SEPTEMBER 94/FEBRUARY 95
MAY 95

RUC Recommendations

September 94/February 95/May 95
RUC Recommendations

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administration

6325 Security Boulevard
Baltimore, MD 21207

May 22, 1995

NOTE TO: See below

SUBJECT: 1995 Work Relative Value Unit (WRVU) Refinement Meeting

Thank you for agreeing to participate in the 1995 work relative value refinement meeting. The meeting will be held June 28 and 29 in Linthicum Heights, a small community outside of Baltimore, very close to the BWI airport. The meeting will begin at 8:15 at the Maritime Institute Seminar and Conference Center (410) 859-5700, a facility located near the BWI airport. Details regarding the making of hotel reservations will be provided in another letter.

We are enclosing a packet containing the RUC recommendations for new and revised codes. We will be scheduling conference calls in early June in an attempt to determine which of these codes do not need to be discussed at the refinement meeting. These will be codes about which you have no questions and for which you believe the RUC recommendations are appropriate. We have assigned you to a conference which should last approximately 60 minutes. See attached for the list of codes to be discussed during each call. If you choose to review recommendations for codes that will be discussed during the conference call other than the one to which you are assigned, please call one of the CMDs assigned to that call to express any concerns you may have about the recommendations.

Please retain all of the RUC material as you may be asked to evaluate codes at the meeting which were discussed during a conference call other than your own. If you have any questions regarding the conference calls or the refinement process, please feel free to contact Grant Bagley, M.D. at (410) 966-4509.

Liz Cusik

Attachments

Addressees

James Adamson, M.D.
James E. Alexander, M.D.
Alice Faryna, M.D.
George R. Gerber, M.D.
W. Aubrey Godfrey, M.D.
John E. Harding, M.D.
James. B. Holloway, M.D.
Marjorie E. Kanof, M.D.
Frank R. Mohs, M.D.
P. Michael Riisager, M.D.
H. Jerry Stone, M.D.
Richard G. Thompson, M.D.

Adamson, Alexander, Faryna, Harding, Kanof, Mohs

Positron Emission Tomography (PET)
Physical Medicine and Rehabilitation
Group Preventive Medicine Counseling
Electrodiagnostic Medicine
Special Otorhinolaryngologic Services
Blood-derived stem cells
Visual Evoked Potential Testing
Hospital Discharge Services
Newborn Discharge

Gerber, Godfrey, Holloway, Riisager, Stone, Thompson

Infusion Pump Insertion
Transperineal Radioactive Insertion of Prostate
Midface Reconstruction
Bronchoplasty
Multiple Interrupted Atriotomies
Systemic-To-Pulmonary Artery Shunt
Trauma Care
Laparoscopic Salpingoneostomy and Fimbrioplasty
Paravaginal Repair
Vaginal Birth after Cesarean
Retinal Detachment Repair
Percutaneous Balloon Valvuloplasty, Mitral

American Medical Association
Physicians dedicated to the health of America

Grant V. Rodkey, MD
Chairman
AMA/Specialty Society RVS
Update Committee

515 North State Street
Chicago, Illinois 60610

312 464-4455
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May 18, 1995

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

Dear Mr. Ault:

Attached are the relative work value recommendations developed by the American Medical Association/Specialty Society RVS Update Committee (RUC) for codes that have been added or revised for CPT 1996. We have previously provided you with the RUC recommendations adopted at the October 1994 RUC meeting and for monthly care of adult patients with end stage renal disease. The current submission includes the recommendations adopted at the February and April 1995 RUC meetings, thus completing the CPT 1996 cycle.

The trend that began last year of a decrease in the total number of annual CPT changes from 796 in CPT 1994 to 456 in CPT 1995 has continued this year. The total number of changes for CPT 1996 that were considered by the RUC and the Advisory Committee is 282. This number includes 97 additions, 132 revisions, and 53 deletions.

Attached are the RUC's recommendations for 182 new and revised codes and two group counseling codes that currently do not have published relative values. With the previously submitted recommendations, the total number of RUC recommendations for the 1996 RBRVS is 196. In addition to the services that were directly reviewed by the RUC, Table 1 (attached) lists the 96 codes which were determined after initial review by the RUC Advisory Committee to be editorial and which did not, therefore, require in-depth review by the RUC.

Included in these recommendations are new recommendations for physical medicine codes developed by the RUC Health Care Professionals Advisory Committee (HCPAC) Review Board. In addition, a number of the attached RUC recommendations involved collaborative efforts of five or more medical specialty societies or of specialty societies working with HCPAC organizations. I believe the growing level of cross-specialty and cross-profession cooperation has greatly enhanced the quality of the recommendations for the 1996 RBRVS. We strongly encourage the Health Care Financing Administration (HCFA) to adopt all of these recommendations.

It is our understanding that these recommendations will be considered by panels of carrier medical directors and HCFA staff on June 28 and 29. I have appointed three members of the RUC, Doctor Leonard Lichtenfeld from the American Society of Internal Medicine,

Doctor John Gage from the American College of Surgeons, and Doctor William Rich from the American Academy of Ophthalmology, to attend these meetings and assist HCFA in its review. If you have any questions about the attached recommendations, please contact Ms. Sandra Sherman at the AMA.

Sincerely,

Grant V. Rodkey, MD

Grant V. Rodkey, MD

Enclosure

cc: John O. Gage, MD
J. Leonard Lichtenfeld, MD
William Rich, MD
Sandra L. Sherman

Table 1: RUC Advisory Committee Determined that no RUC Review was Necessary

18-May-95

Code	Issue	RVU
17110	Lesion Destruction	0.55
20804	Partial Amputation	0.00
20806	Partial Amputation	0.00
20812	Partial Amputation	0.00
20820	Partial Amputation	0.00
20823	Partial Amputation	0.00
20826	Partial Amputation	0.00
20826	Partial Amputation	0.00
20832	Partial Amputation	0.00
20834	Partial Amputation	0.00
20840	Partial Amputation	0.00
21193	Reconstruction of the Mandible	16.23
21195	Reconstruction of the Mandible	16.27
27691	Tarsal Tendon Transfer	9.25
28236	Tarsal Tendon Transfer	8.01
31579	Laryngoscopy	2.26
33350	Great Vessel Repair	0.00
43264	Endoscopic Retrograde Cholangiopancretography	8.90
43269	Endoscopic Retrograde Cholangiopancretography	6.04
43271	Endoscopic Retrograde Cholangiopancretography	7.39
58100	Endocervical Sampling	0.71
58972	Embryo Transfer	0.00
58974	Embryo Transfer	0.00
58976	Embryo Transfer	3.83
67105	Repair of Retinal Detachment	7.06
67825	Correction of Trichiasis by Laser	1.33
77295	Therapeutic Radiology	4.57
78655	Radionuclide Identification of Eye Tumor	0.56
78800	Radionuclide Identification of Eye Tumor	0.65
80019	Automated Multichannel Test	0.00
80410	Calcitonin Stimulation Panel	0.00
80416	Captopril, Renal Vein & Peripheral Vein Stimuulati	
80417	Captopril, Renal Vein & Peripheral Vein Stimuulati	
81000	Urinalysis	0.00
81001	Urinalysis	
81002	Urinalysis	0.00

Code	Issue	RVU
81003	Urinalysis	0.00
83655	Lead Test	0.00
85651	Automated Sedimentation Rate	0.00
85652	Automated Sedimentation Rate	
86003	Allergen Specific IgE	0.00
86005	Allergen Specific IgE	0.00
89250	Embryo Transfer	
90721	Combined DTaP & HIB Vaccine	
90731	Hepatitis B Vaccine	0.00
90765	Hepatitis B Vaccine	
90766	Hepatitis B Vaccine	
90767	Hepatitis B Vaccine	
90768	Hepatitis B Vaccine	
90830	Developmental Testing	0.00
90841	Psychotherapy	0.00
92081	Ophthalmological Services	0.36
92082	Ophthalmological Services	0.44
92083	Ophthalmological Services	0.50
92100	Ophthalmological Services	0.92
92120	Ophthalmological Services	0.81
92140	Ophthalmological Services	0.50
92225	Ophthalmological Services	0.58
92226	Ophthalmological Services	0.50
92230	Ophthalmological Services	0.60
92235	Ophthalmological Services	0.81
92250	Ophthalmological Services	0.44
92265	Ophthalmological Services	0.81
92270	Ophthalmological Services	0.81
92275	Ophthalmological Services	1.01
92284	Ophthalmological Services	0.37
92285	Ophthalmological Services	0.20
92286	Ophthalmological Services	0.66
92287	Ophthalmological Services	0.81
92585	Brainstem Evoked Potentials	0.50
93660	Autonomic Testing	0.00
95117	Allergen Immunotherapy	0.00
95125	Allergen Immunotherapy	0.00
95145	Allergen Immunotherapy	0.06
95146	Allergen Immunotherapy	0.06

Code	Issue	RVU
95147	Allergen Immunotherapy	0.06
95148	Allergen Immunotherapy	0.06
95149	Allergen Immunotherapy	0.06
95165	Allergen Immunotherapy	0.06
95880	Developmental Testing	0.00
95881	Developmental Testing	0.00
95882	Developmental Testing	0.00
95883	Developmental Testing	0.00
96100	Developmental Testing	
96105	Developmental Testing	
96110	Developmental Testing	
96111	Developmental Testing	
96115	Developmental Testing	
96117	Developmental Testing	
99178	Developmental Testing	0.00
99291	Critical Care	3.64
99292	Critical Care	1.84
99295	Neonatal Intensive Care	16.03
99296	Neonatal Intensive Care	7.40
99297	Neonatal Intensive Care	3.84
99440	Newborn Resuscitation	2.93

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

AMBULATORY ECG (POST SYMPTOM) - TAB 15

CPT code 93014 [Telephonic transmission of post-symptom electrocardiogram rhythm strip(s), per 30-day period of time; physician review with interpretation and report only] was modified to reflect post-symptom transmission of rhythm strips over a 30 day period. The physician work involved in this service is identical to that for code 93268 [Patient demand single or multiple event recording with presymptom or postsymptom memory loop, includes transmission, physician review and interpretation, per 30 day period of time (RVW= 0.52)]. The technical component of these two services will vary as 93014 uses an event recorder without a memory loop and 93268 uses an event recorder with a memory loop.

CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation (Adjusted by 1.1% for 1995 MFS Budget Neutrality
93012	Telephonic ~~or telemetric~~ transmission of post-symptom electrocardiogram rhythm strip(s), per 30-day period of time; tracing only	XXX	0.00
93014	physician review with interpretation and report only	XXX	0.52

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

CPT Code Number: 93012 Global Period: XXX **Recommended RVW:** 0.0

CPT Descriptor: Telephonic ~~or telemetric~~ transmission of post-symptom electrocardiogram rhythm strip(s), per 30-day period of time; tracing only

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: **This codes represents the technical component of the service with a work RVU of zero. Therefore, this code was not surveyed.**

Description of Pre-Service Work:

Description of Intra-Service Work:

Description of Post-Service Work:

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

SUMMARY OF RECOMMENDATION

CPT Code Number: 93014 Global Period: XXX **Recommended RVW:** 0.53

CPT Descriptor: Telephonic ~~or telemetric~~ transmission of post-symptom electrocardiogram rhythm strip(s), per 30-day period of time; physician review with interpretation and report only

CLINICAL DESCRIPTION OF SERVICE: [The portion of the following vignette involving physician work is indicated in **boldface**.]

Vignette Used in Survey: A young woman complains of frequent episodes of rapid sustained palpitations accompanied by near-syncope. Her physician recommends outpatient transmission of her cardiac rhythm when such symptoms occur. The patient is given a portable cardiac monitor and instructed in its use. Four times over the next month the patient's symptoms recur. Each time she telephones the cardiac monitoring center, describes her symptoms, and transmits a rhythm strip over the telephone. Personnel at the monitoring center record the rhythm strip, mount it, record the patient's symptoms, and send it to the physician responsible for interpretation. **Each of the four times the patient transmits a rhythm strip, the physician diagnoses the rhythm and determines whether immediate action is necessary. When the fourth transmission reveals a potentially serious arrhythmia, the physician notifies the patient's personal physician and/or the patient by telephone, explains the implications of the abnormal rhythm, and recommends immediate follow-up. The physician reviews all transmitted strips and dictates a report to the patient's personal physician.**

Description of Pre-Service Work: The physician reviews the patient's medical record and any previously obtained rhythm strips.

Description of Intra-Service Work: The physician reviews the rhythm strip(s) as received, interprets the results and contacts the referring physician and/or patient as necessary.

Description of Post-Service Work: The physician reviews all transmitted strips and dictates a final report to the referring physician.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
93268	Patient demand single or multiple event recording with presymptom or postsymptom memory loop, includes transmission, physician review and interpretation, per 30 day period of time	0.53
93324	Electrocardiographic monitoring for 24 hours by continuous original ECG waveform recording and storage, with visual superimposition scanning; includes recording, scanning analysis with report, physician review and interpretation	0.53
93010	Electrocardiogram, routine ECG with at least 12 leads; interpretation and report only	0.17

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 physician work involved in this service is identical to that for code 93268 (review of patient event recorder rhythm strips) which has a work RVU of 0.53.

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

FREQUENCY INFORMATION

How was this service previously reported? N/A

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? 14,000 (est.)

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

SURVEY DATA:

Specialty: Cardiology

Median Intra-Service Time: 20 min. Low: 5 min. High: 60 min.

Median Pre-Service Time: 10 min. Median Post-Service Time: 12 min.

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 20 in Past 5 years: 100

Other Data: _____

Sample Size: 60 # Responses/Rate (%): 31/ 52% Median RVW: 0.53

25th Percentile RVW: 0.50 75th Percentile RVW: 0.80 Low: 0.17 High: 1.63

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

CORNEA PROCEDURES - TAB 18

The RUC recommends that codes 65760 [Keratomileusis], 65765 [Keratophakia], and 65767 [Epikeratoplasty] are obsolete procedures that should not have an assigned RVW.

CPT code 65771 [Radial Keratotomy] is a procedure that is performed to correct myopia by making radial incisions in the anterior surface of the central cornea to alter the shape of the cornea and its refractive properties. Radial Keratotomy requires more work than corneal wedge resection [CPT code 65775 (5.57 RVW)] which is done to correct astigmatism. Radial Keratotomy is also characterized by extensive pre-op physician counseling regarding the risks of the procedure and patient expectation. Currently patients are billed for approximately five level 3 visits during the post-op period.

CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation (Adjusted by 1.1% for 1995 MFS Budget Neutrality)
65760	Keratomileusis	090	No Recommendation
65765	Keratophakia	090	No Recommendation
65767	Epikeratoplasty	090	No Recommendation
65771	Radial keratotomy	090	6.92

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 65760 Global Period: 90 **Recommended RVW:** 13.59

CPT Descriptor: Keratomileusis

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 30 year old man with severe myopia of 16 diopters has limited field of vision with spectacles and is unable to wear contact lenses. He seeks improvement of vision with surgical correction of myopia. A partial thickness, disc-shaped piece of corneal tissue is removed with a microkeratome form the anterior surface of the cornea, An additional lamellar layer of cornea is removed and discarded. The original disc-shaped piece of stromal tissue is reshaped by a variety of techniques including the use of a cryolathe to correct for myopia and hyperopia. Once shaped, the disc is replaced onto the cornea. The patient requires frequent post-operative evaluation and care for more than four months.

Description of Pre-Service Work: Procedure includes a comprehensive eye care evaluation, ultrasonic pachymmetry (measure the thickness of the cornea), corneal topographic mapping (to measure the various curves of the anterior surface of the cornea), extensive pre-operative counseling -- informed consent more important because patient is being treated for a functional impairment (e.g. myopia) and not a disease. Also, the outcome is less predictable than eye surgeries such as the standard cataract surgery.

Description of Intra-Service Work: Local anesthetic is given as an injection around the eye ball, instruments are calibrated to micron accuracy with a variety of optical instruments, surgery is performed as described in vignette and patient is discharged.

Description of Post-Service Work: Focused post operative examinations starting the first day after surgery, sequential corneal mapping, sequential refraction, selective suture removal, sequential corneal pachymmetry and post-operative examinations up to one year.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
65750	Keratoplasty (corneal transplant), penetrating (in aphakia)	12.89
65285	Repair of laceration; cornea and/or sclera, perforating, with reposition or resection of uveal tissue	12.35

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

Keratoplasty is a very similar procedure because it involves the skillful cutting of the cornea and reattaching corneal tissues. The skill and manner of these steps influences the final refractive outcome.

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

FREQUENCY INFORMATION

How was this service previously reported? _____

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? X Yes ___ No

SURVEY DATA:

Specialty: _____

Median Intra-Service Time: 53 min. Low: 15 min. High: 90 min.

Median Pre-Service Time: 45 min. Median Post-Service Time: 85 min.

Length of Hospital Stay: N/A Number of ICU Days: _____

Number & Level of Post-Hospital Visits: 6 level 2 visits

Number of Times Provided in Past 12 months (Median): 12 in Past 5 years: _____

Other Data: _____

Sample Size: 91 Response Rate (%): 18 Median RVW: 13.59

25th Percentile RVW: 12.13 75th Percentile RVW: 15 Low: 7 High: 38

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 65765 Global Period: 90 **Recommended RVW:** 13

CPT Descriptor: Keratophakia

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 35 year old woman with hyperopia seeks surgical correction of vision. A partial thickness, disc shaped piece of corneal tissue is removed from the anterior corneal surface. A previously lathed donor corneal tissue is placed on the eye. The resected corneal tissue is affixed over the donor tissue leading to change in the refractive property of the eye. The patient requires frequent post-operative evaluation and care for more than four months.

Description of Pre-Service Work: Procedure includes a comprehensive eye care evaluation, ultrasonic pachymmetry (measure the thickness of the cornea), corneal topographic mapping (to measure the various curves of the anterior surface of the cornea), extensive pre-operative counseling -- informed consent more important because patient is being treated for a functional impairment (e.g. myopia) and not a disease. Also, the outcome is less predictable than eye surgeries such as the standard cataract surgery.

Description of Intra-Service Work: Local anesthetic is given as an injection around or behind the eye ball, instruments are calibrated to micron accuracy with a variety of optical instruments, surgery is performed as described in vignette and patient is discharged.

Description of Post-Service Work: Focused post operative examinations starting the first day after surgery, sequential corneal mapping, sequential refraction, selective suture removal, sequential corneal pachymmetry and post-operative examinations up to one year.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
65750	Keratoplasty (corneal transplant), penetrating (in aphakia)	12.89
65285	Repair of laceration; cornea and/or sclera, perforating, with reposition or resection of uveal tissue	12.35
66985	Insertion of intraocular lens prosthesis (secondary implant), not associated with concurrent cataract removal	8.09

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

Keratoplasty is a very similar procedure because it involves the skillful cutting of the cornea and reattaching corneal tissues. The skill and manner of these steps influences the final refractive outcome.

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

FREQUENCY INFORMATION

How was this service previously reported? _____

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? 100

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

SURVEY DATA:

Specialty: _____

Median Intra-Service Time: 60 min. Low: 20 min. High: 140 min.

Median Pre-Service Time: 60 min. Median Post-Service Time: 85 min.

Length of Hospital Stay: N/A Number of ICU Days: _____

Number & Level of Post-Hospital Visits: 7 level 2 visits

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: _____

Other Data: _____

Sample Size: 91 Response Rate (%): 18 Median RVW: 13

25th Percentile RVW: 12.60 75th Percentile RVW: 14.84 Low: 10 High: 38

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 65767 Global Period: 90 **Recommended RVW:** 13

CPT Descriptor: Epikeratoplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A six year old girl who has congenital monocular cataract surgery is now intolerant to her aphakic contact lens. She desires surgical correction to improve her vision. Previously frozen and lathed donor corneal tissue is sutured onto the anterior surface of the cornea to alter the anterior curvature of the ye and the refractive properties of the cornea. The patient requires frequent post-operative evaluation and care for more than four months.

Description of Pre-Service Work: Procedure includes a comprehensive eye care evaluation, ultrasonic pachymmetry (measure the thickness of the cornea), corneal topographic mapping (to measure the various curves of the anterior surface of the cornea), extensive pre-operative counseling -- informed consent more important because patient is being treated for a functional impairment (e.g. myopia) and not a disease. Also, the outcome is less predictable than eye surgeries such as the standard cataract surgery.

Description of Intra-Service Work: Local anesthetic is given as an injection around or behind the eye ball, instruments are calibrated to micron accuracy with a variety of optical instruments, surgery is performed as described in vignette and patient is discharged.

Description of Post-Service Work: Focused post operative examinations starting the first day after surgery, sequential corneal mapping, sequential refraction, selective suture removal, sequential corneal pachymmetry and post-operative examinations up to one year.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
65750	Keratoplasty (corneal transplant), penetrating (in aphakia)	12.89
65285	Repair of laceration; cornea and/or sclera, perforating, with reposition or resection of uveal tissue	12.35
66985	Insertion of intraocular lens prosthesis (secondary implant), not associated with concurrent cataract removal	8.09

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

Keratoplasty is a very similar procedure because it involves the skillful cutting of the cornea and reattaching corneal tissues. The skill and manner of these steps influences the final refractive outcome.

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

FREQUENCY INFORMATION

How was this service previously reported? _____

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:

Specialty: _____

Median Intra-Service Time: 60 min. Low: 30 min. High: 140 min.

Median Pre-Service Time: 53 min. Median Post-Service Time: 70 min.

Length of Hospital Stay: N/A Number of ICU Days: _____

Number & Level of Post-Hospital Visits: 6 level 2 visits

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: _____

Other Data: _____

Sample Size: 90 Response Rate (%): 22 Median RVW: 13

25th Percentile RVW: 11 75th Percentile RVW: 14.51 Low: 7 High: 38

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 65771 Global Period: 90 **Recommended RVW:** 7.4

CPT Descriptor: Radial Keratotomy

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 25 year old police officer with 4 diopters of myopia is intolerant to contact lenses seeks surgical correction to improve his vision. Radial incisions are made in the anterior surface of the central cornea to alter the shape of the cornea and its refractive properties. The patient requires frequent post-operative evaluation and care for more than four months.

Description of Pre-Service Work: Procedure includes a comprehensive eye care evaluation,(including auto/manual keratometry, auto/manual refraction, cycloplegic refraction (requiring dilation,), and slit lamp biomicroscopy, ultrasonic pachymmetry (measure thickness of the cornea), corneal topographic mapping (to measure the various curves of the anterior surface of the cornea), extensive pre-operative counseling -- informed consent more important because patient is being treated for a functional impairment (e.g. myopia) and not a disease. Also, the outcome is less predictable than eye surgeries such as the standard cataract surgery.

Description of Intra-Service Work: Anesthetic eye drops are applied in the upper and lower cul de sacs repeatedly until deep topical anesthesia is achieved. Instruments are calibrated to micron accuracy with a variety of optical instruments, surgery is performed as described in vignette and patient is discharged.

Description of Post-Service Work: Focused post operative examinations starting the first day after surgery, sequential corneal mapping, sequential refraction and up to 30 percent of patients may require secondary procedures involving deepening or adding incisions during the post-operative period.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
65775	Corneal wedge resection for correction of surgically induced astigmatism.	5.57
65772	Corneal relaxing incision for correction of surgically induced astigmatism	4.08
65750	Keratoplasty (corneal transplant), penetrating (in aphakia)	12.89

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

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

Not Applicable: We are recommending the average (mean) recommended RVW.

FREQUENCY INFORMATION

How was this service previously reported? Not normally reported to insurers.

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? 50,000

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

SURVEY DATA:

Specialty: _____

Median Intra-Service Time: 25 min. Low: 10 min. High: 75 min.

Median Pre-Service Time: 80 min. Median Post-Service Time: 90 min.

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: 5 level 3 visits 99213

Number of Times Provided in Past 12 months (Median): 80 in Past 5 years: 300

Other Data: _____

Sample Size: 154 Response Rate (%): 27 Median RVW: 7 (Mean 7.4)

25th Percentile RVW: 5.5 75th Percentile RVW: 8.0 Low: 4.1 High: 12.3

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

ANESTHESIA FOR THORACOSCOPY - TAB 20

CPT code 00520 [Anesthesia for closed chest procedures (including esophagoscopy, bronchoscopy, diagnostic thoracoscopy); not otherwise specified], represents a CPT editorial change. The revision distinguishes the provision of anesthesia for diagnostic thoracoscopy from a surgical thoracoscopy.

CPT code 00540 [Anesthesia for thoracotomy procedures involving lungs pleura, diaphragm, and mediastinum (including surgical thoracoscopy); not otherwise specified] describes the longer period of physician time required for a series of thoracotomy procedures including surgical thoracoscopy. Surgical thoracoscopy has increased the risk associated with providing anesthesia. During this procedure the anesthesiologist is more likely to encounter problems with patient oxygenation.

Tracking Number	CPT Code (• New)	CPT Descriptor	Global Period	Base Unit Value Recommendation
A1	00520	Anesthesia for closed chest procedures (including esophagoscopy, bronchoscopy, diagnostic thoracoscopy); not otherwise specified	XXX	6
A2	00540	Anesthesia for thoracotomy procedures involving lungs, pleura, diaphragm, and mediastinum (including surgical thoracoscopy); not otherwise specified	XXX	13

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SUMMARY OF RECOMMENDATION

Tracking Number: A1 Global Period: XXX Recommended RVU (Anes): 8

CPT Descriptor: Anesthesia for closed chest procedures (including esophagoscopy, bronchoscopy, diagnostic thoracoscopy); not otherwise specified

CPT/ASA RVG Code: 00520

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 66 yo male with a history of COPD, hypertension and 40 pack years of smoking with a 3 cm peripheral nodule in the right upper lobe is scheduled for a diagnostic thoracoscopy and biopsy using a left lateral position. Anesthesia with an inhalational agent and muscle relaxant, double-lumen endotracheal tube and arterial blood pressure monitoring is planned.

Description of Pre-Service Work:

Pre-service work includes the pre-operative visit and evaluation of the patient's cardiovascular, neurological and pulmonary systems with special attention to pulmonary function. Pre-service work also includes the ordering of appropriate pulmonary function tests, ABG's and the insertion of appropriate IV's and IV fluids plus selection of double-lumen endotracheal tubes and provision for CPAP on the collapsed lung if patient oxygenation low. In addition, suitable monitoring equipment (arterial pressure transducers, etc.) above and beyond usual monitoring equipment must be setup and calibrated.

Description of Intra-Service Work:

Intraservice work includes induction of anesthesia, application of monitors, insertion of a double-lumen endotracheal tube, delivery of anesthesia, constant attention to vital signs, monitoring of oxygenation and respiratory status, regulation of depth of anesthesia and control of blood pressure and cardiac output. Usually the patient is paralyzed and ventilation controlled during the procedure. During the case, ABG's may be sampled and respiratory parameters changed as needed to ensure patient stability and homeostasis. CPAP may be required on the upper lung to maintain oxygenation when this lung is collapsed by occluding gas flow to the upper limb of the double-lumen ET tube. In addition, fiberoptic bronchoscopy is often utilized to check proper positioning of the double-lumen ET tube. At the end of the case, the patient must be extubated and awakened while maintaining adequate oxygenation. Occasionally, the double-lumen ET tube must be switched to a single-lumen ET tube for post-op ventilatory support.

Description of Post-Service Work:

The patient is transported to the recovery room and stabilized there. Cardiovascular and respiratory status is closely monitored. The patient's immediate care is transferred to the recovery room personnel and the patient's condition is reported intermittently to the anesthesiologist who makes appropriate medical decisions regarding control of pain, adequacy of respiration, and discharge to the regular floor or ICU. Ventilatory support, regulation of blood pressure and circulatory status are frequently required in this immediate post-op period.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVU-Anes. Base
00500	Anesthesia for procedures on esophagus	15
00522	needle biopsy of pleura	4
00528	mediastinoscopy	8
00534	transvenous insertion or replacement of cardioverter/defibrillator	7

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICES(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-operative time is similar to 00500 and 00528 but generally more than 00522 and 00534. Technical skill and physical effort are similar to 00500 when one-lung anesthesia is utilized in 00500, but generally greater than 00522, 00528 and 00534. Mental effort and judgment are similar to 00528 and 00534. Stress is similar to or greater than 00534 and similar to stress with 00500, especially when double-lumen endotracheal anesthesia used with 00500.

FREQUENCY INFORMATION

How was this service previously reported? This descriptor is now modified to include "diagnostic thoracoscopy", otherwise there is no change in descriptor.

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

Estimate the number of times this service might be provided nationally in a one-year period? 6500

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

SURVEY DATA:

Specialty: Anesthesiology

Median Intra-Service Time: 90 minutes Low: 45 minutes High: 200 minutes

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

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 20

Other Data:

Sample Size: 50 Response Rate (%): 64 % (32) Median RVU (Anes): 8

25th Percentile RVU(Anes): 7 75th Percentile RVU(Anes): 10 Low: 6 High: 16

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SUMMARY OF RECOMMENDATION

Tracking Number: A2 Global Period: XXX **Recommended RVU (Anes):** 13

CPT Descriptor: Anesthesia for thoracotomy procedures involving lungs, pleura, diaphragm, and mediastinum (including surgical thoracoscopy); not otherwise specified

CPT/ASA RVG Code: 00540

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 64 yo female with a history of COPD, emphysema, 30 pack years of smoking and recurrent right-sided pneumothoraces is scheduled for decortication of the right pleura with a surgical thoracoscopy. The patient will be positioned in the left lateral position and anesthesia provided with an inhalational agent plus narcotics and muscle relaxants, double-lumen endotracheal tube and arterial blood pressure monitoring.

Description of Pre-Service Work:

Pre-service work includes the pre-operative visit and evaluation of the patient's cardiovascular, neurological and pulmonary systems with special attention to pulmonary function. Pre-service work also includes the ordering of appropriate pulmonary function tests, ABG's and the insertion of appropriate IV's plus selection of double-lumen endotracheal tubes and provision for CPAP on the collapsed lung if patient oxygenation is low. In addition, suitable monitoring equipment (arterial pressure, CVP or Swan-Ganz monitoring transducers) must be setup and calibrated.

Description of Intra-Service Work:

Intraservice work includes induction of anesthesia, application of monitors, insertion of a double-lumen endotracheal tube, confirmation of correct endotracheal tube position with fiberoptic bronchoscopy, delivery of inhalational and intravenous anesthetics, constant attention to vital signs, monitoring of oxygenation and respiratory status, regulation of depth of anesthesia and control of blood pressure and cardiac output. The patient is paralyzed and ventilation controlled during the procedure. During the case, ABG's are obtained and respiratory parameters changed as needed to ensure patient stability and homeostasis during one-lung ventilation. CPAP may be required on the upper lung to maintain adequate patient oxygenation when this lung is collapsed during the surgery. At the end of the case, the patient must be extubated and awakened while maintaining adequate oxygenation and ventilation. Usually, the double-lumen ET tube is changed to a single-lumen ET tube for post-op ventilatory support.

Description of Post-Service Work:

The patient is transported to the recovery room and stabilized. Cardiovascular and respiratory status is closely monitored. The patient's immediate care is transferred to the recovery room personnel and the patient's condition is reported frequently to the anesthesiologist who makes appropriate medical decisions regarding control of pain, adequacy of respiration, control of mechanical ventilation, timing of extubation and discharge to the intensive care unit. Interpretation of ABG's and regulation of blood pressure and circulation are required in this immediate post-op period.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVU-Anes. Base
00500	Anesthesia for procedures on esophagus	15
00528	Anesthesia for closed chest procedures mediastinoscopy	8
00542	Anesthesia for thoracotomy procedures involving lungs, pleura, diaphragm, and mediastinum decortication	15
00544	pleurectomy	15
00546	pulmonary resection with thoracoplasty	15
00548	intrathoracic repair of trauma to trachea and bronchi	15

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICES(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-operative time is similar to 00500 and 00542-00548 but greater than pre-op time with 00528. Technical skill and physical effort are slightly less with 00542-00548 but greater than skill and effort required with 00500 and 005284. Mental effort and judgment are similar with 00542-00548. Stress is similar 00542-00548, greater than stress with 00528 but equal to stress with 00500 when double-lumen endotracheal anesthesia is used with 00500.

FREQUENCY INFORMATION

How was this service previously reported? This descriptor is now modified to contain "including surgical thoracoscopy", otherwise there is no change in descriptor.

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

Estimate the number of times this service might be provided nationally in a one-year period? 2500

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

SURVEY DATA:

Specialty: Anesthesiology

Median Intra-Service Time: 120 minutes Low: 60 minutes High: 300 minutes

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

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 5

Other Data: _____

Sample Size: 50 Response Rate (%): 64 % (32) Median RVU (Anes): 13

25th Percentile RVU(Anes): 13 75th Percentile RVU(Anes): 15 Low: 10 High: 16

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

ANESTHESIA FOR RADICAL RETROPUBIC PROSTATECTOMY - TAB 21

0086X [Anesthesia for extraperitoneal procedures in lower abdomen, including urinary tract; radical prostatectomy (suprapubic, retropubic) is very similar in physician work to 00862 [Anesthesia for extraperitoneal procedures in lower abdomen, including urinary tract; renal procedures, including upper 1/3 of ureter or donor nephrectomy (base unit=7)]. The radical retropubic prostatectomy involves significant bleeding often at a rate of 2500 cc's per hour, making it more difficult for the physician to keep the blood flowing and the patient oxygenated.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	Base Unit Value Recommendation
B1	●0086X	Anesthesia for extraperitoneal procedures in lower abdomen, including urinary tract; radical prostatectomy (suprapubic, retropubic)	XXX	7

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: B1 Global Period: XXX **Recommended RVU (Anes):** 7

CPT Descriptor: Anesthesia for extraperitoneal procedures in lower abdomen, including urinary tract; radical prostatectomy (suprapubic, retropubic)

CPT/ASA RVG Code: 00863

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 58 yo male with prostatic carcinoma scheduled for a radical prostatectomy under general anesthesia. Blood loss is estimated to be 1500 to 2500 ml and patient has donated two units of autologous blood.

Description of Pre-Service Work:

Pre-service work includes the pre-operative visit, evaluation of the patient's cardiovascular, neurological and pulmonary systems, review of pre-operative laboratory tests, ordering of additional laboratory testing as necessary, checking on availability of blood and blood products, and insertion of appropriate intravenous lines and setup of selected monitoring devices. In addition, an epidural catheter may be inserted pre-operatively for post-op pain control.

Description of Intra-Service Work:

Intraservice work includes induction of anesthesia, application of monitors, delivery of inhalational and intravenous anesthetics, constant attention to vital signs, monitoring of oxygenation and respiratory status, regulation of depth of anesthesia, control of blood pressure and maintenance of blood volume with IV fluids and blood products as necessary. At the end of the case, the patient must be extubated and awakened while maintaining adequate oxygenation and ventilation.

Description of Post-Service Work:

The patient is transported to the recovery room and stabilized there. Cardiovascular and respiratory status is closely monitored. The patient's immediate care is transferred to the recovery room personnel and the patient's condition is reported frequently to the anesthesiologist who makes appropriate medical decisions regarding control of pain, adequacy of circulatory volume, and readiness for discharge to the surgical post-op floor.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVU-Anes. Base
00860	Anesthesia for extraperitoneal procedures in lower abdomen, incl. urinary tract; not otherwise specified	6
00862	renal procedures, including upper 1/3 of ureter or donor nephrectomy	7
00864	total cystectomy	8
00866	total adrenalectomy	10

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICES(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-operative time is similar to 00860, 00862, and 00864 but less than pre-op time with 00866. Technical skill and physical effort are greater than 00860, equal to skill and effort required with 00862 and 00864, but slightly less than 00866. Mental effort and judgment are similar to 00862, 00864, 00866. Stress is greater than stress with 00860 and 00862, equal to stress with 00864 and slightly less than stress with 00866.

FREQUENCY INFORMATION

How was this service previously reported? This descriptor is a new descriptor. It previously was reported as 00860 or 00862.

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

Estimate the number of times this service might be provided nationally in a one-year period? 7500

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

SURVEY DATA:

Specialty: Anesthesiology

Median Intra-Service Time: 180 minutes Low: 110 minutes High: 360 minutes

Median Pre-Service Time: 20 minutes Median Post-Service Time: 25 minutes

Number of Times Provided in Past 12 months (Median): 6 in Past 5 years: 24

Other Data:

Sample Size: 50 Response Rate (%): 64 % (32) Median RVU (Anes): 7

25th Percentile RVU(Anes): 7 75th Percentile RVU(Anes): 8 Low: 7 High: 10

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

POSITRON EMISSION TOMOGRAPHY (PET) - TAB 22

Positron Emission Tomography (PET) is a method of nuclear medicine imaging that uses short-lived radiopharmaceuticals to detect and quantify the metabolic abnormalities of disease. PET allows for biochemical imaging that defines actual patterns of chemical metabolic changes. PET has been most widely used in brain imaging, but technological advancements have made PET useful in a wide variety of circumstances. PET is considered a much more difficult procedure than SPECT as patients who receive PET are at high risk for coronary artery bypass surgery or are potential candidates for cardiac transplantation and this treatment is often the last resort. The physician must also be present to monitor and manage the radioactive glucose injection required in PET. It is unlikely that PET would ever replace SPECT due to the differences in the type of equipment that is required and the overall cost of performing PET.

