
Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 247 thousand

Is this service performed by many physicians across the United States? X Yes ___ No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

N/A

Please complete this page if more than one specialty society was involved in developing the recommendation.

Ophthalmology

Median Intra-Service Time: 10 min. Low: 5 min. High: 30 min.

Median Pre-Service Time: 5 min. Median Post-Service Time: 2 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 12

Opticians

Median Intra-Service Time: 15 min. Low: 12 min. High: 30 min.

Median Pre-Service Time: 5 min. Median Post-Service Time: 3 min.

Length of Hospital Stay: n/a Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 150

Optometry

Median Intra-Service Time: 10 Low: 5 High: 20

Median Pre-Service Time: 1 Median Post-Service Time: 1

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 100

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
INTRACORONARY STENT PLACEMENT - TAB A

The RUC recommends the values 15.00 RVW [(929X1) Transcatheter placement of an intracoronary stent(s), percutaneous; single vessel] and 4.22 RVW [(929X2) Transcatheter placement of an intracoronary stent(s), percutaneous; each additional vessel]. These recommendations are based on a survey of cardiologists. The following chart was provided to the RUC to compare intracoronary stent placement to PTCA and Atherectomy:

PROCEDURE	Coronary Angioplasty	Position balloon inflate	Additional coronary device	Pre- an Post-operative care	Effort	RVW	Global	Additional Vessel
PTCA	+	+	-	+	-	11.10	000	3.00
Atherectomy	+	+/-	+	+	10%	12.22	000	3.30
Stent	+	++	+	++	35%	15.00	000	4.22

It was noted that the post-procedure work for the stents is more physician intensive as the patient requires aggressive anticoagulation to prevent clotting at the stent site, and careful management of the groin arterial access site to prevent bleeding complications.

The RUC agreed that the service should be valued as a stand alone procedure and is under the assumption that the specialty society will apply to CPT for a coding language change to include "with or without other therapeutic intervention, any method." When a stent is performed, it would be reported as a primary procedure. The RUC clarified that if other vessels are treated during the same procedure with other modalities such as balloon angioplasty or atherectomy, each of these would be reported using the appropriate "each additional vessel" code (RVW = 3.0 and 3.3, respectively). The multiple procedure rule would not apply, as these have been valued as add-on codes. The RUC expressed a general concern regarding the assignment of 000 global periods to therapeutic procedures. Since post-service visits can be reported for these procedures it was felt that the result is the undervaluing of therapeutic procedures that require similar physician work but are assigned a 90 day global period.

Track- ing Number	CPT Code (● New)	CPT Descriptor	Coding Change	Global Period	RVW Recommendation
If other vessels are treated with balloon angioplasty or atherectomy at the same time as an intracoronary stent placement, each should be reported separately using the appropriate "each additional vessel" code (92984 and 92996).					
AG1	●929X1	Transcatheter placement of an intracoronary stent(s), percutaneous; single vessel	new	000	15.00
AG2	●929X2	each additional vessel	new	ZZZ	4.22
	92982	Percutaneous transluminal coronary balloon angioplasty; single vessel	no change	000	11.10
	92984	each additional vessel	no change	ZZZ	3.00
	92995	Percutaneous transluminal coronary atherectomy, with or without balloon angioplasty; single vessel	no change	000	12.22
	92996	each additional vessel	no change	ZZZ	3.30

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AG1 Global Period: 000

CPT Descriptor: Transcatheter placement of an intracoronary stent(s), percutaneous; single vessel

CLINICAL DESCRIPTION OF SERVICE:

Introductory Note: An intracoronary stent is used for treatment of acute closure of a coronary artery following another catheter intervention (balloon angioplasty, atherectomy or laser angioplasty). Stents may also be used in the management of complex coronary lesions where acute closure may be anticipated. The physician work value of this service should reflect all the work involved as if the service is provided as a stand-alone procedure. If stents are placed at the time of another coronary intervention such as balloon angioplasty, the multiple procedure rule will be applied resulting in full payment for the more highly valued service and 50 percent payment for the additional service.

Vignette Used in Survey: The decision is made to place a stent and this is discussed fully with the patient/family. The patient is prepared for the procedure, which includes sterilization of the access site and cannulation with an indwelling sheath (typically the femoral artery is used). A guide catheter is positioned in the appropriate coronary ostium and baseline arteriograms are obtained. A guidewire is passed down the target vessel across the target stenosis. The stent is loaded on a carrying catheter (which has an expandable balloon.) which is inserted into the guiding catheter and advanced using fluoroscopic guidance. The operator positions the stent in the target vessel and confirms the location by fluoroscopy and comparison to previous contrast injections. When the operator is confident the stent is in the correct location, the balloon is inflated to expand and secure the stent. The carrying catheter balloon is deflated and the catheter removed over the guidewire. Then a larger or less compliant balloon is passed over the guidewire into the stent, expanded until the stent is fully dilated, and then removed.

After the completion of the procedure, the arterial sheath remains in place for 4 to 24 hours as Heparin and other anticoagulants used to prevent thrombosis of the newly placed stent often cause bleeding at the groin site requiring transfusion. Twenty-four hour followup care is included in this procedure.

Description of Pre-Service Work: The decision is made to place a stent and this is discussed fully with the patient/family.

Description of Intra-Service Work: The patient is prepared for the procedure, which includes sterilization of the access site and cannulation with an indwelling sheath (typically the femoral artery is used). A guide catheter is positioned in the appropriate coronary ostium and baseline arteriograms are obtained. A guidewire is passed down the target vessel across the target stenosis. The stent is loaded on a carrying catheter (which has an expandable balloon.) which is inserted into the guiding catheter and advanced using fluoroscopic guidance. The operator positions the stent in the target vessel and confirms the location by fluoroscopy and comparison to previous contrast injections. When the operator is confident the stent is in the correct location, the balloon is inflated to expand and secure the stent. The carrying catheter balloon is deflated and the catheter removed over the guidewire. Then a larger or less compliant balloon is passed over the guidewire into the stent, expanded until the stent is fully dilated, and then removed.

Description of Post-Service Work: After the completion of the procedure, the arterial sheath remains in place for 4 to 24 hours as Heparin and other anticoagulants used to prevent thrombosis of the newly placed stent often cause bleeding at the groin site requiring transfusion. Twenty-four hour followup care is included in this procedure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
35450	Transluminal balloon angioplasty, open; renal or other visceral artery	10.18
92982	Coronary artery dilation balloon PTCA, one vessel	11.10
35474	Transluminal balloon angioplasty, percutaneous; femoral-popliteal	7.44

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The consensus panel estimated that the physician work effort involved in the placement of an initial coronary stent exceeds that involved in performing an initial balloon angioplasty by approximately 35 percent (approximately 10 percent more effort for the pre- and post-work combined, and 30 percent more for the intra-service work). To date, these services have typically been coded using CPT code 93799: unlisted cardiovascular service or procedure. The pre-service work is similar to an angioplasty service and the post-service work includes additional physician time and effort to monitor for and minimize groin complications related to increased anticoagulation which is required to prevent stent closure. The intra-service work component requires the most additional effort of the three components, particularly as this includes a post-stent placement angioplasty to secure the stent in the vessel, when compared to an angioplasty.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY: N/A

SURVEY DATA:Specialty: CardiologyMedian Intra-Service Time: 2 hrs Low: 15 mins High: 3 hrsMedian Pre-Service Time: 45 mins Median Post-Service Time: 1 hrLength of Hospital Stay: 6 days Number & Level of Post-Hospital Visits: 99213, day 7; 99212, day 10-14Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AG2 Global Period: ZZZ

CPT Descriptor: Transcatheter placement of an intracoronary stent(s), percutaneous; each additional vessel

CLINICAL DESCRIPTION OF SERVICE:

Introductory Note: At the time of initial stent placement, it is determined that an additional stent is required. This additional service represents only the intra-service work of placing the additional stent. It does not include any pre- or post-work, as these portions of the service are captured in the initial stent placement code.

Vignette Used in Survey: An additional stent (loaded on a separate carrying catheter) is inserted through the guiding catheter and advanced into the coronary artery using fluoroscopic guidance. The operator positions the stent in the target vessel and confirms the location by fluoroscopy and comparison to previous contrast injections. When the operator is confident the stent is in the correct location, the carrying catheter balloon is deflated and the catheter removed over the guidewire. Then a larger or less compliant balloon is passed over the guidewire into the stent, expanded until the stent is fully dilated, and then removed.

Description of Pre-Service Work: N/A

Description of Intra-Service Work: As in above vignette.

Description of Post-Service Work: N/A

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
35450	Transluminal balloon angioplasty, open; renal or other visceral artery	10.18
92982	Coronary artery dilation balloon PTCA, one vessel	11.10
92984	Coronary artery dilation balloon PTCA, each additional vessel	3.0
36245	Selective catheter placement, arterial system; each first order abdominal, pelvic or lower extremity artery branch, within a vascular family	5.13

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The technical advisors estimated that the intra-service physician work effort required for this service exceeds that required for balloon angioplasty, each additional vessel, by 30 percent, as in the initial vessel procedures noted in tracking code AG1. Therefore, the TAP recommends a value of 4.22 RVUs, even though this is less than the median survey value of 6.0 RVUs. As in similar services (92984; 92996), pre- and post-service work for each additional coronary stent placement are included in the primary procedure (92982; 92995).

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY: N/A

SURVEY DATA:Specialty: CardiologyMedian Intra-Service Time: 1 hr Low: 15 mins High: 4 hrsMedian Pre-Service Time: N/A Median Post-Service Time: N/ALength of Hospital Stay: no additional days required beyond those of the single vessel stent placementNumber & Level of Post-Hospital Visits: N/ANumber of Times Provided in Past 12 months (Median): 4

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
CARDIOGRAPHY - TAB B

The American College of Cardiology has proposed further CPT revisions to codes 93012 and 93014 and will develop recommendations to present to a future RUC meeting.

Code 93268 has been split out so that recording, monitoring, and physician review and interpretation may be reported separately. The RUC recommends that the value for 932X3 [physician review and interpretation only] be valued the same as the global code, 93268. There is no physician work in 932X1 [recording (includes hook-up, recording and disconnection)] or 932X2 [monitoring, receipt of transmissions, and analysis].

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BU1	93012	<u>Postsymptom</u> telephonic or telemetric transmission of electrocardiogram rhythm strip, <u>per 30 day period of time;</u>	XXX	No Recommendation at this time
BU2	93014	physician review with <u>and</u> interpretation and report only	XXX	No Recommendation at this time
BU3	93268	Patient demand single or multiple event recording with presymptom or postsymptom memory loop, <u>per 30 day period of time;</u> includes transmission, physician review and interpretation	XXX	0.53 (no change)
BU4	●932X1	recording (includes hook-up, recording and disconnection)	XXX	0.00
BU5	●932X2	monitoring, receipt of transmissions, and analysis	XXX	0.00
BU6	●932X3	physician review and interpretation only (For postsymptom recording, see 93012, 93014)	XXX	0.53

American College of Cardiology



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Executive Vice President
DAVID J. FEILD

**SUBJECT: American College of Cardiology Recommendations
Regarding ECG Rhythm Strips**

Dear Dr. Rodkey:

Thank you for the opportunity to provide the American College of Cardiology's recommendations to the AMA's Relative Value Update Committee (RUC) regarding ECG rhythm strips, CPT codes 93012 and 93014. We believe, as described in the attached letter to Dr. Harris, Chairman of the CPT Editorial Panel, that both the existing and recently revised coding descriptions for these codes do not effectively resolve the issues identified by the College and HCFA. Therefore, the College is recommending to the AMA CPT Editorial Panel that additional language revisions be made. **In the interim, we request that the RUC's assignment of physician work relative value units be postponed until the language changes have been accomplished.**

Once final revisions are adopted by the AMA CPT Editorial Panel, a relative value update survey will be undertaken to establish physician work values for these services, as previous values were generally applied on a per-transmission basis.

Thank you for your assistance in this matter. We look forward to working with the RUC to establish appropriate RVUs for these services once the coding language changes are finalized. Please call Sandy Morrin at the College if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Daniel J. Ulliyot".

Daniel J. Ulliyot, M.D., F.A.C.C.
President

Attachment

cc: William L. Winters, M.D., F.A.C.C.
Joe R. Wise, Jr., M.D., F.A.C.C.
Michael J. Wolk, M.D., F.A.C.C.
Sandy Beyer Morrin

SM 125572

American College of Cardiology



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T. Reginald Harris, M.D.
Chairman, CPT Editorial Panel
American Medical Association
515 N. State Street
Chicago, IL 60610

Dear Dr. Harris:

The American College of Cardiology appreciates the CPT Editorial Panel's efforts to modify CPT codes 93012 and 93014 for ECG rhythm strips. However, recent discussions regarding these coding revisions have revealed specific problems with the new language. Therefore, we are asking that the CPT Editorial Panel consider additional language revisions.