788XX [Tumor imaging, positron emission tomography (PET), metabolic evaluation], represents an advance in PET technology. PET for tumor imaging is much more complex than PET for brain imaging [code 78608, RVW= 1.78 (RUC recommendation, RVW not implemented by HCFA)], as it requires more physician time. The physician must interpret results from 2-6 bed positions as opposed to the one bed position required for PET brain imaging.

784X3 [Myocardial imaging, positron emission tomography (PET), metabolic evaluation] describes biochemical imaging of the heart. This is useful for measuring heart ischemia. Myocardial PET imaging requires more physician time than PET for brain imaging (code 78608, RVW= 1.78) because: 1) the interpreting physician must correlate PET data with data from motion studies and other cardiac exams, and 2) patients who are diabetic must have their glucose monitored and, if necessary, have insulin/glucose infused.

Tracking Number	CPT Code (● New)	CPT Descriptor	Global Period	RVW Recommendation (Adjusted by 1.1% for 1995 MFS Budget Neutrality
C1	●788XX	Tumor imaging, positron emission tomography (PET), metabolic evaluation	XXX	1.93
C2	●784X3	Myocardial imaging, positron emission tomography (PET), metabolic evaluation	XXX	1.88

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SOCIETY OF NUCLEAR MEDICINE
ASSOCIATION OF UNIVERSITY RADIOLOGISTS

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS SUMMARY OF RECOMMENDATION

Tracking Number: C1 Global Period: XXX **Recommended RVW:** 1.95

CPT Descriptor: Tumor imaging, positron emission tomography (PET), metabolic evaluation

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Vignette #1: 42 year old female, 15 year smoking history, chronic cough, with finding of a solitary pulmonary nodule that is indeterminate for malignancy on CT scanning.

Procedure: Position emission tomographic (PET) metabolic study performed following an injection of F-18 fluorodeoxyglucose.

Result: No significant uptake, essentially excluding non-small cell lung cancer.

Vignette #2: 75 year old women with a prior history of sigmoidectomy for colorectal cancer, presented with abdominal pain. CT diagnosis: CT scan shows soft tissue which, at the site of surgery, could be scar or recurrent tumor.

Procedure: Position emission tomographic (PET) metabolic study performed following an injection of F-18 fluorodeoxyglucose.

Result: PET scan clearly showed a hypermetabolic focus corresponding to the soft tissue abnormality.

Description of Pre-Service Work: (See Attachment)

Description of Intra-Service Work: (See Attachment)

Description of Post-Service Work: (See Attachment)

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	1994 RVW
78608	Brain imaging, positron emission tomography (PET); metabolic evaluation	1.80*
74160	Computerized axial tomography, abdomen; with contrast material(s)	1.28
78465	Myocardial perfusion imaging; tomographic (SPECT), multiple studies, resting and/or stress (exercise and/or pharmacologic) and redistribution and/or rest injection, qualitative or quantitative	1.48

* RUC's value (May 1993) with budget neutrality adjustment applied. HCFA did not implement an RVW for this procedure.

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

PET for tumor imaging is more physician intensive than PET for brain imaging because the physician time is longer. First, prior to performing the PET study, the physician must interpret data from MRI, CT, and ultrasound studies in order to identify area(s) to be imaged using PET. Next, the physician must ensure that the PET study adequately covered the desired area(s). Data from the PET study is in 15 cm increments (referred to as bed-positions). For brain imaging, usually one bed-position is obtained. However, for metabolic body tumor imaging, the physician interprets 2 to 6 bed-positions. The consensus panel (ACR, ACNP, SNM. AUR) is satisfied that the results are appropriate because physicians active in PET imaging were surveyed and the range in RVW estimates is consistent.

FREQUENCY INFORMATION

How was this service previously reported?

78999 Unlisted diagnostic nuclear medicine procedure

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? 40,000

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

SURVEY DATA:

Specialty: ACR, ACNP, SNM, AUR

Median Total-Service Time (minutes): 67.5 Low: 20 High: 150

Number of Times Provided in Past 12 months (Median): 90 in Past 5 years: 110

Other Data:

Sample Size: 59 Response Rate (%): 31% (N=18) Median RVW: 1.95

25th Percentile RVW: 1.8 75th Percentile RVW: 2.5 Low: 1.2 High: 10

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
FEBRUARY 1995 RUC RECOMMENDATIONS

GROUP PREVENTIVE MEDICINE COUNSELING - TAB 13

Group preventive medicine counseling services (codes 99411 and 99412) are interactive and require participation from both the patients and physician. During these sessions, the physician presents information on selected risk factors, their impact on health, and options for reducing risk. The physician facilitates group discussion and responds to questions. For example, a counseling session about early detection of breast cancer would include a discussion of the incidence and relative risk of breast cancer, instruction in breast self-examination using an anatomical model, and discussion of mammography. It was noted during the presentation that the presumed number of patients that would be receiving the services described by 99411 is five, and 99412 assumes that six patients are receiving services. The RUC determined that the methodology to value these procedures should be the same as that used to value the multiple-family group psychotherapy code, 90849. The ratio between the values for individual and group medical psychotherapy was used to compute the relative value for 99411 [Preventive Medicine group counseling and/or risk factor reduction intervention(s) provided to individuals in a group setting (separate procedure); approximately 30 minutes.] The calculations were as follows:

[99411] Assume the relationship between the physician work for individual vs. group psychotherapy is consistent with the relationship between physician work for individual vs. group preventive medicine counseling. 90842/90853 = 99402/99411, 2.74/4.3 = 0.98/99411 therefore, 99411 = 0.15

[99412] Assume the relationship between the physician work for individual vs. group psychotherapy identified in the latest survey is appropriate. 99411/99412 = 0.6, 0.15/99412 = 0.6, therefore, 99412 = 0.25

The ratio calculation for 99412 was based on a survey of approximately 150 physicians of the difference between 30 and 60 minutes of preventive medicine group counseling.

	CPT Descriptor	Global Period	RVW Recommendation
99411	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to individuals in a group setting (separate procedure); approximately 30 minutes	XXX	.15
99412	approximately 60 minutes	XXX	.25

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CPT Code Number: 99411 Global Period: XXX **Recommended RVW:** 0.60 per individual

CPT Descriptor: Preventive medicine counseling and/or risk factor reduction intervention(s) provided to individuals in a group setting (separate procedure); approximately 30 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

AAP: Counseling session with a group of new parents regarding breast feeding, including the importance of maternal diet and exercise; avoidance of drugs, alcohol, and tobacco; the use of supplemental feedings; the role of the father; etc.

AAFP, ACOG, ACPM: Counseling session with a group of healthy women to discuss early detection of breast cancer through breast self-examination and mammography.

Description of Pre-Service Work:

The physician reviews the charts if they are available. The physician prepares or reviews items to be discussed during the session. The physician gathers materials that will be used as visual aids or handouts.

Description of Intra-Service Work:

The physician presents information on selected risk factors, their impact on health, and options for reducing risk. The physician facilitates group discussion and responds to questions. The counseling session with the new parents would include the pros and cons of breast feeding as well as alternatives, the importance of adequate nutrition for both the infant and mother, and the avoidance of deleterious substances. The counseling session about early detection of breast cancer would include a discussion of the incidence and relative risk of breast cancer, instruction in breast self-examination using an anatomical model, and discussion of mammography.

Description of Post-Service Work:

The physician documents the length and contents of the session in each chart.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
99213	Office/outpt visit, est pt, Level 3 (15 min)	0.56
99214	Office/outpt visit, est pt, Level 4 (25 min)	0.95
99242	Office/outpt consult, Level 2 (30 min)	1.12

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 respondents indicated that the physician work of 30 minutes of preventive medicine group counseling falls between a Level 3 and Level 4 established patient problem-oriented visit. It is difficult to compare the physician work of counseling to the physician work of problem-oriented services because the key element of counseling services is time while the key elements of problem-oriented visits are history, examination, and medical decision making. Although this service (99411) is defined as approximately thirty minutes of physician work, the technical skill, physical effort, mental effort, judgement, and stress of approximately 30 minutes of an established patient

problem-oriented visit (99214) is greater than for 30 minutes of preventive medicine group counseling. In fact, the technical skill, physical effort, mental effort, judgement, and stress of 30 minutes of preventive medicine group counseling approximates the 15 minutes of physician work of an established patient problem-oriented visit (99213). In addition, although the respondents were not provided with the values for individual preventive medicine counseling, the median survey response value of 0.60 falls between the values of 0.50 for 15 minutes of individual preventive medicine counseling and 1.00 for 30 minutes of individual preventive medicine counseling, indicating that there is less physician work per individual for 30 minutes of group counseling as compared to 30 minutes of individual counseling.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? NA

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? No data available

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

SURVEY DATA:

Specialty: Pediatrics (AAP), Family Physicians (AAFP), Obstetricians and Gynecologists (ACOG) and Preventive Medicine (ACPM)

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

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Other Data: Median Number of Patients in Group: 5

Sample Size: 150 Response Rate (%): 33% Median RVW: 0.60

25th Percentile RVW: 0.38 75th Percentile RVW: 1.06 Low: 0.10 High: 3.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

CPT Code Number: 99412 Global Period: XXX **Recommended RVW:** 1.00 per individual

CPT Descriptor: Preventive medicine counseling and/or risk factor reduction intervention(s) provided to individuals in a group setting (separate procedure); approximately 60 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

AAP: Counseling session with a group of teenagers (13 - 15 year olds) regarding substance (alcohol, drugs, tobacco) abuse.

AAFP, ACOG, ACPM: Counseling session with a group of healthy teenagers to discuss prevention of teenage pregnancy.

Description of Pre-Service Work:

The physician reviews the charts if they are available. The physician prepares or reviews items to be discussed during the session. The physician gathers materials that will be used as visual aids or handouts.

Description of Intra-Service Work:

The physician presents information on selected risk factors, their impact on health, and options for reducing risk. The physician facilitates group discussion and responds to questions. The counseling session with teenagers regarding substance abuse would include a discussion of the hazards of alcohol, tobacco, and drug use, the reasons teenagers engage in substance abuse, and strategies for resisting peer pressure. The counseling session regarding prevention of teenage pregnancy would include a discussion of the biological aspects of conception, the benefits of postponing sexual activity, contraceptive options, and the importance of condom use for preventing STDs.

Description of Post-Service Work:

The physician documents the length and contents of the session in each chart.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
99205	Office/outpt visit, new pt, Level 5 (60 min)	2.31
99213	Office/outpt visit, est pt, Level 3 (15 min)	0.56
99244	Office/outpt consult, Level 4 (60 min)	2.25

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 respondents indicated that the physician work of 60 minutes of preventive medicine group counseling falls between a Level 3 established patient problem-oriented visit and a Level 4 office/outpatient consult. It is difficult to compare the physician work of counseling to the physician work of problem-oriented services or consults because the key element of counseling services is time while the key elements of problem-oriented visits and consults are history, examination, and medical decision making. Although this service (99412) is defined as approximately sixty minutes of physician work, the technical skill, physical effort, mental effort, judgement, and

stress of approximately 30 minutes of an office/outpatient consult (99244) is greater than for 60 minutes of preventive medicine group counseling. In fact, the technical skill, physical effort, mental effort, judgement, and stress of 60 minutes of preventive medicine group counseling falls about halfway between the 15 minutes of physician work of an established patient problem-oriented visit (99213) and the 60 minutes of an office/outpatient consult (99244). In addition, although the respondents were not provided with the values for individual preventive medicine counseling, the median survey response value of 1.00 is equivalent to the value of 1.00 for 30 minutes of individual preventive medicine counseling, indicating there is approximately equivalent physician work per individual for 60 minutes of group counseling as compared to 30 minutes of individual counseling.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? NA

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? No data available

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

SURVEY DATA:

Specialty: Pediatrics (AAP), Family Physicians (AAFP), Obstetricians and Gynecologists (ACOG), and Preventive Medicine (ACPM)

Median Intra-Service Time: 60 minutes Low: 10 minutes High: 75 minutes

Median Pre-Service Time: 18.75 minutes Median Post-Service Time: 10 minutes

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 1

Other Data: Median number of Patients in Group: 6

Sample Size: 150 Response Rate (%): 33% Median RVW: 1.00

25th Percentile RVW: 0.50 75th Percentile RVW: 1.90 Low: 0.20 High: 3.50

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

INFUSION THERAPY - TAB 8

The CPT Editorial Panel added eight new codes to describe procedures using implantable drug pumps to provide continuous intrathecal medications for patients with severe intractable pain or spasticity. After a development period of ten years, the FDA approved treatment using implantable pumps. There was considerable discussion at the RUC meetings regarding the nature of these coding changes, particularly whether the new codes describe new procedures or could be considered as included in the existing codes 63750 and 63780. The RUC was also provided with diagrams, which are attached to the recommendations.

Codes 63750 [Insertion subarachnoid catheter with reservoir and/or pump for intermittent or continuous infusion of drug, including laminectomy] and 63780 [Insertion or replacement, subarachnoid or epidural catheter, with reservoir and/or pump for drug infusion, without laminectomy] sound very similar to the new CPT codes 62350 [Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable pump; without laminectomy] and 62362 [Implantation or replacement of device for intrathecal or epidural drug infusion; programmable pump, including preparation of pump, with or without programming] however, codes 63750 and 67380 are used to describe the work involved in implanting cancer patients with a catheter system to alleviate severe pain, not chronic pain or spasticity. The existing codes 63750 and 63780 provide a short-term means for controlling pain until the patient dies of cancer, whereas the new codes apply to the constant delivery of medicine into the intrathecal space. The operation to place the intrathecal catheter is very complex because the system is permanent and must remain in place for the duration of the patients' life.

The family of codes has been divided into two groups to separately describe implanting a device to provide medicine and implanting a catheter. This grouping recognizes that the permanent placement of a complete drug infusion system would only occur at the initiation of treatment.

Code 62350 [Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable pump; without laminectomy] involves the placement of an implantable reservoir for the delivery of drugs designed to alleviate chronic pain or spasticity. The physician work is similar to code 63650 [Percutaneous implantation of neurostimulator electrodes; epidural]. The RUC recommends 6.25 RVUs for this code.

Code 62351 [Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable pump; with laminectomy] is the same as code 62350 but requires a laminectomy. The RUC compared the work involved in this service to code 63655 [Laminectomy for implantation of neurostimulator electrodes; epidural], and recommends 9.25 RVUs.

Code 62355 [Removal of previously implanted intrathecal or epidural catheter] is done when a problem such as infection develops. Until now, there was no way for the physician to report removal of a previously implanted catheter. The RUC determined that the work of 62355 most closely approximated the work of CPT code 63688 [Revision or removal of implanted spinal neurostimulator pulse generator or receiver] and, therefore, lowered the specialty's recommendation by 0.8 RVUs, reducing the recommended RVUs from 5.60 to 4.80 RVUs.

Code 62360 [Implantation or replacement of a device for intrathecal or epidural drug infusion; subcutaneous reservoir] is a new code for the implantation of a reservoir. The surgeon implants the reservoir after the intrathecal catheter has been placed, and connects the reservoir to the catheter. Although placement of a subcutaneous reservoir is similar to CPT code 63685 [Incision and subcutaneous placement of spinal neurostimulator or receiver, direct or inductive coupling], less physician work is required to place the smaller subcutaneous reservoir. The RUC recommends 2.00 RVUs.

Code 62361 [Implantation or replacement of device for intrathecal or epidural drug infusion; non-programmable pump] is similar to placement of a spinal neurostimulator (code 63685). The RUC determined that the work of code 62361 was comparable to code 36530 [Insertion of an implantable intravenous infusion pump] and reduced the specialty recommendation from 7.00 to 4.80 RVUs.

The RUC found that the work of code 62362 [Implantation or replacement of device for intrathecal or epidural drug infusion; programmable pump, including preparation of pump, with or without programming] was most comparable to that of code 63685, and lowered the specialty society recommendation from 7.14 RVUs to 6.29 RVUs. The RUC considered the work involved in code 62365 [Removal of subcutaneous reservoir or pump, previously implanted for intrathecal or epidural infusion] to be comparable to that of code 36532, which has 3.23 RVUs. Code 36532 has a 10 day global period, however, and 62365 has a 90 day global period. Therefore, the RUC lowered the specialty recommendation from 5.20 RVUs to 4.77 RVUs.

Codes 62367 [Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); without reprogramming] and 62368 [Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); with reprogramming] are done postoperatively and involve the overall evaluation of the implanted pump to make sure that it is working correctly. The RUC recommends 0.48 RVUs for code 62367 and 0.75 RVUs for code 62368.

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
62274	L1	Injection of diagnostic or therapeutic anesthetic or antispasmodic substance (including narcotics); subarachnoid or subdural, single	000	1.78 (No Change)
62288*	L11	Injection of substance other than anesthetic, antispasmodic, contrast, or neurolytic solutions; subarachnoid (separate procedure)	000	1.74 (No Change)
CATHETER IMPLANTATION (For percutaneous placement of intrathecal or epidural catheter, see codes 62274-62284, 62288, 62289, 62298)				
●62350	L2	Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable infusion pump; without laminectomy	090	6.25
●62351	L3	with laminectomy	090	9.25
●62355	L4	Removal of previously implanted intrathecal or epidural catheter	090	4.80

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
RESERVOIR/PUMP IMPLANTATION				
●62360	L5	Implantation or replacement of device for intrathecal or epidural drug infusion; subcutaneous reservoir	090	2.00
●62361	L6	non-programmable pump	090	4.80
●62362	L7	programmable pump, including preparation of pump, with or without programming	090	6.29
●62365	L8	Removal of subcutaneous reservoir or pump, previously implanted for intrathecal or epidural infusion	090	4.77
●62367	L9	Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); without reprogramming	XXX	0.48
●62368	L10	with reprogramming (To report pump refill, use 96530)	XXX	0.75
63750	L12	~~Insertion, subarachnoid catheter with reservoir and/or pump for intermittent or continuous infusion of drug, including laminectomy~~ (63750 has been deleted. To report, see 63XX2 and 63XX4, 63XX5 or 63XX6)	090	N/A
63780	L13	~~Insertion or replacement, subarachnoid or epidural catheter, with reservoir and/or pump for drug infusion, without laminectomy~~ (63780 has been deleted. To report, see 63XX1 and 63XX4, 63XX5 or 63XX6)	090	N/A

Appendix B1

Short-term Placement of Port Catheter

Acute and Chronic Pain: Use of Spinal Opioids, in Neural Blockade in Clinical Anesthesia and Management of Pain, MJ Cousins, DA Cherry, GK Gourlay; JB Lippincott Company, MJ Cousins & PO Bridenbaugh (eds.), Philadelphia, 1988

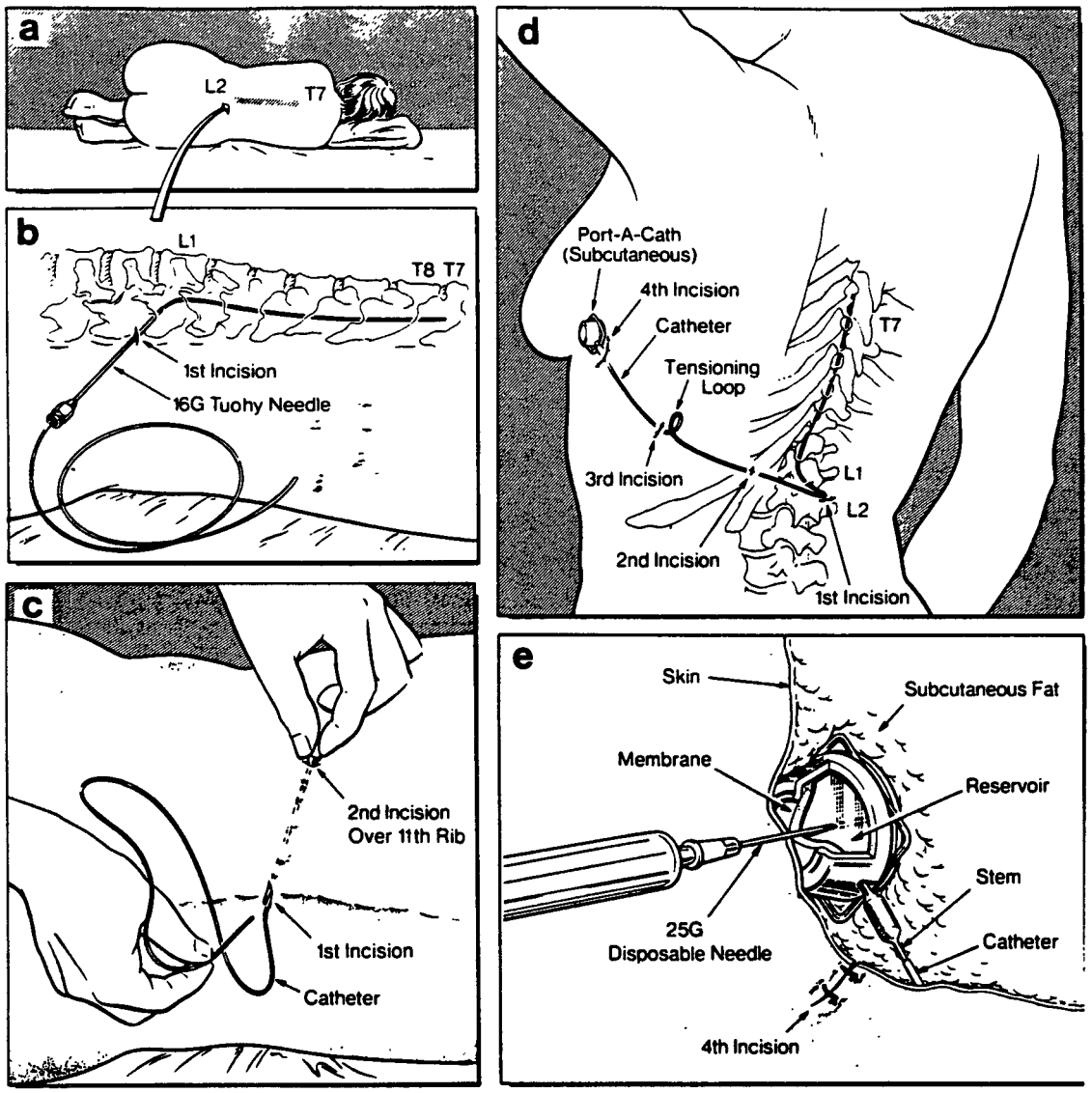


FIG. 28-22. Implantation of the epidural portal system. **a.** Position of patient before implantation. **b.** Insertion of 16-gauge epidural catheter through a Tuohy needle. **c.** Tunneling technique used to relocate the end of the epidural catheter to the anterior chest wall. **d.** Portal attached to the inserted epidural catheter. **e.** Injection technique and exposed view of the epidural portal.

Appendix B2

Implantation of Permanent Drug Pump and Catheter

Intraspinal Drug Delivery: Surgical Technique Notebook, Medtronic, Inc., 1991

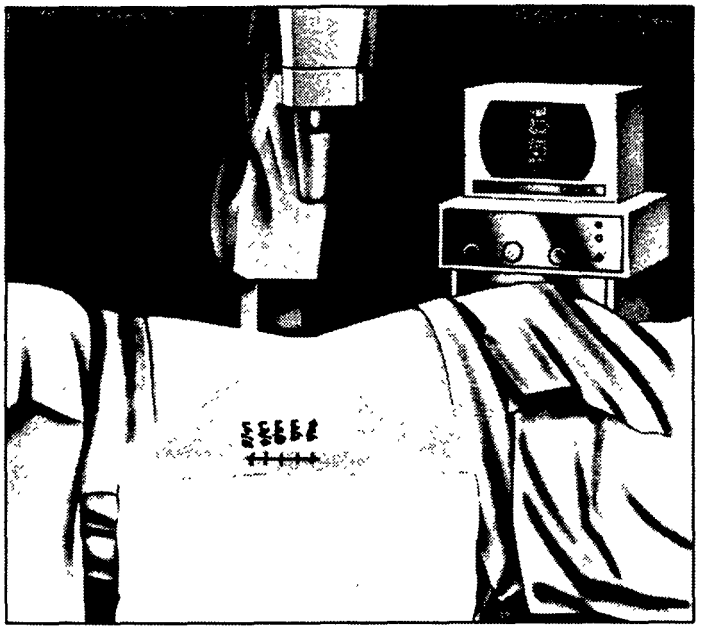


Figure 1

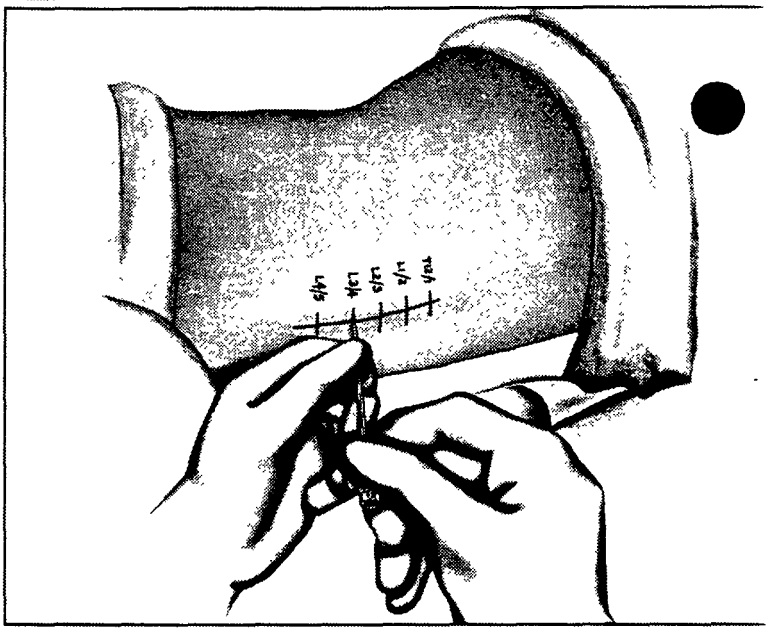
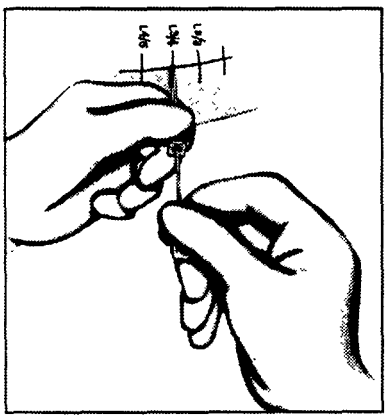


Figure 2



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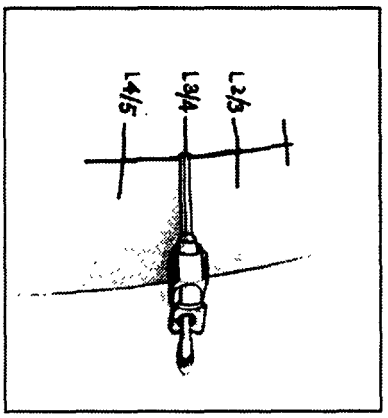

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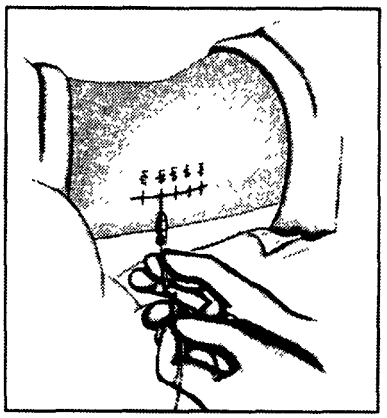

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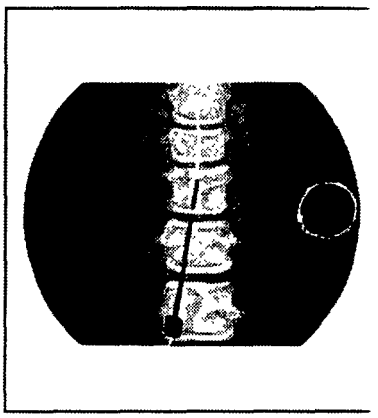

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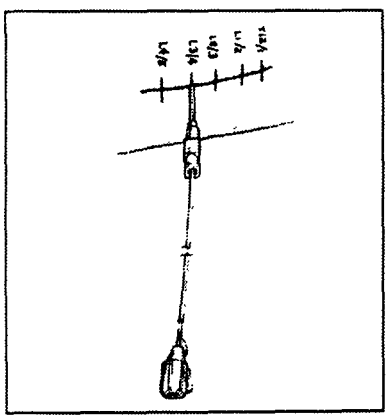

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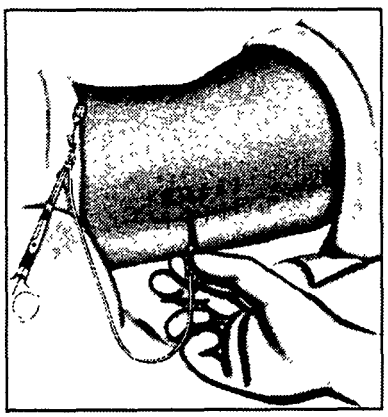

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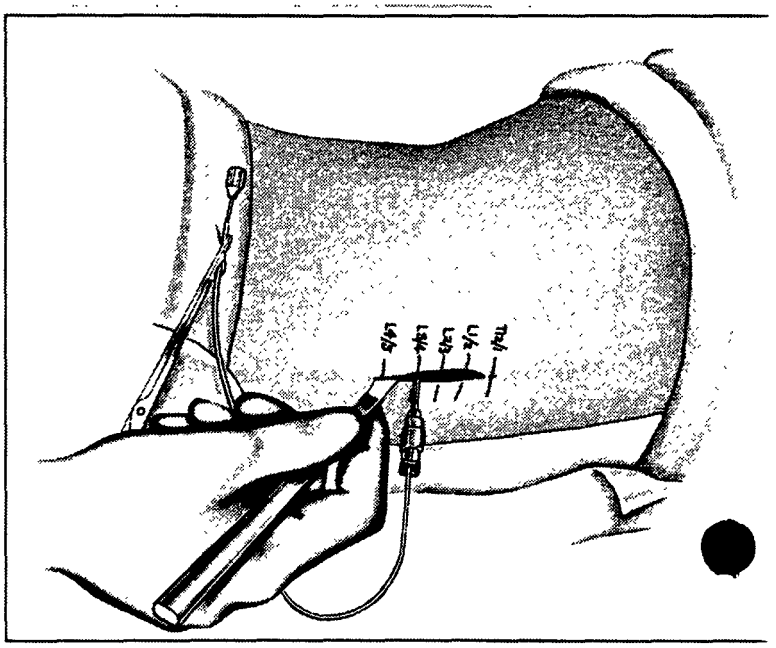

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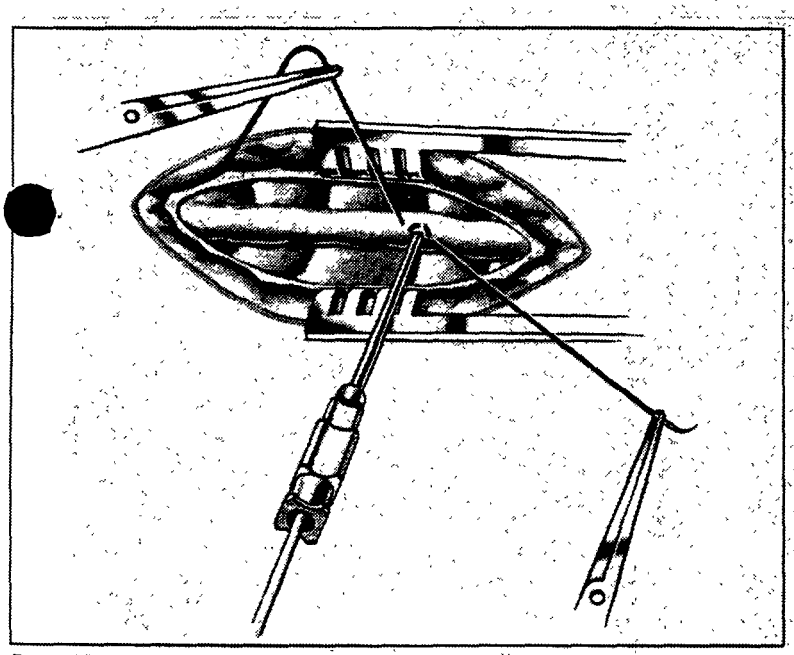

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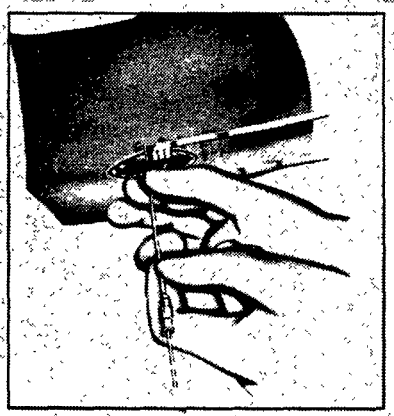

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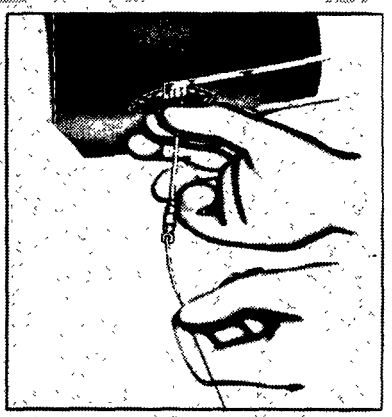

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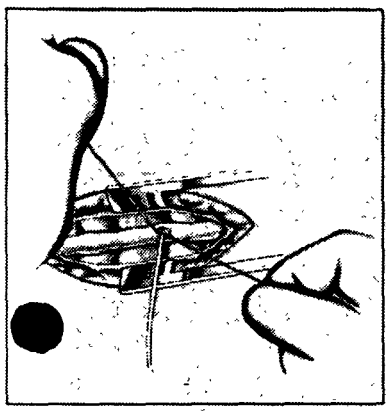

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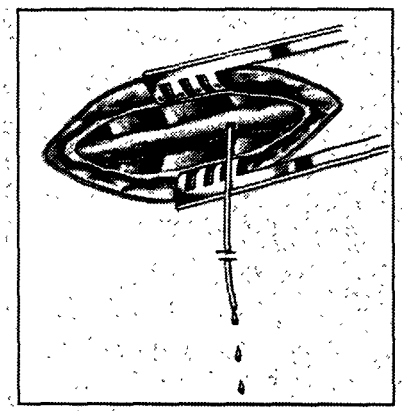

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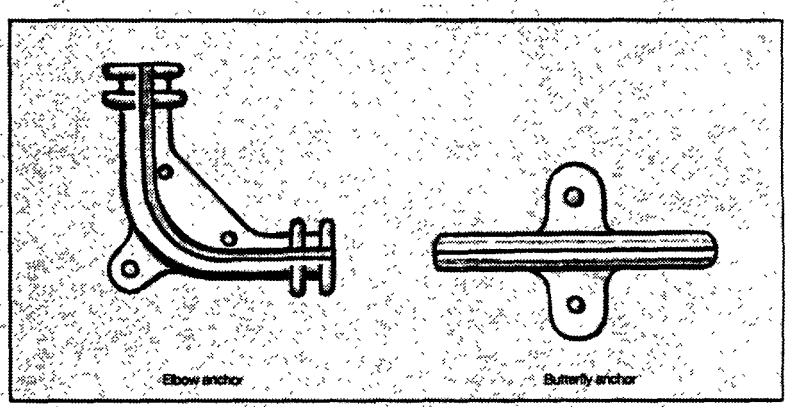

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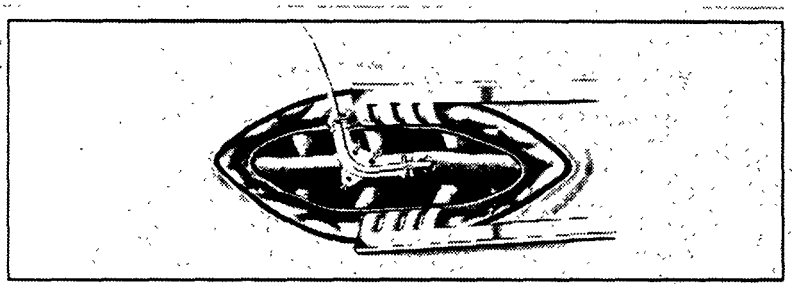