Background--In an effort to reduce confusion regarding the telephonic transmission of a rhythm strip, CPT codes 93012 and 93014 were modified to reflect post-symptom transmission of rhythm strips over a 30-day period of time. This change was in part in response to the deletion, in 1990, of code 93269: patient demand single event ECG recording, post-symptom recording and transmission. Codes 93012 and 93014 provide a mechanism to report the transmission of a rhythm strip resulting from a variety of situations. The 30-day time frame, consistent with the existing patient event recording code (93268), was added in an effort to normalize the use of the codes.

Upon further review, the new coding language does not appear to be sufficiently specific to eliminate all the confusion. For example, our physician advisors pointed out that the reference to telemetric transmissions is outdated and could be inappropriately applied. In addition, although code 93012 as originally revised, did not specify tracing only, the Medicare fee schedule RVUs were established to reflect just the technical component with this code.

Recommendation--The College recommends that the following additional revisions to the codes be considered:

Executive Vice President
DAVID J. FEILD

T. Reginald Harris, M.D.
April 28, 1994
Page 2

Revise 93012 and 93014 to reflect telephonic, **but not telemetric**, rhythm strip transmission within a 30 day treatment period and add phrase "tracing only" after the semi-colon, as follows:

93012 Telephonic ~~or telemetric~~ transmission of post-symptom electrocardiogram rhythm strip(s), per 30-day period of time; tracing only

93014 physician review with interpretation and report only

As crafted, both codes would be required to report the complete services, as there is no global code. Once these language revisions are reviewed and finalized by the AMA CPT Editorial Panel, a relative value update survey will be undertaken to establish physician work values for these services, as previous values were generally applied on a per-transmission basis.

Thank you for your assistance in this matter. We look forward to working with the Panel to finalize appropriate coding language these services. Please call Karen Karlsson at the College if you have any questions.

Sincerely,



James C. Blankenship, M.D., F.A.C.C.
Chairman, Coding and Nomenclature Committee

cc: William Winters, M.D., F.A.C.C.
Sandy Beyer Morrin
Karen Karlsson

**MAY 1994 RUC RECOMMENDATION
ECHOCARDIOGRAPHY - TAB C**

Code 93350 [Echocardiography] has been revised to indicate that when performed during exercise and/or pharmacologic stress, the appropriate stress testing code from the 93015-93018 series should be reported in addition to 93350. The RVW recommendation for 93350 "backs out" the RVW for 93015 to arrive at .79.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
BV1	93015	Cardiovascular stress test using maximal or submaximal treadmill or bicycle exercise, continuous electrocardiographic monitoring, and/or pharmacological stress; with physician supervision, with interpretation and report	XXX	0.75 (no change)
BV2	93016	physician supervision, only, without interpretation and report	XXX	0.45 (no change)
BV3	93017	tracing only, without interpretation and report	XXX	0.00 (no change)
BV4	93018	interpretation and report only	XXX	0.30 (no change)
BV5	93350	Echocardiography, real time with documentation (2D), with or without M-mode recording, during rest and cardiovascular stress test using maximal or submaximal treadmill, bicycle exercise and/or pharmacologically induced stress, including electrocardiographic monitoring, with interpretation and report <u>(When performed during exercise and/or pharmacologic stress, the appropriate stress testing code from the 93015-93018 series should be reported in addition to 93350)</u>	XXX	.79



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ACTION REQUESTED

April 28, 1994

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Grant V. Rodkey, M.D.
Chairman, AMA Relative Value Update Committee
American Medical Association
515 N. State Street
Chicago, IL 60610

SUBJECT: American College of Cardiology Recommendations Regarding Stress Echocardiography Physician Relative Value Units

Dear Dr. Rodkey:

Thank you for the opportunity to provide the American College of Cardiology's recommendations to the AMA's Relative Value Update Committee (RUC) regarding the assignment of relative value units (RVUs) for stress echocardiograms (CPT code 93350).

Background--The College's Coding and Nomenclature Committee, based on member input, requested a language change in the CPT code for stress echocardiograms which would allow physicians to bill separately for the exercise component of the test. The AMA CPT Editorial Panel adopted the language change for 1995 with a recommendation that the physician work relative value units (RVUs) for the exercise component currently captured in the stress echo code be "backed out of" code 93350 for 1995. The rationale for this decision is that physicians would be allowed to use two codes in 1995 to identify a stress echo, and together these two codes should add up to the one existing code, as shown in the table below. **The College agrees with this division of the existing RVUs, assigning a value of .79 to the revised stress echocardiography service, but only as long as the relevant payment policy is equitable (see discussion of policy below).**

**Comparison of Possible Work RVU Allocations
Based on the Coding Change**

CPT Code	1994 RVU	1995 RVU (proposed)
93350	1.54	.79
93015	included in 93350	.75
Total	1.54	1.54

Other cardiovascular services which require the application of a stress test, such as thallium stress testing, are already reported using two codes, one for the stress test (93015

Executive Vice President
DAVID J. FIELD

Grant V. Rodkey, M.D.
April 28, 1994
Page 2

or 93016 and 93018) and one for the nuclear study (78460-78465). The language change described above provides for more consistent coding of these types of services without an alteration in the total physician work value of the service. The College will work directly with HCFA to ensure that the technical and practice expense components of the service are revised equitably, as well.

Concerns--The primary concern raised by the College's technical advisors is that the potential exists for a reduction in the total payment for these services as a result of a change in the payment policy. Physicians who provide stress echo services have described the stress component of this service to be fully equivalent to a complete exercise ECG, including the supervision of the test and interpretation and report of the findings. These components are in addition to the echocardiographic evaluation, both before (baseline) the exercise portion and after exercise to determine the effect of the exercise on the heart. We are concerned that payers might allow only the supervision of the exercise ECG (CPT code 93016 - 0.45 RVUs) with the echo component rather than the full study (CPT code 93015 - 0.75 RVUs) in an effort to achieve savings.

Therefore, the College's technical advisors strongly urge the RUC to support the application of a consistent and equitable payment policy for the coding of the exercise component, code 93015 (or its equivalents, 93016 and 93018) with a stress echocardiography service (code 93350).

Thank you for your assistance in this matter. We appreciate the RUC's commitment to establishing appropriate RVUs for all physician services. Please call Sandy Morrin at the College if you have any questions.

Sincerely,



Daniel J. Ulyett, M.D., F.A.C.C.
President

cc: William L. Winters, M.D., F.A.C.C.
Joe R. Wise, Jr., M.D., F.A.C.C.
Michael J. Wolk, M.D., F.A.C.C.
Sandy Beyer Morrin

**NOVEMBER 1993 RUC RECOMMENDATIONS
CARDIAC CATHETERIZATION - TAB 7**

The RUC is, at this time, only submitting recommendations for the new injection procedure codes. The committee recommends an RVW of .29 for 93539 [arterial conduits] as the typical service includes an injection to only one vessel. The value of .29 is equivalent to the RVW for deleted codes 93541, 93542, 93543, 93544, and 93545. However, the committee agreed that typically 93540 [venous bypass grafts] would include two or more injections and should therefore be valued at .43 (.43 = .29 + 50% X .29). Injection codes do include the extra work of repositioning or moving forward along the vessel once the catheter has been placed.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
	36230	Selective catheter placement, coronary artery, single or multiple <u>(36230 has been deleted. To report, please see the appropriate cardiac catheterization and injection procedure code(s) in the Medicine section of CPT</u>	XXX	N/A
	75507	Angiocardiography by serialography, multi plane, radiological supervision and interpretation <u>(75507 has been deleted. To report, use 935X2)</u>	XXX	N/A
	75523	Cardiac radiography, selective cardiac catheterization, left side, radiological supervision and interpretation <u>(75523 has been deleted. To report, use 935X1)</u>	XXX	N/A
	75527	Cardiac radiography, selective cardiac catheterization, right and left side, radiological supervision and interpretation <u>(75523 and 75527 have been deleted. To report, use 935X1)</u>	XXX	N/A
	75750	Angiography, coronary, root injection, radiological supervision and interpretation <u>(75750 has been deleted. To report, use 935X2)</u>	XXX	N/A
	75752	Angiography, coronary, unilateral selective injection, including left ventricular and supraaortic angiogram and pressure recording, radiological supervision and interpretation <u>(75752 has been deleted. To report, use 935X2)</u>	XXX	N/A

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 = Not considered in refinement process

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RWV Recommendation
	75752	Angiography, coronary, unilateral selective injection, including left ventricular and supraaortic angiogram and pressure recording, radiological supervision and interpretation (75752 has been deleted. To report, use 935X2)	XXX	N/A
	75754	Angiography, coronary, bilateral selective injection, including left ventricular and supraaortic angiogram and pressure recording, radiological supervision and interpretation (75754 has been deleted. To report, use 935X2)	XXX	N/A
	75756	Angiography, internal mammary, radiological supervision and interpretation (75756 has been deleted. To report, use 935X2)	XXX	N/A
	75762	Angiography, coronary bypass, unilateral selective injection, radiological supervision and interpretation (75762 has been deleted. To report, use 935X2)	XXX	N/A
	75766	Angiography, coronary bypass, multiple selective injection, radiological supervision and interpretation (75766 has been deleted. To report, use 935X2)	XXX	N/A
CARDIAC CATHETERIZATION				
Cardiac catheterization is a diagnostic medical procedure which includes introduction, positioning and repositioning of catheter(s), when necessary, recording of intracardiac and intravascular pressure, obtaining blood samples for measurement of blood gases and/or dye (or other) or dilution of curves and cardiac output measurements (dye dilution, Fick or other method, with or without rest and exercise and/or other studies) with or without electrode catheter placement, final evaluation and report for procedure.				
(For radiological procedures, see 75500-75767)				
AP1	●93539	Injection procedure during cardiac catheterization; for selective opacification of arterial conduits (eg, internal mammary), whether native or used by bypass	000	.29
AP2	●93540	for selective opacification of aortocoronary venous bypass grafts, one or more coronary arteries	000	.43
	93541	Injection procedure during cardiac catheterization; for pulmonary angiography (For radiological supervision and interpretation, see 75741-75746)	000	0.29 (No Change)

Tracking Number	CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
	93542	for selective right ventricular or right atrial angiography <i>(For radiological supervision and interpretation, see 75500-75507)</i>	000	0.29 (No Change)
	93543	for selective left ventricular or left atrial angiography <i>(For radiological supervision and interpretation, see 75600-75625)</i>	000	0.29 (No Change)
	93544	for aortography <i>(For radiological supervision and interpretation, see 75600-75625)</i>	000	0.29 (No Change)
	93545	for selective coronary angiography (injection of radiopaque material may be by hand) <i>(For radiological supervision and interpretation, see 75750-75754)</i>	000	0.29 (No Change)
CARDIAC CATHETERIZATION WITH ANGIOGRAPHY				
	93546	Combined left heart catheterization and left ventricular angiography <i>(93546 has been deleted. To report, use 93510, 93543, 935X1)</i>	000	N/A
	93547	Combined left heart catheterization, selective coronary angiography, one or more coronary arteries, and selective left ventricular angiography (this code number is to be used when procedure 93510 is combined with procedures 93543 and 93545) <i>(93547 has been deleted. To report, use 93510, 93543, 93545, 935X1, 935X2)</i>	000	N/A
	93548	Combined left heart catheterization, selective coronary angiography, one or more coronary arteries, selective left ventricular angiography, with aortic root aortography <i>93548 has been deleted. To report, use 93510, 93543, 93544, 93545, 935X1 and 935X2)</i>	000	N/A
	93549	Combined right and left heart catheterization, selective coronary angiography, one or more coronary arteries, and selective left ventricular angiography; (this code number to be used when procedure 93547 is combined with right heart catheterization) <i>(93549 has been deleted. To report, use 93510, 93526, 93527, 93528, 93543, 93545, 935X1, 935X2)</i>	000	N/A

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 = Not considered in refinement process

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
	93550	with selective visualization of bypass graft (This code is to be used when procedure 93549 is combined with 93551) (93550 has been deleted. To report, use 93526, 93540, 93543, 93545, 935X1 and 935X2)	000	N/A
	93551	Selective opacification of aortocoronary bypass grafts, one or more coronary arteries (injection or radiopaque material may be made by hand) (93551 has been deleted. To report, see 93539 and 93540)	000	N/A
	93552	Combined left heart catheterization, selective coronary angiography, one or more coronary arteries, selective left ventricular cineangiography and visualization of bypass grafts; (this code number is to be used when procedure 93551 is combined with procedure 93547) (93552 has been deleted. To report, use 93510, 9354X, 93543, 93545, 935X1, 935X2)	000	N/A
	93553	with aortic root aortography (this code number is to be used when procedure 93548 is combined with procedure 93547) (For radiological supervision and interpretation, see 75762-75766) (93553 has been deleted. To report, use 93510, 9354X, 93543, 93544, 93545, 935X1 and 935X2)	000	N/A
AP3	●93555	Imaging supervision, interpretation and report for injection procedure(s) during cardiac catheterization; ventricular and/or atrial angiography	XXX	No Recommendation at this time
AP4	●93556	pulmonary angiography, aortography, and/or selective coronary angiography including venous bypass grafts and arterial conduits (whether native or used in bypass)	XXX	No Recommendation at this time

*Source Key: 1 = Harvard surveyed; 2 = Harvard non-surveyed; 3 = HCFA assigned; 4 = Refinement process changed RVW; 5 = Refinement process did not change RVW; 6 = Not considered in refinement process

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: API CPT Code: •93539 Global Period: 000

CPT Descriptor: Injection procedure during cardiac catheterization; for selective opacification of arterial conduits (eg, internal mammary), whether native or used for bypass

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 75 year old male who underwent triple coronary artery bypass grafting seven years ago with unstable angina following an inferior wall myocardial infarction. Review of his old records reveals that his surgery involved saphenous vein grafts to the right and circumflex coronary arteries and a left internal mammary graft to the left anterior descending coronary artery. The physician injects contrast media into the previously placed catheters. Catheter repositioning and multiple injections may be necessary to obtain a complete study of the arterial conduits.

Description of Pre-Service Work: The review of old operative notes and previous cath findings is required prior to performing a cardiac cath on this patient.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: None, included in other components of the cath service.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93551	Injection of bypass grafts	0.29
93545	Injection, coronary arteries	0.29
50394	Injection for kidney x-ray	0.78
36217	Place catheter in Arteries	6.45

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The cardiac cath injection codes were originally established internally by HCFA and were set at .29 RVUs. In reviewing the ACC and SCVIR survey results, the consensus technical advisory panel recommends that a value of .87 is more appropriate for the injection of arterial conduits. In comparison, injection codes in other body systems have similar values; for example, code 50394, renal angiography injection through an established catheter, has a work value of .78 RVUs. Often, more than one arterial conduit must be located. The repositioning of catheters is the more time-consuming component of this service and, in some instances, can take as long as 30 minutes. To appropriately view each coronary bypass graft, it is frequently necessary to perform 2-3 injections. The recommendation for a value for the injection of coronary arterial bypass conduits which is slightly higher than the kidney injection service based on the greater difficulty of the procedure for the physician (the heart is a moving target) and significantly more risk for the patient (e.g., cardiac arrest). The recommended value of .87 reflects the review of nearly 60 responses, which clustered around this value, and a consensus of the two organizations involved.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA:

Cardiology

Median Intra-Service Time: 20 min Low: 4 min High: 60 min

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 63

Other Data: The injection and repositioning of catheters was considered to be intra work; activities of pre-service and post-service work included in other cath components

Interventional Radiology

Median Intra-Service Time: 20 min Low: 4 min High: 2 hrs

Median Pre-Service Time: 5 min Median Post-Service Time: 5 min

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION**

Tracking Number: AP2 CPT Code: 93540 Global Period: 000

CPT Descriptor: Injection procedure during cardiac catheterization; for selective opacification of aortocoronary venous bypass grafts, one or more coronary arteries

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 69 year old woman with a prior history of single saphenous bypass graft surgery presents with unstable angina pectoris. She was well until 5 years ago, when she had an inferior wall MI, complicated by post infarction angina. She underwent single vessel CABG to her dominant left circumflex coronary artery at that time. In view of her unstable symptoms, she is now referred for angiography. The physician injects contrast media into the previously placed catheters. Catheter repositioning and multiple injections may be necessary to obtain a complete study of the aortocoronary venous bypass grafts.

Description of Pre-Service Work: A review of the previously anastomosed bypass grafts is required.

Description of Intra-Service Work: Vignette above describes intra-service work.

Description of Post-Service Work: None, included in other components of the cath service.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
93551	Injection of bypass grafts	0.29
93545	Injection, coronary arteries	0.29
50394	Injection for kidney x-ray	0.78
36217	Place catheter in arteries	6.45

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

The cardiac cath injection codes were originally established internally by HCFA and were set at .29 RVUs. In reviewing the ACC and SCVIR survey results, the consensus technical advisory panel recommends that a value of .87 is more appropriate for the injection of venous bypass grafts. In comparison, injection codes in other body systems have similar values; for example, code 50394, renal angiography injection through an established catheter, has a work value of .78 RVUs. Usually, at least 2-3 venous bypass graphs must be located. The repositioning of catheters is the more time-consuming component of this service and, in some instances, can take as long as 30 minutes. To appropriately view each coronary bypass graft, it is frequently necessary to perform 2-3 injections. The recommendation for a value for the injection of coronary venous bypass conduits which is slightly higher than the kidney injection service based on the greater difficulty of the procedure for the physician (the heart is a moving target) and significantly more risk for the patient (e.g., cardiac arrest). The recommended value of .87 reflects the review of nearly 60 responses which clustered around this value and a consensus of the two organizations involved. We consider the physician work component of this service to be equal to that for code 93539, for which we are also recommending an RVU of .87

FREQUENCY INFORMATIONHow often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? _____

Is this service performed by many physicians across the United States? Yes No

SURVEY DATA:

Cardiology

Median Intra-Service Time: 20 min Low: 5 min High: 60 minMedian Pre-Service Time: N/A Median Post-Service Time: N/ALength of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/ANumber of Times Provided in Past 12 months (Median): 75Other Data: The injection and repositioning of catheters was considered to be intra work; activities of pre-service and post-service work included in other cath components.

Interventional RadiologyMedian Intra-Service Time: 20 min Low: 2 min High: 2 hrsMedian Pre-Service Time: 5 min Median Post-Service Time: 5 minLength of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

MAY 1994 RUC RECOMMENDATIONS
NEUROLOGY AND NEUROMUSCULAR PROCEDURES - TAB D

959X5 [Digital analysis of electroencephalogram (EEG) (eg, for epileptic spike analysis)] is a complex, intense service that is performed in teaching centers. The physician time and the level of intensity involved in interpretation in 959X5 is approximately three times the standard EEG (95816 and 95819). The recommendation of 2.00 for 959X5 should be considered interim; the RUC will revisit this service in the Fall.

95XX1 [Electroencephalogram (EEG) extended monitoring; up to one hour] requires the review of approximately three times the paper as a standard EEG (95816 and 95819). This service will be coded as a stand alone service, not as an add-on to the standard EEG services. 95XX2 [Electroencephalogram (EEG) extended monitoring; greater than one hour] will be presented in the Fall.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation
<p>Neurology & Neuromuscular Procedures</p> <p>Neurologic services are typically consultative, and any of the levels of consultation (99241-99263) may be appropriate.</p> <p>In addition, services and skills outlined under Evaluation and Management levels of service appropriate to neurologic illnesses should be coded similarly.</p> <p><u>All The EEG, evoked potential and sleep services listed below (95805-95827, 9592X-95925 and 959X5-95962) except 95821 include tracing, interpretation and report. For interpretation of EEG-only, use modifier -26 or 09926.</u></p>				
AY1	95816	Electroencephalogram (EEG) including recording awake and drowsy, with hyperventilation and/or photic stimulation; standard or portable, same facility, (For extended monitoring, see 95XX1, 95XX2)	XXX	1.09 (no change)
AY2	95817	portable, to an alternative facility (95817 has been deleted. To report, use 95816)	XXX	N/A
AY3	95819	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation; standard or portable, same facility (For extended monitoring, see 95XX1, 95XX2)	XXX	1.09 (no change)

AY4	95821	portable, to an alternate facility (95821 has been deleted. To report, use 95819)	XXX	N/A
AY5	95822	Electroencephalogram (EEG); sleep only (For extended monitoring, see 95XX1, 95XX2)	XXX	1.09 (no change)
AY6	95823	physical or pharmacological activation only (95823 has been deleted. To report, use 959X5 or 95954)	XXX	N/A
AY7	95826	intracerebral (depth) EEG only (95826 has been deleted. To report, use 95829, 95951 or 95956)	XXX	N/A
AY8	95842	Muscle testing, electrical; reaction of degeneration, chronaxie, galvanic/tetanus ratio, one or more extremities, one or more methods (95842 and 95845 has have been deleted. To report, use 95999)	XXX	N/A
AY9	●959X5	Digital analysis of electroencephalogram (EEG) (eg, for epileptic spike analysis) (Use code 959X5 in addition to the EEG study performed, 95816, 95819 or 95954)	ZZZ	2.00 (Interim Recommendation)
AY10	95954	Pharmacological or physical activation during prolonged monitoring for localization of cerebral seizure focus requiring physician attendance during EEG recording of activation phase (eg, thiopental activation test)	XXX	2.48 (no change)
AY11	●95XX1	Electroencephalogram (EEG) extended monitoring; up to one hour	XXX	1.75
AY12	●95XX2	greater than one hour	XXX	No Recommendation at this time
AY13	95961	Functional cortical mapping by stimulation of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital cortex, other than in operating room ; initial hour of physician attendance	XXX	3.00 (no change)
AY14	95962	each additional hour of physician attendance	XXX	3.25 (no change)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AY9 Global Period: ZZZ

CPT Descriptor: Digital analysis of electroencephalogram (EEG) (eg, for epileptic spike analysis)

(Use code 959X5 in addition to the EEG study performed, 95816, 95819 or 95954)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 24 year old man has suffered from epileptic seizures for 15 years. These have gradually increased in frequency and now occur 3 times per week. These partial complex seizures involve staring, automatic movements, and loss of contact with the environment around him lasting several minutes followed by 20 minutes of confusion. The patient is on the verge of losing his job because of these events. Routine EEG suggests that the seizures arise from the right hemisphere but it does not localize the onsets. Ictal EEG shows a right sphenoidal onset. MRI is normal. The patient is referred for localization for the epileptic focus, based upon locating the generator of the epileptic spikes. A digital EEG is performed, and billed as a traditional EEG test, (CPT 95816). The information on this 30 minute recording is then subjected to subsequent off-line analysis. Forty epileptic spikes are identified for further analysis. After averaging and filtering of data, several patterns of scalp fields are identified. When subjected to a 3 dimensional single-dipole localization analysis, the spikes are determined to come from the general region of the right hippocampal formation. This information, taken together with PET scan right temporal hypometabolism as well as neuropsychometric testing impairment of visual-spatial functions with preservation of language functions, leads to the patient being referred for a right temporal lobectomy. Subsequent surgery, the patient is seizure free and after 1 year discontinues his antiepileptic medication without recurrence of seizures.

Description of Pre-Service, Intra-Service, and Post-Service Work: For this service, the service period is treated as a whole and includes the work from the time the service begins until complete (including a report of the results, if applicable). This code considers only the work that is done and not work done by technicians or other professionals and does not include distinct evaluation and management services provided in addition to procedure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
95816	Electroencephalogram (EEG) including recording awake and drowsy, with hyperventilation and/or photic stimulation; standard or portable, same facility.	1.09
95823	Electroencephalogram (EEG); sleep only, physical or pharmacological activation only	2.92
95954	Pharmacological activation during prolonged monitoring for localization of cerebral seizure focus	2.48

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

related services

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Neurology _____

Median Intra-Service Time: 60 Low: 30 High: 120

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 10

Other Data: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AY10 Global Period: XXX

CPT Descriptor: ~~Pharmacological or physical activation during prolonged monitoring for localization of cerebral seizure focus~~ requiring physician attendance during EEG recording of activation phase (eg, thiopental activation test)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 24-year old man is under evaluation for possible surgical therapy for his medically refractory partial complex seizures. A pentothal test is conducted using intravenous pentothal, given in 25 milligram boluses every one minute until 225 milligrams are given. A nurse anesthesiologist is present to monitor vital signs, an EEG technologist records a 21 channel EEG throughout the entire procedure, and the neurologist after obtaining informed consent, oversees the procedure and interprets the EEG on-line. EEG induced fast activity is monitored as an endpoint for the test and to determine how much medication to use. The test can determine which hemisphere is damaged and therefore is the likely site of the epileptic seizure focus. The patient must be observed during subsequent hours to assure good recovery from the procedure. Complications include respiratory arrest, hypotension, laryngospasm, convulsions, etc.