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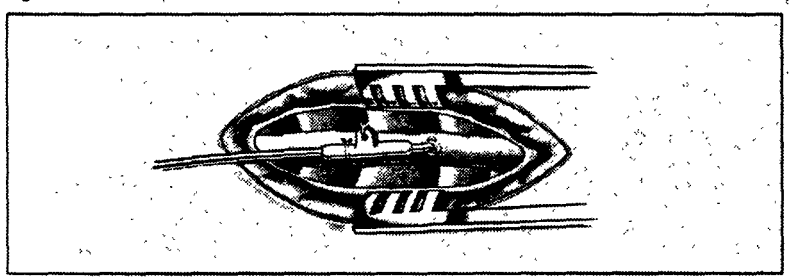
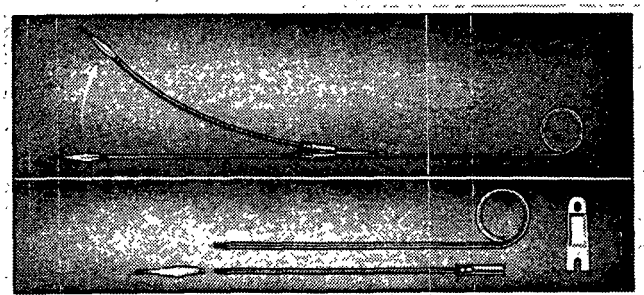


Figure 17

Figure 18

Figure 19



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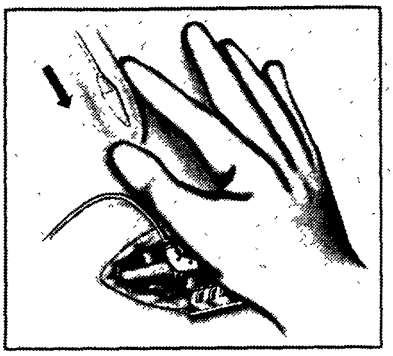

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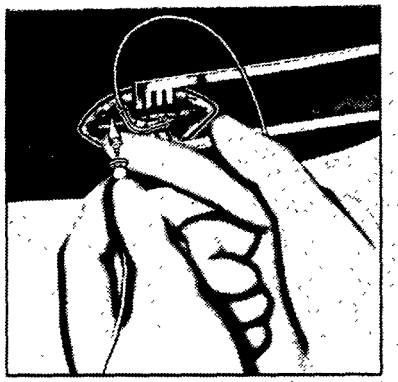

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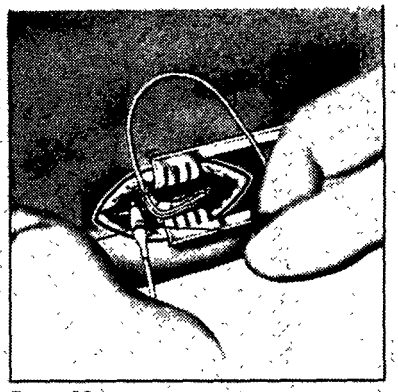

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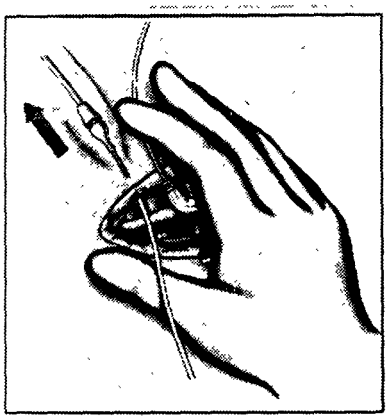

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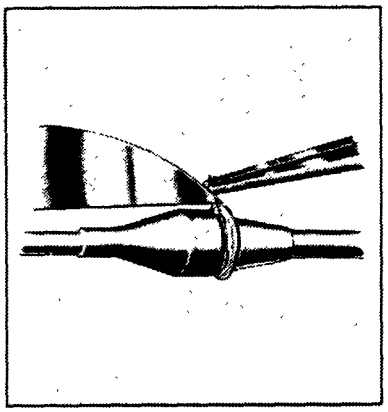

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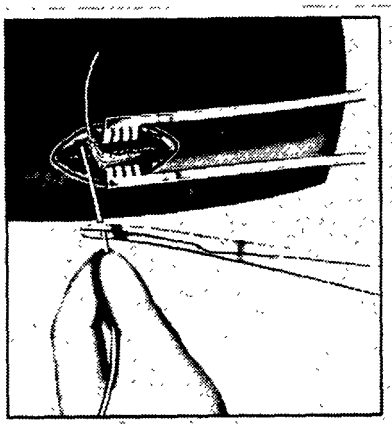

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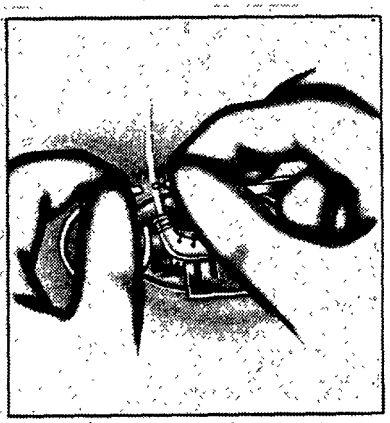

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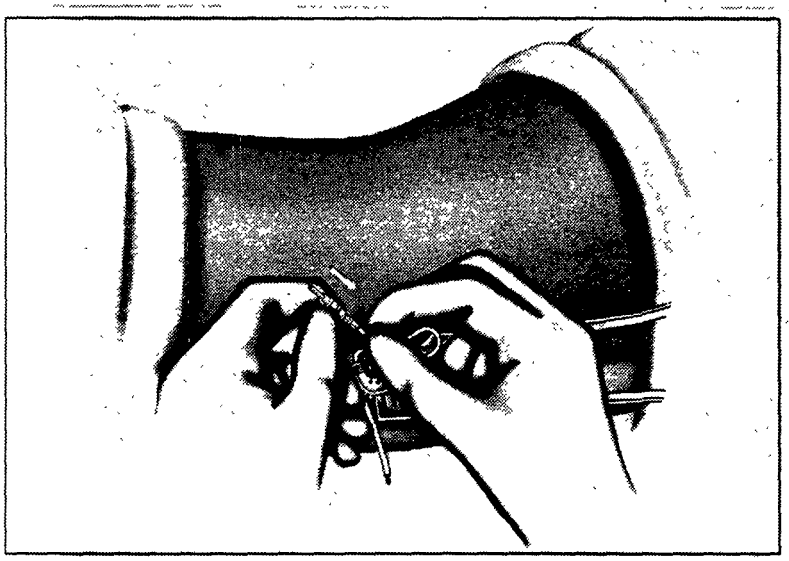

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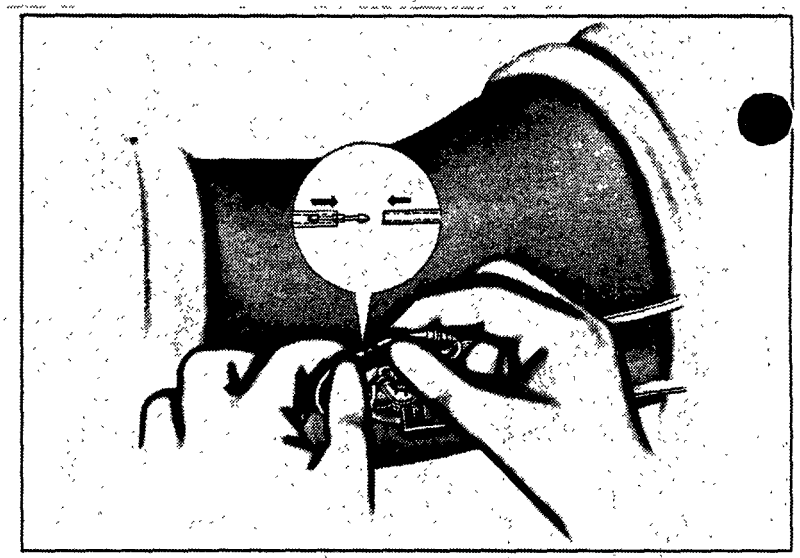

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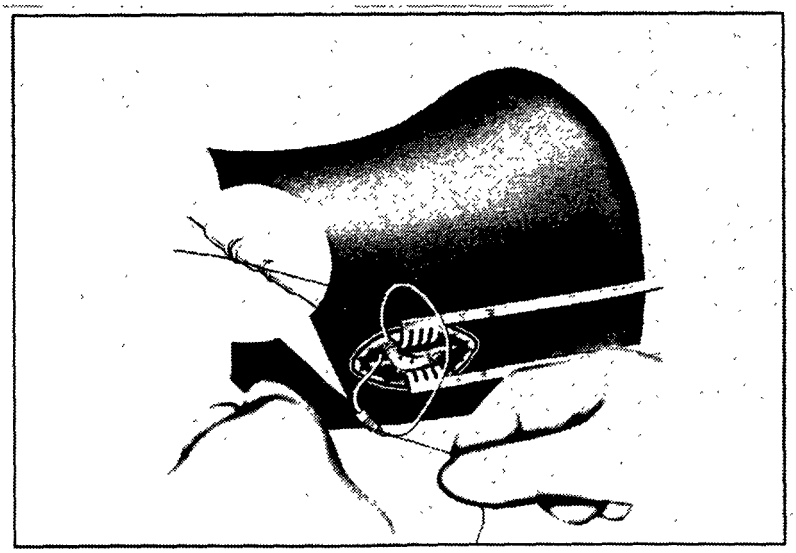

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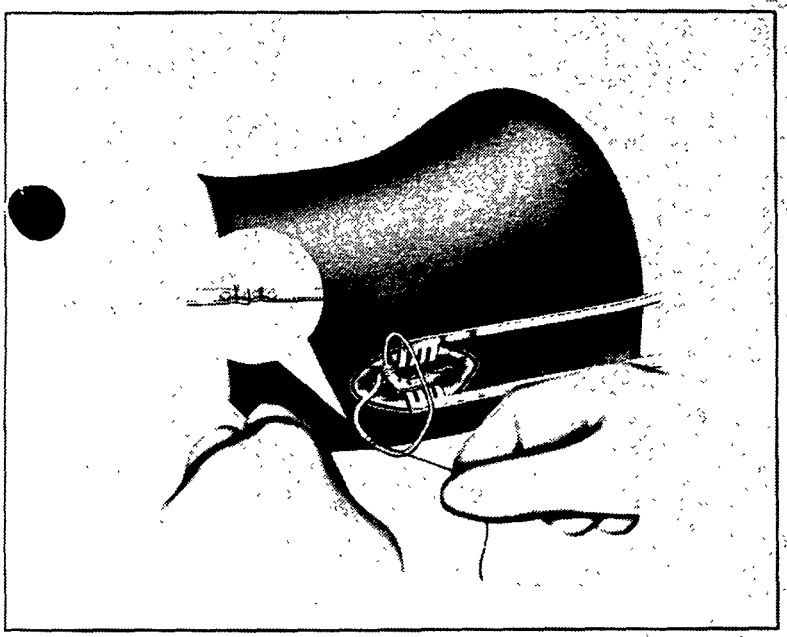

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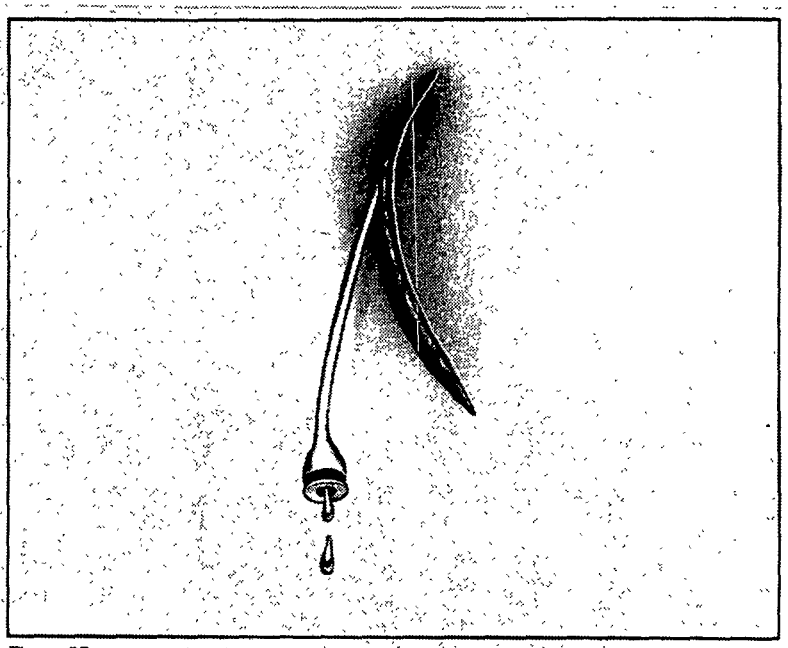

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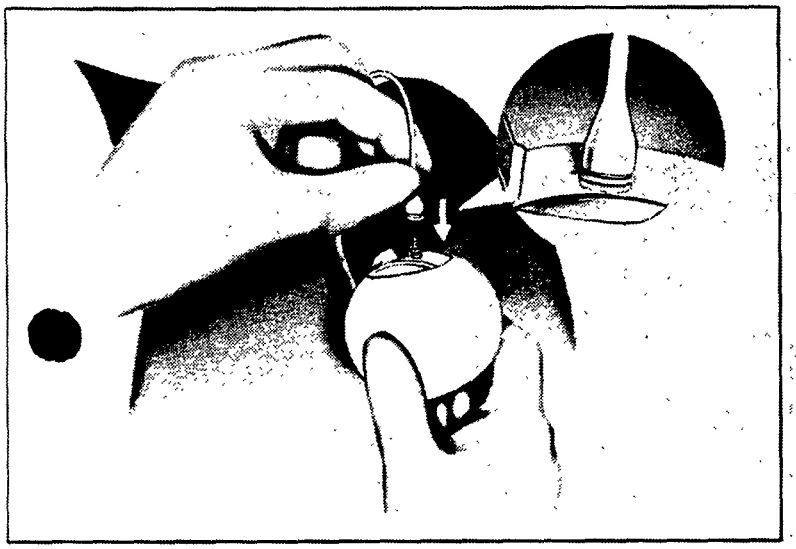

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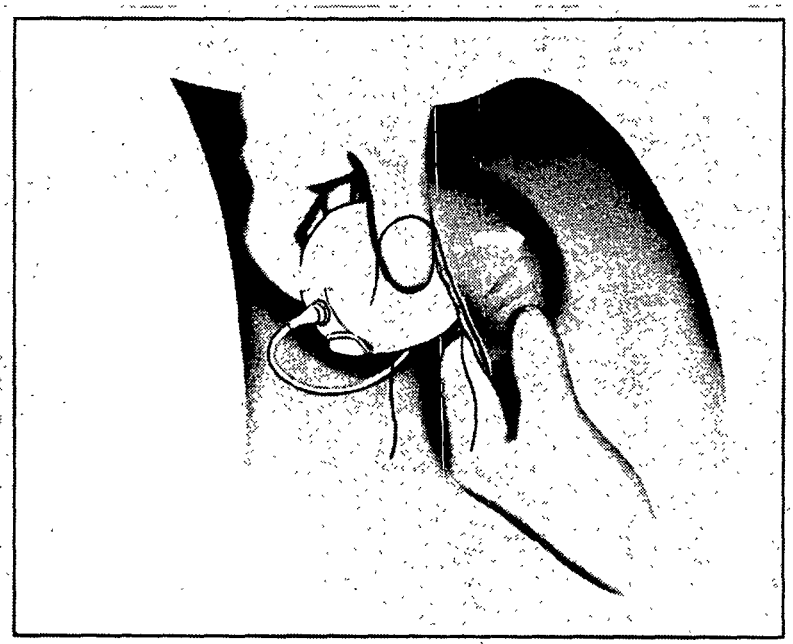

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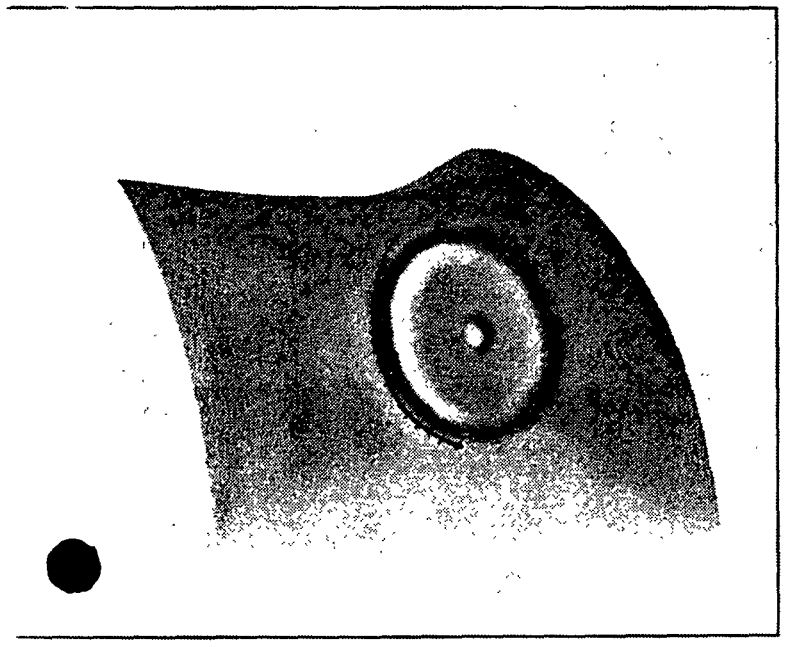

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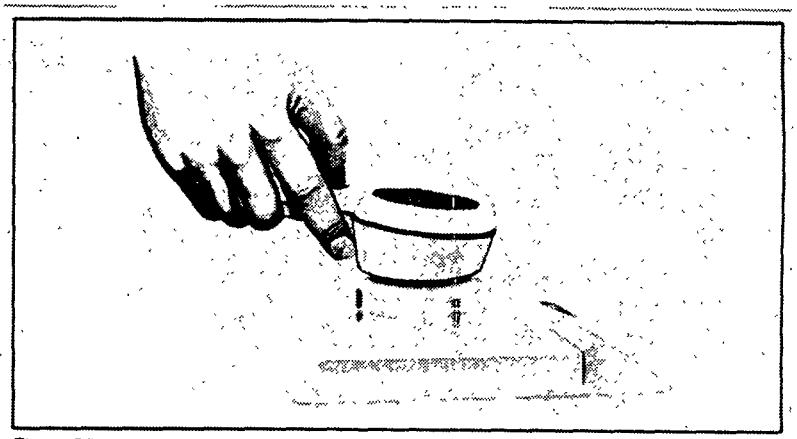

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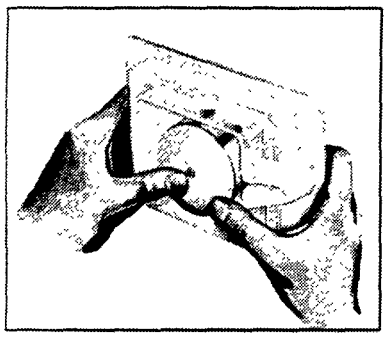
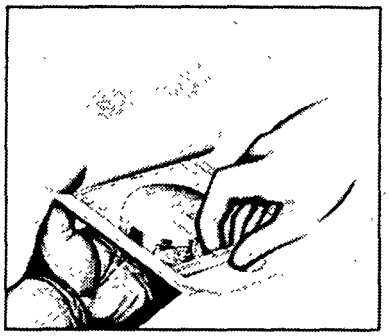


Figure 37a



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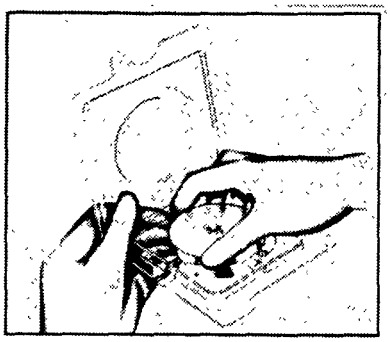

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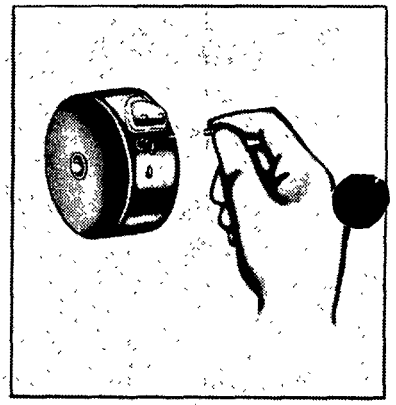

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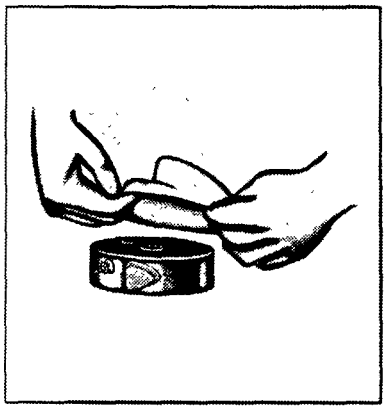

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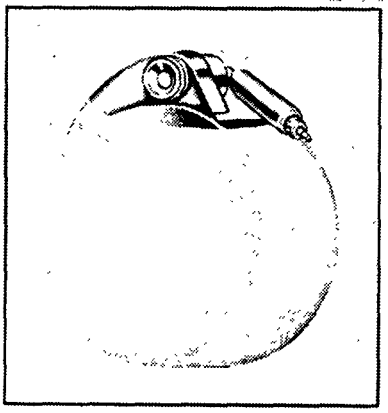


Figure 41 Model 8615

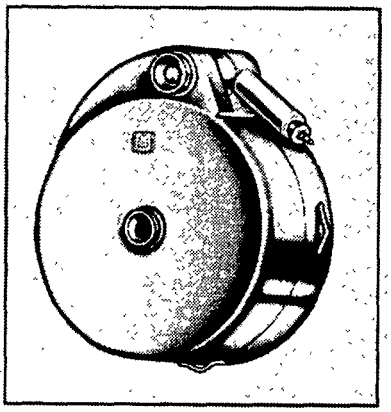
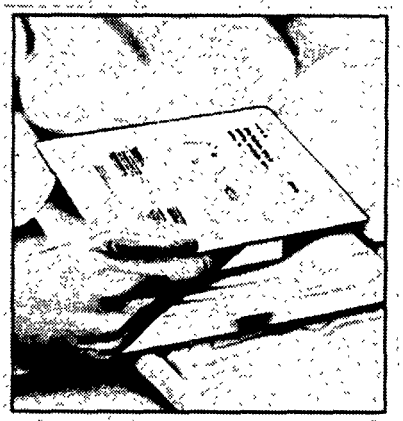


Figure 42 Model 8615L
(with suture loops)



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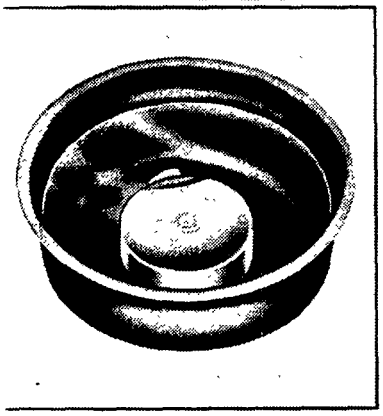
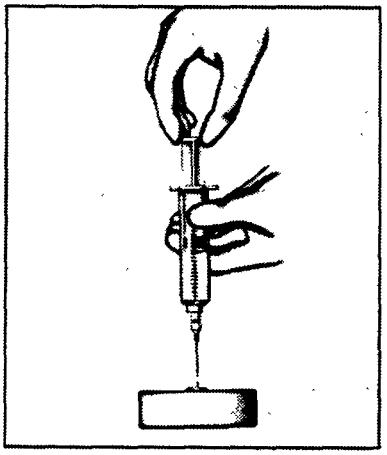


Figure 44



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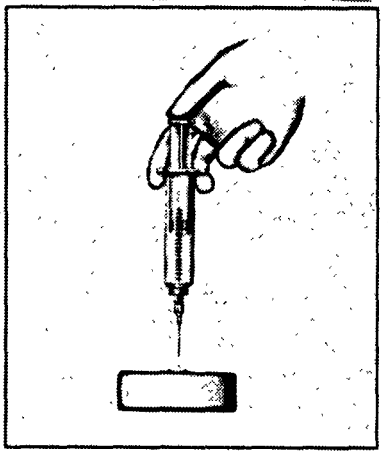

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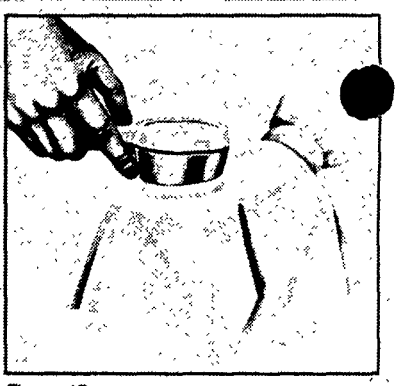

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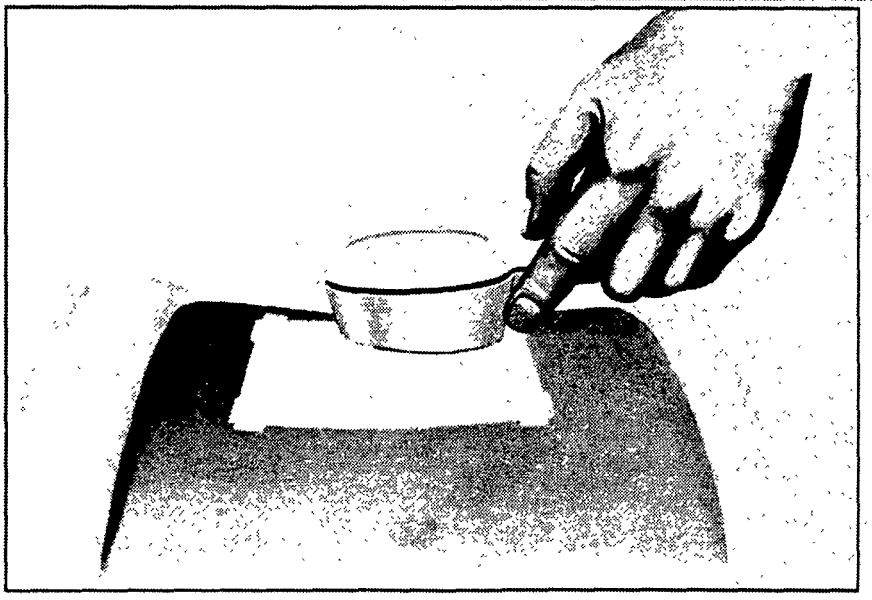
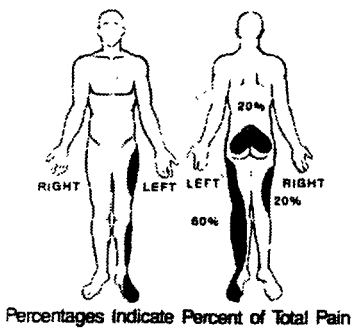


Figure 48

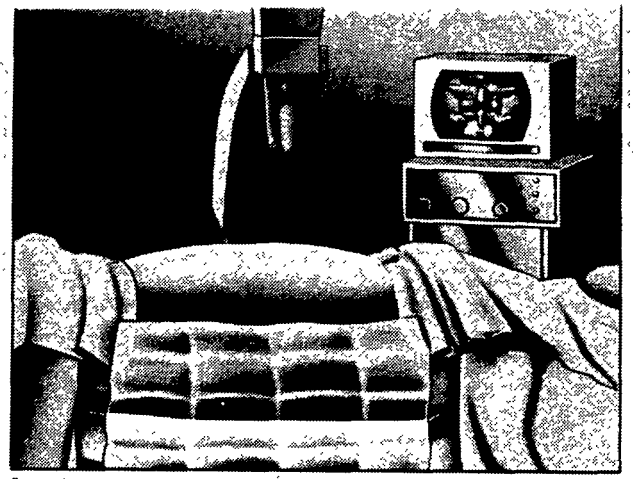
Appendix B3

Placement of Permanent Epidural Stimulating System

Spinal Cord Stimulation: Implantation Technique Notebook, Medtronic, Inc., 1992



Percentages Indicate Percent of Total Pain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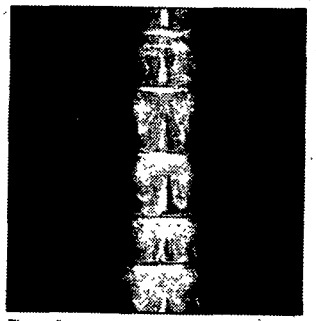
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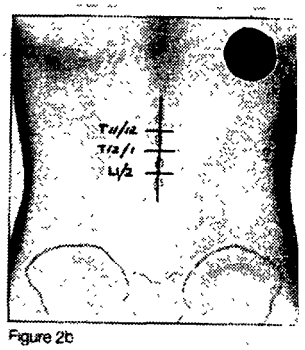

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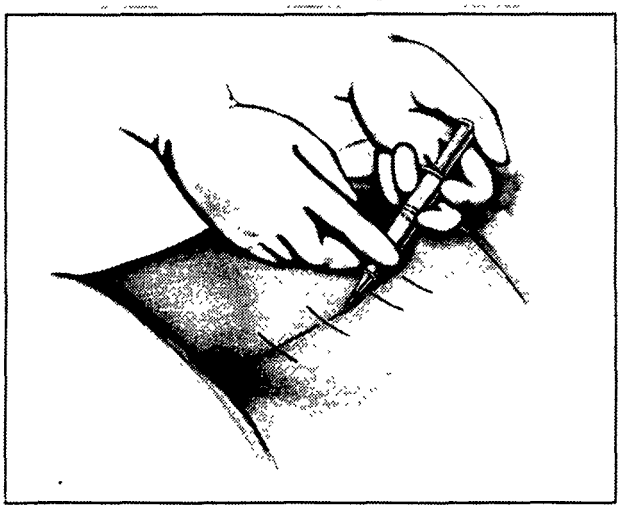
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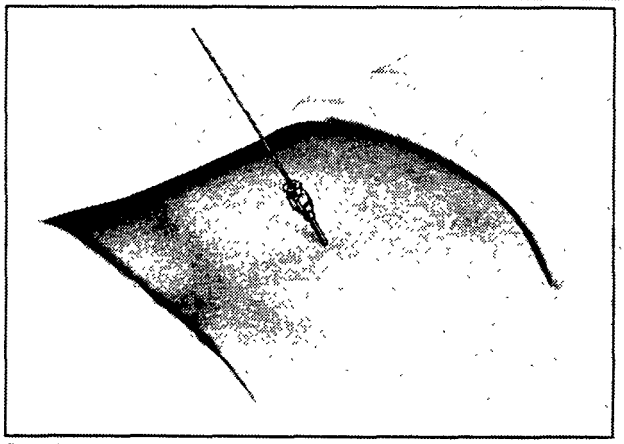
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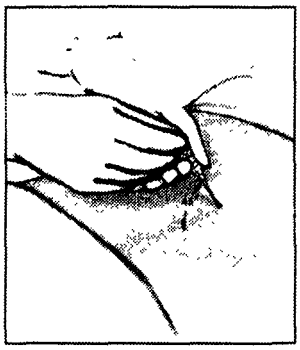
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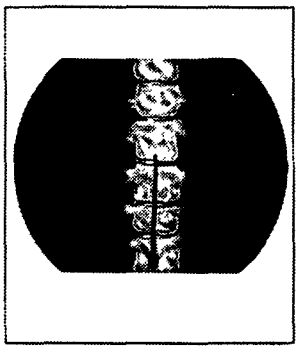
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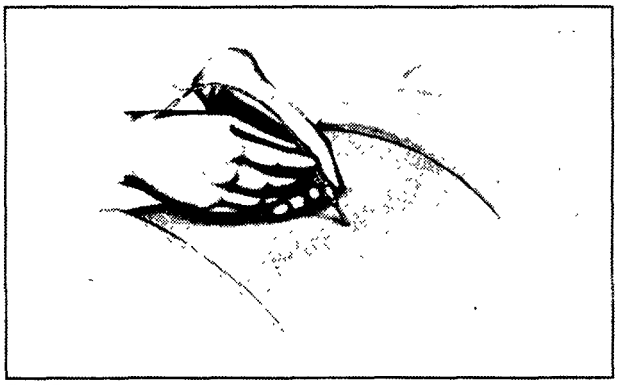
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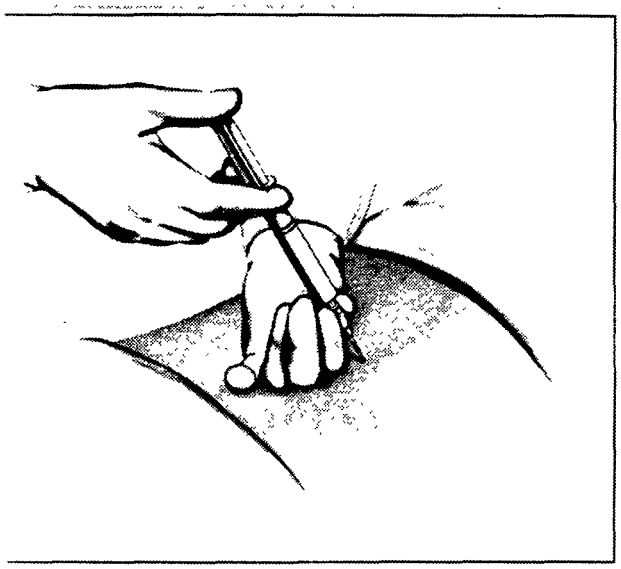
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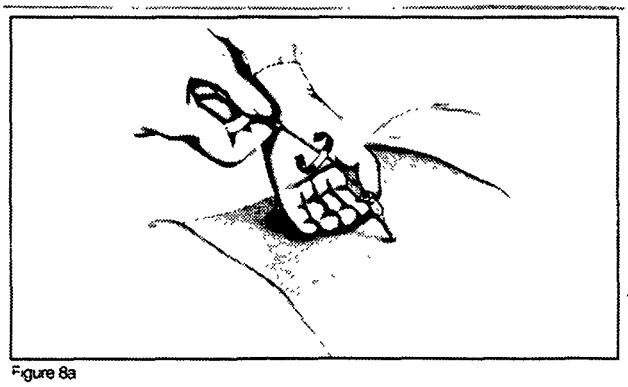
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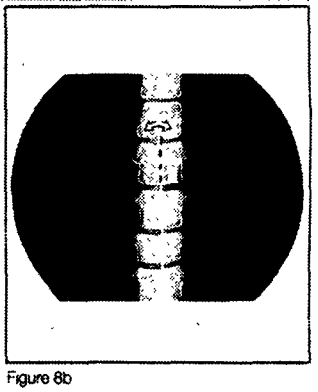
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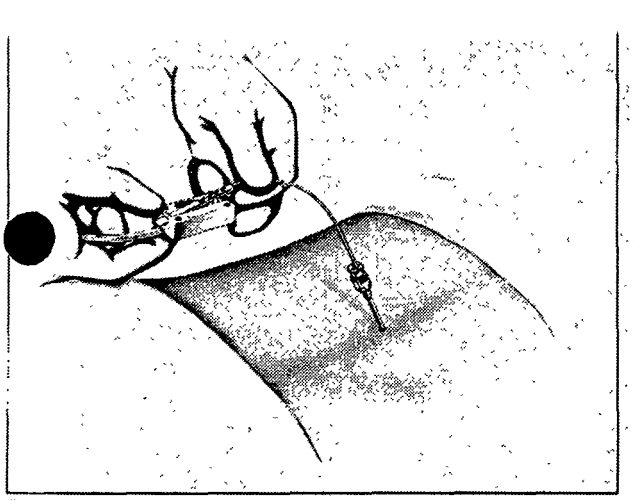

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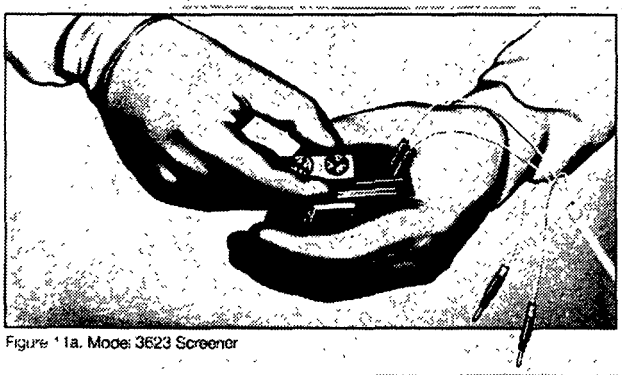