Description of Pre-Service, Intra-Service and Post-Service Work: For this service, the service period is treated as a whole and includes the work from the time the service begins until complete (including a report of the results, if applicable). This code considers only the work that is done and not work done by technicians or other professionals and does not include distinct evaluation and management services provided in addition to the procedure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
95816	Electroencephaogram (EEG) including recording awake and drowsy, with hyperventilation and/or photic stimulation; standard or portable, same facility	1.09
95823	Electroencephalogram (EEG); sleep only, physical or pharmacological activation only.	2.92
95954	Pharmacological activation during prolonged monitoring for localization of cerebral seizure focus.	2.48

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Related Services

AY 10

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: . Neurology

Median Intra-Service Time: 60 Low: 45 High: 90

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 34

Other Data:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AY11 Global Period: XXX

CPT Descriptor: Electroencephalogram (EEG) monitoring; up to one hour

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 3 year old child was found lifeless at the bottom of a swimming pool. The child was intubated by paramedics and a satisfactory cardiac rhythm was restored at the accident site. After admission through the paramedic service and emergency room, the child was placed in the intensive care unit where he remains comatose. Deliberate use of barbiturates was employed to add a degree of protection to the cerebral cortex at a time when the brain is likely to experience ischemia from edema. (Barbiturates for cerebral protection are effective only when given in doses that induce a burst suppression on EEG. The exact dose of barbiturates for an individual patient may differ by an order of magnitude from patient to patient). This child's EEG was initially diffusely slow and use of pentobarbital was initiated intravenously. After 30 minutes a sufficient amount of barbiturates was given to induce a burst suppression pattern on EEG. Having established a suitable level of burst suppression and monitoring this for the first hour, the EEG was left at the bedside so that the nurses might observe the burst suppression from time to time overnight. Physicians might also observe for burst suppression when they are available at the bedside. Total technologist time required: 1 hour of direct monitoring. Monitoring was discontinued on the second ICU day, patient gradually removed from the pentobarbital later that day and recovered well.

Description of Pre-Service, Intra-Service, and Post-Service Work: For this service, the service period is treated as a whole and includes the work from the time the service begins until complete (including a report of the results, if applicable). This code considers only the work that is done and not work done by technicians or other professionals and does not include distinct evaluation and management services provided in addition to the procedure.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
95816	Electroencephalogram (EEG) including recording awake and drowsy, with hyperventilation and/or photic stimulation; standard or portable, same facility.	1.09
95823	Electroencephalogram (EEG); sleep only, physical or pharmacological activation only.	2.92
95954	Pharmacological activation during prolonged monitoring for localization of cerebral seizure focus	2.48

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Related Services

AY 11

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Specialty: Neurology

Median Intra-Service Time: 55 Low: 45 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 11

Other Data:

MAY 1994 RUC RECOMMENDATIONS
PHOTOCHEMOTHERAPY - TAB P

The RUC recommendation for CPT code 96913 [Photochemotherapy (Goeckerman and/or PUVA) for severe photoresponsive dermatoses requiring at least four to eight hours of care under direct supervision of the physician (includes application of medication and dressings)] of 1.63 RVW with a global period of XXX was proposed at the November 1993 RUC meeting. This issue was referred back to the specialty society. CPT code 96913 is a rare procedure that is performed on patients with severe photoresponsive dermatoses. This procedure requires four to eight hours of care under direct physician supervision. The specialty society noted that there are only 15-20 outpatient clinics that perform this procedure. The RUC adopted the recommendation of 1.56 RVW for 96913 with a global period of 10 days. This value is the same as the Harvard proposed value.

The recommended work values are based on those that were published in the July Rule and have not been re-scaled to the 1994 RVS.

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
96913	Photochemotherapy (Goeckerman and/or PUVA) for severe photoresponsive dermatoses requiring at least four to eight hours of care under direct supervision of the physician (includes application of medication and dressings)	010	1.56

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF SPECIALTY SOCIETY RECOMMENDATION

Proposed Harvard Value: 1.56

CPT Code: 96913

Global Period: XXX

CPT Descriptor:

Photochemotherapy (Goeckerman and/or PUVA) for severe photoresponsive dermatoses requiring at least four to eight hours of care under direct supervision of the physician (includes application of medication and dressings)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 38 year old female with a 14 year history of generalized psoriasis. Previous topical therapy has included various topical corticosteroids, tars and anthralin preparations. In addition, she has previously had courses of phototherapy. One year ago, she was placed on Methotrexate, 15 mgs. weekly. This was discontinued one month ago, due

Description of Pre-Service Work:

to persistently abnormal liver function tests. Evaluation reveals generalized, indurated plaques of psoriasis affecting 50 percent of her body surface area with confluent plaque involvement of her scalp. She is otherwise in good general health with a minor degree of associated psoriatic arthritis of her hand and feet. She is admitted for an intensive course of day care Goeckerman with an expected duration of treatment of 18 days.

Description of Intra-Service Work:

Description of Post-Service Work:

-- See Attached

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
99222	Initial hospital care, per day. Comprehensive history, examination and medical decision making of moderate complexity.	1.90
99205	New patient office or other outpatient evaluation requires comprehensive history, examination and decision making of high complexity.	2.36
99232	Subsequent hospital care, per day requires a problem focused interval history, a problem focused examination, and medical decision making that is straightforward or of low complexity.	0.93

Relationship to Key Reference Service(s) and/or other Rationale for RVW Recommendation (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Refer to pre-, intra- and post-service work.

CPT 96913 Photochemotherapy (Goeckerman and/or PUVA) for severe photoresponsive dermatoses requiring at least four to eight hours of care under direct supervision of the physician (includes application of medication and dressings)

PRE-SERVICE WORK

History Taking: General medical history including current medications and history of arthritis, possible sensitivities to topical medications (tars, etc.), and history of photosensitivity disorders. Evaluation of duration of psoriasis plus comprehensive review of all previous therapies.

Physical Examination: Total body surface skin evaluation including scalp, genitalia and nails. Percentage of body surface involvement plus evaluation of individual lesions stressing erythema, induration, and scaling. Examination in particular to detect any existing skin cancers, assess nevi, evaluate any photoaging and detect other signs of cutaneous disease. Appropriate diagnostic tests are ordered. Also, a basic general medical evaluation is performed specifically relating to cardiac status. Referral for ophthalmological consult if PUVA contemplated.

Medical Decision Making: High Complexity

Counselling and Coordination of Care: Discussion of all aspects of Goeckerman regimen including risks, expected duration of therapy, and compliance with chosen treatments. Alternative treatment options are discussed including topical, phototherapy and photochemotherapy (PUVA), and systemic medications. Potential side effects of Methoxalen are explained.

A pre-service report is dictated for the referring physician.

INTRA-SERVICE WORK

The patients are evaluated daily by the physician. The physician discusses with the nurses the progress and daily treatments of the patients. The physician discusses with patients and/or lectures to patients relating to disease, education, remissions, prognosis and future care.

The general regimen of the patients involves: Phototherapy and/or PUVA, 1-2 times daily; application of topicals (tars, anthralin, etc.), 1-2 times daily to all affected areas including scalp; application of dressings (gauze, saran wrap, appropriate occlusive dressings); and daily baths/showers including shampooing scalp and removal of all medications.

POST-SERVICE WORK

The physician performs a full skin discharge examination and counsels relative to immediate post-discharge treatment (topicals, phototherapy and/or photochemotherapy). The physician also discusses future management and follow-up as necessary. The medical record is completed and a post-discharge summary dictated. Also, a note to the referring physician is dictated as to the course and outcome of treatment and future management stated.

Refer to the American Academy of Dermatology's Guidelines of Care for Phototherapy and Photochemotherapy, publication pending.

FREQUENCY INFORMATION

How often do physicians in your specialty perform this service? Commonly Sometimes Rarely

Estimate the number of times this service might be provided nationally in a one-year period? 15-20,000

Is this service performed by many physicians across the United States? Yes No

COMPARISON TO HARVARD PROPOSED RELATIVE VALUE (If Applicable):

The proposed, Median RVW of 1.63 is 4.3% higher than the 1.56 Harvard proposed value for physician work.

SURVEY DATA: Dermatology

Median Intra-Service Time: 25 minutes Low: 10 minutes High: 60 minutes

Median Pre-Service Time: 45 minutes Median Post-Service Time: 20 minutes

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 63

Other Data: _____

MAY 1994 RUC HCPAC REVIEW BOARD RECOMMENDATIONS
PHYSICAL MEDICINE AND REHABILITATION

The physical medicine and rehabilitation section of CPT has been substantially revised to better describe services provided by physical therapists, occupational therapists, and less frequently, physicians. The revised section includes three major categories of services: 1) Supervised modalities that do not require direct one-on-one patient contact with the provider and are only reported once, regardless of the number of areas treated; 2) Constant Attendance modalities that do require direct one-on-one patient contact with the provider and will be reported each 15 minutes regardless of the number of areas treated; and 3) Therapeutic Procedures that require the direct one-on-one patient contact with the provider and will be reported each 15 minutes regardless of the number of areas treated.

The nomenclature of the new and revised physical medicine and rehabilitation codes should also assist in preventing fraud and abuse and therefore decrease the frequency of these services. For example, the current nomenclature for modalities allows a provider to code 97010-97028 for the application of a modality for each area treated. The revised codes specify one or more areas and will therefore only be reported once per visit.

The current established work values for these codes are based on cost/charge data and have never been surveyed by Harvard. Thus, the current values may not reflect a proper rank ordering. For example, currently 97116 [Gait training] which requires continual mental effort and judgement regarding development and implementation of a of treatment program utilizing direct face-to-face manual or verbal contact to elicit appropriate movement patterns, is valued the same as 97010 [Hot or cold packs therapy] which requires that the provider only checks the patient 5 minutes after the initiation of treatment to determine skin sensitivity and the appropriate thermal reaction from this modality. The RUC HCPAC Review Board recommendations will reflect that the RVW for gait training should be more than 3 1/2 times that of the application of hot/cold packs. The attached bar charts provide a summary of the rank order recommended by the physical therapists and occupational therapists and maintained in the RUC HCPAC Review Board's recommendations.

The relative value recommendations are based on survey results of approximately 100 physical therapists and occupational therapists. All of the HCPAC Review Board recommendations are equal to or less than the 25th percentile of the survey responses.

Supervised Modalities:

97010 (AZ1) [Application of a modality to one or more areas; hot or cold packs] is the least intensive service in the physical medicine and rehabilitation section. The provider performs a status check of the patient's skin sensitivity and the appropriateness of thermal reaction, but the actual application of the hot or cold pack is typically provided by ancillary staff.

97012 (AZ2) [Application of a modality to one or more areas; traction, mechanical] is one of the most difficult modalities. The intensity of work and the risk to the patient is significantly higher than 97010 [hot or cold packs]. This service is comparable to the key reference procedure 97118 [Electrical stimulation (manual) (RVW = 0.25)] as it involves potentially less direct time, but greater mental effort and judgement.

97014 (AZ3) [Application of a modality to one or more areas; electrical stimulation (unattended)] requires more work than 97010 [hot or cold packs] as the intensity of work is greater due to requirements for appropriate electrode placement and identification or adjustment of treatment parameters. The placement of surface pad electrodes requires a more detailed review of anatomy than placement of a hot or cold pack and the provider must periodically check on the patient who is laying down or sitting with the electrical stimulation unit.

97016 (AZ4) [Application of a modality to one or more areas; vasopneumatic devices] requires greater mental effort and judgement than 97118 [electrical stimulation (manual)] and 97128 [ultrasound] in identifying the treatment parameter. Blood pressure monitoring is also required prior to initiation of treatment.

97018 (AZ5) [Application of a modality to one or more areas; paraffin bath] requires more work than 97010 [hot or cold packs] as the provider must position the extremity to achieve the specific effect.

97020 (AZ6) [Application of a modality to one or more areas; microwave] is a very infrequently performed service. The work is equal to 97018 [paraffin bath] and 97024 [diathermy]. This service is more work than 97010 [hot or cold packs] as the provider must position the unit to ensure efficient treatment and patient safety.

97022 (AZ7) [Application of a modality to one or more areas; whirlpool] is comparable in work to 97032 [Electrical stimulation (manual)]. The survey median of .44 may reflect the more difficult patient. In some centers, the provider may be required to fill and clean the tank, however, in most settings this will be performed by ancillary staff. Some survey respondents included the work of

debridement and dressing change in this value. It was noted that there is no existing CPT code that describes the debridement performed by therapists. The RUC HCPAC Review Board also considered that this code essentially describes two types of services: an easier, more typical whirlpool treatment would be equivalent in work to 97018 [paraffin bath] and the whirlpool treatment, for example, requiring wound debridement in burn centers would be similar in work to the therapeutic procedures. Assuming a 75% easier (RVW = .15):25% difficult (RVW = .44) split, the recommended value of .25. appears reasonable.