Figure 11a. Model 3623 Screener

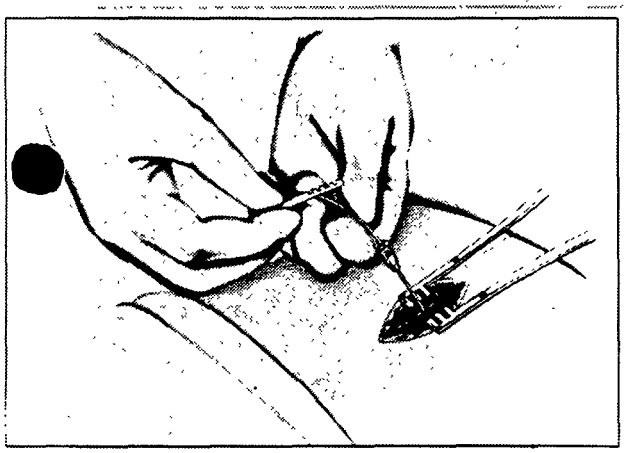


Figure 13

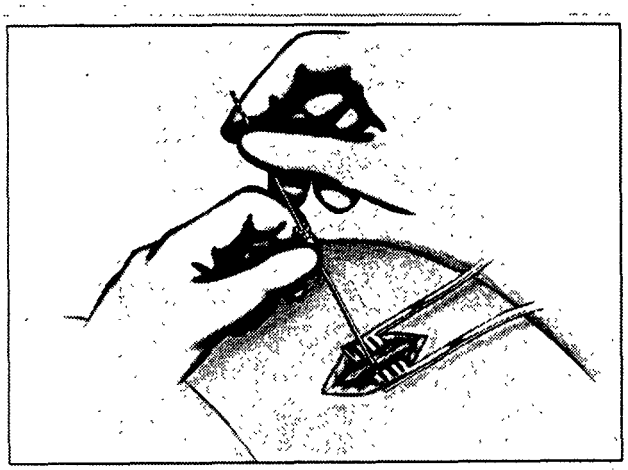
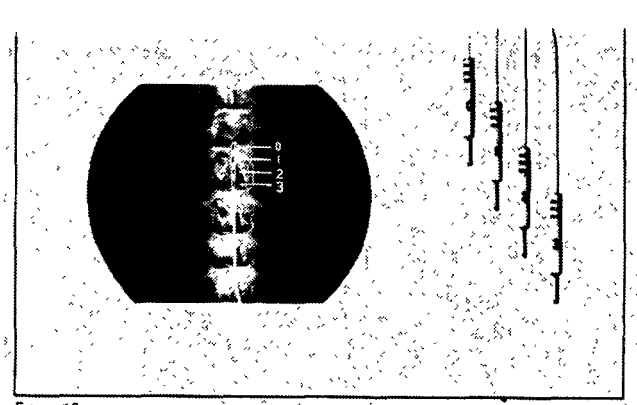


Figure 14a



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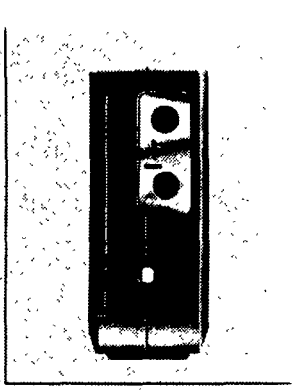
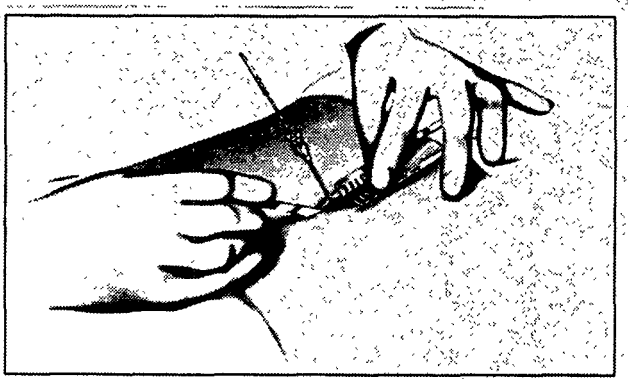


Figure 11b Model 3625 Screener



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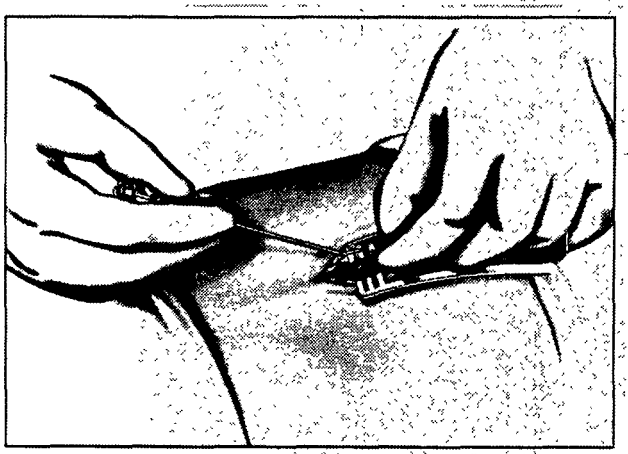

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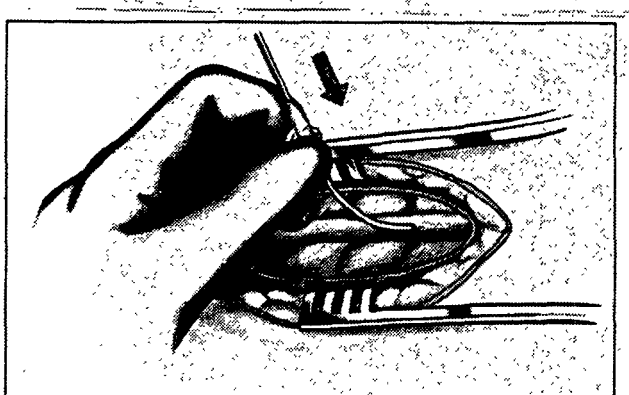

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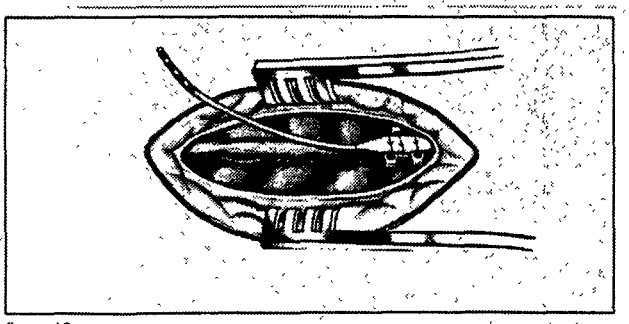

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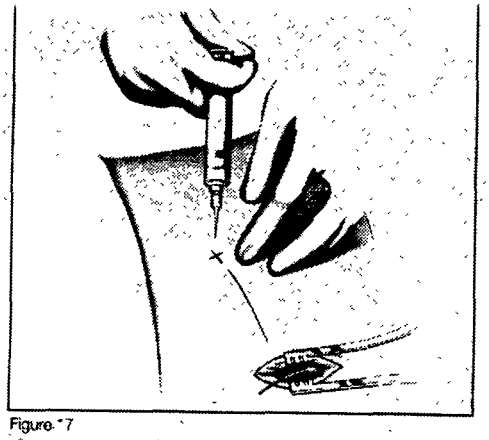

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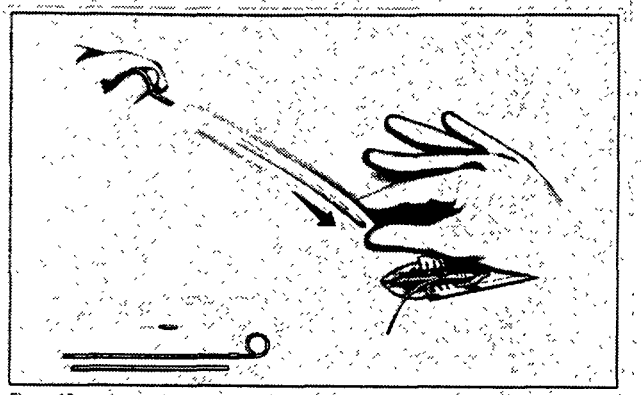

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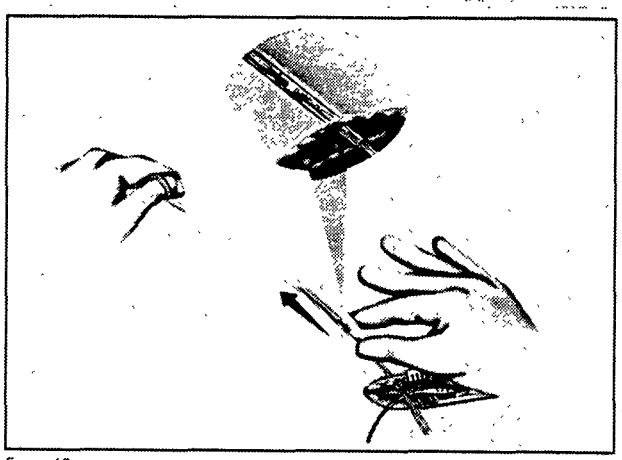

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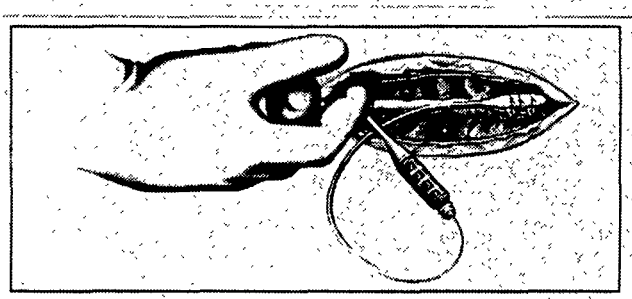

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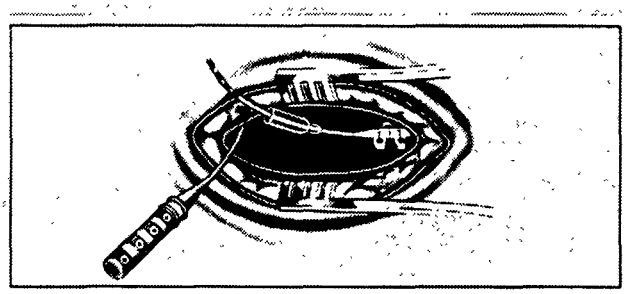

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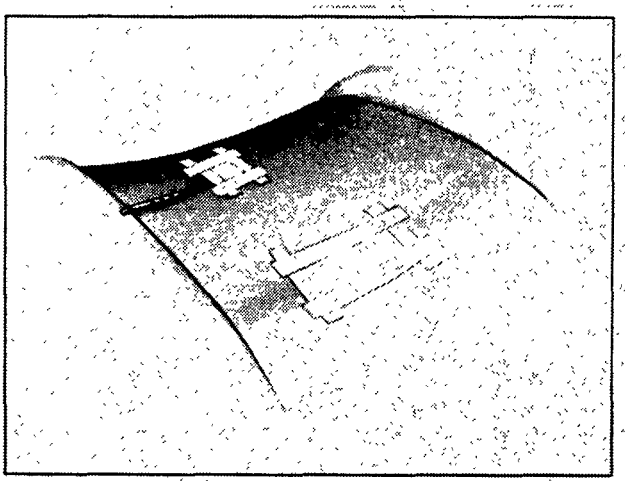

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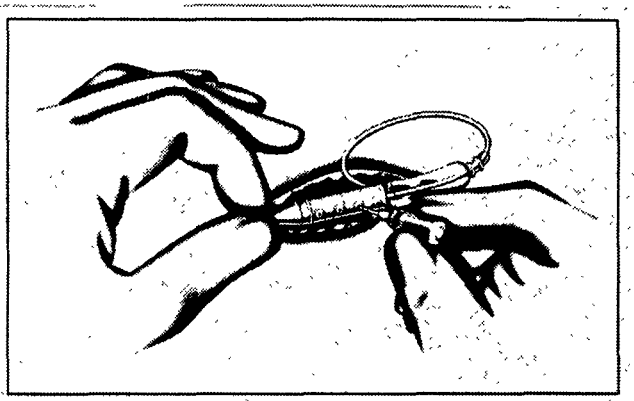

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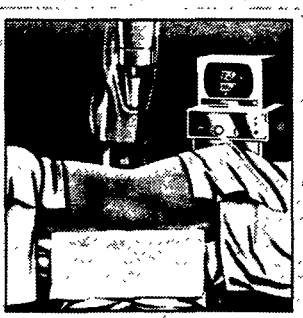
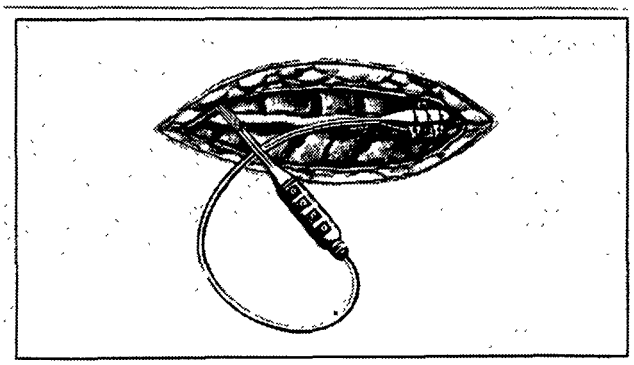


Figure 25

Figure 26



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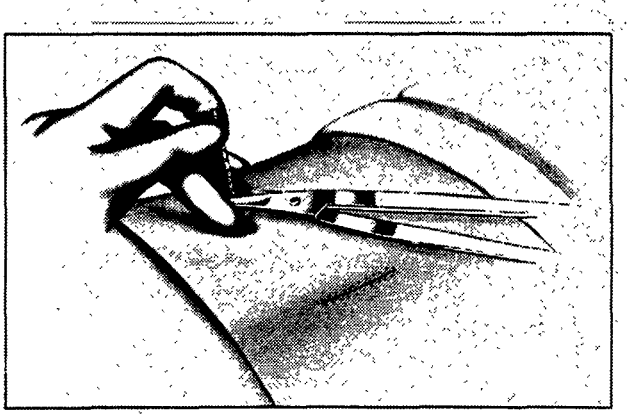

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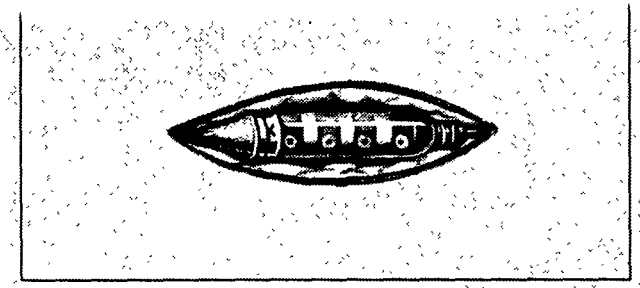

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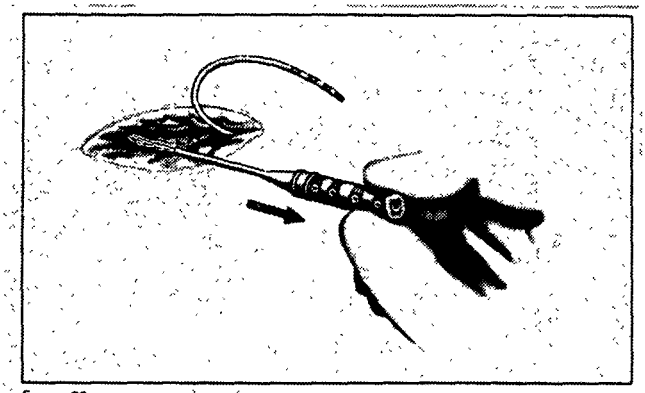

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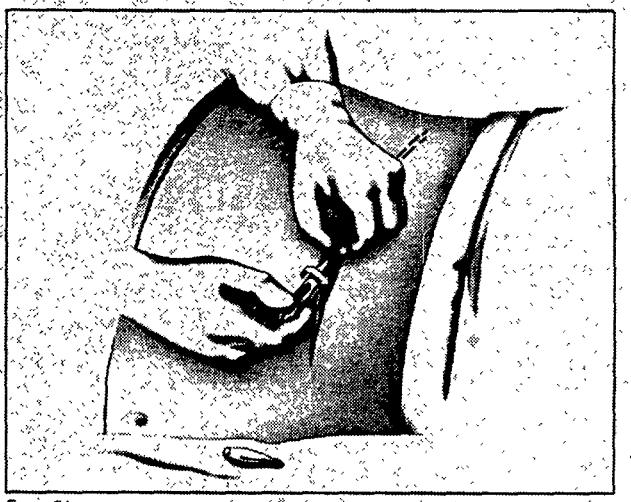

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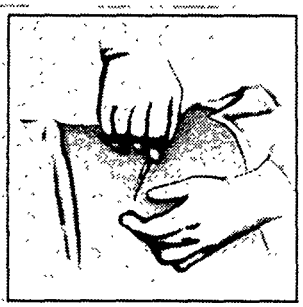

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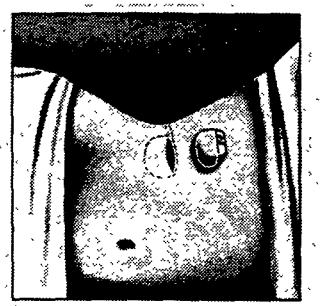


Figure 30b

Figure 35a

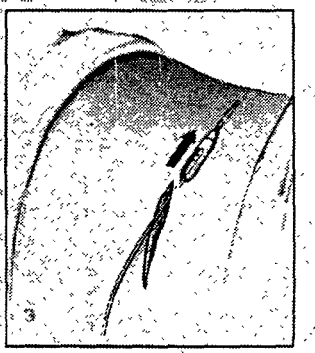
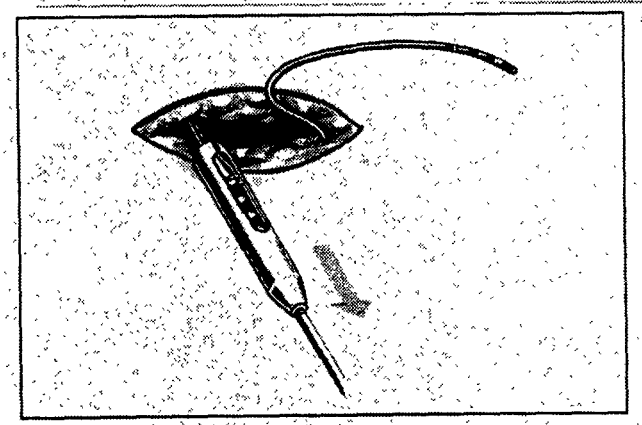


Figure 35b

Figure 30c



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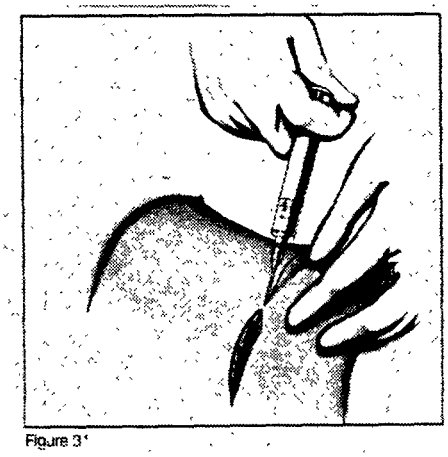

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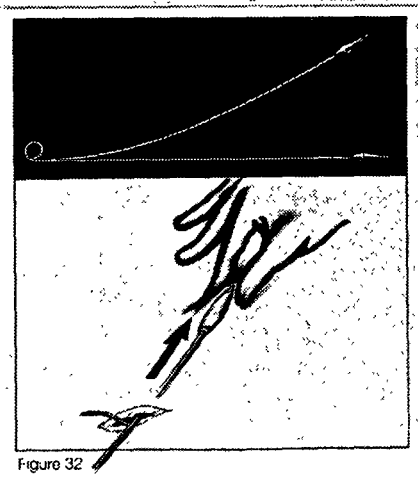

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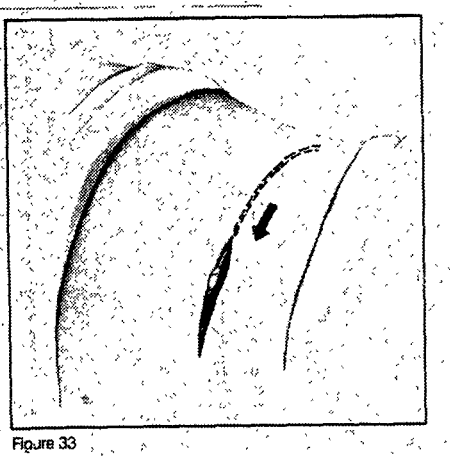

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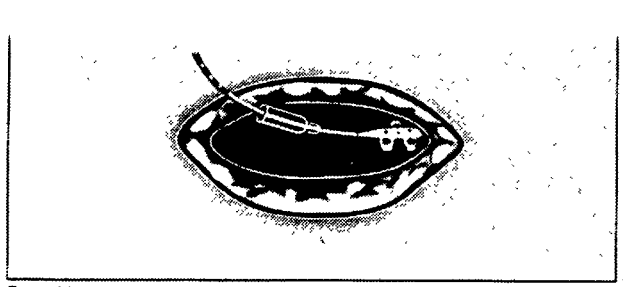

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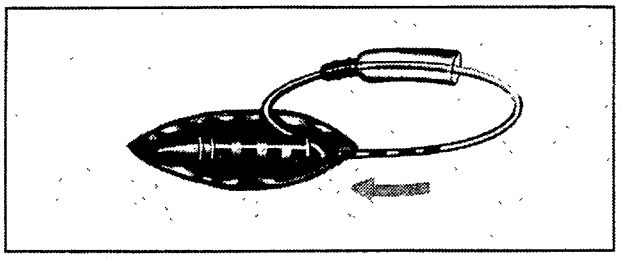
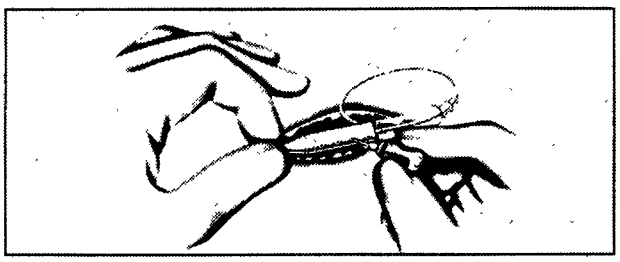


Figure 37a



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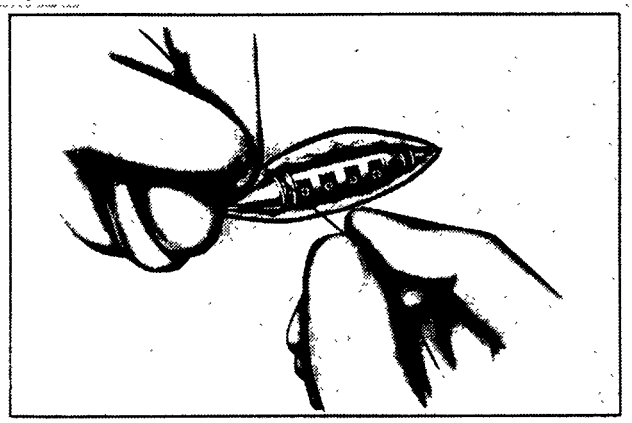

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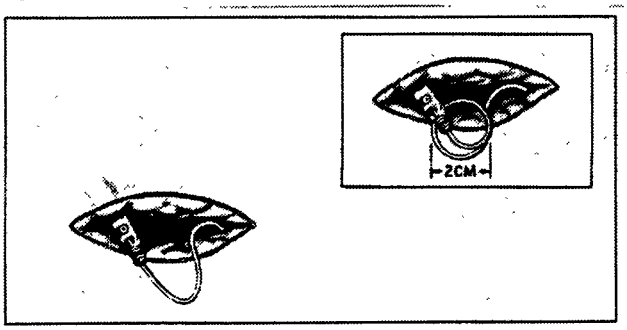

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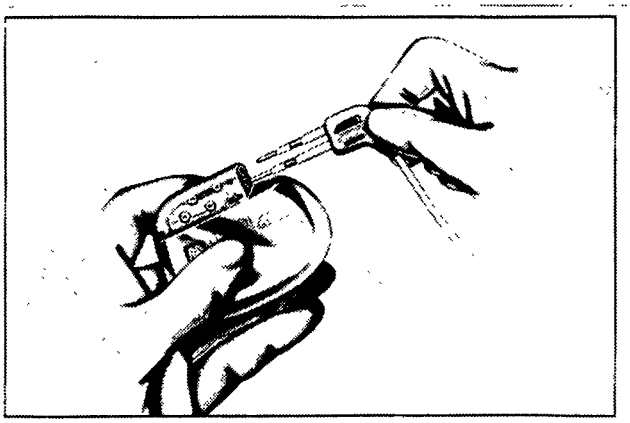

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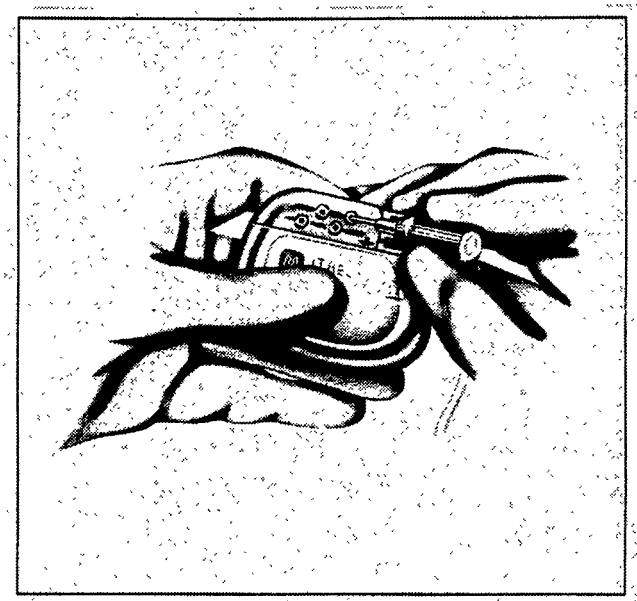

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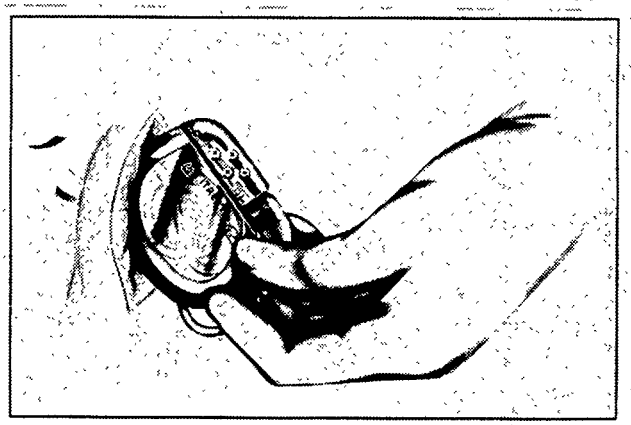

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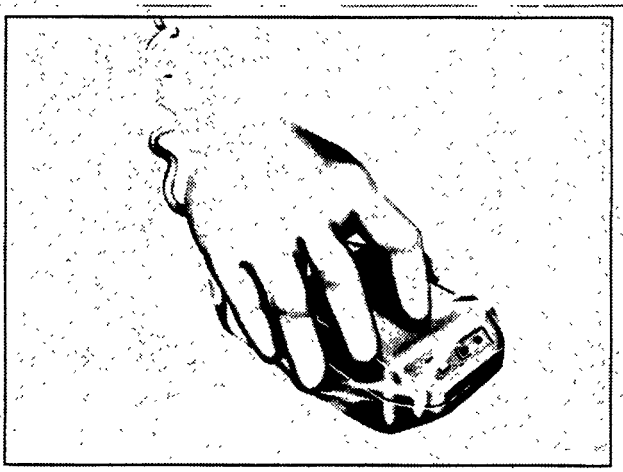

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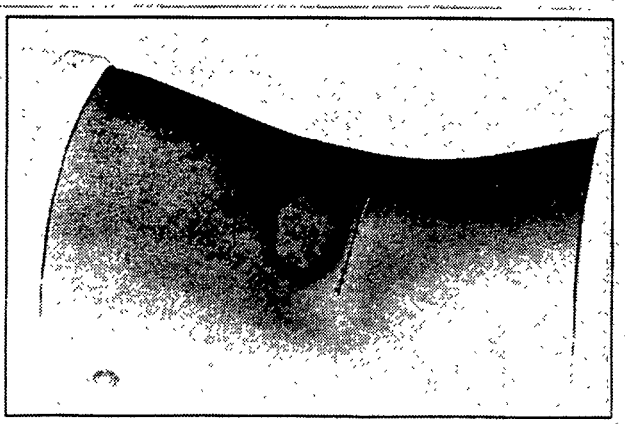

Figure 44

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L2 **Global Period:** 090 **Recommended RVW:** 6.25

CPT Descriptor: Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable infusion pump; without laminectomy

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is nine months from his cancer.

Although his pain has been lessened with the use of oral opiates, the patient is experiencing intolerable side effects, even at relatively low doses. After successful screening, an intrathecal catheter is inserted and it's position verified. The catheter is anchored for connection to an implanted pump. No laminectomy is required for catheter insertion in this patient since the catheter is introduced percutaneously into the subarachnoid space via a Touhy needle inserter. Only a small skin incision is needed in order to connect the catheter to the implanted pump catheter.

Description of Pre-Service Work: Review of hospital admission workup; preparation of equipment required for surgery; and obtaining informed consent. The patient is placed in a lateral recumbent position on a radiolucent table, prepped, draped and marked for catheter placement.

Description of Intra-Service Work: A Touhy needle is inserted in the mid lumbar region such as L3-L4 until the dura is penetrated. The catheter is advanced using fluoroscopy to the desired placement level and patency is verified by injection of nonionic contrast. With the Touhy needle in place, a vertical incision (3-5 cm) is made to expose the supraspinous ligament to provide tissue to secure the catheter segment. The Touhy needle and guide are withdrawn. The catheter is secured with a purse string suture around the catheter. An anchoring sleeve to prevent tension and angulation of the catheter is sutured to the tissue and the catheter is inserted into the sleeve. Skin closure after connection to reservoir or pump.

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
5.99	63650	Percutaneous implantation of neurostimulator electrodes; epidural	50	74	58	32	3/ns 090	yes
6.83	63744	Replacement, irrigation or revision of lumbosubarachnoid shunt	56	75	64	29	3/ns 090	no
(new)* 6.25	**L2**	**Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable infusion pump; without laminectomy**	**70**	**60**	**100**	**63**	**RUC/ ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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 procedure which most resembles L2 is percutaneous implantation of neurostimulation electrodes. (See Diagrams 2 and 3 in Appendix B). In both x-ray control is used to place a small catheter or electrode into a precise spinal position, the catheter and electrodes must be secured in place and attached to a pump or stimulator. The extra work in managing the catheter patient post operatively is the main difference that raises the RVW .26. Another similar procedure is replacement or revision of a lumbarsubarachnoid shunt. This requires x-ray control and manipulation of a small catheter into the subarachnoid space. In some cases, the V-P shunt requires intraperitoneal placement of a catheter and so it has a higher value. Note that the deleted code 63780 is not used for comparison since it was for a much simpler operation; placing a catheter into the epidural space without x-rays, and not using connectors or securing holders (see Diagram 1 in Appendix B).

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63780 (see above) has been used to report combined catheter and pump implantation. However, this code was established at least six years ago to describe implant procedures for cancer pain which involves services significantly different from those associated with management of spasticity and chronic pain.

How often do physicians <u>in your specialty</u> perform this service? ___ Commonly __XX__ Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 60 Low: 20 High: 150

Median Pre-Service Time: 70 Median Post-Service Time: 100

Length of Hospital Stay: 2 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 3.5 @ 18 min.

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 40

Sample Size: 160 Response Rate (%): 49 (31%) MEDIAN RVW: 6.25

25th pctl RVW: 5.50 75th pctl RVW: 7.50 Low: 2.81 High: 20.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L3 **Global Period:** 090 **Recommended RVW:** 9.25

CPT Descriptor: Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable infusion pump; with laminectomy

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is nine months from his cancer.

Although his pain has been lessened with the use of oral opiates, the patient is experiencing intolerable side effects, even at relatively low doses. A midline lumbar incision is made and the adjoining lamina above and below the intended insertion site are exposed. A partial or complete laminectomy is performed to permit the introduction of an intrathecal catheter into the subarachnoid space. After patency and placement of the catheter are confirmed, the catheter is anchored to the deep fascia and connected to the extension catheter from an implanted pump. The skin incision is closed.

Description of Pre-Service Work: Review of hospital admission workup; preparation of equipment required for surgery; and obtaining informed consent. The patient is placed in a lateral recumbent position on a radiolucent table, prepped, draped and marked for catheter placement.

Description of Intra-Service Work: A midline lumbar incision is made and the adjoining lamina above and below the intended insertion site are exposed. A partial or complete laminectomy is performed to permit the introduction of an intrathecal catheter into the subarachnoid space. After patency and placement of the catheter are confirmed, the catheter is anchored to the deep fascia and connected to the extension catheter from an implanted pump. The skin incision is closed.

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
8.95	63655	Laminectomy for implantation of neurostimulator electrodes; epidural	62	109	75	37	3/ns 090	
(new)* 9.25	**L3**	**Implantation, revision or repositioning of intrathecal or epidural catheter, for implantable reservoir or implantable infusion pump; with laminectomy**	**62**	**90**	**120**	**60**	**RUC/ns 090**	**no**

*Specialty recommended RVW

Relationship to Key Reference Service(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):

L3 includes all of the L2 services plus a laminectomy to place the catheter. The value of the additional laminectomy can be compared to two similar procedures done with and without laminectomy:

	Intra time	RVW
Epidural electrode with laminectomy	109	8.95
without laminectomy	74	5.99
	35	2.96
Subarachnoid shunt with laminectomy	116	10.43
without laminectomy	86	7.13
	30	3.3
L3 with laminectomy	90	9.25
L2 without laminectomy	60	6.25
	30	3

These RVWs are the same.

Note: *There is an inconsistency in the old codes 63780 and 63750 in which the laminectomy increases the operative time by only 17 minutes and the RVW by 1.01. Why the old survey obtained such a short operative period for performing a laminectomy is unclear. The laminectomy requires removing a full spinous process and both left and right lumina, plus placing a catheter through the dura and securing it permanently, an activity that takes at least 30 minutes.*

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63750 has been used to report implantation with laminectomy. However, this code was established at least six years ago to describe implant procedures for cancer pain, which involves indications and services significantly different from those associated with management of spasticity and chronic pain.

How often do physicians <u>in your specialty</u> perform this service? ___ Commonly __XX__ Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 90	Low: 45	High: 255
Median Pre-Service Time: 62	Median Post-Service Time: 120	
Length of Hospital Stay: 3	Number of ICU Days: 0	

Number & Level of Post-Hospital Visits: 4.0 @15 min.

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 2

Sample Size: 160	Response Rate (%): .45 (25%)		MEDIAN RVW: 10.00
25th pctl RVW: 7.50	75th pctl RVW: 11.00	Low: 5.50	High: 22.0

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L4 **Global Period**: 090 **Recommended RVW:** 5.60

CPT Descriptor: Removal of previously implanted intrathecal or epidural catheter

Vignette Used in Survey: A 65-year-old male, with metastatic cancer of the prostate to multiple bony sites, has had good pain control following implantation of an intrathecal catheter connected to a subcutaneous pump system. He has developed signs of an infection involving the catheter/pump system, which is removed by re-exploration of the operative tract. This requires reopening the lumbar incision and release of the anchoring sutures around the catheter. The catheter is then withdrawn from the point of spinal insertion, and the wounds are closed.

Description of Pre-Service Work: Review of hospital admission workup; communicating with the referring physician and other health care professionals; and obtaining informed consent. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Description of Intra-Service Work: The previously implanted catheter is removed by re-exploration of the operative tract. This requires reopening the lumbar incision and releasing the anchoring sutures around the catheter. The spinal catheter is disconnected from the catheter coming from the implanted pump or reservoir. The catheter is then withdrawn from the point of spinal insertion, and the wounds are closed.