97024 (AZ8) [Application of a modality to one or more areas; diathermy] is also a very infrequently performed service. The work is equal to 97018 [paraffin bath] and 97020 [microwave]. This service is more work than 97010 [hot or cold packs] as the provider must position the unit to ensure efficient treatment and patient safety.

97026 (AZ9) [Application of a modality to one or more areas; infrared] is a very infrequently performed superficial heat modality. It involves the same work as 97010 [hot or cold packs]. The positioning of the extremity is easier and the level of heat is less than 97020 [microwave] and 97024 [diathermy].

97028 (AZ10) [Application of a modality to one or more areas; ultraviolet] requires more work than 97024 [diathermy] as the provider must perform a MED test to establish treatment parameters prior to use. This service requires less mental effort and judgement than 97012 [traction, mechanical].

Constant Attendance Modalities:

97032 (97118 in CPT 1994) (AZ11) [Application of a modality to one or more areas; electrical stimulation, each 15 minutes] is typically performed prior to 97116 [Gait training]. The work is very comparable to 97016 [vasopneumatic devices]. The recommendation reflects no change in RVW from the 1994 RVS.

97033 (97120 in CPT 1994) (AZ12) [Application of a modality to one or more areas; iontophoresis, each 15 minutes] is comparable to 97014 [Electrical stimulation (unattended)] with additional time required for administration of medications into electrode followed by exact placement of electrode to treatment area. The recommendation reflects no change in RVW from the 1994 RVS.

97034 (97126 in CPT 1994) (AZ13) [Application of a modality to one or more areas; contrast bath, each 15 minutes] requires less skill than 97022 [whirlpool] and is comparable to 97035 [ultrasound]. The recommendation reflects no change in RVW from the 1994 RVS.

97035 (97128 in CPT 1994) (AZ14) [Application of a modality to one or more areas; ultrasound, each 15 minutes] is similar in work to 97034 [contrast baths]. The recommendation reflects no change in RVW from the 1994 RVS.

97036/97220 in CPT 1994 (AZ15) [Application of a modality to one or more areas; Hubbard tank, each 15 minutes] is most typically performed in a hospital and the patient severity is usually greater. This procedure is also more work than 97022 [whirlpool] as full body emersion is generally utilized with these complex patients. It was noted that the survey median of .44 may reflect an inappropriate vignette. In certain centers, the provider may be required to fill and clean the tank, however, in most settings this will be performed by ancillary staff.

Currently, 97039 [unlisted modalities] has an assigned work value of .29. The RUC HCPAC Review Board recommends that this code be carrier priced to be consistent with other codes for unlisted procedures because they include a number of different services.

Therapeutic Procedures:

97110 (AZ16) [therapeutic exercises], 97112 (AZ17) [neuromuscular reeducation], 97113 (AZ25) [aquatic therapy], 97116 (AZ19) [gait training], 97122 (AZ22) [traction, manual], 97530 (AZ33) [therapeutic activities] and 97750 (AZ39) [physical performance test or measurement] now require continual mental effort and judgement regarding development and implementation of treatment program utilizing direct (one-on-one) manual or verbal patient contact. Therapeutic exercises performed with a group will now be reported using 97150 [therapeutic procedure(s), group (2 or more individuals) (list separately in addition to code for primary procedure)]. The RUC HCPAC Review Board accepted the 25th percentile RVW for each of these services. Each of these services is comparable to M0008 [Office visit including any combination of modality(ies) and procedure(s), each additional 15 minutes (RVW = .51)] and 97250 [Myofascial release/soft tissue mobilization (RVW = .45)]. The work in these services is actually higher than the M0008 code as it includes a 15 minute combination of supervised modalities and procedures, whereas the new therapeutic procedures describe direct one-on-one procedures only.

97124 (AZ23) [massage] will be less intense than the other therapeutic procedures as the more difficult patient will now be treated with 97250 [myofascial release].

Currently, 97139 [unlisted therapeutic procedures] has an assigned work value of .35. The RUC HCPAC Review Board recommends that this code be carrier priced to be consistent with other codes for unlisted procedures because they include a number of different services.

97250 [Myofascial release/soft tissue mobilization, one or more regions] and 97265 [Joint mobilization, one or more areas (peripheral or spinal)] will be presented at a future RUC HCPAC Review Board meeting. HCFA has previously established a value of .45 for 97250.

97545 [Work hardening/conditioning; initial 2 hours] requires two hours of face-to-face contact with the provider. The survey median of 2.36 was felt to be too high as some respondents may have rated 97545 as the initial intensive evaluation of the patient. However, this code is to be reported for the initial 2 hours of work hardening/conditioning per date of service. The Review Board accepted an RVW of 1.70.

The recommended value of 1.70 takes into consideration the fact that the code for work hardening and work conditioning describes two different services. While work hardening and work conditioning programs may share the common goal of returning an individual to work, the treatments are very different both in scope and focus. **Work hardening** is known in the rehabilitation community as a comprehensive, interdisciplinary treatment program designed to assist the individual achieve maximum function in the area of work performance. Health care professionals such as, occupational therapists, physical therapists, psychologists, and vocational counselors provide stimulated or actual work activities that address a wide range of performance limitations including productivity, biomechanical, neuromuscular, cognitive, and psychosocial dimensions. **Work conditioning** is better suited for patients with needs requiring improvement in strength, endurance and skills necessary to perform work or work related activities through exercise and limited work simulation tasks. It is considered to be a one or two discipline (occupational therapy and physical therapy) treatment program. Specifically, the primary component in work hardening that differs from work conditioning is the aspect of work simulation. For example, an individual involved in a work hardening program will advance through a series of either real or simulated, large scale work routines and receive some exercise or aerobic conditioning. In contrast, the work conditioning program concentrates on exercise (strength, endurance, etc.) and only exposes the patient to limited, stimulated work tasks.

97546 [Work hardening/conditioning; each additional hour] was computed as follows: [(50% of 97545 = .85 - to account for 1 hour) - (20% of .85 = .15 - to account for pre- and post-service time) = .70].

Other Procedures:

97770 (AZ35) [Development of cognitive skills to improve attention, memory, problem solving, includes compensatory training and/or sensory integrative activities, direct (one on one) patient contact by the provider, each 15 minutes] describes two different services: compensatory training and sensory integrated activities. Compensatory training requires the provider to analyze the patient's home environment and daily routine through interviews with patient and family. The provider then develops a structured system by which the

patient incorporates taking their medication and eating their meals into their daily activities. Sensory integrated activities require the provider to perform a status check of the patient's balance and equilibrium, coordination abilities, processing of sensory input and functional abilities. The provider monitors the child's progress and modifies the activities accordingly. The work involved in this service is the same as 97530 (AZ33) [therapeutic activities (RVW = .44)].

97799 [Unlisted physical medicine/rehabilitation service or procedure] should be carrier priced to be consistent with other codes for unlisted procedures because they include a number of different services.

Tracking Number	CPT Code (• New)	CPT Descriptor	Global Period	RVW Recommendation
PHYSICAL MEDICINE & REHABILITATION (For muscle testing, range of joint motion, electromyography, see 95831 et seq) (For biofeedback training by EMG, see 90900) (For transcutaneous nerve stimulation (TNS), see 64550)				
MODALITIES <u>Any physical agent applied to produce therapeutic changes to biologic tissue; includes but not limited to thermal, acoustic, light, mechanical, or electric energy.</u>				
<u>Supervised:</u> <u>The application of a modality that does not require direct (one on one) patient contact by the provider.</u>				
AZ1	97010	Physical medicine treatment Application of a modality to one or more areas; hot or cold packs	XXX	0.11
AZ2	97012	traction, mechanical	XXX	0.25
AZ3	97014	electrical stimulation (unattended)	XXX	0.18
AZ4	97016	vasopneumatic devices	XXX	0.25 (no change)

AZ5	97018	paraffin bath	XXX	0.15
AZ6	97020	microwave	XXX	0.15
AZ7	97022	whirlpool	XXX	0.25
AZ8	97024	diathermy	XXX	0.15
AZ9	97026	infrared	XXX	0.11
AZ10	97028	ultraviolet	XXX	0.20
Constant Attendance:				
<u>The application of a modality that requires direct (one on one) patient contact by the provider.</u>				
AZ11	●97032	electrical stimulation (manual), each 15 minutes	XXX	0.25 (no change)
AZ12	●97033	iontophoresis, each 15 minutes	XXX	0.26 (no change)
AZ13	●97034	contrast baths, each 15 minutes	XXX	0.21 (no change)
AZ14	●97035	ultrasound, each 15 minutes	XXX	0.21 (no change)
AZ15	●97036	Hubbard tank, each 15' minutes	XXX	0.28
	97039	unlisted modality (specify)	XXX (YYY- recommended)	Carrier Price
THERAPEUTIC PROCEDURES				
<u>A manner of effecting change through the application of clinical skills and/or services that attempt to improve function.</u>				
(Physician or therapist required to be have in-constant-attendance direct (one on one) patient contact)				

CPT five-digit codes, two-digit modifiers, and descriptions only are copyright by the American Medical Association.

AZ16	97110	Physical medicine treatment to one area, initial 30 minutes, each visit; therapeutic exercises Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility	XXX	0.45
AZ17	97112	neuromuscular reeducation neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and proprioception	XXX	0.45
AZ25	•97113	aquatic therapy with therapeutic exercises	XXX	0.44
AZ18	97114	functional activities (97114 has been deleted. To report, see 97530)	XXX	N/A
AZ19	97116	gait training	XXX	0.40
AZ20	97118	electrical stimulation (manual) (97118 has been deleted. To report, see 97032)	XXX	N/A
AZ21	97120	iontophoresis (97120 has been deleted. To report, see 97033)	XXX	N/A
AZ22	97122	traction, manual	XXX	0.45
AZ23	97124	massage, including effleurage, petrissage and/or tapotement (stroking, compression, percussion) (For myofascial release, see 97250)	XXX	0.35
AZ24	97126	contrast baths (97126 has been deleted. To report, see 97034)	XXX	N/A
AZ26	97128	ultrasound (97128 has been deleted. To report, see 97035)	XXX	N/A