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
5.60	63746	Removal of entire lumbosubarachnoid shunt system without replacement	49	45	62	29	3/ns 090	no
5.54	63660	Revision or removal of spinal neurostimulator electrodes	49	64	54	30	3/ns 090	yes
(new)* 5.60	**L4**	**Removal of previously implanted intrathecal or epidural catheter**	**60**	**40**	**110**	**45**	**RUC/ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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 L4 is comparable most directly to removing a spinal stimulating electrode. The only difference is that the removal of the spinal subarachnoid catheter requires placement of sutures to avoid a CSF leak, and this justifies the .06 higher value. The other directly comparable procedure is removal of a lumbarsubarachnoid shunt system which has the same RVW value.

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63780 has been used to report implantation, however, there are no codes to accurately describe removal of a previously implanted catheter. The only codes that approximate this service L4 are listed above in the Key Reference Services that describe removal of other types of shunt/catheter/electrode systems.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 40 Low: 20 High: 240

Median Pre-Service Time: 60 Median Post-Service Time: 110

Length of Hospital Stay: 3 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 3.0 @ 15 min.

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Sample Size: 160 Response Rate (%): 47 (29%) MEDIAN RVW: 5.60

25th pctl RVW: 5.50 75th pctl RVW: 6.20 Low: 2.90 High: 15.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L5 **Global Period:** 090 **Recommended RVW:** 2.0

CPT Descriptor: Implantation or replacement of device for intrathecal or epidural drug infusion; subcutaneous reservoir

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is three months from his cancer.

Although his pain has been lessened with the use of oral opiates, the patient is experiencing intolerable side effects, even at relatively low doses. After placement of an intrathecal catheter, a subcutaneous reservoir is implanted and connected to the intrathecal catheter. This requires incising the skin, creating a subcutaneous pocket, and tunneling beneath the skin and subcutaneous tissues to permit passage of the connecting catheter to the location of the intrathecal spinal catheter, to which the reservoir catheter is then connected.

Description of Pre-Service Work: Review of hospital admission workup; communicating with the referring physician and other health care professionals; and obtaining informed consent. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Description of Intra-Service Work: An abdominal incision is made to create a pocket for the reservoir in the deep subcutaneous layer beneath the skin. A tunneling rod is advanced subcutaneously from the abdominal pocket around to the spinal incision site. The spinal catheter is attached to the tunnelling rod and secured with a ligature. The catheter is pulled through to the subcutaneous pocket. The catheter connection is completed at the spinal site by inserting a metal tubing connector, a strain relief sleeve (optional) and placement of ligatures to secure the connection. At the abdominal site, patency of the catheter is confirmed and the catheter is secured with a non-absorbable ligature to the reservoir. The skin incision is closed.

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
6.29	63685	Incision and subcutaneous placement of spinal neurostimulator pulse generator or receiver, ...	53	62	43	29	3/ns 090	yes
(new)* 2	**L5**	**Implantation or replacement of device for intrathecal or epidural drug infusion; subcutaneous reservoir**	**60**	**55**	**103**	**60**	**RUC/ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L5 can be compared to placement of a neurostimulator generator or receiver. However, the subcutaneous reservoir is much smaller, 2-3 cm compared to 5-7 cm, and is much easier to place. L5 is shown in Appendix B in Diagram 1 and is done with L2. The combined RWU for L5 and L2 with (-51) for a single surgeon would be 7.25. This is 1.03 RVW higher than the code 63780 it replaces. The value represents the fact that L5 and L2 will sometimes be done with a simple epidural catheter as in Diagram 1 but often with a more permanent cathter as in Diagram 2.

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63780 has been used to report implantation of both the catheter and the reservoir. However, there are no codes that cover the particular service of implantation of the subcutaneous reservoir including the connection to the separately coded and implanted catheter.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 55	Low: 20	High: 150
Median Pre-Service Time: 60	Median Post-Service Time: 103	
Length of Hospital Stay: 2	Number of ICU Days: 0	

Number & Level of Post-Hospital Visits: 4.0 @ 15 min.

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 11

Sample Size: 160	Response Rate (%): 47 (29%)		MEDIAN RVW: 6.29
25th pctl RVW: 6.16	75th pctl RVW: 8.00	Low: 3.00	High: 13.45

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L6 **Global Period:** 090 **Recommended RVW:** 7.00

CPT Descriptor: Implantation or replacement of device for intrathecal or epidural drug infusion; non-programmable pump

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is nine months from his cancer.

Although his pain has been lessened with the use of oral opiates, the patient is experiencing intolerable side effects, even at relatively low doses. After placement of an intrathecal catheter, a non-programmable pump is implanted and connected to the intrathecal catheter. This requires incising the skin, creating a subcutaneous pocket, and tunneling beneath the skin and subcutaneous tissues to permit passage of the connecting catheter to the location of the intrathecal spinal catheter, to which the pump catheter is then connected.

Description of Pre-Service Work: Review of hospital admission workup; communicating with the referring physician and other health care professionals; and obtaining informed consent. The patient is marked, prepped, and draped. The pump is prepared for implantation. The pump is warmed to 35-45°C. Under sterile conditions, the sterile water is removed from the pump using a Huber type needle and replace with the required amount of prescribed fluid.

Description of Intra-Service Work: An abdominal incision is made to create a pocket for the pump in the deep subcutaneous layer beneath the skin. A tunneling rod is advanced subcutaneously from the abdominal pocket around to the spinal incision site. The spinal catheter is attached to the tunnelling rod and secured with a ligature. The catheter is pulled through to the subcutaneous pocket. The catheter connection is completed at the spinal site by inserting a metal tubing connector, a strain relief sleeve (optional) and placement of ligatures to secure the connection. At the abdominal site, patency of the catheter is confirmed and the catheter is secured with a non-absorbable ligature to the pump. The skin incision is closed

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
6.29	63685	Incision and subcutaneous placement of spinal neurostimulator pulse generator or receiver,	53	62	43	29	3/ns 090	yes
(new)* 7.00	**L6**	**Implantation or replacement of device for intrathecal or epidural drug infusion; non-programmable pump**	**60**	**60**	**110**	**60**	**RUC/ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L6 is matched to placement of a spinal neurostimulator. The non-programmable pump is much larger, about 9 cm in diameter and must be placed in a large subcutaneous pocket. It has to be connected to the spinal catheter and both the catheter and the pump must be secured in place. This extra work plus the addition of post operative time for drug management is reflected in the .71 higher RVW. Insertion of implantable intraarterial infusion pumps (for chemotherapy) 36260 has an RVW of 9.27 and revision 36261 has RVW of 5.04. The average being comparable to the 7.0 for L6.

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63780 has been used to report implantation of both the catheter and the reservoir. However, there are no codes that cover the particular service of implantation of the pump including the connection to the separately coded and implanted catheter.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

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

Median Pre-Service Time: 60 Median Post-Service Time: 110

Length of Hospital Stay: 2 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4.0 @ 15 min.

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 3

Sample Size: 160 Response Rate (%): 45 (28%) MEDIAN RVW: 7.00

25th pctl RVW: 6.25 75th pctl RVW: 8.00 Low: 3.50 High: 20.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L7 **Global Period:** 090 **Recommended RVW:** 7.14

CPT Descriptor: Implantation or replacement of device for intrathecal or epidural drug infusion; programmable pump, including preparation of pump, with or without programming

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is nine months from his cancer.

Although his pain has been lessened with the use of oral opiates, the patient is experiencing intolerable side effects, even at relatively low doses. After successful screening, a spinal infusion pump is implanted. The pump is prepared for implantation by initial analysis and filling with saline solution and warming the pump and the solution. The pump is implanted into a subcutaneous pocket created through a separate skin incision over the abdomen and anchored into place with marginal sutures. The catheter attached to the pump is tunneled beneath the skin and subcutaneous tissues to permit passage of the connecting catheter to the location of the intrathecal spinal catheter, to which the pump catheter is then connected. The saline solution is then replaced with the opiate solution. The catheter is anchored to the fascia and the wounds are closed. Immediately post-operatively, the external programming of the infusion pump is conducted.

Description of Pre-Service Work: Review of hospital admission workup; communicating with the referring physician and other health care professionals; and obtaining informed consent. The patient is marked, prepped, and draped. The pump is prepared for implantation by programming and warming to 35-45°C. Under sterile conditions, the sterile water is removed from the pump using a Huber type needle and replaced with the required amount of prescribed fluid.

Description of Intra-Service Work: The pump is implanted into a subcutaneous pocket created through a separate skin incision over the abdomen and anchored into place with marginal sutures. The catheter attached to the pump is tunneled beneath the skin and subcutaneous tissues to permit passage of the connecting catheter to the location of the intrathecal spinal catheter, to which the pump catheter is then connected. The catheter is anchored to the fascia and the wounds are closed.

Description of Post-Service Work: Immediately post-operatively, the external programming of the infusion pump is conducted. Post-service work also includes patient stabilization; communicating with the patient, family, and other health care professionals (including written and telephone reports and orders); monitoring of patient response and dosage adjustment to achieve the desired patient response; and discharge day management. Additionally, all hospital visits and post-discharge office visits for care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
0.65	63691	Electronic analysis of implanted neurostimulator pulse generator system (may include rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); with reprogramming of pulse generator	0	27t	0	0	3/ns XXX	yes
6.29	63685	Incision and subcutaneous placement of spinal neurostimulator pulse generator or receiver,	53	62	43	29	3/ns 090	
(new)* 7.14	**L7**	**Implantation or replacement of device for intrathecal or epidural drug infusion; programmable pump, including preparation of pump, with or without programming**	**75**	**90**	**120**	**60**	**RUC/ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L7 is matched with placement of a spinal neurostimulator plus electronic analysis of the stimulator for a RVW of 6.94. The implanted programmable pump (diameter 8 cm) is larger than the neurostimulator, it must be placed within a large pocket, a dacron pouch is used to secure it from moving, and it must be prepared, programmed and loaded with saline or medicine at the time of implantation. These extra steps (see Diagram 2) justify the RVW of 7.14. As noted in the justification L6, the values for placement or revision of a pump for chemotherapy have an average RVW of 7.15, which is similar.

FREQUENCY INFORMATION

How was this service previously reported? CPT code 63780 may have been used to report implantation. However, this code was established at least six years ago to describe implant procedures associated with cancer pain and involves completely different services than those associated with spasticity and chronic pain. Additionally, this code does not describe the unique preparation associated with implant of a programmable pump. There are no codes to accurately describe replacement of a device for intrathecal or epidural drug infusion.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

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

Median Pre-Service Time: 75 Median Post-Service Time: 120

Length of Hospital Stay: 3 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4.0 @ 15 min

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 28

Sample Size: 160 Response Rate (%): 48 (30%) MEDIAN RVW: 7.14

25th pctl RVW: 6.50 75th pctl RVW: 9.75 Low: 4.00 High: 20.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L8 **Global Period:** 090 **Recommended RVW:** 5.20

CPT Descriptor: Removal of subcutaneous reservoir or pump, previously implanted for intrathecal or epidural infusion

Vignette Used in Survey: A 65-year-old male presents with bilateral leg and pelvic bone pain (rated 8/10) due to prostate cancer and metastases to multiple bone sites in the lower body. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned for him. His expected survival time is nine months from his cancer.

Placement of an intrathecal catheter and a subcutaneous infusion pump produced several months of satisfactory pain control in the patient. However, he has developed signs and symptoms of infection at the site of the subcutaneous pump pocket. The skin incision over the pump pocket is reopened, the sutures anchoring the pump are removed, the exit catheter is tied and divided, and the pump device is removed. The pocket is irrigated and the wound closed over external drainage.

Description of Pre-Service Work: Review of hospital admission workup; communicating with the referring physician and other health care professionals; and obtaining informed consent. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Description of Intra-Service Work: The skin incision over the pump pocket is reopened, the sutures anchoring the pump are removed, the exit catheter is tied and divided, and the pump device is removed. The pocket is irrigated and the wound closed over external drainage.

Description of Post-Service Work: Patient stabilization; 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 care of the wound for 90 days after the day of the operation are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
4.77	63688	Revision or removal of implanted spinal neurostimulator pulse generator or receiver	48	59	54	30	3/ns 090	yes
(new)* 5.20	**L8**	**Removal of subcutaneous reservoir or pump, previously implanted for intrathecal or epidural infusion**	**60**	**45**	**105**	**45**	**RUC/ns 090**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L8 covers three situations, removal of a small subcutaneous reservoir, removal of a non-programmable pump in a large pocket, and removal of a programmable pump in a dacron pouch which is densely adherent to the subcutaneous pocket. At present about 80% of the pumps placed are programmable and require the most effort to remove. The subcutaneous reservoirs will rarely be removed because cancer patients most likely will die with them in place. Therefore, the RVW reflects the fact that most of the procedures will be for the highest work and intensive procedure of the three. The value of 5.2 reflects the average RVWs of the three procedures corrected for the likely frequency they will be done.

FREQUENCY INFORMATION

How was this service previously reported? There were no codes to accurately describe removal of a previously implanted subcutaneous reservoir or pump.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 45 Low: 15 High: 180

Median Pre-Service Time: 60 Median Post-Service Time: 105

Length of Hospital Stay: 3 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 3.0 @ 15 min.

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Sample Size: 160 Response Rate (%): 47 (29%) MEDIAN RVW: 5.20

25th pctl RVW: 4.77 75th pctl RVW: 6.00 Low: 3.50 High: 15.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L9 **Global Period:** XXX **Recommended RVW:** 0.48

CPT Descriptor: Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); without reprogramming

Vignette Used in Survey: A 65-year-old male presents for an electronic analysis of an implanted infusion pump that delivers opiates and has successfully controlled his pain due to prostate cancer and metastases to multiple bone sites in the lower body and resultant bilateral leg and pelvic bone pain (rated 8/10). Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned. His expected survival time is nine months from his cancer.

The electronic analysis of the implanted pump device, which determines the rate of infusion and the amount of morphine solution remaining in the pump reservoir, indicates a satisfactory infusion rate and residual volume; so no reprogramming is needed.

Description of Pre-Service Work: Review of patient medical chart with special attention to patient's response to drug delivery via implanted infusion pump.

Description of Intra-Service Work: Electronic analysis is performed to determine reservoir status, alarm status, and the drug prescription status. Because the electronic analysis of the implanted pump device indicates a satisfactory infusion rate and residual volume; no reprogramming is needed.

Description of Post-Service Work: Communication with the patient, family, and other health care professionals (including written and telephone reports and orders) on the day of the analysis are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
0.45	63690	Electronic analysis of implanted neurostimulator pulse generator system (may include rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); without reprogramming of pulse generator	0	19t	0	0	3/ns XXX	yes
(new)* .48	**L9**	**Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); without reprogramming**	**0**	**20**	**0**	**0**	**RUC/ns XXX**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L9 can be compared to electronic analysis of a neurostimulator without reprogramming. This is also the same RVW as 93731 electronic analysis of a dual chamber pacemaker without reprogramming. (.45)

FREQUENCY INFORMATION

How was this service previously reported? CPT code 96530 may have been used for refilling and maintenance of an implantable pump or reservoir, however, this code is included in the section for chemotherapy, and thus is inappropriate for spasticity and pain management. Equally important, 96530 was not intended to describe the new generation of pumps requiring analyses to check the reservoir status, the alarm status, and drug prescription status. Depending upon the results of these analyses, the physician may change the patient's dosage, reprogram the pump, and refill the pump.

How often do physicians <u>in your specialty</u> perform this service? ___ Commonly __XX__ Sometimes ___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 20 Low: 5 High: 60

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: 0 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 30 in Past 5 years: 101

Sample Size: 160 Response Rate (%): 46 (29%) MEDIAN RVW: 0.48

25th pctl RVW: 0.45 75th pctl RVW: 0.98 Low: 0.38 High: 2.00

AMA/Specialty Society RVS Update Process Summary of Recommendation

Tracking Number: L10 **Global Period:** XXX **Recommended RVW:** 0.75

CPT Descriptor: Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); with reprogramming

Vignette Used in Survey: A 65-year-old male presents for an electronic analysis of an implanted infusion pump that delivers opiates to control pain because he has begun to experience increasing pain after several months of good control, that has become quite severe (rated 6/10). The patient has prostate cancer and metastases to multiple bone sites in the lower body and resultant bilateral leg and pelvic bone pain. Because of the multiple sites of bone involvement and lack of response to chemotherapy, no radiation therapy or further chemotherapy is planned. His expected survival time is nine months from his cancer.

Analysis of the pump function via external electronic analysis verifies the infusion rate. The pump is then reprogrammed to increase the rate of infusion and control the increased level of pain.

Description of Pre-Service Work: Review of patient medical chart with special attention to patient's response to drug delivery via implanted infusion pump.

Description of Intra-Service Work: Electronic analysis is performed to determine reservoir status, alarm status, and the drug prescription status. Electronic analysis of the pump function verifies the infusion rate. The pump is then reprogrammed to increase the rate of infusion and control the increased level of pain.

Description of Post-Service Work: Communication with the patient, family, and other health care professionals (including written and telephone reports and orders) on the day of the analysis and reprogramming are considered part of the post-operative work for this procedure.

Key REFERENCE SERVICE(S):

1995 RVW	CPT	Descriptor	Harvard Time (minutes)				Phase Spec Global	On MPC Tbl?
			Pre-	Intra-	Hosp-Post	Off-Post		
0.65	63691	Electronic analysis of implanted neurostimulator pulse generator system (may include rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); with reprogramming of pulse generator	0	27t	0	0	3/ns XXX	yes
(new)* 0.75	**L10**	**Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion (includes evaluation of reservoir status, alarm status, drug prescription status); with reprogramming**	**0**	**30**	**0**	**0**	**RUC/ ns XXX**	**n/a**

*Specialty recommended RVW

Relationship to Key Reference Service(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):**

L10 RVW falls between the .65 RVW for reprogramming a neurostimulator pulse generator and .92 for reprogramming a dual chamber pacemaker.

FREQUENCY INFORMATION

How was this service previously reported? CPT code 96530 may have been used for refilling and maintenance of an implantable pump or reservoir, however, this code is included in the section for chemotherapy, and thus is inappropriate for spasticity and pain management. Equally important, 96530 was not intended to describe the new generation of pumps requiring analyses to check the reservoir status, the alarm status, and drug prescription status. Depending upon the results of these analyses, the physician may change the patient's dosage, reprogram the pump, and refill the pump.

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

Estimate the number of times this service might be provided nationally in a one-year period? The Health Care Financing Administration has only recently (3/4/94) expanded it's national Medicare coverage policy on infusion pumps to specifically include coverage for implantable infusion pumps used to administer antispasmodic drugs intrathecally to treat chronic intractable spasticity and to administer opioid drugs for chronic intractable pain. Consequently, Medicare frequency data is not available. [Attachment A presents data about the incidence of the disease(s) that this procedure is designed to treat.]

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

SURVEY DATA:

Specialty(s): American Association of Neurological Surgeons

Median Intra-Service Time: 30 Low: 10 High: 65

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: 0 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 50 in Past 5 years: 120

Sample Size: 160 Response Rate (%): 45 (28%) MEDIAN RVW: 0.75

25th pctl RVW: 0.65 75th pctl RVW: 1.13 Low: 0.48 High: 3.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
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ELECTRODIAGNOSTIC MEDICINE - TAB 9

There has been significant confusion among both physicians and payors regarding the proper way to report H and F reflex nerve conduction studies. In an attempt to reduce confusion and clarify the test that was performed, code 95935 ["H" or "F" reflex study, by electrodiagnostic testing] was deleted and two new codes (95903 and 95934) were added for H and F wave studies. Code 95903 [Nerve conduction, amplitude and latency/velocity study, each nerve, any/all site(s) along the nerve; motor, with F-wave study] is a diagnostic study that involves assessing the peripheral nervous system noninvasively. In F-wave studies, a nerve trunk is stimulated and the response of a muscle it innervates is recorded. F-wave studies are motor nerve conduction studies that primarily evaluate nerves in the limbs. An F-wave study can evaluate the entire length of a nerve from the spinal cord to the muscle it innervates. F-wave studies are useful in detecting proximal pathology that would not otherwise be detected by standard motor and sensory nerve conduction techniques. F-waves involve only the motor nerves. The impulse generated at the stimulating electrode travels up motor nerves to the motor neuron cell bodies in the spinal cord, then travels down the motor nerves to the neuromuscular junction, then to the muscle.

Physicians are responsible for the performance or supervision of patient preparation, placement of ground, stimulating rod and recording surface electrodes, the stimulation of nerves, and recording the of the waveform of the resulting compound sensory nerves or muscle action potentials. The physician also calculates the nerve conduction velocities and generates a report based on this information. The RUC adopted the specialty's recommendation of 0.60 for code 95903.

Short-latency somatosensory testing as described by CPT codes 95925, 95926, and 95927 all require that physicians have additional training beyond residency programs. In addition, the results of these tests are usually the basis of a physician diagnosis which could result in surgery, so it is important that the results are accurate. Codes 95926 [Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in upper limbs] and 95927 [Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in the trunk or head] describe non-invasive ways to assess the central and peripheral nervous systems. A nerve trunk is stimulated and the response of proximal nerves, plexuses, nerve roots, spinal cord and cerebral cortex to this stimulation is recorded. Somatosensory evoked potentials are useful in detecting proximal pathology in nerves that would not otherwise be detected by standard

motor and sensory nerve conduction techniques and are useful for detecting disorders of central nervous function such as multiple sclerosis. In almost all cases, the tests are performed bilaterally and the typical stimulation sites are the arms and legs. The term "short-latency" was added to the beginning of the definition to clearly distinguish it from long-latency evoked potential testing. The codes were separated into upper and lower limbs to recognize that switching from upper to lower limbs requires an increase in work (whether or not the physician is actually performing or supervising the procedure) because several stimulating and recording electrodes must be moved to perform the testing. The physician work of code 95926 is more complex than the reference services 95900 [Nerve conduction, velocity and/or latency study, motor, each nerve] and 95904 [Nerve conduction, velocity and/or latency study; sensory, each nerve] because there are more artifacts to analyze, more trials to consider, more waveforms to measure which are usually less well defined and therefore, harder to assess. The RUC adopted the specialty's recommended value of 0.81 for both codes, which is the 25th percentile of the survey responses.

Codes 95934 [H-reflex, amplitude and latency study; record gastrocnemius/soleus muscle] and 95936 [H-reflex, amplitude and latency study; record muscle other than gastrocnemius/soleus muscle] are diagnostic studies that involve assessing the peripheral nervous system noninvasively. H-reflexes involve sensory and motor nerves. The impulse generated at the stimulating electrode travels up the axons of sensory nerves, then travels to the spinal cord, where it crosses a synapse and activates motor neurons. The impulse then travels down the motor nerves to the neuromuscular junction, then to the muscle. H-reflexes therefore, are able to assess motor and sensory nerve functions and their connections in the spinal cord. H-reflex studies usually involve assessment of the tibial motor nerve and the gastrocnemius-soleus muscle complex and are often done in conjunction with conventional nerve conduction studies (95900 and 95904) of this nerve-muscle pair. Only one or two H-reflex studies are typically done on a single patient on a given occasion.

Physicians are responsible for the performance or supervision of patient preparation, placement of ground, stimulating rod and recording surface electrodes, the stimulation of nerves, and recording the of the waveform of the resulting compound sensory nerves or muscle action potentials. If the test is performed by a technologist, the physician is readily available for consultation and assistance. The physician also calculates the nerve conduction velocities and generates a report and differential diagnosis based on this information. The RUC recommendds 0.51 RVUs for code 95934 and 0.55 for code 95936, which are the survey medians.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
95872	M1	Needle electromyography~~, single fiber, any technique~~ using single fiber electrode, with quantitative measurement of jitter, blocking and/or fiber density, any/all sites of each muscle studied	XXX	1.50 (No Change)

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
95900	M2	Nerve conduction, ~~velocity and/or latency study; motor, each nerve~~ amplitude and latency/velocity study, each nerve, any/all site(s) along the nerve; motor, without F-wave study	XXX	0.42 (No Change)
●95903	M3	motor, with F-wave study	XXX	0.60
95904	M4	sensory	XXX	0.34 (No Change)
95925	M5	~~Somatosensory testing (eg, cerebral evoked potential), one or more nerves~~ Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in upper limbs	XXX	0.81 (No Change)
●95926	M6	in lower limbs	XXX	0.81
●95927	M7	in the trunk or head (To report a unilateral study, use modifier -52 or 09952)	XXX	0.81
95935	M8	~~"H" or "F" reflex study, by electrodiagnostic testing~~ (95935 has been deleted. To report, see 959X1, 959X4, 95-9X5)	XXX	N/A
●95934	M9	H-reflex, amplitude and latency study; record gastrocnemius/soleus muscle	XXX	0.51 (Approved at the Feb95 RUC meeting)
●95936	M10	record muscle other than gastrocnemius/soleus muscle (To report a bilateral study, use modifier -50 or 09950)	XXX	0.55 (Approved at the Feb95 RUC meeting)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: M3 Global Period: XXX **Recommended RVW:** 0.63

CPT Descriptor: Nerve conduction, amplitude and latency/velocity study, each nerve, any/all site(s) along the nerve; motor, with F-wave study

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 50-year-old woman complains of weakness and numbness of her arms and legs for three months. Physical examination shows weakness of distal upper and lower limb muscles, areflexia and stocking-glove sensory loss. Differential diagnostic considerations included axonal or demyelinating polyneuropathies. Electrophysiologic findings included normal sensory potentials, only slightly prolonged motor conduction velocities and markedly prolonged F-wave latencies recorded from both the hand and foot muscles. The F-wave testing results indicate that she has a generalized primarily proximal demyelinating radiculoneuropathy. After a course of prednisone fails, she receives intermittent infusions of human immune globulin, which result in marked clinical improvement.

Most primarily demyelinating neuropathies are diagnosable only by electrodiagnostic techniques, not blood or imaging tests. Omission of F-wave testing will greatly decrease the sensitivity of the motor nerve conduction studies in detecting neuropathies and will decrease the ability of these tests to differentiate between primarily axonal and demyelinating neuropathies which have different etiologies and treatments.

Description of Pre-Service Work:

Pre-service work involves the examiner determining which nerves are to be studied based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

Intra-service work includes physician performance or supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and recording of the waveform of the resulting compound muscle action potentials. The waveform is analyzed with respect to latency, amplitude and configuration. Interelectrode distances are measured and recorded. F-wave studies involve changing the electromyograph's gain setting, time base and filter settings (sometimes), reorienting the stimulating electrode (sometimes) and stimulating motor nerves enough times to generate more than 10 F-waves, which are recorded and analyzed. Test design changes during the course of the study in response to the information obtained.

Description of Post-Service Work:

Post-service work involves calculation of nerve conduction velocities, sometimes calculation of certain F-wave indices that are more sensitive than raw F-wave latencies, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95900	Nerve conduction, velocity and/or latency study, motor, each nerve	0.42
95904	Nerve conduction, velocity and/or latency study; sensory, each nerve	0.34

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 reference services listed above are related services. This new code considers only the physician work and does not include the work performed by technicians or other professionals. The new code does not include distinct evaluation and management services which may be provided in addition to the procedure. As is discussed below, there is more intra-service and post-service physician work involved in M3 than in any of the reference services.

Description of Pre-Service Work:

In all codes, the pre-service work involves the examiner determining which nerves are to be studied based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

Intra-service work includes physician performance or supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and recording of the waveforms of the resulting compound sensory nerve or muscle action potentials. The waveforms are analyzed with respect to latency, amplitude and configuration. Interelectrode distances are measured and recorded. In reference services 95900 and 95904, only a single type of evoked response is recorded. In M3, two distinct types of evoked responses are recorded. In M3, the additional F-wave studies involve changing the electromyograph's gain setting, time base and filter settings (sometimes), reorienting the stimulating electrode (sometimes) and stimulating motor nerves enough times to generate more than 10 F-waves, which are recorded and analyzed. Test design changes during the course of the study in response to the information obtained.

Description of Post-Service Work:

Post-service work involves calculation of nerve conduction latencies or velocities, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up. In reference services 95900 and 95904, only a single type of evoked response is interpreted. In M3, two distinct types of evoked responses are interpreted. In M3, sometimes calculation of certain F-wave indices that are more sensitive than raw F-wave latencies must also be done.

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

The recommended relative values reached for M3 are a weighted average of the median responses obtained from the four societies' surveys

FREQUENCY INFORMATION

How was this service previously reported? 95935 and 95900

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? 60% of all procedures currently coded as 95900

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

SURVEY DATA:

Specialty: American Association of Electrodiagnostic Medicine

Median Intra-Service Time: 10 min Low: 2 min High: 40 min

Median Pre-Service Time: 8 min Median Post-Service Time: 5 min

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 300 in Past 5 years: 1500

Other Data: Other Reference Services: 95933

Sample Size: 73 Response Rate (%): 60% Median RVW: 0.60

25th Percentile RVW: 0.50 75th Percentile RVW: 0.63 Low: 0.39 High: 1.56

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: American Academy of Neurology

Median Intra-Service Time: 10 min Low: 1 min High: 60 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 200 in Past 5 years: 1,000

Other Data: Other Reference Services: 95860, 99241, 99244

Sample Size: 60 Response Rate (%): 42% Median RVW: 0.50

25th Percentile RVW: 0.35 75th Percentile RVW: 0.85 Low: 0.15 High: 1.54

Specialty: American Academy of Physical Medicine and Rehabilitation

Median Intra-Service Time: 30 min Low: 5 min High: 90 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 60 in Past 5 years: 350

Other Data: Other Reference Services: 95935

Sample Size: 100 Response Rate (%): 16% Median RVW: 1.19*

25th Percentile RVW: 0.50 75th Percentile RVW: 4.38 Low: 0.40 High: 10.00

**The AAPMR survey responses were as follows: 0.40, 0.50, 0.50, 0.50, 0.63, 0.63, 0.65, 0.80, 1.58, 2.28, 4.20, 4.38, 4.51, 6.60, 6.94 and 10.00. Given the number of high-end responses, AAPMR believes that some of the respondents must have multiplied their estimated RVW by the number of times this procedure would have to be conducted in order to treat the patient described in the clinical vignette. Thus, AAPMR decided to exclude all responses above 1.58. The median using the remaining responses is 0.63, AAPMR's recommended RVW. The 0.63 value was used in the weighted average, by which the specialty societies reached their consensus recommendation.*

Specialty: American Physical Therapy Association

Median Intra-Service Time: 40 min Low: 9 min High: 90 min

Median Pre-Service Time: 14 min Median Post-Service Time: 15 min

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 250 in Past 5 years: 1250

Other Data: Other Reference Services: 95935

Sample Size: 120 Response Rate (%): 16% Median RVW: 0.85

25th Percentile RVW: 0.59 75th Percentile RVW: 1.56 Low: 0.34 High: 11.20

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: M5 Global Period: XXX **Recommended RVW:** 1.1

CPT Descriptor: Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in upper limbs*

* For the purpose of completing this survey only, answer the survey questions as if the test were bilateral.

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 35-year-old woman complains of numbness in the right arm. Physical examination, MRI of the brain, needle EMG and nerve conduction studies are normal. Median somatosensory evoked potentials are markedly abnormal, with slowing of conduction demonstrated in the cervical spinal cord on right-sided stimulation. MRI of the cervical spine shows T2 hyperintensity in the mid cervical region. Cerebrospinal fluid analysis is positive for high CSF IgG and oligoclonal bands. A presumptive diagnosis of transverse myelitis is made. She recovers after a course of high dose intravenous Solumedrol therapy. In this case the median somatosensory evoked potential abnormalities were the first objective evidence obtained of central nervous system dysfunction.

Description of Pre-Service Work:

Pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

Intra-service work includes physician supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes and recording the resulting evoked potentials at several sites from periphery to cerebral cortex. Multiple trials are averaged since the signals are very small. Test design changes during the course of the study in response to the information obtained.

Description of Post-Service Work:

Post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95900	Nerve conduction, velocity and/or latency study, motor, each nerve	0.42
95904	Nerve conduction, velocity and/or latency study; sensory, each nerve	0.34
95819	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation	1.08

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 reference services listed above are related services. This new code considers only the physician work and does not include the work performed by technicians or other professionals. The new code does not include distinct evaluation and management services which may be provided in addition to the procedure. As is discussed below, there is more intra-service and post-service physician work involved in M5 than in reference services 95900 or 95904. Physician work is comparable to reference service 95819.

Description of Pre-Service Work:

In M5 and in reference services 95900 and 95904, the pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

In reference service 95819, the pre-service work involves the examiner determining which type of electroencephalogram is to be performed based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

In reference services 95900 and 95904 and in M5, intra-service work includes physician performance or supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes and recording of the waveforms of the resulting compound sensory nerve or muscle action potentials, or of the evoked potentials. In M5, multiple sets of recording electrodes are placed over the scalp, neck, and supraclavicular areas (and sometimes arms), since the evoked potentials are recorded at several sites from periphery to cerebral cortex. In reference services 95900 and 95904, only a single set of recording electrodes is attached to the patient. In M5, a much larger number of trials are run than in the reference services. The evoked potentials must be averaged since the signals are very small. In the reference services and in M5, the evoked waveforms are analyzed with respect to latency, amplitude and configuration. Interelectrode distances are measured and recorded. Test design changes during the course of the study in response to the information obtained.

In reference service 95819, intra-service work includes physician performance or supervision of patient preparation, placement of ground and multiple recording scalp surface electrodes, and recording of the waveform of the resulting electroencephalogram. The recording is prolonged, often up to an hour and many types of artifacts must be recognized and eliminated, if possible. Correlation of the waveforms and the patient's clinical condition must be made. Hyperventilation and/or photic stimulation studies are performed.

Description of Post-Service Work:

In reference services 95900 and 95904 and in M5, post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up. In M5, the interpretation of the study is more complicated than in the reference services. There are more artifacts, more trials to consider, more waveforms to measure, usually inter-side and inter-waveform latency differences to calculate, and the waveforms themselves are less well defined and thus harder to assess.

In reference service 95819, post-service work involves interpretation of the lengthy electroencephalogram (viewed either on many pages of paper or many screens on a computer monitor), determination of the significance of artifacts on the record, clinical correlation of the waveforms with the patient's clinical status, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

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

The society member representatives are of the opinion that the physician work is equal for codes M5, M6, and M7 and therefore used a value between the weighted averages of median responses for the two most commonly performed of these services (M5 and M6).

FREQUENCY INFORMATION

How was this service previously reported? 95925

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? 50 - 60% of procedures currently coded as 95925

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

SURVEY DATA:

Specialty: American Association of Electrodiagnostic Medicine

Median Intra-Service Time: 30 min Low: 0 min High: 90 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 25 in Past 5 years: 125

Other Data: Other Reference Services: 95933

Sample Size: 73 Response Rate (%): 41% Median RVW: 1.00

25th Percentile RVW: 0.80 75th Percentile RVW: 1.60 Low: 0.59 High: 3.39

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: American Academy of Neurology

Median Intra-Service Time: 15 min Low: 5 min High: 90 min

Median Pre-Service Time: 5 min Median Post-Service Time: 15 min

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 20 in Past 5 years: 75

Other Data: Other Reference Services: 95861, 99241, 99244

Sample Size: 60 Response Rate (%): 38% Median RVW: 1.00

25th Percentile RVW: 0.80 75th Percentile RVW: 1.25 Low: 0.42 High: 3.00

Specialty: American Academy of Physical Medicine and Rehabilitation

Median Intra-Service Time: 60 min Low: 15 min High: 90 min

Median Pre-Service Time: 10 min Median Post-Service Time: 12.5 min

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 22.5

Other Data: Other Reference Services: 95925

Sample Size: 100 Response Rate (%): 11% Median RVW: 1.84

25th Percentile RVW: 1.10 75th Percentile RVW: 2.75 Low: 0.75 High: 6.30

Specialty: American Physical Therapy Association

Median Intra-Service Time: 30 min Low: 0 min High: 90 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 6 in Past 5 years: 20

Other Data: Other Reference Services: 95925

Sample Size: 120 Response Rate (%): 16% Median RVW: 0.81

25th Percentile RVW: 0.31 75th Percentile RVW: 1.30 Low: 0.00 High: 1.92

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: M6 Global Period: XXX **Recommended RVW:** 1.1

CPT Descriptor: Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in lower limbs*

* For the purpose of completing this survey only, answer the survey questions as if the test were bilateral.

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Over the last two months, a 45-year-old man has noted progressive difficulty in gait, urinary urgency and numbness in his feet. Physical examination is remarkable for diffuse mild (4/5) weakness in the lower limbs (right side worse), hyperactive knee and ankle muscle stretch reflexes with a right Babinski sign and equivocal loss of vibration sense in the feet. The referral diagnoses include cervical spondylosis, motor neuron disease or intracranial pathology (e.g. hydrocephalus or stroke). Bilateral tibial nerve SEPs demonstrate poorly developed and delayed cortical waveforms bilaterally while median SEPs are normal bilaterally. The findings demonstrate involvement of the somatosensory pathways (arguing against motor neuron disease) and suggest spinal cord impairment between the tibial (L5,S1) and median (C6,7) inputs. Combined with the clinical picture, these abnormalities are strongly suggestive of cervical or thoracic myelopathy and allow imaging to be focused on the cervical and thoracic spinal regions. Imaging studies demonstrate a large thoracic disc herniation. He undergoes surgery and eventually recovers completely.