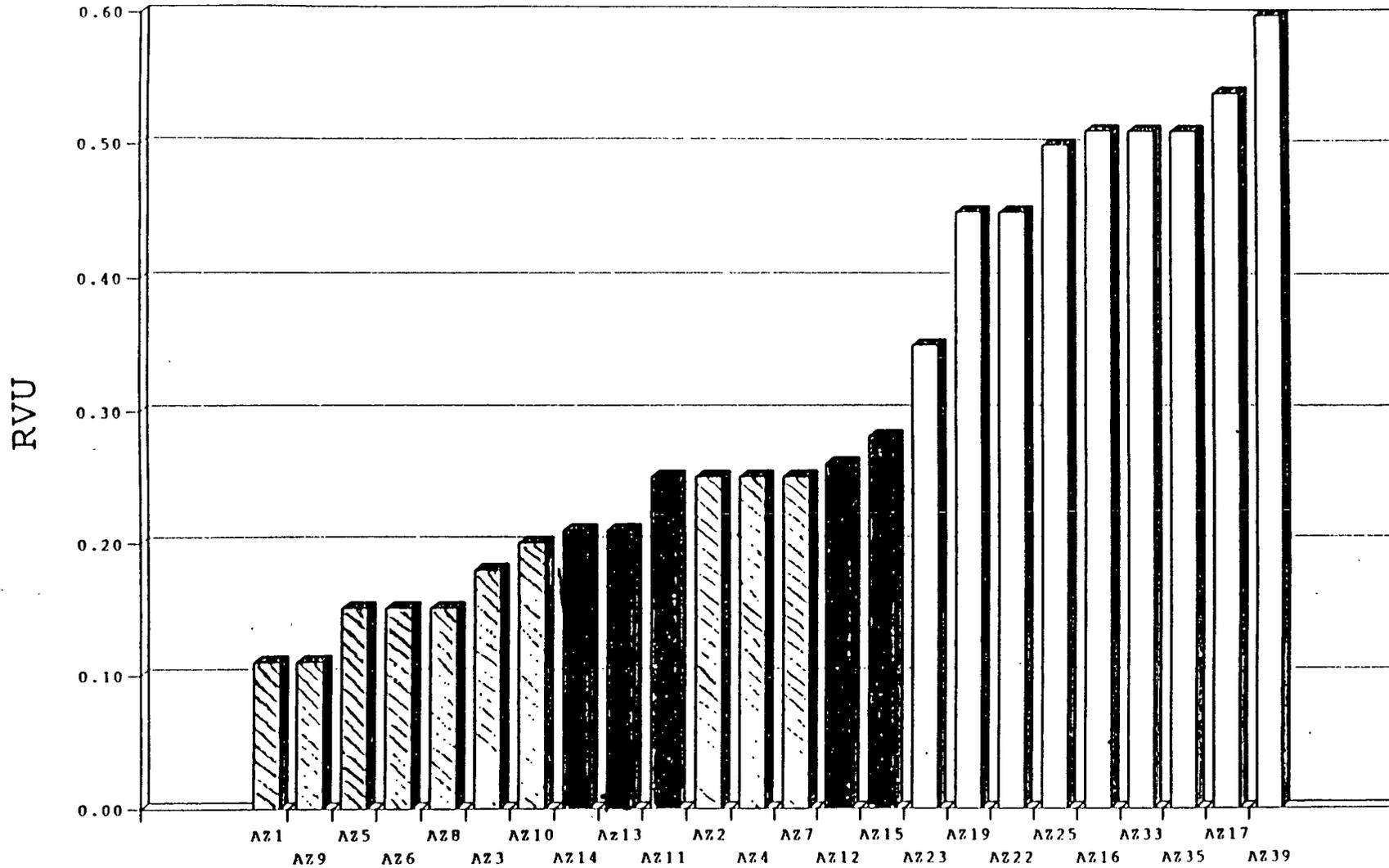
AZ27	97139	unlisted <u>therapeutic</u> procedure (specify)	XXX (YYY- recommended)	Carrier Price
AZ28	97145	Physical medicine treatment to one area, each additional 15 minutes (97145 has been deleted. To report, see 97110-97139)	XXX	N/A
BW2	●97150	Therapeutic procedure(s), group (2 or more individuals) (list separately in addition to code for primary procedure)	XXX (YYY- recommended)	Carrier Price
AZ29	97220	Hubbard tank, initial 30 minutes, each visit	XXX	N/A
AZ30	97221	each additional 15 minutes, up to one hour (97220, 97221 have been deleted. To report, see 97036)	XXX	N/A
AZ31	97240	Pool or Hubbard tank with therapeutic exercises, initial 30 minutes, each visit	XXX	N/A
AZ32	97241	each additional 15 minutes, up to one hour (97240, 97241 have been deleted. To report, see 97036, 97127)	XXX	N/A
	97250	Myofascial release/soft tissue mobilization, one or more regions	000	No recommendation at this time
BW1	●97265	Joint mobilization, one or more areas (peripheral or spinal)	000	No recommendation at this time
AZ33	97530	<u>Therapeutic Kinetic activities, direct (one on one) patient contact by the provider (use of dynamic activities to improve functional performance), to increase coordination, strength, and/or range of motion, one area (any two extremities or trunk, initial 30 minutes, each visit, each 15 minutes</u>	XXX	0.44
AZ34	97531	each additional 15 minutes (97531 has been deleted. To report, use 97530)	XXX	N/A

	97545	Work hardening/conditioning; initial 2 hours	XXX	1.70
	97546	each additional hour	XXX	0.70
TESTS AND MEASUREMENTS				
(For muscle testing, manual or electrical, joint range of motion, electromyography or nerve velocity determination, see 95831-95904)				
AZ36	97720	Extremity testing for strength, dexterity, or stamina; initial 30 minutes, each visit	XXX	N/A
AZ37	97721	each additional 15 minutes (97720, 97721 have been deleted. To report, see 97750)	XXX	N/A
AZ39	●97750	Physical performance test or measurement (eg, musculoskeletal, functional capacity), with written report, each 15 minutes	XXX	0.45
AZ38	97752	Muscle testing with torque curves during isometric and isokinetic exercise, mechanized or computerized evaluations with printout (97752 has been deleted. To reported, see 97750)	XXX	N/A
OTHER PROCEDURES				
AZ35	●97770	Development of cognitive skills to improve attention, memory, problem solving, includes compensatory training and/or sensory integrative activities, direct (one on one) patient contact by the provider, each 15 minutes	XXX	0.44
AZ40	97799	Unlisted physical medicine/ <u>rehabilitation</u> service or procedure	XXX (YYY - recommended)	Carrier Price

RVU SURVEY

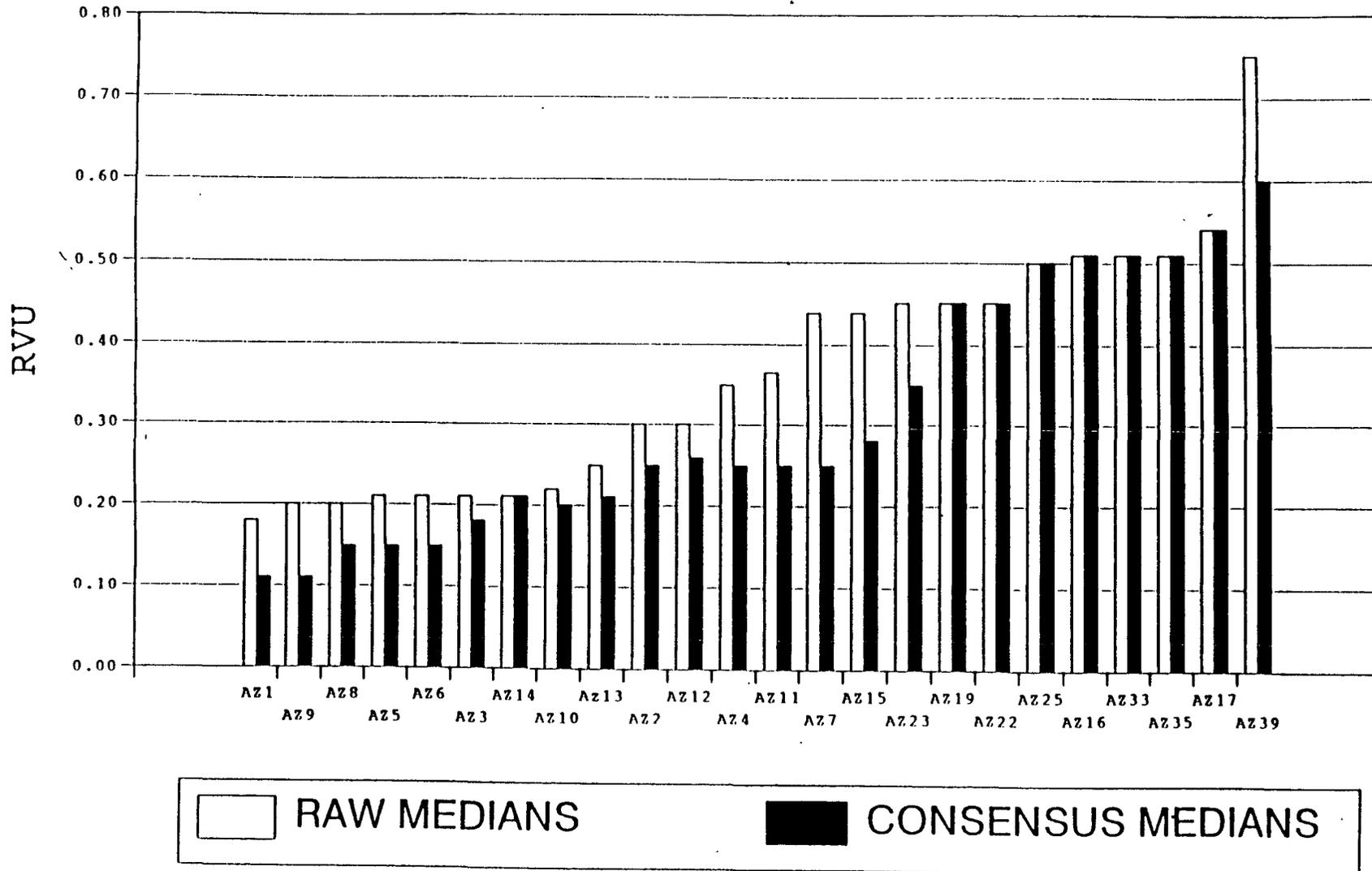
CONSENSUS MEDIANS

-  Modalities (supervised)
-  Modalities (constant attendance)
-  Therapeutic Procedures



RVU SURVEY

RAW AND CONSENSUS MEDIANS



**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ1 Global Period: XXX Recommended RVW: 0.11

CPT Descriptor: Application of a modality to one or more areas; hot or cold packs

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 55 year old male following right total knee arthroplasty with stiffness and inability to fully extend his knee. Hot packs are applied around the knee for 20 minutes prior to other therapeutic procedures. The provider checks the patient 5 minutes after the initiation of treatment to determine skin sensitivity and the appropriateness of thermal reaction from the modality.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's problem is performed: range of motion, skin integrity, and sensation. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical Stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Adjustment appropriately ranks service as least work intensive in physical medicine and rehabilitation section.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 5 Low: 1 High: 90

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 940

Other Data: _____

Sample Size: 105/300 Response Rate (%): 35.0 Median RVW: .18

25th Percentile RVW: .15 75th Percentile RVW: .21 Low: .05 High: .51

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ2 Global Period: XXX Recommended RVW: 0.25

CPT Descriptor: Application of a modality to one or more areas; traction, mechanical

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 48 year old female with lumbar radiculopathy. She has pain and muscle guarding in the lumbar region. Lumbar traction is applied using pelvic and stabilization belts with the patient positioned in supine. The traction is intermittent. It takes the provider 10-15 minutes to set up the treatment and establish position and poundage. At the end of 15-20 minute application, the provider takes approximately 5 minutes to disassemble the treatment and assist the patient.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's pain level, sensory distribution, and muscle guarding is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Adjusted to rank service as one of highest of supervised modalities given skill required for positioning and identification of treatment parameters required. Ranking among supervised modalities maintained. Comparable to reference code 97118 - potentially less direct time, greater cognitive work.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ3 Global Period: XXX Recommended RVW: 0.18

CPT Descriptor: Application of a modality to one or more areas; electrical stimulation (unattended)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 20 year old male who sustained a traumatic sprain to the AC joint (acromioclavicular). Electrical stimulation at sensory level is applied using 2 electrodes, 1 anterior & 1 posterior to the shoulder. Electrical stimulation is performed for pain control prior to ROM activity. Unit set up requires 5-10 minutes for electrode placement and patient positioning. Electrical stimulation left in place approximately 15 minutes.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's level of pain, muscle spasm, and range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 and 97118. Less work than 97012 (AZ2) or 97022 (AZ27), greater work than 97010 (AZ1). Cognitive work greater due to requirements for appropriate electrode placement and identification or adjustment of treatment parameters.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 11 Low: 1 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 382

Other Data: _____

Sample Size: 106/300 Response Rate (%): 35.3 Median RVW: .21

25th Percentile RVW: .20 75th Percentile RVW: .25 Low: .10 High: .75

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 14 Low: 2 High: 30

Median Pre-Service Time: 7.5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 50

Other Data: _____

Sample Size: 100 Response Rate (%): 17 Median RVW: .3

25th Percentile RVW: .26 75th Percentile RVW: .32 Low: .23 High: .55

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ4 Global Period: XXX Recommended RVW: 0.25

CPT Descriptor: Application of a modality to one or more areas; vasopneumatic devices

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 55 year old male who sustained a crush injury to left hand 7 days ago while at work. He has swelling and loss of motion. Intermittent compression is applied using a short compression sleeve. The patient is first measured via volumetrics to determine the amount of swelling in the hand objectively. Then a stockinet is applied to hand, the vasopneumatic cuff is applied, the hand is elevated and the pressure is determined. The vasopneumatic device is left in place for at least 30 minutes with the provider removing the device to check the hand at least 2 times during that period. At the termination of treatment, the provider then repeats the volumetric measure to determine the effect of the treatment.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's range of motion, sensation, and volumetric measurement is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21
97250	Myofascial release/soft tissue mobilization	0.45

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Similar in work to 97012 (AZ2). Treatment parameter identification potentially greater skill (though less time) than reference code 97128, more equal to reference code 97118. BP monitoring required prior to initiation of treatment.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 17.5 Low: 3 High: 60

Median Pre-Service Time: 10 Median Post-Service Time: 9

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 30

Other Data: _____

Sample Size: 95/300 Response Rate (%): 31.7 Median RVW: .35

25th Percentile RVW: .25 75th Percentile RVW: .47 Low: 0.10 High: 1.90

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ5 Global Period: XXX Recommended RVW: 0.15

CPT Descriptor: Application of a modality to one or more areas; paraffin bath

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 32 year old male with fracture dislocation of the PIP joints, radial digits. K-wires have been removed and ROM initiated to increase flexion. The hand is heated in paraffin bath to increase collagen extensibility prior to exercises. The provider enhances effect by taping the PIPs in flexion, under slight tension. Patient is instructed in the techniques of paraffin dip (6-10 times). Paraffin is left in place on the hand for 15-20 minutes.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members,; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's range of motion, sensation, and skin integrity is performed. Further Intra-Service Work is detailed in vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 or 97118. Survey median lowered to reflect supervised versus constant attendance status. Higher ranking than 97010 (AZ1) due to need for positioning of hand to achieve specific effect.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 10 Low: 1 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 45

Other Data:

Sample Size: 102/300 Response Rate (%): 34.0 Median RVW: .21

25th Percentile RVW: .20 75th Percentile RVW: .25 Low: .05 High: .51

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 15 Low: 2 High: 45

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 150

Other Data:

Sample Size: 100 Response Rate (%): 27.0 Median RVW: .25

25th Percentile RVW: .25 75th Percentile RVW: .30 Low: .15 High: .77

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ6 Global Period: XXX Recommended RVW: 0.15

CPT Descriptor: Application of a modality to one or more areas; microwave

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient has a lumbosacral sprain with muscle guarding in her dorsal lumbar muscles. The patient is positioned in prone position to comfort and unit is turned on. The heat agent over the lumbosacral sprain is left in place 20 minutes. The provider checks the dosage level at 5 minutes following institution of treatment and checks patient response at end of 20 minute time period.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's sensation, muscle spasm, level of pain and range of motion is performed. Further Intra-Service Work is detailed in vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 or 97118. Survey median lowered to reflect supervised versus constant attendance status. Same work as 97018 (AZ5). Higher ranking than 97010 (AZ1) due to requirements for positioning of unit to ensure efficient treatment and patient safety.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 13.5 Low: 1 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 4

Other Data:

Sample Size: 83/300 Response Rate (%): 27.7 Median RVW: .21

25th Percentile RVW: .18 75th Percentile RVW: .21 Low: .05 High: 0.50

Please complete the following if more than one organization was involved in developing the recommendation:

Organization:

Median Intra-Service Time: Low: High:

Median Pre-Service Time: Median Post-Service Time:

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median):

Other Data:

Sample Size: Response Rate (%): Median RVW:

25th Percentile RVW: 75th Percentile RVW: Low: High:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ7 Global Period: XXX Recommended RVW: 0.25

CPT Descriptor: Application of a modality to one or more areas; whirlpool

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 62 year old woman with diabetes with stasis ulcer on lateral malleolus. Whirlpool is used for wound debridement. Whirlpool is filled, aseptic agent is applied to whirlpool, bandages removed using universal precautions, foot is emersed, and foot is left in whirlpool for 15 minutes. Wound is dried, cleaned and redressed following treatment using universal precautions. Whirlpool is then cleaned following appropriate procedures.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members,; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's skin integrity, sensation, measurement of wound size, and pulses is performed. Further Intra-Service Work is detailed in vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21
97240	Pool therapy or Hubbard tank with therapeutic exercises	0.44

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Comparable in work to 97118, Electrical stimulation (manual). The survey median of .44 may reflect the more difficult patient. In some centers, the provider may be required to fill and clean the tank, however, in most settings this will be performed by ancillary staff.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ8 Global Period: XXX Recommended RVW: 0.15

CPT Descriptor: Application of a modality to one or more areas; diathermy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient has a lumbosacral sprain with muscle guarding in her dorsal lumbar muscles. The patient is positioned in prone position to comfort and unit is turned on. The heat agent over the lumbosacral sprain is left in place 20 minutes. The provider checks the dosage level at 5 minutes following institution of treatment and checks patient response at end of 20 minute time period.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's sensation, muscle spasm, level of pain and range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 or 97118. Survey median lowered to reflect supervised versus constant attendance status. Same work as 97018 (AZ5). Slightly greater work than 97010 (AZ1) due to requirements for positioning of unit to ensure efficient treatment and patient safety.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 15 Low: 1 High: 45

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 4

Other Data:

Sample Size: 84/300 Response Rate (%): 28.0 Median RVW: .20

25th Percentile RVW: .18 75th Percentile RVW: .21 Low: .05 High: .60

Please complete the following if more than one organization was involved in developing the recommendation:

Organization:

Median Intra-Service Time: Low: High:

Median Pre-Service Time: Median Post-Service Time:

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median):

Other Data:

Sample Size: Response Rate (%): Median RVW:

25th Percentile RVW: 75th Percentile RVW: Low: High:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ9 Global Period: XXX Recommended RVW: 0.11

CPT Descriptor: Application of a modality to one or more areas; infrared

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient has a lumbosacral sprain with muscle guarding in her dorsal lumbar muscles. The patient is positioned in prone position to comfort and unit is turned on. The heat agent over the lumbosacral sprain is left in place 20 minutes. The provider checks the dosage level at 5 minutes following institution of treatment and checks patient response at end of 20 minute time period.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members,; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's sensation, skin integrity, muscle spasm, level of pain and trunk range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 or 97118. Survey median lowered to reflect supervised versus constant attendance status. Same work as 97010 (AZ1). Lowered slightly reflecting ranking as compared to 97010 (AZ1), 97018 (AZ5), and 97020 (AZ6). Positioning easier than 97020 (AZ6) or 97024 (AZ8).

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 10 Low: 1 High: 45

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): 3

Other Data:

Sample Size: 78/300 Response Rate (%): 26.0 Median RVW: .20

25th Percentile RVW: .15 75th Percentile RVW: .21 Low: .05 High: .60

Please complete the following if more than one organization was involved in developing the recommendation:

Organization:

Median Intra-Service Time: Low: High:

Median Pre-Service Time: Median Post-Service Time:

Length of Hospital Stay: Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median):

Other Data:

Sample Size: Response Rate (%): Median RVW:

25th Percentile RVW: 75th Percentile RVW: Low: High:

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ10 Global Period: XXX Recommended RVW: 0.20

CPT Descriptor: Application of a modality to one or more areas; ultraviolet

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 39 year old male with psoriasis to the elbows. The minimal erythema dose is performed and treatment is delivered at the first degree erythema level. Exposure time to UVA is carefully monitored and reported in seconds.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of the patient's skin integrity is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Less work than reference codes 97128 or 97118. Survey median lowered to reflect supervised versus constant attendance status. Ranked higher than 97024 (AZ8), 97014 (AZ3) and lower than 97012 (AZ2) given work needed to perform MED Test to establish treatment parameters prior to use. Time with patient greater than AZ3, less cognitive work than 97012 (AZ2)

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ11 Global Period: XXX Recommended RVW: 0.25

CPT Descriptor: Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 52 year old male who had a reconstruction procedure for patellar femoral dysfunction. Electrical stimulation is used for neuromuscular reeducation during stepping and climbing activities. Provider works with patient for proper electrode placement and stimulus parameter adjustment during exercise session. The provider uses manual probe stimulation to find motor points of quadriceps to obtain good muscle contraction. The session most likely lasts up to 30 minutes with 15 minutes of direct therapist time.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members,; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's sensation, skin integrity, and range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Kept as constant given use as reference code. Maintains ranking as one of the highest direct contact modality codes.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ12 Global Period: XXX Recommended RVW: 0.26

CPT Descriptor: Application of a modality to one or more areas; iontophoresis, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 26 year old female with a nonresolving lateral epicondylitis. Provider uses appropriate ionic compounds with a disposable electrode. The skin over the area is cleaned and prepped, and the electrode is placed appropriately. Provider adjusts unit for correct sensory input and rechecks the patient after several minutes to monitor adverse skin reactions. After 10 minutes, the polarity is changed by the provider and the patient receives an additional 10 minutes of treatment. On completion, the skin is again checked for possible irritation.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's skin integrity, sensation, range of motion, and pain level is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Survey median adjusted slightly to reflect modality grouping with direct contact codes. Ranking kept higher than "supervised" group. Comparable to key reference codes 97128 and 97118. Relates well to the work value of 97014 (AZ3) of .18 with additional value added to incorporate direct time requirements for administration of medications into electrode followed by exact placement of electrode to treatment area.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ13 Global Period: XXX Recommended RVW: 0.21

CPT Descriptor: Application of a modality to one or more areas; contrast baths, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 48 year old female with hypersensitivity and edema in the right ankle. Two separate basins of water, one hot, one cold are filled and brought to the patient. With the provider in attendance, the patient is instructed to immerse her ankle first in hot water for several minutes, then cold for several minutes, and to continue in this manner until the desired effects are achieved.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's skin integrity, sensation, and range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97118	Electrical stimulation (manual)	0.25
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Survey median adjusted to reflect ranking as one of the lowest direct contact modalities reflected in the survey data. Skill needed less than 97012 (AZ2), 97016 (AZ4), and 97022 (AZ7). Comparable to key reference codes 97128 and 97118.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ14 Global Period: XXX Recommended RVW: 0.21

CPT Descriptor: Application of a modality to one or more areas; ultrasound, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient has acute shoulder joint capsulitis. Provider has determined that restriction of motion is coming from the anterior inferior glenohumeral joint capsule. Ultrasound is applied, using a coupling gel, first to anterior joint capsule for 5 minutes then the inferior joint capsule for 5 minutes using direct contact techniques and careful positioning of the patient. The provider is with patient for the entire time.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's skin integrity, sensation, level of pain and range of motion is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects survey median. Used as key reference code. No change in current value.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ15 Global Period: XXX Recommended RVW: 0.28

CPT Descriptor: Application of a modality to one or more areas; Hubbard tank, each .15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient has debilitating rheumatoid arthritis with bilateral knee and hip involvement. Patient is placed in Hubbard tank for assisted exercise program. Approximately 10 minutes to fill Hubbard tanks, the provider is working with patient for about 15 minutes for exercise. Time needed for cleaning of tank.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's skin integrity, sensation, range of motion, and pain level is performed. Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97240	Pool therapy or Hubbard tank with therapeutic exercises	0.44

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

This service is most typically performed in a hospital and the patient severity is usually greater. This procedure is also more work than 97022, whirlpool, as full body emersion is generally utilized with these complex patients. It was noted that the survey median of .44 may reflect an inappropriate vignette. In certain centers, the provider may be required to fill and clean the tank, however, in most settings this will be performed by ancillary staff.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

See Above Rationale

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 15 Low: 5 High: 45

Median Pre-Service Time: 10 Median Post-Service Time: 15

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 25

Other Data: _____

Sample Size: 87/300 Response Rate (%): 29.0 Median RVW: .44

25th Percentile RVW: .44 75th Percentile RVW: .50 Low: .22 High: 1.00

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ16 Global Period: XXX Recommended RVW: 0.51

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is a 60 year old male status post total knee replacement with loss of motion and strength. Patient and provider work one-on-one through exercise program of passive range of motion, active range of motion and progressive resistive exercises as tolerated. Patient requires feed back and verbal ques for proper performance of some exercises.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's range of motion, muscle strength, and muscle flexibility is performed. Provider initiates or modifies one-on-one activities of the exercise program. Provider uses direct manual contact to elicit appropriate movements of the knee joint.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97240	Pool therapy or Hubbard tank with therapeutic exercises	0.44
97250	Myofascial release/soft tissue mobilization	0.45
97540	Training in activities of daily living	0.44
M0008	Office visit including any combination of modality(ies) and procedure(s), each additional 15 minutes	0.51

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (It clude all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ16 is procedural only.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

N/A

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 20 Low: 3 High: 75

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 1000

Other Data: _____

Sample Size: 106/300 Response Rate (%): 35.3 Median RVW: .51

25th Percentile RVW: .45 75th Percentile RVW: .65 Low: .22 High: 1.20

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 30 Low: 10 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 1000

Other Data: _____

Sample Size: 180 Response Rate (%): 16.6 Median RVW: .40

25th Percentile RVW: .36 75th Percentile RVW: .62 Low: .22 High: .88

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ17 Global Period: XXX Recommended RVW: 0.54

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and proprioception

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A woman has a right CVA resulting in a left spastic hemiplegia. Although she can move her left arm, she has no functional use of it, as her increased muscle tone results in a flexion synergy in which she adducts her shoulder, flexes her elbow, and pulls her hand into a tight fist. In order to diminish the spasticity during her daily activities, the provider applies deep pressure to the patient's biceps. The provider then internally rotates the patient's upper arm, extends the elbow, pronates the forearm and extends the patient's fingers and thumb. This combination of movements releases the spasm, and with manual guiding from the provider, the patient is able to practice grasping, holding and releasing large objects.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's muscle tone, sensation, active movement patterns, and ability to reach, grasp and release an object is performed. Further Intra-Service Work is detailed in the vignette. Provider uses direct manual contact to elicit appropriate movements of the knee joint.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97250	Myofascial release/soft tissue mobilization	0.45
97540	Training in activities of daily living	0.44
M0008	Office visit including any combination of modality(ies) and procedure(s), each additional 15 minutes	0.51
95860	Needle electromyography, one extremity and related paraspinal areas	0.97

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ17 is procedural only. Slight elevation over 97110 (AZ16) given code definition which might necessitate slightly greater cognitive work. Maintains highest rank order of revised procedural codes.