Description of Pre-Service Work:

Pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

Intra-service work includes physician supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes recording the resulting evoked potentials at several sites from periphery to cerebral cortex. Multiple trials are averaged since the signals are very small. Test design changes during the course of the study in response to the information obtained.

Description of Post-Service Work:

Post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95900	Nerve conduction, velocity and/or latency study, motor, each nerve	0.42
95904	Nerve conduction, velocity and/or latency study; sensory, each nerve	0.34
95819	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation	1.08

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 reference services listed above are related services. This new code considers only the physician work and does not include the work performed by technicians or other professionals. The code does not include distinct evaluation and management services which may be provided in addition to the procedure. As is discussed below, there is more intra-service and post-service physician work involved in M6 than in reference services 95900 or 95904. Physician work is comparable to reference service 95819.

Description of Pre-Service Work:

In M6 and in reference services 95900 and 95904, the pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

In reference service 95819, the pre-service work involves the examiner determining which type of electroencephalogram is to be performed based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

In reference services 95900 and 95904 and in M6, intra-service work includes physician performance or supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes and recording of the waveforms of the resulting compound sensory nerve or muscle action potentials, or of the evoked potentials. In M6, multiple sets of recording electrodes are placed over the scalp, neck, and lumbar areas (and sometimes legs), since the evoked potentials are recorded at several sites from periphery to cerebral cortex. In reference services 95900 and 95904, only a single set of recording electrodes is attached to the patient. In M6, a much larger number of trials are run than in the reference services. The evoked potentials must be averaged since the signals are very small. In the reference services and in M6 the evoked waveforms are analyzed with respect to latency, amplitude and configuration. Interelectrode distances are measured and recorded. Test design changes during the course of the study in response to the information obtained.

In reference service 95819, intra-service work includes physician performance or supervision of patient preparation, placement of ground and multiple recording scalp surface electrodes, and recording of the waveform of the resulting electroencephalogram. The recording is prolonged, often up to an hour and many types of artifacts must be recognized and eliminated, if possible. Correlation of the waveforms and the patient's clinical condition must be made. Hyperventilation and/or photic stimulation studies are performed.

Description of Post-Service Work:

In reference services 95900 and 95904 and in M6, post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up. In M6, the interpretation of the study is more complicated than in the reference services. There are more artifacts, more trials to consider, more waveforms to measure, usually inter-side and inter-waveform latency differences to calculate, and the waveforms themselves are less well defined and thus harder to assess.

In reference service 95819, post-service work involves interpretation of the lengthy electroencephalogram (viewed either on many pages of paper or many screens on a computer monitor), determination of the significance of artifacts on the record, clinical correlation of the waveforms with the patient's clinical status, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

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

The society member representatives are of the opinion that the physician work is equal for codes M5, M6, and M7 and therefore used a value between the weighted averages of median responses for the two most commonly performed of these services (M5 and M6).

FREQUENCY INFORMATION

How was this service previously reported? 95925

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? 50 - 60% of procedures currently coded as 95925

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

SURVEY DATA:

Specialty: American Association of Electrodiagnostic Medicine

Median Intra-Service Time: 30 min Low: 0 min High: 90 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 20 in Past 5 years: 113

Other Data: Other Reference Services: 95933

Sample Size: 73 Response Rate (%): 41% Median RVW: 1.00

25th Percentile RVW: 0.90 75th Percentile RVW: 1.55 Low: 0.48 High: 3.22

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: American Academy of Neurology

Median Intra-Service Time: 15 min Low: 2 min High: 90 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 50

Other Data: Other Reference Services: 95861, 99241, 99244

Sample Size: 60 Response Rate (%): 38% Median RVW: 1.20

25th Percentile RVW: 0.90 75th Percentile RVW: 1.40 Low: 0.42 High: 3.00

Specialty: American Academy of Physical Medicine and Rehabilitation

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

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 20

Other Data: Other Reference Services: 95925

Sample Size: 100 Response Rate (%): 10% Median RVW: 1.67

25th Percentile RVW: 1.15 75th Percentile RVW: 2.54 Low: 0.75 High: 4.27

Specialty: American Physical Therapy Association

Median Intra-Service Time: 30 min Low: 0 min High: 120 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 20

Other Data: Other Reference Services: 95925

Sample Size: 120 Response Rate (%): 16% Median RVW: 0.90

25th Percentile RVW: 0.81 75th Percentile RVW: 1.47 Low: 0.00 High: 2.37

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: M7 Global Period: XXX **Recommended RVW:** 1.1

CPT Descriptor: Short-latency somatosensory evoked potential study, stimulation of any/all peripheral nerves or skin sites, recording from the central nervous system; in the trunk or head

* For the purpose of completing this survey only, answer the survey questions as if the test were bilateral.

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 40-year-old man reports back pain in the thoracic and lumbar region. Imaging studies reveal disc herniations at the T6-7 and T10-11 regions, both impinging on the thecal sac. Dermatomal somatosensory evoked potentials are performed stimulating at the T4, T8 and T12 levels on the trunk. While the T4 and T8 somatosensory evoked potentials are normal, the T12 somatosensory evoked potentials are abnormal. These findings suggest that the T10-11 disc herniation is the clinically significant one and direct the surgeon to operate at this level. He recovers uneventfully.

Description of Pre-Service Work:

Pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

Intra-service work includes physician supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes and recording the resulting evoked potentials at several sites from periphery to cerebral cortex. Multiple trials are averaged since the signals are very small. Test design changes during the course of the study in response to the information obtained.

Description of Post-Service Work:

Post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95900	Nerve conduction, velocity and/or latency study, motor, each nerve	0.42
95904	Nerve conduction, velocity and/or latency study; sensory, each nerve	0.34
95819	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation	1.08

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 reference services listed above are related services. This new code considers only the physician work and does not include the work performed by technicians or other professionals. The code does not include distinct evaluation and management services which may be provided in addition to the procedure. As is discussed below, there is more intra-service and post-service physician work involved in M7 than in reference services 95900 or 95904. Physician work is comparable to reference service 95819.

Description of Pre-Service Work:

In M7 and in reference services 95900 and 95904, the pre-service work involves the examiner determining which nerves and/or dermatomes are to be studied based on the referring physician's questions and the available clinical information.

In reference service 95819, the pre-service work involves the examiner determining which type of electroencephalogram is to be performed based on the referring physician's questions and the available clinical information.

Description of Intra-Service Work:

In reference services 95900 and 95904 and in M7, intra-service work includes physician performance or supervision of patient preparation, placement of ground, stimulating and recording surface electrodes, stimulation of nerves and/or dermatomes and recording of the waveforms of the resulting compound sensory nerve or muscle action potentials, or of the evoked potentials. In M7, multiple sets of recording electrodes are placed over the scalp, and spine, since the evoked potentials are recorded at several sites from periphery to cerebral cortex. In reference services 95900 and 95904, only a single set of recording electrodes is attached to the patient. In M7, a much larger number of trials are run than in the reference services. The evoked potentials must be averaged since the signals are very small. In the reference services and in M7, the evoked waveforms are analyzed with respect to latency, amplitude and configuration. Interelectrode distances are measured and recorded. Test design changes during the course of the study in response to the information obtained.

In reference service 95819, intra-service work includes physician performance or supervision of patient preparation, placement of ground and multiple recording scalp surface electrodes, and recording of the waveform of the resulting electroencephalogram. The recording is prolonged, often up to an hour and many types of artifacts must be recognized and eliminated, if possible. Correlation of the waveforms and the patient's clinical condition must be made. Hyperventilation and/or photic stimulation studies are performed.

Description of Post-Service Work:

In reference services 95900 and 95904 and in M7, post-service work involves determination of the latency and amplitude of the evoked potentials, comparison to normal values, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up. In M7, the interpretation of the study is more complicated than in the reference services. There are more artifacts, more trials to consider, more waveforms to measure, usually inter-side and inter-waveform latency differences to calculate, and the waveforms themselves are less well defined and thus harder to assess.

In reference service 95819, post-service work involves interpretation of the lengthy electroencephalogram (viewed either on many pages of paper or many screens on a computer monitor), determination of the significance of artifacts on the record, clinical correlation of the waveforms with the patient's clinical status, summarization of clinical and electrodiagnostic data, physician interpretation, generation of a differential diagnosis and sometimes suggestions for further work-up.

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

The society member representatives are of the opinion that the physician work is equal for codes M5, M6, and M7 and therefore used a value between the weighted averages of median responses for the two most commonly performed of these services (M5 and M6).

FREQUENCY INFORMATION

How was this service previously reported? 95925

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? 0.5 - 1.0% of procedures currently coded as 95925

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

SURVEY DATA:

Specialty: American Association of Electrodiagnostic Medicine

Median Intra-Service Time: 35 min Low: 5 min High: 105 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 5

Other Data: Other Reference Services: 95933, 95937

Sample Size: 73 Response Rate (%): 40% Median RVW: 1.30

25th Percentile RVW: 0.95 75th Percentile RVW: 1.80 Low: 0.48 High: 3.75

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: American Academy of Neurology

Median Intra-Service Time: 15 min Low: 5 min High: 60 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Other Data: Other Reference Services: 95861, 99241, 99244

Sample Size: 60 Response Rate (%): 33% Median RVW: 1.15

25th Percentile RVW: 1.00 75th Percentile RVW: 1.20 Low: 0.42 High: 2.23

Specialty: American Academy of Physical Medicine and Rehabilitation

Median Intra-Service Time: 60 min Low: 15 min High: 90 min

Median Pre-Service Time: 10 min Median Post-Service Time: 12.5 min

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 22.5

Other Data: Other Reference Services: 95925

Sample Size: 100 Response Rate (%): 11% Median RVW: 1.84

25th Percentile RVW: 1.10 75th Percentile RVW: 2.75 Low: 0.75 High: 6.30

Specialty: American Physical Therapy Association

Median Intra-Service Time: 40 min Low: 0 min High: 120 min

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

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Other Data: Other Reference Services: 95925

Sample Size: 120 Response Rate (%): 16% Median RVW: 0.81

25th Percentile RVW: 0.81 75th Percentile RVW: 1.40 Low: 0.00 High: 2.43

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

TRANSPERINEAL RADIOACTIVE SUBSTANCE INSERTION OF THE PROSTATE - TAB 10

Codes 55859 [Transperineal placement of needles or catheters into prostate for interstitial radioelement application, with or without cystoscopy] and 76965 [Ultrasonic guidance for interstitial radioelement application] are new technology for the treatment of prostate cancer. Eight years ago, the advent of the PSA test and the development of transrectal sonography changed the course of treatment for prostate cancer. Radiation treatment for prostate cancer involves three steps: 1) sonographic control for the evaluation of the prostate (services that are part of code 76965); 2) placement of needles into the prostate (described by code 55859); and 3) introduction of radioactive seeds into the needles. The "seeds" are made to fit through an 18 gauge needle. In accordance to dosimetric calculations, the physician must ensure that the seeds are properly aligned so that the entire gland is treated. Usually the patient experiences acute urinary retention after the placement of the seeds and must stay in the hospital overnight.

Code 55859 [Transperineal placement of needles or catheters into prostate for interstitial radioelement application, with or without cystoscopy] involves stabilizing the prostate, placing needles into the prostate, and implanting radioactive seeds. The procedure includes a cystoscopy, which is done to ensure that no seeds were misdirected into the bladder. The specialty society noted that this procedure has no "quiet time" as approximately 78 needles are placed into the prostate. The RUC recommends 14.00 RVUs for code 55859, which was also the survey median.

Code 76965 [Ultrasonic guidance for interstitial radioelement application] describes the sonography required for the physician to visualize placement of the radioelements. Placement of radioelements into the prostate is always done with ultrasonic guidance. This continuous ultrasonic guidance is not comparable to brachytherapy (codes 77761-77799) which is performed during a set period of time. The RUC determined that the work of 76965 was comparable to that of CPT code 76941 [Ultrasonic guidance for chorionic villus sampling, radiological supervision and interpretation] which has an RVU of 1.34, and lowered the specialty recommendation of 1.65 RVUs to 1.34 RVUs.

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
●55859	K1	Transperineal placement of needles or catheters into prostate for interstitial radioelement application, with or without cystoscopy (For interstitial radioelement application, see 77776-77778) (For ultrasonic guidance for interstitial radioelement application, see 7696X)	090	14.00
●76965	K2	Ultrasonic guidance for interstitial radioelement application	XXX	1.34

SUMMARY OF RECOMMENDATION

Tracking Number: KI___ Global Period: 090 Recommended RVW: 14.00

CPT Descriptor: Transperinеal placement of needles or catheters into prostate for interstitial radioelement application, with our without cystoscopy

(For interstitial radioelement application, see 77776-7778)

(For ultrasonic guidance for interstitial radioelement application, see 769XX)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:
A 60-year old male with localized Stage A1-B2, prostate cancer without evidence of metastatic disease. Previous biopsy confirmed cancer.

Description of **Pre-Service Work:**
Orders, scrubbing, etc.

Description of **Intra-Service Work:**
Patient is placed under general or spinal anesthesia. Under ultrasound guidance, the urologist positions template for exact coordinates as was done in pre-op ultrasound study. The urologist transperineally stabilizes the prostate to the bladder with sutures or needles. The urologist transperineally inserts approximately 30-45 needles into the prostate according to coordinates. The radioactive seeds are inserted through the needles and placed (maximum tolerance allowed 12 mm) to allow for the entire prostate field to be irradiated. The urologist performs a cystoscopy to ensure that no seeds were misdirected into the bladder, the prostate stabilization needles are removed and a Foley catheter is placed.

Description of **Post-Service Work:**
Patient is observed as outpatient for 24 hours and discharged. Patient returns to urologist at one week, one month and three months intervals for post-op evaluation.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
61770	Stereotactic localization, any method, including burr hole(s), with insertion of catheter(s) for brachytherapy	15.14
67218	Radiation by implantation of source (includes removal of source)	12.73
55845	Prostatectomy; with bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes	26.73
50230	Nephrectomy, radical with regional lymphadenectomy and/or vena caval thrombectomy	20.56

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 61770 is the best reference code because it uses comparable technology in a different area of the body. We believe this reference code requires very similar technical skill and physical and mental effort. These procedures are very similar and should be valued accordingly. We also believe transperineal seed implant is similar to 67218, which uses comparable technology on the eye, although this code is less difficult because the radioactive seeds are sutured to the outside of the eye rather than inserted into the body.

FREQUENCY INFORMATION

How was this service previously reported? 77778 (billed as co-surgeons)

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? 5,000

Is this service performed by many physicians across the United States? _X_ Yes, approximately 1000 urologists

SURVEY DATA:

Specialty: American Urological Association

Median Intra-Service Time: 90 min Low: 40 min High: 300 min

Median Pre-Service Time: 50 mins Median Post-Service Time: 40 mins.

Length of Hospital Stay: 1 day Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: three level 3 (99213) visits

Number of Times Provided in Past 12 months (Median): 20 in Past 5 years: N/A

Other Data: _____

Sample Size: 40 Response Rate (%): 62% 25/40 Median RVW: 14.00

25th Percentile RVW: 6.81 75th Percentile RVW: 19 Low: 3.0 High: 25.00

Tracking Number: K2 Global Period: XXX **Recommended RVW:** 1.65

CPT Descriptor: Ultrasonic guidance for interstitial radioelement application

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:
A 60-year old male with localized Stage A1-B2, prostate cancer without evidence of metastatic disease. Previous biopsy confirmed cancer.

Pre-service Work:
1) Review history and physical exam, previous imaging studies, and treatment plan
2) Quality assurance of ultrasound equipment.

Intra-service Work:
Urologist or radiologist places ultrasound probe into rectum for ultrasound guidance. The stabilizing unit is adjusted until the axis of the probe and the images of the ultrasound monitor are identical at each 5mm interval. The placement of needles used to stabilize the prostate to the bladder are confirmed with ultrasonic imaging. Approximately 30-45 seed needles are placed into the coordinates on the template grid and are advanced through the perineum into the prostate until the base ultrasonic image shows the needle tip to be in the proper coordinates. Tolerance of ±2 mm dimensional accuracy is confirmed by biplanar ultrasound or a combination of ultrasound and fluoroscopy. After the needles have been inserted, the stabilization apparatus is removed.

Post-service Work:
1) The physician interprets the resulting ultrasonic and flourscopic (if used) images in comparison to treatment plan for homogeneity of seed distribution.
2) Issuance of written radiologic/procedural report.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
Urology		
76942	Ultrasonic guidance for needle biopsy, radiological supervision and interpretation	.67
76872	Echography, transrectal	.69
Radiology		
77263	Therapeutic radiology treatment planning; complex	3.14
76942	Ultrasonic guidance for needle biopsy, radiological supervision and interpretation	.67
77290	Therapeutic radiology simulation-aided field setting; complex	1.56

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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): AUA and ACR have combined our survey data to achieve an acceptable response of 36 physicians. We then took the median number from the combined data. We believe this is a fair methodology, one approved by the RUC, and feel this service has been placed appropriately in its family of codes. We also believe this code to be placed appropriately because it's intensity is in line with other RUC approved ultrasound work values.

Example

Code	Median Total Time (from RUC	1995 RVW	Intensity RVW/Time
76941	68	1.34	0.01970588
76945	30	.67	0.02233333
76975	45	.81	0.018
769XX	70	1.65	0.02357143

FREQUENCY INFORMATION

How was this service previously reported? N/A

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? 5,000

Is this service performed by many physicians across the United States? _X_ Yes

SURVEY DATA:

Specialty: _____

Median Intra-Service Time: _____ Low: _____ High: _____

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

Length of Hospital Stay: _____ Number of ICU Days: _____

Number & Level of Post-Hospital Visits:

Number of Times Provided in Past 12 months (Median): _____ in Past 5 years: _____

Other Data: _____

Sample Size: _____ Response Rate (%): _____ Median RVW: _____

25th Percentile RVW: _____ 75th Percentile RVW: _____ Low: _____ High: _____

Please complete the following if <u>more than one specialty society</u> was involved in developing the recommendation:

Specialty: American Urological Association

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

Median Pre-Service Time: 30 mins. Median Post-Service Time: 12.5 mins.

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 17.5 in career:

Other Data:

Sample Size: 40 Response Rate (%): 45% (18/40) Median RVW: 1.2

25th Percentile RVW: .70 75th Percentile RVW: 2.75 Low: .60 High: 6.0

Specialty: American College of Radiology

Median Total Time: 70 mins. Low 30 mins. High: 240 mins.

25th Percentile for Total Time: 55 mins 75th Percentile for Total Time: 90 mins.

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 21 in career:

Other Data:

Sample Size: 100 Response Rate (%): 18% (18/100) Median RVW: 2.65

25th Percentile RVW: 1.5 75th Percentile RVW: 3.57 Low: .70 High: 9.89

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

SPECIAL OTORHINOLARYNGOLOGIC SERVICES - TAB 11

Code 92525 [Evaluation of swallowing and oral function for feeding] is a new code which describes an evaluation that is performed by a speech pathologist and/or an otolaryngologist to determine the ability of the patient to swallow while at the same time maintaining adequate nutrition. This test is usually performed on patients that have dysphagia. Initially the clinician will examine the structure and function of the lips, tongue, and palate, and observe the patient during feeding. Based on this evaluation, the clinician will determine if it is appropriate to proceed with a barium swallow study. The service is currently reported as code 92506 [Medical evaluation, speech, language and/or hearing problems], which is appropriate because the descriptor makes no reference to evaluation of the swallowing function. The specialty noted that the code is an evaluation code that would only be reported once and that the barium swallow is performed in approximately 80% of the cases. The RUC lowered the specialty's recommendation from 1.72 to 1.61 to better account for the times when the barium swallow might not be done.

Code 92526 [Treatment of swallowing dysfunction and/or oral function for feeding] is a new code for the treatment of swallowing once dysfunction is diagnosed. The clinician directs a treatment protocol that includes oral motor exercises, thermal stimulation, and safe swallowing techniques. This procedure is usually performed by a speech pathologist, and has previously been reported with code 92507 [Speech, language or hearing therapy, with continuing medical supervision; individual]. The RUC recommends 0.64 RVUs for code 92526.

Code 92597 [Evaluation for use and/or fitting of voice prosthetic or augmentative/alternative communication device to supplement oral speech] is new code that describes evaluating the patient for a voice prosthetic device. This device is used by patients that have had their larynx removed. Prior to surgery the patient indicates to the otolaryngologist their desire to have the option of using a voice prosthetic device so that the surgeon creates a fistula. The clinician (usually a speech-language pathologist) will fit the patient for the prosthesis and insert the device. The clinician will then conduct tests to make sure the device is properly located and to determine whether or not the patient can communicate using the device. The RUC recommends 1.50 RVUs for code 92597.

Code 92598 [Modification of voice prosthetic or augmentative/alternative communication device to supplement oral speech] describes the repair or modification of the device, which is often needed to maintain usefulness for the patient as his/her vocabulary and communication abilities improve or deteriorate. The specialty society noted that this involves face to face patient contact, particularly with new

users. In established patients it is not always necessary for the patient to be present. The RUC reduced the specialty recommendation from 1.04 to 0.99 RVUs.

Code 92510 [Aural rehabilitation following cochlear implant (includes evaluation of aural rehabilitation status and hearing, therapeutic services) with or without speech processor programming] involves speech perception training, instruction about assistive devices, communication therapy, and family counseling. The first year after cochlear implant is crucial to determine whether the patient is a successful recipient of an implant, and there may be 30 to 70 patient visits. This therapy is required on an almost continuous basis involving numerous visits to the clinician during the first year after implant, with those visits tapering off as the patient becomes more familiar with the implant. The typical recipient of a cochlear implant has had limited experience with sound. The RUC accepted the specialty's recommendation of 1.50 RVUs for this procedure.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•92525	AI1	Evaluation of swallowing and oral function for feeding	XXX	1.61
•92526	AI2	Treatment of swallowing dysfunction and/or oral function for feeding	XXX	0.64
•92597	AI3	Evaluation for use and/or fitting of voice prosthetic or augmentative/alternative communication device to supplement oral speech	XXX	1.50
•92598	AI4	Modification of voice prosthetic or augmentative/alternative communication device to supplement oral speech	XXX	0.99
•92579		Visual reinforcement audiometry (VRA)	XXX	No work value recommendation at this time
•92510	AI5	Aural rehabilitation following cochlear implant (includes evaluation of aural rehabilitation status and hearing, therapeutic services) with or without speech processor programming	XXX	1.50
92506		~~Medical e~~Evaluation~~,~~ of speech, language~~, and/or hearing problems~~ voice, communication, auditory processing, and/or aural rehabilitation status	XXX	0.86 (No Change)
92507		Treatment of ~~S~~speech, language~~, or hearing therapy, with continuing medical supervision~~ voice, communication, and/or auditory processing disorder (includes aural rehabilitation); individual	XXX	0.52 (No Change)

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
92508		group, two or more individuals	XXX	0.26 (No Change)
92516		Facial nerve function studies (e.g., electroneuronography)	XXX	0.43 (No Change)
92546		~~Torsion swing test, with recording~~ Sinusoidal vertical axis rotational testing	XXX	0.29 (No Change)
92555		Speech audiometry; threshold ~~only;~~	XXX	No work value recommendation at this time
92556		~~threshold and discrimination~~ with speech recognition	XXX	No work value recommendation at this time
92557		~~Basic e~~Comprehensive audiometry threshold evaluation and speech recognition (92553 and 92556 combined)~~, (pure tone, air and bone, and speech threshold and discrimination)~~ (For hearing aid evaluation and selection, see 92590 and 92595)	XXX	No work value recommendation at this time
92574		~~Swinging story test~~ (92574 has been deleted)	XXX	N/A
92578		~~Delayed auditory feedback test~~ (92578 has been deleted)	XXX	N/A
92580		~~Electrodermal audiometry~~ (92580 has been deleted)	XXX	N/A

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
92585		~~Brainstem evoked response recording (evoked response (EEG) audiometry~~ Auditory evoked potentials for evoked response audiometry and/or testing of the central nervous system	XXX	0.50 (No Change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AI1 Global Period: XXX **Recommended RVW:** 1.72

CPT Descriptor: Evaluation of swallowing and oral function for feeding

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year old male inpatient, 1 week post-CVA, reports discomfort swallowing liquids, foods, and medications. Frequent throat clearing and coughing during mealtime are reported by patient and family, (and indicates increased risk for aspiration). Voice quality is "wet" and sounds as if saliva is pooling in the laryngeal area. Because of the increased risk of aspiration, a clinical bedside/table side swallowing study is indicated. History is obtained from the patient. An examination of the structure and function of the lips, tongue, and palate is performed at bedside. The patient is observed during feeding. A decision is made to proceed with the modified barium swallow videofluoroscopy which is conducted by the clinician and the radiologist. During the videofluoroscopy study, various consistencies of contrast materials are presented and the patient's ability to form a bolus, transport the bolus and swallow are observed. Direct (e.g., maneuvers, postures) and compensatory (e.g., bolus, volume, and consistency modification) treatment techniques are assessed during the fluoroscopy to direct treatment. Results and recommendations are discussed with patient/family. Results and recommendations are also provided to the referring physician, nurse, and dietician.

The clinician determines, based on the evaluation and results of the swallow study, the: (1) overall ability of patient to maintain adequate oral nutrition, based on cognitive, responsiveness, and alertness levels; (2) oral-motor and pharyngeal functioning for swallowing; (3) overall efficiency and safety of swallow; (4) etiology(s) and type of dysphagia; (5) appropriate direct and compensatory techniques that will improve swallow functioning; and (6) appropriate recommendations regarding oral vs. non-oral nutrition and, if oral is recommended, the food volumes, consistencies and any compensatory and direct swallow treatment techniques to be employed at meals and during swallow treatment.

Results of the bedside/table side evaluation show that the patient has reduced oral bolus control, delayed pharyngeal swallow, and reduced pharyngeal peristalsis with significant residue remaining in the pharynx after the swallow. A treatment protocol is determined. Prognosis for improvement with treatment is good.

Description of Pre-Service Work: See Above.

Description of Intra-Service Work: See Above.

Description of Post-Service Work: See Above.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92506	Medical evaluation, speech, language and/or hearing problems	0.86
74230	Swallowing function, pharynx and/or esophagus, with cineradiography and/or video	0.53

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 services noted above were chosen as key reference services because all of these codes are common to both the specialties that provide these services, namely, speech-language-pathology/audiology and otolaryngology - head and neck surgery, and are similar by comparison to the new code and are scaled around this type of service.

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

FREQUENCY INFORMATION

How was this service previously reported? 92506 and/or 92507

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes ___ Rarely __X__ Not Applicable

Estimate the number of times this service might be provided nationally in a one-year period? Not Available

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

---

SURVEY DATA:

Specialty: Combined Speech-Language Pathology/Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 75 Low: 25 High: 300

Median Pre-Service Time: 20 Median Post-Service Time: 37

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 55 in Past 5 years: 300

Other Data: _____

Sample Size: 122 Response Rate (%): 44.26 Median RVW: 1.72

25th Percentile RVW: 1.06 75th Percentile RVW: 1.75 Low: 0.30 High: 4.17

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Speech-Language Pathology

Median Intra-Service Time: 75 Low: 30 High: 300

Median Pre-Service Time: 20 Median Post-Service Time: 38.5

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 102.5 in past 5 years: 575

Other Data: _____

Sample Size: 85 Response Rate (%): 41.18 Median RVW: 1.50

25th Percentile RVW: 0.86 75th Percentile RVW: 1.72 Low: 0.30 High: 2.58

Specialty: Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 75 Low: 25 High: 180

Median Pre-Service Time: 23 Median Post-Service Time: 30

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 30 in past 5 years: 88

Other Data:

Sample Size: 37 Response Rate (%): 54.05 Median RVW: 1.78

25th Percentile RVW: 1.31 75th Percentile RVW: 2.22 Low: 0.88 High: 4.17

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: ___AI2___ Global Period: ___XXX___ **Recommended RVW:** 0.64

CPT Descriptor: Treatment of swallowing dysfunction and/or oral function for feeding

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 70-year old male inpatient, 1 week post-CVA was previously seen for bedside/ table side evaluation of swallowing and modified barium swallow videofluoroscopy. The patient was found to have reduced oral bolus control, delayed pharyngeal swallow and reduced pharyngeal peristalsis with significant residue remaining in the pharynx after the swallow. A treatment program was developed based on results of the evaluation. The long-term goal is improved oral and pharyngeal control for safe and efficient swallowing. The short-term goals include improved strength and range of movement of the tongue, use of a "safe swallow" protocol during feeding, and improved triggering of pharyngeal swallow. The clinician directs the patient in exercises to improve strength and range of motion of the tongue. Resistive exercises and directed movements toward specific targets are utilized. Thermal/tactile stimulation is used to work on improved triggering of the pharyngeal swallow. The safe swallow treatment protocol includes ½ teaspoon amounts per swallow of liquids and pureed/mechanical soft foods, double swallows to clear pharyngeal residue, sitting in an upright position for 30-40 minutes following feeding and chin tuck posture during all swallows at meals. The clinician instructs the patient, family, and nursing staff in these techniques for use during mealtimes. Continued treatment is warranted. Prognosis for continued improvement is good.

Description of Pre-Service Work: See Above.

Description of Intra-Service Work: See Above.

Description of Post-Service Work: See Above.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92507	Speech, language or hearing therapy, with continuing medical supervision; individual	0.52
92506	Medical evaluation, speech, language and/or hearing problems	0.86

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 services noted above were chosen as key reference services because all of these codes are common to both the specialties that provide these services, namely, speech-language-pathology/audiology and otolaryngology - head and neck surgery, and are similar by comparison to the new code and are scaled around this type of service.

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

FREQUENCY INFORMATION

How was this service previously reported? 92507

How often do physicians in your specialty perform this service? ___ Commonly ___ Sometimes ___ Rarely _X_ Not Applicable

Estimate the number of times this service might be provided nationally in a one-year period? Not Available

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

---

SURVEY DATA:

Specialty: Combined Speech-Language Pathology/Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 45 Low: 18 High: 450

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 75 in Past 5 years: 275

Other Data: _____

Sample Size: 122 Response Rate (%): 43.44 Median RVW: 0.64

25th Percentile RVW: 0.52 75th Percentile RVW: 0.86 Low: 0.38 High: 7.50

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Speech-Language Pathology

Median Intra-Service Time: 45 Low: 20 High: 450

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 100 in past 5 years: 375

Other Data: _____

Sample Size: 85 Response Rate (%): 40 Median RVW: 0.65

25th Percentile RVW: 0.52 75th Percentile RVW: 1.04 Low: 0.38 High: 7.50

Specialty: Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 41.50 Low: 18 High: 330

Median Pre-Service Time: 12.50 Median Post-Service Time: 15

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 14 in past 5 years: 50

Other Data: _____

Sample Size: 37 Response Rate (%): 54.05 Median RVW: 0.61

25th Percentile RVW: 0.52 75th Percentile RVW: 0.86 Low: 0.50 High: 1.50

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AI3 Global Period: XXX **Recommended RVW:** 1.50

CPT Descriptor: Evaluation for use and/or fitting of voice prosthetic or augmentative/alternative communication device to supplement oral speech

---

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 68-year old male diagnosed with laryngeal carcinoma required a total laryngectomy and bilateral neck dissection. As part of the primary laryngectomy surgery, the surgeon created a tracheoesophageal fistula as the patient expressed interest in alaryngeal communication via a voice prosthesis and was felt to be a good candidate. Following adequate healing of the stoma and fistula, the patient returns to see the clinician for sizing and fitting of the voice prosthesis. The clinician describes both the standard voice prosthesis and the indwelling voice prosthesis. The patient chooses the indwelling voice prosthesis because it requires minimal care and does not require removal for cleaning as does the standard voice prosthesis. The clinician inserts a sizing device into the patient's fistula to determine the appropriate size prosthesis. Once the size is determined, the appropriate indwelling voice prosthesis is inserted. Tests are conducted to determine if the retention collar of the prosthesis is located appropriately inside the esophageal lumen. The tests include rotation of the prosthesis on the inserter stick. If properly placed inside the esophageal lumen, it will rotate freely on the inserter stick. In addition. The edge of the retention collar is radiopaque and the patient is taken for an AP x-ray that allows visualization of the prosthesis to make sure it is properly located. By manual occlusion of the stoma, the patient is able to immediately make sound with the voice prosthesis. He quickly is able to successfully communicate in connected speech. The patient's employment requires use of both hands not allowing him to manually occlude the stoma to speak. The clinician then fits the patient with a tracheostoma valve that eliminates the need for manual occlusion. Caring and cleaning of the voice prosthesis and valve is discussed. The patient is provided with troubleshooting suggestions. Prognosis for maintenance and successful use of the voice prosthesis for alaryngeal communication is good.

Description of Pre-Service Work: See Above.

Description of Intra-Service Work: See Above.

Description of Post-Service Work: See Above.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92506	Medical evaluation, speech, language and/or hearing problems	0.86
92507	Speech, language or hearing therapy, with continuing medical supervision; individual	0.52

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 services noted above were chosen as key reference services because all of these codes are common to both the specialties that provide these services, namely, speech-language-pathology/audiology and otolaryngology - head and neck surgery, and are similar by comparison to the new code and are scaled around this type of service.

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

FREQUENCY INFORMATION

How was this service previously reported? 92506 and/or 92507

How often do physicians in your specialty perform this service? ____ Commonly ____ Sometimes ____ Rarely __X__ Not Applicable

Estimate the number of times this service might be provided nationally in a one-year period? Not Available

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

---

SURVEY DATA:

Specialty: Combined Speech-Language Pathology/Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 65 Low: 30 High: 405

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 9 in Past 5 years: 30

Other Data: _____

Sample Size: 122 Response Rate (%): 36.07 Median RVW: 1.50

25th Percentile RVW: 1.00 75th Percentile RVW: 1.82 Low: 0.05 High: 5.50

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Speech-Language Pathology

Median Intra-Service Time: 60 Low: 30 High: 240

Median Pre-Service Time: 22.5 Median Post-Service Time: 30

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 7.5 in Past 5 years: 18

Other Data: _____

Sample Size: 85 Response Rate (%): 32.00 Median RVW: 1.50

25th Percentile RVW: 1.01 75th Percentile RVW: 1.72 Low: 0.5 High: 5.50

Specialty: Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 60 Low: 30 High: 240

Median Pre-Service Time: 22.5 Median Post-Service Time: 30

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 9 in Past 5 years: 50

Other Data:

Sample Size: 37 Response Rate (%): 54.05 Median RVW: 1.50

25th Percentile RVW: 1.05 75th Percentile RVW: 1.93 Low: 0.53 High: 4.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AI4 Global Period: XXX **Recommended RVW:** 1.04

CPT Descriptor: Modification of voice prosthetic or augmentative/alternative communication device to supplement oral speech

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 44-year old male with a diagnosis of amyotrophic lateral sclerosis presents with severe dysarthria. His speech has become increasingly unintelligible even to familiar listeners. He has been using an electronic augmentative/alternative communication device to supplement speech. His speech has now deteriorated to the pont where he must rely on the electronic communication system for more extensive vocabulary needs. The patient presents for reprogramming of his device to provide an expanded vocabulary more suited to his present needs. The clinician interviews the patient's family to obtain an inventory of daily activities to establish an appropriate vocabulary of words and phrases. The patient's access to the device (direct selection) is reviewed and modified. The vocabulary list is compiled. Following the interview, the clinician accesses the electronic dictionary and removes each icon individually. The lay-out of the board is configured and the icons and messages are programmed. The device is then delivered to the patient. Follow-up contact is made with the family post visit to determine adequacy of the modification.

Description of Pre-Service Work: See Above.

Description of Intra-Service Work: See Above.

Description of Post-Service Work: See Above.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92507	Speech, language or hearing therapy, with continuing medical supervision; individual	0.52
92506	Medical evaluation, speech, language and/or hearing problems	0.86

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 services noted above were chosen as key reference services because all of these codes are common to both the specialties that provide these services, namely, speech-language-pathology/audiology and otolaryngology - head and neck surgery, and are similar by comparison to the new code and are scaled around this type of service.