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ19 Global Period: XXX Recommended RVW: 0.45

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; gait training

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 18 year old post ACL arthroscopic repair presenting for gait training to eliminate gait deviations affecting normal swing and stance phase, i.e., stride length and cadence symmetry, etc.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's range of motion, muscle strength, balance and weight shifting ability is performed. Gait training is initiated. Provider uses verbal cues and direct manual contact to elicit appropriate movement pattern.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members.

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97540	Training in activities of daily living	0.44
97240	Pool therapy or Hubbard tank with therapeutic exercises	0.44
M0008	Office visit including any combination of modality(ies) and procedure(s), each additional 15 minutes	0.51

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ19 is procedural only. Comparable to reference codes 97540 and 97240. Maintains rank order.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

N/A

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 15 Low: 3 High: 75

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 280

Other Data: _____

Sample Size: 107/300 Response Rate (%): 35.7 Median RVW: .45

25th Percentile RVW: .40 75th Percentile RVW: .55 Low: .20 High: .97

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ22 Global Period: XXX Recommended RVW: 0.45

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; traction, manual

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 33 year old female with acute pain of cervical nerve root irritation requiring direct one-on-one hands on contact consisting of gentle static traction essentially a Grade 1 movement with traction forces at occiput and mandible.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's sensation, level of pain and distribution, range of motion and muscle strength is performed. Provider uses requested manual contact to achieve desired traction force and movement of the occiput and mandible

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97250	Myofascial release/soft tissue mobilization	0.45
M0008	Office visit including combination modality(ies) and procedure(s), each additional 15 minutes	0.51

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ22 is procedural only. Comparable to reference codes 97250 and M0008. Maintains ranking with 97116 (AZ19).

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ23 Global Period: XXX Recommended RVW: 0.35

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; massage, including effleurage, petrissage and/or tapotement (stroking, compression, percussion)

(For myofascial release, see 97250)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Patient is 60 year old female with a "frozen shoulder" and altered glenohumeral rhythm for therapeutic massage to the middle trapezius and rhomboid muscles to release scapular tightness.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's range of motion, level of pain, and tissue extensibility. Provider uses manual contact to increase circulation and promote tissue relaxation to scapular muscles.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97250	Myofascial release/soft tissue mobilization	0.45
97128	Ultrasound	0.21

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Survey median adjusted to reflect separation of new code 97250 from old code 97124 (AZ23). Ranking altered to reflect ratio between survey median for 97124 (AZ23) and 97250 and then adjusted downward to maintain ranking between consensus adjusted medians of these codes. Ranked as lowest of procedures expecting decreased work secondary to new definition and new, more intensive, code 97250.

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AZ25 Global Period: XXX Recommended RVW: 0.50

CPT Descriptor: Therapeutic procedure, one or more areas, each 15 minutes; aquatic therapy with therapeutic exercises

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 42 year old male S/P lumbar fusion unable to tolerate a progressive therapeutic exercise program on land. He is limited by pain during functional activities, restricted dynamic trunk and hip motion secondary to lumbar dysfunction and adhesions and needs to return to work in 4 weeks. Patient will require at least 30 minutes of one-on-one skilled care in the aquatic environment utilizing simultaneously specific hydrodynamics and ongoing progressive therapeutic exercise carefully integrated, when appropriate, with land therapeutic exercise.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of the patient's level of pain, trunk range of motion, and activity level is performed. Provider uses direct feedback and or manual contact to guide patient to achieve desired movement pattern in order to increase ability to perform functional activities

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
M0008	Office visit including combination of modality(ies) and procedure(s), each additional 15 minutes	0.51
97540	Training in activities of daily living	0.44
97240	Pool therapy or Hubbard tank with therapeutic exercises	0.44

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ25 is procedural only. Maintains ranking. Variation in medium of application possible cause for slight discrepancy between this service and AZ16

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

N/A

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 30 Low: 5 High: 60

Median Pre-Service Time: 10 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 90

Other Data: _____

Sample Size: 89/300 Response Rate (%): 29.7 Median RVW: 0.50

25th Percentile RVW: .44 75th Percentile RVW: .70 Low: .22 High: 1.46

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 15 Low: 2 High: 45

Median Pre-Service Time: 5 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 150

Other Data: _____

Sample Size: 100 Response Rate (%): 27 Median RVW: .25

25th Percentile RVW: .25 75th Percentile RVW: .3 Low: .15 High: .77

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: AZ33 Global Period: XXX Recommended RVW: 0.51

CPT Descriptor: Therapeutic activities, direct (one on one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A carpenter who sustained multiple trauma from an automobile accident experiences decreased strength and coordination of both upper extremities and poor standing tolerance. The provider designs a woodworking project requiring the patient to make a series of items which require standing for periods of time and use of upper extremity coordination. The difficulty of each project requires progressively increased strength, coordination, endurance and standing tolerance.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification. Includes project/area set up.

Description of Intra-Service Work:

Design activity based on patient's functional and motivational needs. Status check of patient's muscle strength, movement coordination, and standing activity level. Modify activity based on patient progress. Provider uses verbal and direct manual contact to elicit appropriate movement pattern.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97540	Training in activities of daily living	0.44
M0008	Office visit including combination of any modality(ies) and procedure(s), each additional 15 minutes	0.51
97250	Myofascial release/soft tissue mobilization	0.45

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ33 is procedural only.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

N/A

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: 17.5 Low: 2 High: 300

Median Pre-Service Time: 10 Median Post-Service Time: 5

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 255

Other Data: _____

Sample Size: 98/300 Response Rate (%): 32.7 Median RVW: .51

25th Percentile RVW: .44 75th Percentile RVW: .60 Low: .15 High: 1.00

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 30 Low: 10 High: 135

Median Pre-Service Time: 10 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 200

Other Data: _____

Sample Size: 180 Response Rate (%): 21.6 Median RVW: 0.44

25th Percentile RVW: .36 75th Percentile RVW: .59 Low: .27 High: .85

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AZ35 Global Period: XXX Recommended RVW: 0.51

CPT Descriptor: Development of cognitive skills to improve attention, memory, problem solving, includes compensatory training and/or sensory integrated activities, direct (one on one) patient contact by the provider, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Cognitive: An older adult has a combination of depression and organic brain syndrome. Although she lives with her daughter's family, she is alone during the day at their home. She has difficulty remembering when to take her medicines and frequently forgets to eat the meals which her daughter prepares for her. By analyzing the patient's home environment and daily routine, the provider develops a structured system by which the patient incorporates taking her medication and eating her meals into her daily activities.

SI: A child is fearful of walking down stairs, has poor balance, and has difficulty focusing on a task. Evaluation reveals that the child exhibits difficulty processing vestibular, proprioceptive; and tactile input. The provider engages the child in a variety of activities which provide the appropriate sensory input (e.g., heavy touch/pressure with graded movement) to improve the child's ability to make adaptive motor and behavioral responses and cope with environmental demands. As the child's sensorimotor and perceptual skills improve, he is able to walk down the stairs with less fear, has better balance and is able to sit longer to attend to a task.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Cognitive patient: status check of difficulties in home environment and daily routine activities. Further Intra-Service Work is detailed in the vignette. Intra work also includes planning and design of meaningful activity to reinforce behavior change through interviews with patient and family.

SI patient: status check of balance and equilibrium, coordination abilities, processing of sensory input, and functional abilities is performed. The provider monitors child's progress and modifies activities accordingly.

Further Intra-Service Work is detailed in the vignette.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
97540	Training in activities of daily living	0.44
M0008	Office visit including combination of any modality(ies) and procedure(s), each additional 15 minutes	0.51
97250	Myofascial release/soft tissue mobilization	0.45

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Recommendation reflects the survey median. Continual cognitive work regarding development and implementation of treatment program utilizing direct face-to-face manual or verbal contact required. RVW recommendation equal to current work value for "15 minute" M0008 reference code which is the only 15 minute time based procedure code on the reference list. Theoretical value possibly higher when related to description of M0008 as "combination modalities and procedures, 15 minutes" as a portion of the M0008 code could be for supervised modalities, whereas AZ33 is procedural only.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

N/A

SURVEY DATA:

Organization: APTA

Median Intra-Service Time: .30 Low: 5 High: 360

Median Pre-Service Time: 10 Median Post-Service Time: 15

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 150

Other Data: _____

Sample Size: 70/300 Response Rate (%): 23.3 Median RVW: .51

25th Percentile RVW: .44 75th Percentile RVW: .65 Low: .21 High: .98

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: AOTA

Median Intra-Service Time: 30 Low: 15 High: 60

Median Pre-Service Time: 10 Median Post-Service Time: 10

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): 100

Other Data: _____

Sample Size: 180 Response Rate (%): 16.1 Median RVW: 0.50

25th Percentile RVW: .45 75th Percentile RVW: .74 Low: .27 High: .90

**AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION**

Tracking Number: 97545 Global Period: XXX Recommended RVW: 1.70

CPT Descriptor: Work hardening/conditioning; initial 2 hour

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 40 year old male who sustained a work-related back injury without subsequent surgical repair/reconstruction, who has participated in an acute therapy program and who continues to exhibit pain, weakness, fatigue, stiffness, and possible psychosocial limitations. Return to work potential is undetermined.

Description of Pre-Service Work:

Chart reviews for medical treatment; pre set up of activities, equipment, area; review of previous documentation as needed; communicating with other health care professionals (eg, social worker, nurse); discussions with family members; calls to referring MD for additional information/clarification.

Description of Intra-Service Work:

Status check of patient's level of pain, muscle strength, endurance, trunk range of motion, blood pressure, heart rate and level of functional activity is performed. Provider develops program to address strength, endurance, flexibility, motor control and cardiopulmonary capacity related to performance of work tasks. Provider modifies instruction/practice of work related activities.

Description of Post-Service Work:

Writing up report/documentation of treatment; calls to referring physician to report progress; communicating with other team members

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
95860	Needle electromyography, one extremity and related paraspinal area	0.97
M0008	Office visit including combination of any modality(ies) and procedure(s), each additional 15 minutes	0.51
97250	Myofascial release/soft tissue mobilization	0.45

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

Prior consensus agreement between APTA, AOTA, and AAPMR for June 1993 RUC Meeting. Recommendation was never presented. Two hour time of treatment would be face-to-face contact with the patient.

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Organization: APTA/AOTA/AAPMR

Median Intra-Service Time: 120 Low: N/A High: N/A

Median Pre-Service Time: 30 Median Post-Service Time: 15

Length of Hospital Stay: N/A Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: 80 Response Rate (%): 53 (66%) Median RVW: 2.36

25th Percentile RVW: 2.00 75th Percentile RVW: 2.50 Low: 1.00 High: 4.72

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 97546 Global Period: XXX Recommended RVW: .85

CPT Descriptor: Work hardening/conditioning; each additional hour

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 40 year old male who sustained a work-related back injury without subsequent surgical repair/reconstruction, who has participated in an acute therapy program and who continues to exhibit pain, weakness, fatigue, stiffness, and possible psychosocial limitations. Return to work potential is undetermined.

Description of Pre-Service Work:

N/A

Description of Intra-Service Work:

Status of patient's level of pain, muscle strength, endurance blood pressure, heart rate, and trunk range of motion is performed. See Intra-Service work for # 97545. Provider also educates patient to safe job performance, injury prevention, and self-management of program.

Description of Post-Service Work:

N/A

KEY REFERENCE SERVICE(S):

<u>CPT Code</u>	<u>CPT Descriptor</u>	<u>RVW</u>
M0008	Office visit including combination of any modality(ies) and procedure(s), each additional 15 minutes	0.51
97250	Myofascial release/soft tissue mobilization	0.45
95860	Needle electromyography, one extremity and related paraspinal area	0.97

RELATIONSHIP TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

50% of 97545 (1.70) = .85

IF RECOMMENDED RVW IS BASED ON AN ALTERNATIVE METHOD INSTEAD OF THE SURVEY RESULTS, PLEASE EXPLAIN WHY:

SURVEY DATA:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

Please complete the following if more than one organization was involved in developing the recommendation:

Organization: _____

Median Intra-Service Time: _____ Low: _____ High: _____

Median Pre-Service Time: _____ Median Post-Service Time: _____

Length of Hospital Stay: _____ Number & Level of Post-Hospital Visits: _____

Number of Times Provided in Past 12 months (Median): _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____