FREQUENCY INFORMATION

How was this service previously reported? 92507

How often do physicians in your specialty perform this service? ____ Commonly ____ Sometimes ____ Rarely __X__ Not Applicable

Estimate the number of times this service might be provided nationally in a one-year period? Not Available

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

SURVEY DATA:

Specialty: Combined Speech-Language Pathology/Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 90 Low: 15 High: 600

Median Pre-Service Time: 15 Median Post-Service Time: 60

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 20

Other Data: _____

Sample Size: 122 Response Rate (%): 37.70 Median RVW: 1.04

25th Percentile RVW: 0.74 75th Percentile RVW: 1.66 Low: 0.33 High: 8.60

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Speech-Language Pathology

Median Intra-Service Time: 90 Low: 30 High: 600

Median Pre-Service Time: 15 Median Post-Service Time: 60

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 20

Other Data:

Sample Size: 85 Response Rate (%): 31.76 Median RVW: 0.95

25th Percentile RVW: 0.81 75th Percentile RVW: 1.73 Low: 0.50 High: 0.86

Specialty: Otolaryngology—Head & Neck Surgery

Median Intra-Service Time: 60 Low: 15 High: 360

Median Pre-Service Time: 22.5 Median Post-Service Time: 30

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 4 in Past 5 years: 28

Other Data:

Sample Size: 37 Response Rate (%): 54.05 Median RVW: 1.12

25th Percentile RVW: 0.74 75th Percentile RVW: 1.57 Low: 0.33 High: 4.64

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AI5 Global Period: XXX **Recommended RVW:** 1.50

CPT Descriptor: Aural rehabilitation following cochlear implant (includes evaluation of aural rehabilitation status and hearing, therapeutic services) with or without speech processor programming

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A pre-lingual, 4-year old child with a profound bilateral sensorineural hearing loss is unable to obtain even minimum benefit from the use of conventional hearing aids. After counseling the child and family about obtaining a cochlear implant, the clinician performs a cochlear implant evaluation, which consists of an extensive audiological evaluation, including tests of speech perception and speech production. The cochlear implant evaluation determines that the child is a candidate for the cochlear implant procedure and surgery is scheduled.

Following the cochlear implantation, the child returns to the cochlear implant center for the external device fitting. During the fitting, the external components are placed on the child and adjusted so that the child can wear them comfortably. The clinician adjusts the stimulus parameters of the speech processor, which determine the signals delivered to the electrodes in the electrode array. The parameters that are adjusted include dynamic range, loudness balancing, and pitch ranking. After the device fitting, the rehabilitation process begins. The aural rehabilitation program includes speech perception training, instruction about assistive devices, communication therapy, and involvement of the family in the aural rehabilitation process. The cochlear prosthesis (implant) and follow-up rehabilitation provides a level of speech recognition for the child and aids in acquiring speech and language skills.

Description of Pre-Service Work: See Above.

Description of Intra-Service Work: See Above.

Description of Post-Service Work: See Above.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92506	Medical evaluation, speech, language and/or hearing problems	0.86
92507	Speech, language or hearing therapy, with continuing medical supervision; individual	0.52
92585	Brainstem evoked response recording (evoked response (EEG) audiometry)	0.50

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 services noted above were chosen as key reference services because all of these codes are common to both the specialties that provide these services, namely, speech-language-pathology/audiology and otolaryngology - head and neck surgery, and are similar by comparison to the new code and are scaled around this type of service.

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

FREQUENCY INFORMATION

How was this service previously reported? 92506 and/or 92507

How often do physicians in your specialty perform this service? ____ Commonly ____ Sometimes ____ Rarely __X__ Not Applicable

Estimate the number of times this service might be provided nationally in a one-year period? Not Available

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

SURVEY DATA:

Specialty: Combined Speech-Language Pathology/Audiology/Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 90 Low: 40 High: 480

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 34 in Past 5 years: 80

Other Data: _____

Sample Size: 174 Response Rate (%): 18.97 Median RVW: 1.50

25th Percentile RVW: 1.03 75th Percentile RVW: 2.21 Low: 0.52 High: 10.00

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Speech-Language Pathology/Audiology

Median Intra-Service Time: 150 Low: 60 High: 480

Median Pre-Service Time: 15 Median Post-Service Time: 30

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 43 in Past 5 years: 178

Other Data: _____

Sample Size: 137 Response Rate (%): 13.14 Median RVW: 1.95

25th Percentile RVW: 1.35 75th Percentile RVW: 2.21 Low: 0.56 High: 10.00

Specialty: Otolaryngology—Head and Neck Surgery

Median Intra-Service Time: 90 Low: 40 High: 300

Median Pre-Service Time: 30 Median Post-Service Time: 22.5

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 28 in Past 5 years: 80

Other Data:

Sample Size: 37 Response Rate (%): 56.76 Median RVW: 1.50

25th Percentile RVW: 1.03 75th Percentile RVW: 1.70 Low: 0.52 High: 3.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995
MIDFACE RECONSTRUCTION - TAB 12

The CPT Editorial Panel approved the deletion of code 21144 [Reconstruction midface, LeFort I; intrusion, single piece (eg, for Long Face Syndrome) and added three new codes:

- 21141 [Reconstruction midface, Lefort I; single piece, segment movement in any direction (eg, for Long Face Syndrome), without bone graft;
- 21142 [Reconstruction midface, LeFort I; two pieces, segment movement in any direction, without bone graft]; and
- 21143 [Reconstruction midface, LeFort I; three or more pieces, segment movement in any direction, without bone graft].

Included in the RVU calculation for the other LeFort reconstructive surgery codes (21145-21147) are 2.00 RVUs that account for the use of bone grafts as part of providing these services. The RUC, therefore, considered 2.00 RVUs as the established differential for bone grafts for other codes in the maxillofacial section and, to maintain internal consistency within the family of midface reconstruction codes, the RUC recommends that this same differential be maintained in the RVUs for the new codes.

Code 21141 describes procedures performed for dental and facial anomalies of the upper jaw and maxilla such as cleft palate. The nomenclature of this new code reflects the fact that this code would be reported for procedures involving movement in any direction of the upper jaw and maxilla. The recommended RVU is 16.92, which is the 18.92 RVUs for code 21145 [Reconstruction midface, LeFort I; single piece, segment movement in any direction, requiring bone grafts (includes obtaining autografts)] minus the 2.00 RVUs for the bone graft.

Code 21142 is also done to correct dental and facial anomalies of the upper jaw and maxilla. This code, however, involves movement of two skeletal pieces without a bone graft and, like code 21141, the procedure may involve movement in any direction of the upper jaw and maxilla. The recommended RVUs are 17.58, which is the 19.58 RVUs for code 21146 [Reconstruction midface, LeFort I; two pieces, segment movement in any direction, requiring bone grafts (including obtaining autografts)(eg, ungrafted unilateral alveolar cleft)] minus the 2.00 RVUs for the bone graft.

Code 21143 is also done to correct dental and facial anomalies of the upper jaw and maxilla but involves intraoral incisions to gain access to the facial skeletal structures. Osteotomies of the facial skeleton are performed and the skeletal segments are moved to correct

the deformity. This procedure involves the movement of three or more skeletal pieces without a bone graft. The recommended RVUs are 18.30, which is the 20.30 RVUs for code 21147 [Reconstruction midface, LeFort I; three or more pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts)(eg, ungrafted bilateral alveolar cleft or multiple osteotomies)] minus 2.00.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
21144		~~Reconstruction midface, LeFort I; intrusion, single piece (eg, for Long Face Syndrome)~~ (21144 has been deleted. To report, see 211X1)	090	N/A
•21141	Z1	Reconstruction midface, LeFort I; ~~intrusion,~~ single piece, segment movement in any direction (eg, for Long Face Syndrome), without bone graft	090	16.92 (21145-2.00)
•21142	Z2	two pieces, segment movement in any direction, without bone graft	090	17.58 (21146-2.00)
•21143	Z3	three or more pieces, segment movement in any direction, without bone graft	090	18.30 (21147-2.00)
21145		single piece, segment movement in any direction, requiring bone grafts (includes obtaining autografts)	090	18.92 (No Change)
21146		two pieces, segment movement in any direction, requiring bone grafts (including obtaining autografts) (eg, ungrafted unilateral alveolar cleft)	090	19.58 (No Change)
21147		three or more pieces, segment movement in any direction, requiring bone grafts (includes obtaining autografts) (eg, ungrafted bilateral alveolar cleft or multiple osteotomies	090	20.30 (No Change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: Z1 Global Period: 090 **Recommended RVW:** 16.92

CPT Descriptor: Reconstruction midface, LeFort I; ~~intrusion,~~ single piece, segment movement in any direction (eg, for Long Face Syndrome), without bone graft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The procedures that are performed under the coding changes are employed to reconstruct deformities of the mid portion of the facial skeleton. Patients present with malrelation of the jaws manifested by malocclusion of the teeth and various associated functional and cosmetic deficiencies of the face and/or oropharynx. The procedures involve intraoral soft tissue incisions to gain access to the facial skeletal structures. Osteotomies of the facial skeleton are performed (e.g., maxilla, zygoma) and the skeletal segments are moved to predetermined positions thus correcting the deformity. The procedure involves movement of a single skeletal piece without a bone graft. Appropriate fixation devices are employed to secure the repositioned skeletal structures. The complication rates associated with the procedures are low and the results of the corrections are predictable and stable.

Description of Pre-Service Work:
N/A

Description of Intra-Service Work:
N/A

Description of Post-Service Work:
N/A

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
21150	Reconstruction midface, LeFort II, anterior intrusion (eg Treacher-Collins Syndrome)	24.41
21151	any direction, requiring bone grafts (includes obtaining autografts)	27.34
21179	Reconstruction, entire or majority of forehead and/or supraorbital rims with grafts (allograft or prosethetic material)	21.47
21180	with autograft (includes obtaining grafts)	24.41

Z1, p.2

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

Codes Z1, Z2 and Z3 add specific language of "without bone graft" to the established codes for LeFort I, midface reconstruction. The only RVW differential between Z1, Z2, and Z3 and the corresponding CPT codes which include bone graft, 21145, 21146, and 21147, would be attributable to the physician work involved in the bone graft component.

Several series of codes in the maxillofacial family have already established the RVW differential for bone grafts. The reference codes listed above are for related maxillofacial reconstruction codes that have been recently surveyed by the ASPRS and put through the RUC process. Both sets of codes, 21150/21151 and 21179/21180, demonstrate an RVW differential of approximately 3.00 units for a bone or autograft. The initial RVW values, recommended by the RUC in 1993, were 25.00 units and 28.00 units for CPT 21150 and 21151, and 22.00 and 25.00 units for CPT 21179 and 21180.

Several other examples exist of similar RVU differentials of 2.00-3.00 units for codes with and without bone grafts in the maxillofacial repair section of CPT. One such example is CPT 21193, reconstruction of mandibular ramus (without bone graft) with an RVW of 16.23, and CPT 21194 (with bone graft, includes obtaining graft) with an RVW of 18.81.

To follow this precedent and remain internally consistent within the LeFort I, midface reconstruction family of codes, we recommend that codes Z1, Z2 and Z3 be assigned RVWs which reflect a 2.00 unit differential for the new codes "without bone graft." Therefore, for code Z1, an RVW of 16.92 is appropriate when compared to the 1995 RVW of 18.92 for the corresponding code, CPT 21145, including bone graft.

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

The coding change which generated this RUC reccomendation essentially added specific codes for midface reconstruction "without bone graft." An RVW differential for bone grafts has already been established for other codes in the maxillofacial section. In order to remain internally consistent with the current codes including bone grafts, CPT 21145-21147, the established differential of 2.00 units should be used with the new codes. A survey would not be feasible unless it established new values for all of the codes in this midface reconstruction family.

Specialties ASPRS, ASMS, AAPS, AAO-HNS, AAFPRS

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: Z2 Global Period: 090 **Recommended RVW:** 17.58

CPT Descriptor: Reconstruction midface, LeFort I; two pieces, segment movement in any direction, without bone graft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The procedures that are performed under the coding changes are employed to reconstruct deformities of the mid portion of the facial skeleton. Patients present with malrelation of the jaws manifested by malocclusion of the teeth and various associated functional and cosmetic deficiencies of the face and/or oropharynx. The procedures involve intraoral soft tissue incisions to gain access to the facial skeletal structures. Osteotomies of the facial skeleton are performed (e.g., maxilla, zygoma) and the skeletal segments are moved to predetermined positions thus correcting the deformity. The procedure involves movement of two skeletal pieces without a bone graft. Appropriate fixation devices are employed to secure the repositioned skeletal structures. The complication rates associated with the procedures are low and the results of the corrections are predictable and stable.

Description of Pre-Service Work:
N/A

Description of Intra-Service Work:
N/A

Description of Post-Service Work:
N/A

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
21150	Reconstruction midface, LeFort II, anterior intrusion (eg Treacher-Collins Syndrome)	24.41
21151	any direction, requiring bone grafts (includes obtaining autografts)	27.34
21179	Reconstruction, entire or majority of forehead and/or supraorbital rims with grafts (allograft or prosthetic material)	21.47
21180	with autograft (includes obtaining grafts)	24.41

Z2, p.2

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

Codes Z1, Z2 and Z3 add specific language of "without bone graft" to the established codes for LeFort I, midface reconstruction. The only RVW differential between Z1, Z2, and Z3 and the corresponding CPT codes which include bone graft, 21145, 21146, and 21147, would be attributable to the physician work involved in the bone graft component.

Several series of codes in the maxillofacial family have already established the RVW differential for bone grafts. The reference codes listed above are for related maxillofacial reconstruction codes that have been recently surveyed by the ASPRS and put through the RUC process. Both sets of codes, 21150/21151 and 21179/21180, demonstrate an RVW differential of approximately 3.00 units for a bone or autograft. The initial RVW values, recommended by the RUC in 1993, were 25.00 units and 28.00 units for CPT 21150 and 21151, and 22.00 and 25.00 units for CPT 21179 and 21180.

Several other examples exist of similar RVU differentials of 2.00-3.00 units for codes with and without bone grafts in the maxillofacial repair section of CPT. One such example is CPT 21193, reconstruction of mandibular ramus (without bone graft) with an RVW of 16.23 and CPT 21194 (with bone graft, includes obtaining graft) with an RVW of 18.81.

To follow this precedent and remain internally consistent within the LeFort I, midface reconstruction family of codes, we recommend that codes Z1, Z2 and Z3 be assigned RVWs which reflect a 2.00 unit differential for the new codes "without bone graft." Therefore, for code Z2, an RVW of 17.58 is appropriate when compared to the 1995 RVW of 19.58 for the corresponding code, CPT 21146, including bone graft.

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

The coding change which generated this RUC recommendation essentially added specific codes for midface reconstruction "without bone graft." An RVW differential for bone grafts has already been established for other codes in the maxillofacial section. In order to remain internally consistent with the current codes including bone grafts, CPT 21145-21147, the established differential of 2.00 units should be used with the new codes. A survey would not be feasible unless it established new values for all of the codes in this midface reconstruction family.

Specialties: ASPRS, ASMS, AAPS, AAO-HNS, AAFPRS

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: Z3 Global Period: 090 **Recommended RVW:** 18.30

CPT Descriptor: Reconstruction midface, LeFort I; three or more pieces, segment movement in any direction, without bone graft

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The procedures that are performed under the coding changes are employed to reconstruct deformities of the mid portion of the facial skeleton. Patients present with malrelation of the jaws manifested by malocclusion of the teeth and various associated functional and cosmetic deficiencies of the face and/or oropharynx. The procedures involve intraoral soft tissue incisions to gain access to the facial skeletal structures. Osteotomies of the facial skeleton are performed (e.g., maxilla, zygoma) and the skeletal segments are moved to predetermined positions thus correcting the deformity. The procedure involves movement of three or more skeletal pieces without a bone graft. Appropriate fixation devices are employed to secure the repositioned skeletal structures. The complication rates associated with the procedures are low and the results of the corrections are predictable and stable.

Description of Pre-Service Work:
N/A

Description of Intra-Service Work:
N/A

Description of Post-Service Work:
N/A

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
21150	Reconstruction midface, LeFort II, anterior intrusion (eg Treacher-Collins Syndrome)	24.41
21151	any direction, requiring bone grafts (includes obtaining autografts)	27.34
21179	Reconstruction, entire or majority of forehead and/or supraorbital rims with grafts (allograft or prosthetic material)	21.47
21180	with autograft (includes obtaining grafts)	24.41

Z3, p.3

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

Codes Z1, Z2 and Z3 add specific language of "without bone graft" to the established codes for LeFort I, midface reconstruction. The only RVW differential between Z1, Z2, and Z3 and the corresponding CPT codes which include bone graft, 21145, 21146, and 21147, would be attributable to the physician work attributable to the bone graft component.

Several series of codes in the maxillofacial family have already established the RVW differential for bone grafts. The reference codes listed above are for related maxillofacial reconstruction codes that have been recently surveyed by the ASPRS and put through the RUC process. Both sets of codes, 21150/21151 and 21179/21180, demonstrate an RVW differential of approximately 3.00 units for a bone or autograft. The initial RVW values, recommended by the RUC in 1993, were 25.00 units and 28.00 units for CPT 21150 and 21151, and 22.00 and 25.00 units for CPT 21179 and 21180.

Several other examples exist of similar RVU differentials of 2.00-3.00 units for codes with and without bone grafts in the maxillofacial repair section of CPT. One such example is CPT 21193, reconstruction of mandibular ramus (without bone graft) with an RVW of 16.23 and CPT 21194 (with bone graft, includes obtaining graft) with an RVW of 18.81.

To follow this precedent and remain internally consistent within the LeFort I, midface reconstruction family of codes, we recommend that codes Z1, Z2 and Z3 be assigned RVWs which reflect a 2.00 unit differential for the new codes "without bone graft." Therefore, for code Z3, an RVW of 18.30 is appropriate when compared to the 1995 RVW of 20.30 for the corresponding code, CPT 21147, including bone graft.

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

The coding change which generated this RUC recommendation essentially added specific codes for midface reconstruction "without bone graft." An RVW differential for bone grafts has already been established for other codes in the maxillofacial section. In order to remain internally consistent with the current codes including bone grafts, CPT 21145-21147, the established differential of 2.00 units should be used with the new codes. A survey would not be feasible unless it established new values for all of the codes in this midface reconstruction family.

Specialty: ASPRS, ASMS, AAPS, AAO-HNS, AAFPRS

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
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SPINAL PROCEDURES - TAB 13

At the February CPT meeting, the CPT Editorial Panel approved extensive changes to the Spine Section of the CPT manual. The specialty society cited two reasons for these extensive changes: 1) technological advances in spine surgery have made many of the current CPT codes for spine surgery obsolete, and 2) the current spine surgery codes are a source of confusion for the physicians, which has led to unbundling and/or inaccurate reporting of the services that have been performed. Two basic changes in coding philosophy were included in these changes. The first is to remove the bone graft codes as integral parts of the procedures and instead use add-on codes to report bone grafting procedures. The second change was the revision of the spinal instrumentation codes. The changes will reflect the type of instrumentation that is used most commonly in spinal procedures, and will be reported as add-on procedures.

Recommendations in this section cover 57 new and revised codes: 5 bone graft codes (20930-20938); 8 bone excision codes (22100-22116); 8 osteotomy codes (22210-22226); 7 fracture codes (22305-22328); 5 anterior arthrodesis codes (22548-22585); 8 posterior arthrodesis codes (22590-22632); 6 spinal deformity codes (22800-22812); and 10 spinal instrumentation codes (22840-22848, 22851). In addition to the survey results and other rationales presented to justify the recommended RVUs, the RUC also considered crosswalk and frequency estimates provided by the specialty societies. These estimates suggested that the overall recommendations for the issue are either work neutral or would reduce the total work RVUs.

Code 20930 [Allograft for spine surgery only; morselized] involves taking powdered bone out of a bottle and pouring the powder into place. The RUC recommends that code 20930 have 0.00 RVUs.

Code 20931 [Allograft for spine surgery only; structural] is a new code that involves the work of fashioning a structural allograft. This procedure does not involve harvesting the allograft. Since there is an increased chance of failure using allografts, they only are used when autografts are not available. The RUC recommends 1.81 RVUs for code 20931.

Code 20936 [Autograft for spine surgery only (includes harvesting the graft); local (eg, ribs, spinous process, or laminar fragments) obtained from the same incision] is a bone graft most often used to supplement an autograft harvested from the iliac crest. The RUC recommends that 0.00 RVUs be assigned to this code.

Code 20937 [Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin of fascial incision)] is a new add-on code that includes the harvesting of the graft. The physician work of code 20937 is comparable to that of code 22820 [Harvesting of bone autograft through separate incision (eg, ilium, fibula) for spinal arthrodesis], which has 2.79 RVUs.

Code 20938 [Autograft for spine surgery only (includes harvesting the graft); structural (bicortical or tricortical), through separate skin or fascial incision)] involves multilevel anterior fusion utilizing a tibial strut graft harvested from the patient's own tibia. "Back table" physician time is required during this procedure. The RUC recommends 3.02 RVUs for code 20938.

Codes 22100 [Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; cervical)], 22101 [Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; thoracic)], and 22102 [Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; lumbar)] were revised to include the physician work that was previously reported using codes 22105-22107, which will be deleted. These procedures are performed for intrinsic bony pathology such as osteomyelitis. The RUC recommends 9.05 RVUs for code 22100 and 9.00 RVUs for 22101 and 22102. These values are between the existing RVUs for 22100-22102 and 22105-22107. The slightly higher RVUs for 22100 reflect the additional positioning requirements for the cervical procedure during the preservice period.

Code 22103 [Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; each additional segment (list separately in addition to code for primary procedure)] was previously reported by repeating the original code and using the -51 modifier. This procedure is performed for intrinsic bony pathology such as osteomyelitis. The RUC recommends 2.34 RVUs for code 22103.

The revisions of codes 22110 [Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) single vertebral segment; cervical], 22112 [Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) single vertebral segment; thoracic], and 22114 [Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) single vertebral segment; lumbar] were considered editorial and resulted in no change in physician work. The RUC recommends that the current RVUs be retained for these codes.

Codes 22116 [Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) single vertebral segment; each additional segment (list separately in addition to code for primary procedure)] and 22216 [Osteotomy of spine, posterior or posterolateral approach, one vertebral segment; each additional vertebral segment (list separately in addition to the primary procedure)] are new add-on procedure code that would be reported in addition to the definitive procedure codes 22210-22214 and 22220-22224. The RUC recommends 2.32 RVUs for code 22116 and 6.04 RVUs for code 22216.

The revisions of codes 22210 [Osteotomy of spine, posterior or posterolateral approach, one vertebral segment; cervical], 22212 [Osteotomy of spine, posterior or posterolateral approach, one vertebral segment; thoracic], and 22214 [Osteotomy of spine, posterior or posterolateral approach, one vertebral segment; lumbar], as well as codes 22220 [Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; cervical], 22222 [Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; thoracic], and 22224 [Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; lumbar] were considered editorial and resulted in no change in physician work.

Code 22226 [Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; each additional vertebral segment (list separately in addition to code for primary procedure)] is a new add-on procedure code that would be reported in addition to the definitive procedure codes 22220, 22222, and 22224. The RUC recommended an RVU of 6.04 for code 22226.

The revisions of codes 22305 [Closed treatment of vertebral process fracture(s)], 22310 [Closed treatment of vertebral body fracture(s), without manipulation, requiring and including casting or bracing], 22315 [Closed treatment of vertebral fractures(s) and/or dislocation(s) requiring casting or bracing, with and including casting and/or bracing, with or without anesthesia, by manipulation or traction], 22325 [Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; lumbar], 22326 [Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; cervical], and 22327 [Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; thoracic] were considered editorial and resulted in no change in physician work.

Code 22328 [Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure)] is a new add-on procedure code that would be reported in addition to the definitive procedure codes 22325, 22326, and 22327. The RUC recommends 4.61 RVUs for code 22238.

(22548)

The revision of code ~~22458~~ [Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process] was considered editorial and resulted in no change in physician work.

Codes 22554 [Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2], 22556 [thoracic], and 22558 [lumbar] were revised so that minimal diskectomy to prepare the disc space for arthrodesis is not reported separately. A significant amount of time is spent by the physician positioning the patient. The RUC noted that the approach is included in the procedure, even if it is done by a different physician. The RUC recommends 17.24 RVUs for 22554, 22.27 RVUs for 22556, and 21.22 RVUs for 22558.

Code 22585 [Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)] was a revision of an existing code and resulted in no change in physician work. The RUC recommends that the current RVU of 5.53 be retained.

Codes 22590-22632 are for posterior arthrodesis. The existing values for these codes are not in the appropriate rank order. The specialty recommendations adopted by the RUC correct these rank order anomalies.

Code 22590 [Arthrodesis, posterior technique, craniocervical (occiput-C2)] was revised so that the physician will now report bone graft and instrumentation separately. This code is for single arthrodesis only. The specialty society noted that approximately 10% of the cases will also be reported with a bone graft code. The RUC recommends 19.50 RVUs for CPT code 22590.

Code 22595 [Arthrodesis, posterior technique, atlas-axis (C1-C2)] was revised so that the physician will now report bone graft and instrumentation separately. The specialty society noted that approximately 10% of the cases will also report a bone graft code and 90% of the cases will report the spinal instrumentation code 22840. The RUC recommends 18.19 RVUs.

Code 22600 [Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment] was revised so that the physician will now report bone graft and instrumentation separately. The specialty society noted that approximately 10% of the cases will also report a bone graft code and 50% of the cases will report the spinal instrumentation code 22840. The RUC recommends 14.74 RVUs.

Code 22610 [Arthrodesis, posterior or posterolateral technique, single level; thoracic (with or without lateral transverse technique] was revised so that the physician will now report bone graft and instrumentation separately. The specialty society noted that approximately 10% of the cases will also report a bone graft code and 5% of the cases will report the spinal instrumentation code 22840. The RUC recommends 14.62 RVUs.

Code 22612 [Arthrodesis, posterior or posterolateral technique, single level; lumbar (with or without lateral transverse technique] was revised so that the physician will now report bone graft and instrumentation separately. The specialty society noted that approximately 10% of the cases will also report a bone graft code and 30% of the cases will report the spinal instrumentation code 22840. The RUC recommends 20.19 RVUs for CPT code 22612.

Code 22614 [Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (list separately in addition to code for primary procedure)] is a new code that was added to allow physicians to report additional segment without repeating the original code. CPT code 22650 [Arthrodesis, posterior, posterolateral or lateral transverse technique, each additional interspace] was

deleted and replaced by 22614 because posterior and lateral transverse process techniques differ significantly from interbody technique. 22614 is an add-on procedure that should be reported in addition to the definitive procedure. The RUC recommended an RVU of 6.44 code 22614.

Code 22630 [Arthrodesis, posterior interbody technique, single interspace; lumbar] was revised so that the physician will now report bone graft and instrumentation separately. The specialty society noted that approximately 50% of the cases will also report a bone graft code and small percentage of the cases will report the spinal instrumentation code 22841. The RUC recommends 20.03 RVUs for code 22630.

Code 22632 [Arthrodesis, posterior interbody technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)] is a new code to allow physicians to report working on multiple levels of the spine, which require significantly more dissection. 22632 is an add-on procedure that should be reported in addition to the definitive procedure and the RUC recommends 5.23 RVUs.

The revision of CPT code 22800 [Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments] was considered editorial and resulted in no change in physician work.

Code 22802 [Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments] was considered editorial and resulted in no change in physician work. Code 22804 [Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments] is a new code that was added to allow for reporting of long segment arthrodesis. The RUC discussed the increase in RVUs between codes 22800 (16.92 RVU) and the current RVUs of 31.31 for 22802 and noted that there is a significant increase in the amount of physician work required to work on 7 to 12 vertebral segments because the physician must cross the diaphragm, which is considered extremely risky. Code 22804 is a very difficult operation and only represents a small number of the total surgeries that are performed for spinal deformities. The RUC discussed the distribution of these services and estimated that only about 5% of the services previously reported using codes 22802 would now be reported with code 22804. The RUC recommends that the RVUs for 22802 be reduced from their current value of 31.31 to 29.74 RVUs, and recommends 35.00 RVUs for code 22804.

Code 22808 [Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments] is a new code that was added to allow reporting arthrodesis of fewer than 4 vertebral segments. The RUC recommended an RVU of 25.00 for code 22808. The revision of code 22810 [Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments] was considered editorial and resulted in no change in the current value of 29.00.

Code 22812 [Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments] was revised to report spinal fusion on 8 or more vertebral segments. The current RVUs of 22810 and 22812 reflect a rank order anomaly because the work

of 22812 is greater than the physician work of 22810, but the current RVU of 22810 is greater than 22812. In order to correct this rank order problem the RUC recommends 31.00 RVUs.

The revision of code 22840 [Posterior non-segmental, instrumentation (eg, single Harrington rod technique)] was considered editorial and resulted in no change in physician work. However, the specialty society noted that since the global period of this code changed from 000 to ZZZ, 22840 will no longer be reported with a -51 modifier. Therefore, the RUC recommends reducing the current RVUs of 12.54 by 50% to 6.27.

Code 22841 [Internal spinal fixation (eg, wires clamps, plates, or screws) of posterior or anterior spinal elements] is a new code that was added to describe the internal fixation of the spine during procedures that are designed to stabilize and induce posterior fusion of two adjacent spinal segments. This procedure requires minimal physician work and the RUC recommended 0.00 RVUs for this procedure.

Codes 22842 [Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments], 22843 [; 7 to 12 vertebral segments], and 22844 [; 13 or more vertebral segments] were revised (22842) and added (22843 and 22844) to allow for separate reporting of posterior instrumentation at different levels. These procedures are almost exclusively performed on adolescents. The RUC recommends that the current value of code 22842 be reduced by 50% from 14.37 to 7.19 and the values of 22843 and 22844 be 8.97 and 10.96 RVUs, respectively.

Code 22845 [Anterior instrumentation; 2 to 3 vertebral segments], was revised and codes 22846 [; 4 to 7 vertebral segments] and 22847 [; 8 or more vertebral segments] were added to allow for separate reporting of anterior instrumentation at different levels. The RUC recommends that the current value of code 22845 be reduced by 50% from 11.96 to 5.98 and the values of 22846 and 22847 be 8.28 and 9.20 RVUs, respectively.

Code 22848 [Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum] is a new code that describes extension of multi-segmental fixation of the spine, which provides stabilization to the pelvis. The RUC recommends an RVU of 6.00 for code 22848.

Code 22851 [Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace] describes new technology to allow the physician to provide additional stabilization to the spine for patients undergoing arthrodesis. The RUC recommends 6.71 RVUs for code 22851.

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
Grafts (Or Implants) Codes for obtaining autogenous bone, cartilage, tendon, fascia lata grafts, or other tissues, through separate incisions are to be used only when graft is not already listed as part of basic procedure. (For spinal surgery bone graft(s) see codes 209X1-209X7) Codes 209X1-209X7 are reported in addition to codes for the definitive procedure(s). (Report only one bone graft code per operative session)				
•20930	W1	Allograft for spine surgery only; morselized	ZZZ	0.00
•20931	W2	structural	ZZZ	1.81
•20936	W3	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision	ZZZ	0.00
•20937	W4	morselized, (through separate skin or fascial incision)	ZZZ	2.79
•20938	W5	structural, (bicortical or tricortical), (through separate skin or fascial incision) (For needle aspiration of bone marrow for the purpose of bone grafting, see 85095)	ZZZ	3.02

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation

SPINE (VERTEBRAL COLUMN)

Cervical, thoracic, and lumbar spine

Within the *SPINE* section bone grafting procedures are reported separately and in addition to arthrodesis. For bone grafts in other Musculoskeletal sections, see specific code(s) descriptor(s) and/or accompanying guidelines.

To report bone grafts performed after arthrodesis, see codes 20930-20938. Bone graft codes are reported without modifier 51 (multiple procedure)

Example: Posterior arthrodesis of L4-S1 for degenerative disc disease utilizing morselized autogenous iliac bone graft harvested through a separate fascial incision.

Report as 22612 and 20937

Within the *SPINE* section instrumentation is reported separately and in addition to arthrodesis. To report instrumentation procedures performed with definitive vertebral procedure(s), see codes 22840-22855. Instrumentation procedure codes are reported in addition to the definitive procedures(s) without modifier 51.

Example: Posterior arthrodesis of L4-S1, utilizing morselized autogenous iliac bone graft harvested through separate fascial incision, and pedicle screw fixation.

Report as 22612, 22842 and 20937

Vertebral procedures are sometimes followed by arthrodesis and in addition may include bone grafts and instrumentation. When arthrodesis is performed in addition to another procedure, the arthrodesis should be reported in addition to the original procedure with a modifier 51 (multiple procedures). Examples are after osteotomy, fracture care, vertebral corpectomy and laminectomy. Since bone grafts and instrumentation are never performed without arthrodesis, they are reported as add on codes and modifier 51 (multiple procedures) is not used. Arthrodesis, however, may be performed in the absence of other procedures and therefore when it is combined with another definitive procedure, modifier 51 (multiple procedure) is appropriate.

EXAMPLE: Treatment of a burst fracture of L2 by corpectomy followed by arthrodesis of L1-L3, utilizing anterior instrumentation L1-L3 and structural allograft

Report as 63090, 22558-51, 22845 and 20931

(For injection procedure for myelography, use 62284)

(For injection procedure for diskography, see 62290, 62291)

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
EXCISION				
22100	W6	Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; cervical	090	9.05
22101	W7	thoracic	090	9.00
22102	W8	lumbar	090	9.00
•22103	W9	each additional segment (List separately in addition to code for primary procedure) (Use 22103 only for codes 22100, 22101, 22102)	ZZZ	2.34
22105		~~Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); cervical~~ (22105 has been deleted. To report, see 22100)	090	N/A
22106		~~thoracic~~ (22106 has been deleted. To report, see 22101)	090	N/A
22107		~~lumbar~~ (22107 has been deleted. To report, see 22102)	090	N/A
22110	W10	Partial ~~resection~~ excision of ~~vertebrae~~ vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) ~~(eg, for osteomyelitis)~~ single vertebral segment; cervical	090	11.59 (no change)
22112	W11	thoracic	090	11.59 (no change)
22114	W12	lumbar	090	11.59 (no change)

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•22116	W13	each additional vertebral segment (List separately in addition to code for primary procedure) (Use 22116 only for codes 22110, 22112, 22114)	ZZZ	2.32
~~REPAIR, REVISION AND/OR RECONSTRUCTION~~ (22120-22130 have been deleted. For ~~radical~~ complete or near complete resection of vertebral body, see vertebral corpectomy, 63081-63091) ~~(For prosthetic replacement of vertebrae, see 22150-22152)~~				
22140		~~Reconstruction of spine with bone graft, (autograft, allograft) and/or methylmethacrylate following resection of single vertebral body; cervical~~ (22140 has been deleted. To report, use 63081 or 63087 and 22554 and 20931 or 20938)	090	N/A
22141		~~thoracic~~ (22141 has been deleted. To report, use 63085 or 63087 and 22556 and 20931 or 20938)	090	N/A
22142		~~lumbar~~ (22142 has been deleted. To report, use 63087 or 63090 and 22558 and 20931 or 20938)	090	N/A
22145		~~Reconstruction of spine following vertebral body resection, each additional vertebral body~~ (22145 has been deleted. To report, use 63082 or 63086 or 63088 or 63091, and 22585)	ZZZ	N/A
22148		~~Harvesting of bone autograft for vertebral reconstruction following vertebral corpectomy~~ ~~(List separately in addition to codes 22140-22145)~~ (22148 has been deleted. To report, see 20931 or 20938)	ZZZ	N/A

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
22150		~~Reconstruction of spine with prefabricated prosthetic replacement following resection of one or more vertebral bodies; cervical~~ (22150 has been deleted. To report, use 63081 and 22554 and 209X2 or 209X7 and 22851)	090	N/A
22151		~~thoracic~~ (22151 has been deleted. To report, use 63085 and 22556 and 20931 or 20938 and 22851)	090	N/A
22152		~~lumbar~~ (22152 has been deleted. To report, use 63087 or 63090 and 22558, and 20931 or 20938 and 22851)	090	N/A
OSTEOTOMY To report arthrodesis, see codes 22590-22614. (Report in addition to code(s) for the definitive procedure with modifier 51) To report instrumentation procedures, see codes 22840-22855. (Report in addition to code(s) for the definitive procedure(s). To report bone graft procedures, see codes 20930-20938. (Report in addition to code(s) for the definitive procedure(s))				
22210	W14	Osteotomy of spine, posterior or posterolateral approach, one ~~single~~ vertebral segment; cervical	090	22.51 (no change)
22212	W15	thoracic	090	18.14 (no change)
22214	W16	lumbar	090	18.14 (no change)
•22216	W17	each additional vertebral segment (List separately in addition to primary procedure) (Use 22216 only for codes 22210, 22212, 22214)	ZZZ	6.04

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
22220	W18	Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; cervical	090	20.15 (no change)
22222	W19	thoracic	090	20.15 (no change)
22224	W20	lumbar	090	20.15 (no change)
●22226	W21	each additional vertebral segment. (List separately in addition to code for primary procedure) (Use 22226 only for codes 22220, 22222, 22224)	ZZZ	6.04
22230		~~Osteotomy of spine, any approach, each additional segment~~ (22230 has been deleted. To report, use 22216 or 22226)	ZZZ	N/A
(22250-22251 have been deleted. For vertebral corpectomy, see 63081-63091. ~~For spinal instrumentation, see 22840-22845. For reconstruction following vertebral corpectomy, see 22140-22152~~)				
FRACTURE AND/OR DISLOCATION To report arthrodesis, see codes 22590-22614. (Report in addition to code(s) for the definitive procedure with modifier 51) To report instrumentation procedures, see codes 22840-22855. (Report in addition to code(s) for the definitive procedure(s). To report bone graft procedures, see codes 20930-20938. (Report in addition to code(s) for the definitive procedure(s))				
22305	W22	Closed treatment of vertebral process fracture(s)	090	1.86 (no change)
22310	W23	Closed treatment of vertebral body fracture(s), without manipulation, requiring and including casting or bracing	090	1.86 (no change)

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
22315	W24	Closed treatment of vertebral fracture(s) and/or dislocation(s) requiring casting or bracing, with and including casting and/or bracing, with or without anesthesia, by manipulation or traction~~, each~~ (For spinal subluxation, see 97260, 97261)	090	8.36 (no change)
22325	W25	Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; lumbar~~, each~~	090	17.19 (no change)
22326	W26	cervical~~, each~~	090	18.43 (no change)
22327	W27	thoracic~~, each~~	090	17.56 (no change)
•22328	W28	each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure) (Use 22328 only for codes 22325, 22326, 22327)	ZZZ	4.61
(22330-22379 have been deleted. For decompression of spine following fracture, see 63991-63091; for arthrodesis of spine following fracture, see 22548-22362) (For treatment of vertebral fracture by the anterior approach, see corpectomy 63081-63090, and appropriate arthrodesis, bone graft and instrument codes)				

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
ARTHRODESIS				
		~~(Spinal arthrodesis procedures, 22548-22812, include either an allograft or an autograft. When an autograft is taken through a separate incision, use procedure code 22820 for the harvesting of autograft in addition to the code for the arthrodesis.)~~		
		To report instrumentation procedures, see codes 22840-22855. (Report in addition to code(s) for the definitive procedure(s).		
		To report bone graft procedures, see codes 20930-20938. (Report in addition to code(s) for the definitive procedure(s))		
		ANTERIOR OR ANTEROLATERAL APPROACH TECHNIQUE		
		Procedure codes 22554-22558 are for SINGLE interspace arthrodesis (2 adjacent vertebral segments); for additional interspaces or segments, use 22585.		
		~~(Procedure codes 22548-22585 exclude reconstruction following vertebral corpectomy)~~		
		(22550, 22552, 22555, 22560, 22561, 22565 have been deleted. For intervertebral disk excision by laminotomy or laminectomy, see 63020-63042. For arthrodesis, see 22548-22632)		
22548	W29	Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), ~~with bone graft,~~ with or without excision of odontoid process	090	24.08 (no change)
22554	W30	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2~~, with bone graft~~	090	17.24
22556	W31	thoracic~~, with local bone (eg, rib) and/or bone allograft~~	090	22.27
22558	W32	lumbar~~, with bone graft~~	090	21.22
22585	W33	~~Arthrodesis, anterior or anterolateral,~~ each additional interspace (List separately in addition to code for primary procedure) (Use 22585 only for codes 22554, 22556, 22558)	ZZZ	5.53 (no change)

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
		POSTERIOR, POSTEROLATERAL OR LATERAL TRANSVERSE PROCESS TECHNIQUE ~~Procedure codes 22590-22630 are for SINGLE arthrodesis (2 adjacent vertebral segments); for additional interspaces or segments, see 22650.~~ To report instrumentation procedures, see codes 22840-22855. (Report in addition to code(s) for the definitive procedure(s). To report bone graft procedures, see codes 20930-20938. (Report in addition to code(s) for the definitive procedure(s))		
22590	W34	Arthrodesis, posterior technique, craniocervical (occiput-C2)~~, with bone graft and/or internal fixation~~	090	19.50
22595	W35	Arthrodesis, posterior technique, atlas-axis (C1-C2) ~~with bone graft and/or internal fixation~~	090	18.19
22600	W36	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment, ~~local bone or bone allograft and/or internal fixation~~ (22605 has been deleted. To report, use 22600)	090	14.74
22610	W37	~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ thoracic (with or without lateral transverse technique)	090	14.62
22612	W38	lumbar, (with or without lateral transverse technique)	090	20.19
•22614	W39	each additional vertebral segment (List separately in addition to code for primary procedure) (Use 22614 only for codes 22600, 22610, 22612)	ZZZ	6.44
(22615 has been deleted. To report, use 22554 and ~~22820~~ 20930-20938) (22617 has been deleted. To report, use 22548 and ~~22820~~ 20930-20938) (22620 has been deleted. To report, use 22590 and ~~22820~~ 20930-20938)				

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
22625		~~Arthrodesis, lateral transverse process technique, with local bone or bone allograft and/or internal wire fixation, lumbar~~ (22625 has been deleted. To report, use 22610 or 22612 and 22840-22855, and 20930-20938)	090	N/A
22630	W40	Arthrodesis, posterior interbody technique, single interspace; ~~with local bone or bone allograft and/or internal wire fixation,~~ lumbar	090	20.03
●22632	W41	each additional interspace (List separately in addition to code for primary procedure) (Use code 22632 only for code 22630)	ZZZ	5.23
(22640-22645 have been deleted. To report, see 22610, 22612, ~~22820~~ and 20930-20938)				
22650		~~Arthrodesis, posterior, posterolateral or lateral transverse process technique, each additional interspace)~~ ~~(List separately in addition to code for single level arthrodesis, 22590-22612)~~ (22650 has been deleted. To report, see 22614)	ZZZ	N/A
(22655 has been deleted. To report ~~use~~ see 22630, 22632 and ~~22820~~ 20930-20938) (22670 has been deleted. To report, use ~~22625 and 22820~~ 22610 or 22612 and 22840-22855, and 20930-20938) (22680 has been deleted. To report, see 22556-22585~~, 22820~~ and 20930-20938) (22700 has been deleted. To report, see 22556-22585~~, 22820~~ and 20930-20938) (22720 has been deleted. To report, see 22612 and ~~22820~~ and 20930-20938) (22730 has been deleted. To report, see 22585 and ~~22650~~ 22614) (22735 has been deleted. To report, see 22585 and ~~22650~~ 22614)				

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
		SPINE DEFORMITY (eg, SCOLIOSIS, KYPHOSIS) To report instrumentation procedures, see codes 22840-22855. (Report in addition to code(s) for the definitive procedure(s). To report bone graft procedures, see codes 20930-20938. (Report in addition to code(s) for the definitive procedure(s)) (Report only one arthrodesis spine deformity code per operative session)		
22800	W42	Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; up to 6 ~~or less vertebrae~~ vertebral segments (22801 has been deleted. To report, use 22800)	090	16.92 (no change)
22802	W43	7 ~~or more~~ to 12 vertebrael segments (22803 has been deleted. To report, use 22802)	090	29.74
•22804	W44	13 or more vertebral segments	090	35.00
•22808	W45	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments	090	25.00
22810	W46	~~Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft~~ 4 to 7 vertebrael segments	090	29.00 (no change)
22812	W47	8 or more vertebrael segments	090	31.00
		~~(For spinal instrumentation, see 22840-22855)~~ **EXPLORATION**		

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
22820		~~Harvesting of bone autograft through separate incision (eg, ilium, fibula) for spinal arthrodesis~~ ~~(Use code 22820 once regardless of number of levels of arthrodesis)~~ ~~(List separately in addition to codes 22548-22650)~~ (22820 has been deleted. To report, see 20930-20938)	ZZZ	N/A
22830		Exploration of spinal fusion	090	10.22 (No Change)
SPINAL INSTRUMENTATION Segmental instrumentation is defined as fixation at each end of the construct and at least one additional interposed bony attachment. Segmental instrumentation must span two or more motion segments. Non-segmental instrumentation is defined as fixation at each end of the construct and may span several motion segments without attachment to the intervening segments. (List codes 22840-22848, 22851 separately, in addition to code for fracture, dislocation or arthrodesis of the spine ~~22305-22812~~, 22325, 22326, 22327, 22548-22812)				
22840	W48	Posterior non-segmental, instrumentation~~, without segmental fixation~~ (eg, single Harrington rod technique)	ZZZ	6.27
●22841	W49	Internal spinal fixation (eg, wires, cables, clamps, plates, or screws) of posterior or anterior spinal elements	ZZZ	0.00
22842	W50	Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments	ZZZ	7.19
●22843	W51	7 to 12 vertebral segments	ZZZ	8.97
●22844	W52	13 or more vertebral segments	ZZZ	10.96
22845	W53	Anterior instrumentation; 2 to 3 vertebral segments	ZZZ	5.98

CPT Code	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•22846	W54	4 to 7 vertebral segments	ZZZ	8.28
•22847	W55	8 or more vertebral segments	ZZZ	9.20
•22848	W56	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum	ZZZ	6.00
22849		Reinsertion of spinal fixation device	090	12.86
22850		Removal of posterior nonsegmental instrumentation (eg, Harrington rod)	090	8.98 (no change)
•22851	W57	Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace	ZZZ	6.71
22852		Removal of posterior segmental instrumentation	090	8.40 (no change)
22855		Removal of anterior instrumentation	090	9.10 (no change)
		~~(For spinal cord monitoring, use 95925)~~		
OTHER PROCEDURES				
22899		Unlisted procedure, spine	YYY	0.00 (No Change)

REVISED 4-21-95

Insert in Tab 13

Attachment A
Medicare Spinal Code Crosswalk and Frequency Information

New/Rev Code	Previously Reported As:	%	x	1993 NCH Alwd Freq*	Medicare Est. Freq.	Medicare Est. Total
209X2	22820	20%		13,711	2,742	
	22140	50%		673	337	
	22141	50%		259	130	
	22142	50%		236	118	
	22145	50%		626	313	
	22148	50%		351	176	
	22150	50%		17	9	
	22151	50%		14	7	
	22152	50%		14	7	
	22554	50%		8,079	4,040	
	22556	50%		277	139	
	22558	50%		912	456	
	22590	10%		283	28	
	22595	10%		846	85	
	22600	10%		1,108	111	
	22610	10%		597	60	
	22612	10%		6,123	612	
	22625	10%		6,115	612	
	22630	50%		1,060	530	**10,508**
209X6	22820	60%		13,711	8,227	**8,227**
209X7	22820	20%		13,711	2,742	
	22140	50%		673	337	
	22141	50%		259	130	
	22142	50%		236	118	
	22145	50%		626	313	
	22148	50%		351	176	
	22150	50%		17	9	
	22151	50%		14	7	
	22152	50%		14	7	**3,837**
22100	22100	100%		62	62	
	22105	100%		12	12	**74**
22101	22101	100%		34	34	
	22106	100%		12	12	**46**
22102	22102	100%		220	220	
	22107	100%		85	85	**305**
22103	22100-22107	estimate		n/a	50	**50**
22110	22110	90%		66	59	
	63081-63091	estimate		n/a	10	**69**
22112	22112	90%		42	38	
	63081-63091	estimate		n/a	12	**50**
22114	22114	90%		115	104	
	63081-63091	estimate		n/a	17	**121**
22116	22110-22114	10%		223	22	**22**
22210	22210	100%		17	17	**17**
22212	22212	100%		35	35	**35**
22214	22214	100%		128	128	**128**

Attachment A
Medicare Spinal Code Crosswalk and Frequency Information

New/Rev Code	Previously Reported As:	%	x	1993 NCH Alwd Freq*	Medicare Est. Freq.	Medicare Est. Total
22216	22230	50%		77	39	**39**
22220	22220	100%		25	25	**25**
22222	22222	100%		71	71	**71**
22224	22224	100%		36	36	**36**
22226	22230	50%		77	39	**39**
22310	22310	100%		11,952	11,952	**11,952**
22315	22315	100%		802	802	**802**
22325	22325	90%		109	98	**98**
22326	22326	90%		191	172	**172**
22327	22327	90%		73	66	**66**
22328	22325-22327	10%		373	37	**37**
22548	22548	100%		69	69	**69**
22554	22554	100%		8,079	8,079	**8,079**
22556	22556	100%		277	277	**277**
22558	22558	100%		912	912	**912**
22585	22585	100%		4,563	4,563	**4,563**
22590	22590	100%		283	283	**283**
22595	22595	100%		846	846	**846**
22600	22600	100%		1,108	1,108	**1,108**
22610	22610	100%		597	597	**597**
22612	22612	100%		6,123	6,123	
	22625	100%		6,115	6,115	**12,238**
22614	22650	100%		12,788	12,788	**12,788**
22630	22630	90%		1,060	954	**954**
22632	22630	10%		1,060	106	**106**
22800	22800	100%		385	385	**385**
22802	22802	70%		315	221	**221**
22804	22802	30%		315	95	**95**
22808	22810	40%		118	47	**47**
22810	22810	60%		118	71	**71**
22812	22812	100%		29	29	**29**
22840	22840	100%		361	361	**361**
22842	22842	99%		10,609	10,503	**10,503**
22843	22842	1%		10,609	53	**53**
22844	22842	1%		10,609	53	**53**
22845	22845	89%		2,405	2,140	**2,140**
22846	22845	10%		2,405	241	**241**
22847	22845	1%		2,405	24	**24**
22848	22899	estimate		n/a	200	**200**
22851	22899	estimate		n/a	500	**500**

*Allowed frequency source: HCFA. 1993 National Claims History Procedure Summary File. 6/30/94.
Selection criteria: TOS:Surgery; Specialties:Physicians (i.e., non-suppliers)
Modifiers excluded: pre-/post-operative management, assistant, and anesthesia.

RVW Recommendations for Spinal Procedures

Submitted by

American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

1996 Status	CPT (Tracking Number) Descriptor		Society RVW Recommendation
	GRAFTS (OR IMPLANTS) - BONE GRAFT		
new	209X1 (W1)	Allograft for spine surgery only; morselized	0.00
new	209X2 (W2)	structural	1.81
new	209X5 (W3)	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision	0.00
new	209X6 (W4)	morselized, (through separate skin or fascial incision)	2.79
new	209X7 (W5)	structural, (bicortical or tricortical), (through separate skin or fascial incision)	3.02
	SPINE (VERTEBRAL COLUMN) - EXCISION		
revised	22100 (W6)	Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; cervical	9.05
revised	22101 (W7)	thoracic	9.00
revised	22102 (W8)	lumbar	9.00
new	22103 (W9)	each additional segment (List separately in addition to code for primary procedure)	2.34
revised	22110 (W10)	Partial ~~resection~~ excision of ~~vertebrae~~ vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) ~~(eg, for osteomyelitis)~~ single vertebral segment; cervical	(see note 1)
revised	22112 (W11)	thoracic	(see note 1)
revised	22114 (W12)	lumbar	(see note 1)
new	22116 (W13)	each additional vertebral segment (List separately in addition to code for primary procedure)	2.32
	OSTEOTOMY		
revised	22210 (W14)	Osteotomy of spine, posterior or posterolateral approach, one ~~single~~ vertebral segment; cervical	(see note 1)
revised	22212 (W15)	thoracic	(see note 1)
revised	22214 (W16)	lumbar	(see note 1)
new	22216 (W17)	each additional vertebral segment (List separately in addition to primary procedure)	6.04
revised	22220 (W18)	Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; cervical	(see note 1)
revised	22222 (W19)	thoracic	(see note 1)
revised	22224 (W20)	lumbar	(see note 1)
new	22226 (W21)	each additional vertebral segment. (List separately in addition to code for primary procedure)	6.04

1996 Status	CPT (Tracking Number) Descriptor		Society RVW Recommendation
	FRACTURE AND/OR DISLOCATION		
no change	22305 (W22)	Closed treatment of vertebral process fracture(s)	(see note 2)
revised	22310 (W23)	Closed treatment of vertebral body fracture(s), without manipulation, requiring and including casting or bracing	(see note 1)
revised	22315 (W24)	Closed treatment of vertebral fracture(s) and/or dislocation(s) requiring casting or bracing, with and including casting and/or bracing, with or without anesthesia, by manipulation or traction; ~~each~~	(see note 1)
revised	22325 (W25)	Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; lumbar; ~~each~~	(see note 1)
revised	22326 (W26)	cervical; ~~each~~	(see note 1)
revised	22327 (W27)	thoracic; ~~each~~	(see note 1)
new	22328 (W28)	each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure)	4.61
	ARTHRODESIS - ANTERIOR OR ANTEROLATERAL APPROACH TECHNIQUE		
revised	22548 (W29)	Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), ~~with bone graft,~~ with or without excision of odontoid process	(see note 1)
revised	22554 (W30)	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2; ~~with bone graft~~	17.24
revised	22556 (W31)	thoracic; ~~with local bone (eg, rib) and/or bone allograft~~	22.27
revised	22558 (W32)	lumbar; ~~with bone graft~~	21.22
revised	22585 (W33)	~~Arthrodesis, anterior or anterolateral,~~ each additional interspace (List separately in addition to code for primary procedure)	5.53
	POSTERIOR, POSTEROLATERAL OR LATERAL TRANSVERSE PROCESS TECHNIQUE		
revised	22590 (W34)	Arthrodesis, posterior technique, craniocervical (occiput-C2); ~~with bone graft and/or internal fixation~~	19.82
revised	22595 (W35)	Arthrodesis, posterior technique, atlas-axis (C1-C2) ~~with bone graft and/or internal fixation~~	19.06
revised	22600 (W36)	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment, ~~local bone or bone allograft and/or internal fixation~~	17.87
revised	22610 (W37)	~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ thoracic (with or without lateral transverse technique)	14.93
revised	22612 (W38)	lumbar, (with or without lateral transverse technique)	22.07
new	22614 (W39)	each additional vertebral segment (List separately in addition to code for primary procedure)	6.44
revised	22630 (W40)	Arthrodesis, posterior interbody technique, single interspace; ~~with local bone or bone allograft and/or internal wire fixation,~~ lumbar	20.03
new	22632 (W41)	each additional interspace (List separately in addition to code for primary procedure)	5.23

1996 Status	CPT (Tracking Number) Descriptor		Society RVW Recommendation
	SPINE DEFORMITY (eg, SCOLIOSIS, KYPHOSIS)		
revised	22800 (W42)	Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; up to	16.92
revised	22802 (W43)	7 ~~or more~~ to 12 vertebrael segments	31.31
new	22804 (W44)	13 or more vertebral segments	35.00
new	22808 (W45)	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments	25.00
revised	22810 (W46)	~~Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft~~ 4 to 7 vertebrael segments	29.00
revised	22812 (W47)	8 or more vertebrael segments	31.00
	SPINAL INSTRUMENTATION		
revised	22840 (W48)	Posterior non-segmental instrumentation~~; without segmental fixation~~ (eg, single Harrington rod technique)	(see note 3)
-	(W49)	Internal spinal fixation (eg, wires, cables, clamps, plates, or screws) of posterior or anterior spinal elements	(see note 4)
revised	22842 (W50)	Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments	14.37
new	22843 (W51)	7 to 12 vertebral segments	17.94
new	22844 (W52)	13 or more vertebral segments	21.92
revised	22845 (W53)	Anterior instrumentation; 2 to 3 vertebral segments	11.96
new	22846 (W54)	4 to 7 vertebral segments	16.55
new	22847 (W55)	8 or more vertebral segments	18.39
new	22848 (W56)	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum	12.00
new	22851 (W57)	Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace	6.71

Notes:

1. Editorial change only. No recommendation provided.
2. No change in descriptor. No recommendation provided.
3. Editorial change only. No recommendation provided. PLEASE NOTE that the CPT Editorial Panel has changed the global period from 000 to ZZZ for this add-on instrumentation procedure. However, in the pediatric patient population, this service is often provided independent of other procedures (i.e., stand-alone) for juvenile idiopathic scoliosis. Consequently, the society consensus committee recommends that a stand-alone code, with a global period, for the pediatric population requiring this service be developed and valued.
4. The American Academy of Orthopaedic Surgeons and the American Association of Neurological Surgeons have requested that the new instrumentation code W49 be withdrawn because the wording in the new code is too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments. [Please see Attachment B: letters to T. Reginald Harris, MD]

AMA/Specialty Society RVS Update Process Summary of Specialty Society Recommendation

Tracking/CPT: W1 209X1 (new) **Global Period:** ZZZ **Recommended RVW:** 0.00

CPT Descriptor: Allograft for spine surgery only; morselized

The **recommended RVW for code 209X1 is 0.00.** Therefore, this code was not surveyed.

Rationale:
A basic coding philosophy was addressed in removing bone grafting from primary procedures and developing new add-on bone graft codes. Throughout the musculoskeletal system section of the CPT manual, bone graft coding was handled inconsistently. In some instances the harvesting of the bone graft was included in the procedure, and in others is was not included. In some cases, the application of the bone graft itself was an integral part of the procedure descriptor and in others the coder was instructed to use a separate bone graft code.

An additional problem was the inability to differentiate the many kinds of bone grafts that are done today. For instance, in tumor surgery, large structural allografts that my include one or both sides of a joint cannot be differentiated from bone grafts of much smaller proportions. Oral and maxillofacial surgeons encounter the same problem in facial reconstructions. The approved bone graft codes are only the beginning of an effort to correct this inconsistency.

You will note that an RVW of 0.00 has been recommended for new codes 209X1 and 209X5. It is not uncommon to supplement an autograft which was harvested from an iliac crest and requires measurable work with a local autograft (209X5) or morselized allograft (209X1) which requires little work effort. However, the service itself should be able to be coded, so that physicians will not be forced to used other bone graft codes that do have work values.

Please also note, that because the CPT Editorial Panel chose to add the phrase "for spine surgery only" to the proposed series of bone graft codes, allograft codes for "major joint" had to be tabled for future consideration.

Tracking/CPT: W2 209X2 (new) **Global Period:** ZZZ **Recommended RVW:** 1.81

CPT Descriptor: Allograft for spine surgery only; structural

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A patient undergoes an anterior spine fusion utilizing a tibial strut graft obtained from a bone bank. [***This is an "add-on" service to be reported in addition to codes for the definitive procedure(s).* In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for this ADDITIONAL service.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: includes taking measurements by caliper and other devices to provide the dimensions recorded from the recipient site. The integrity and state of readiness of the graft is assessed. Using bone cutting instruments, the graft is trimmed to fit the recipient site. A trial fit is made and the proper orientation is selected. Additional fashioning of the graft for exact fit is accomplished. The fit is made under distraction and/or with impaction. The graft is checked for adequacy of contact, and stability, and absence of interference with surrounding soft tissues. More time is required to fashion the graft if more than one level is to be filled.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
3.02	22148	Harvesting of bone autograft for vertebral reconstruction following vertebral corpectomy	ZZZ
1.81*	209X2	Allograft for spine surgery only; structural	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Approximately 60% of 22148 represents the work of fashioning a structural allograft (i.e. 209X2). Since 209X7 replaces 22148 and has a recommended RVW of 3.02, we **recommend an RVW of 1.81** (60% of 3.02) for 209X2, instead of the survey median value of 2.79.

Tracking/CPT: W2 209X2 (new) **Global Period:** ZZZ **Recommended RVW:** 1.81

CPT Descriptor: Allograft for spine surgery only; structural

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery __X__ Commonly ____ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 20 Low: 10 High: 120

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 15

Sample Size: 223 Response Rate (%): 53 (24%) MEDIAN RVW: 2.79

25th pctl RVW: 2.00 75th pctl RVW: 5.00 Low: 0.25 High: 7.00

Tracking/CPT: W3 209X5 (new) **Global Period:** ZZZ **Recommended RVW:** 0.00

CPT Descriptor: Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision

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The **recommended RVW for code 209X5 is 0.00**. Therefore, this code was not surveyed.

Rationale:
A basic coding philosophy was addressed in removing bone grafting from primary procedures and developing new add-on bone graft codes. Throughout the musculoskeletal system section of the CPT manual, bone graft coding was handled inconsistently. In some instances the harvesting of the bone graft was included in the procedure, and in others is was not included. In some cases, the application of the bone graft itself was an integral part of the procedure descriptor and in others the coder was instructed to use a separate bone graft code.

An additional problem was the inability to differentiate the many kinds of bone grafts that are done today. For instance, in tumor surgery, large structural allografts that my include one or both sides of a joint cannot be differentiated from bone grafts of much smaller proportions. Oral and maxillofacial surgeons encounter the same problem in facial reconstructions. The approved bone graft codes are only the beginning of an effort to correct this inconsistency.

You will note that an RVW of 0.00 has been recommended for new codes 209X1 and 209X5. It is not uncommon to supplement an autograft which was harvested from an iliac crest and requires measurable work with a local autograft (209X5) or morselized allograft (209X1) which requires little work effort. However, the service itself should be able to be coded, so that physicians will not be forced to used other bone graft codes that do have work values.

Please also note, that because the CPT Editorial Panel chose to add the phrase "for spine surgery only" to the proposed series of bone graft codes, allograft codes for "major joint" had to be tabled for future consideration.

Tracking/CPT: W4 209X6 (new) **Global Period:** ZZZ **Recommended RVW:** 2.79

CPT Descriptor: Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A patient undergoes a laminectomy and fusion of the lumbar spine for spinal stenosis that requires the use of a bone graft harvested from the iliac crest through a separate incision in the fascia. [***This is an "add-on" service to be reported in addition to codes for the definitive procedure(s).* In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for this ADDITIONAL service.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Attention is given during positioning and draping to be sure that there is sterile access to the proposed donor site intraoperatively. The recipient area is evaluated to assess the volume and type of graft needed. The length of the incision and amount of subperiosteal reflection are planned accordingly. The soft tissue dissection and retraction of the recipient area is evaluated to determine whether a separate skin incision is needed to access the donor site or whether it can be approached through a fascial incision. The proper skin and/or fascial incision is made. Muscles are reflected subperiosteally over the donor site and held with retractors. With bone cutting instruments, the cortex is removed to expose cancellous bone. If needed, osteotomes or power devices are used to cut corticocancellous strips. bone cutting instruments are used to remove cancellous bone. In the case of iliac grafting, care is taken to avoid deep penetration of the inner table or the sacroiliac joint. bleeding from adjacent muscles is carefully controlled. If necessary, a drainage tube is placed deep in the wound and brought out through a separate stab wound. The fascia over the bone is closed with heavy sutures. Subcutaneous tissues and skin are closed in layers.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
2.79	22820	Harvesting of bone autograft through separate incision (eg, ilium, fibula) for spinal arthrodesis	ZZZ
2.79*	209X6	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The work of 22820 and 209X6 is comparable. Therefore, the survey median **RVW of 2.79 is recommended.**

Tracking/CPT: W4 209X6 (new) **Global Period:** ZZZ **Recommended RVW:** 2.79

CPT Descriptor: Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 40 Low: 20 High: 150

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 40 in Past 5 years: 200

Sample Size: 223 Response Rate (%): 50 (22%) MEDIAN RVW: 2.79

25th pctl RVW: 2.79 75th pctl RVW: 3.00 Low: 1.80 High: 5.00

Tracking/CPT: W5 209X7 (new) **Global Period:** ZZZ **Recommended RVW:** 3.02

CPT Descriptor: Autograft for spine surgery only (includes harvesting the graft); structural (bicortical or tricortical), (through separate skin or fascial incision)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A patient undergoes a multilevel anterior cervical fusion utilizing a tibial strut graft harvested from the patient's own tibia. The graft is internally fixed, either separately, or by the use of spinal instrumentation. [***This is an "add-on" service to be reported in addition to codes for the definitive procedure(s).* In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for this ADDITIONAL service.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Special attention is given to positioning and draping to allow sterile and convenient access intraoperatively without compromising the operation in progress on the recipient area. For tibial or fibular strut grafts, a tourniquet is applied to the extremity. A longitudinal incision is made over the proposed donor area. The muscles and fascia are removed by subperiosteal reflection from the bone. Data are obtained by caliper or other measurement technique from x-ray and the exposed recipient area. The donor site is evaluated to select the ideal site considering the thickness and curvature of the cortex, the quality and thickness of the underlying cancellous bone, and the residual integrity of the donor site. Bone cutting instruments are used to cut through the cortex of the donor bone and the cuts completed deep within the bone, using angled cuts or curved instruments. The donor graft is removed and a trial fit to the recipient area is made. Additional shaping and modeling of the donor bone is carried out until the fit is exact under distraction and by impaction. The graft is then applied and tested for fit and stability. Any protruding portions of the bone that threaten the overlying soft tissue are removed with bone cutting instruments.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
3.02	22148	Harvesting of bone autograft for vertebral reconstruction following vertebral corpectomy	ZZZ
3.02*	209X7	Autograft for spine surgery only (includes harvesting the graft); structural (bicortical or tricortical), (through separate skin or fascial incision)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The work of 22148 and 209X7 is comparable. Therefore, an **RVW of 3.02 is recommended** instead of the survey median value of 3.75.

Tracking/CPT: W5 209X7 (new) **Global Period:** ZZZ **Recommended RVW:** 3.02

CPT Descriptor: Autograft for spine surgery only (includes harvesting the graft); structural (bicortical or tricortical), (through separate skin or fascial incision)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery __X__ Commonly ____ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 45 Low: 20 High: 150

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 25

Sample Size: 223 Response Rate (%): 58 (26%) MEDIAN RVW: 3.75

25th pctl RVW: 3.02 75th pctl RVW: 6.74 Low: 2.75 High: 9.00

Tracking/CPT: W6 22100 (revised) **Global Period:** 090 **Recommended RVW:** 9.05

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; cervical

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with osteomyelitis of the cervical lamina undergoes incision and dissection to expose the lamina. The infected lamina is removed without decompression of the spinal canal.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. Particular attention is given to stable positioning of the head with control of shoulder and arm posture to provide for x-ray access. Where applicable, provision is made for intraoperative monitoring of spinal cord functions. X-rays may be necessary before an incision is made.

Intra-service work: A mid-line incision divides skin, subcutaneous tissue, and fascia down to the dorsal tips of the spinous processes, whereupon an x-ray is taken with a marker on a spinous process. Muscles are carefully stripped subperiosteally from both sides of the spinous process and laminae, bleeding being controlled by cautery and packing until self-retaining retractors can be effectively inserted. The lesion and undesired bony elements are removed with bone cutting instruments, care being taken to protect dura and neural elements. Optionally, a drain is inserted and passed through the muscles and out a separate puncture wound in the skin. The muscles, fascia, and skin are closed in layers. Dressings and collar/brace are applied (alternatively, a halo device may be applied as a separately coded procedure).

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); removal of a drain, if used; adjustments of brace/collar as necessary; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W6 22100 (revised) **Global Period:** 090 **Recommended RVW:** 9.05

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; cervical

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
8.19	22100	Partial resection of vertebral component, spinous processes; cervical	090
8.19	22101	Partial resection of vertebral component, spinous processes; thoracic	090
8.78	22102	Partial resection of vertebral component, spinous processes; lumbar	090
13.02	22105	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); cervical	090
11.59	22106	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); thoracic	090
11.59	22107	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); lumbar	090
9.05*	22100	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet), for intrinsic bony lesion, single vertebral segment; cervical	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of codes 22100-22102 was revised to include the work previously reported with codes 22105-22107 (these codes will be deleted). The wording was changed to make it clear that 22100-22102 are posterior procedures that are performed for intrinsic bony pathology and include any bony part, not just the spinous processes. The survey median RVWs for 22100 (9.05), 22101 (9.00), and 22102 (9.00) are recommended for this revised family of codes because they reflect the variability of work that the revised codes represent and because the survey median RVWs fall between the 1995 RVWs for 22100-22102 and 22105-22107. The slightly higher recommended RVW for 22100 takes into account that the pre-service time for the cervical procedure is slightly higher due to additional positioning requirements.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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Tracking/CPT: W6 22100 (revised) **Global Period:** 090 **Recommended RVW:** 9.05

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; cervical

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 90 Low: 60 High: 200

Median Pre-Service Time: 80 Median Post-Service Time: 135

Length of Hospital Stay: 4 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Sample Size: 137 Response Rate (%): 38 (28%) MEDIAN RVW: 9.05

25th pctl RVW: 8.19 75th pctl RVW: 11.44 Low: 4.00 High: 20.00

Tracking/CPT: W7 22101 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; thoracic

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with osteomyelitis of a thoracic lamina undergoes incision and dissection to expose the lamina. The infected lamina is removed without decompression of the spinal canal.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. The particular difficulty of intraoperative assessment of level in the thoracic spine must be anticipated by careful analysis of x-rays, sometimes including skin marking of correlating surface landmarks. The particular attention to positioning may require x-ray assessment in the operating room prior to the first incision.

Intra-service work: A mid-line incision is made to divide skin, subcutaneous tissue, and fascia, down to the dorsal tips of the spinous processes, whereupon an x-ray is taken with a marker on a spinous process. Muscles are carefully stripped subperiosteally from both sides of the spinous process and lamina and muscles reflected from the capsules of the facet joints. Bleeding is controlled by cautery and packing until self-retaining retractors can be effectively inserted. The lesion and undesired bony elements are removed with bone cutting instruments with care taken to protect dura and neural elements. Traction is released from the muscles and hemostasis secured. Optionally, a drain is inserted and passed through the muscles and out a separate puncture in the skin. The fascia, muscles, and skin are closed in layers.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); removal of a drain, if used; adjustments of brace as necessary; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W7 22101 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; thoracic

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
8.19	22100	Partial resection of vertebral component, spinous processes; cervical	090
8.19	22101	Partial resection of vertebral component, spinous processes; thoracic	090
8.78	22102	Partial resection of vertebral component, spinous processes; lumbar	090
13.02	22105	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); cervical	090
11.59	22106	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); thoracic	090
11.59	22107	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); lumbar	090
*	22101	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet), for intrinsic bony lesion, single vertebral segment; thoracic	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of codes 22100-22102 was revised to include the work previously reported with codes 22105-22107 (these codes will be deleted). The wording was changed to make it clear that 22100-22102 are posterior procedures that are performed for intrinsic bony pathology and include any bony part, not just the spinous processes. The **survey median RVWs for 22100 (9.05), 22101 (9.00), and 22102 (9.00) are recommended** for this revised family of codes because they reflect the variability of work that the revised codes represent and because the survey median RVWs fall between the 1995 RVWs for 22100-22102 and 22105-22107. The slightly higher recommended RVW for 22100 takes into account that the pre-service time for the cervical procedure is slightly higher due to additional positioning requirements.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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Tracking/CPT: W7 22101 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; thoracic

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 90 Low: 60 High: 200

Median Pre-Service Time: 75 Median Post-Service Time: 135

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 2

Sample Size: 137 Response Rate (%): 38 (28%) MEDIAN RVW: 9.00

25th pctl RVW: 8.19 75th pctl RVW: 11.59 Low: 8.00 High: 20.00

Tracking/CPT: W8 22102 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; lumbar

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with osteomyelitis of a lumbar lamina undergoes incision and dissection to expose the lamina. The infected lamina is removed without decompression of the spinal canal.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, with careful x-ray analysis of peculiarities of lumbar anatomy that might effect intraoperative assessment of level; 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. The positioning must be accomplished with the consideration of the need for precise intraoperative radiologic assessment. An x-ray is often necessary before an incision is made.

Intra-service work: A mid-line incision is made to divide skin, subcutaneous tissue, and fascia, down to the dorsal tips of the spinous processes, whereupon an x-ray is taken with a marker on a spinous process. Muscles are carefully stripped subperiosteally from both sides of the spinous processes, laminae, and over the facet capsules. Bleeding is controlled by cautery and packing until self retaining retractors can be effectively inserted. The lesion and desired bony elements are removed with bone cutting instruments with care taken to protect dura and neural elements. Traction is released from the muscles and hemostasis secured. Optionally, a drain is inserted and passed through the muscles and out a separate puncture in the skin. Fascia, muscles, and skin are closed in layers.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); removal of a drain, if used; adjustments of brace as necessary; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W8 22102 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; lumbar

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
8.19	22100	Partial resection of vertebral component, spinous processes; cervical	090
8.19	22101	Partial resection of vertebral component, spinous processes; thoracic	090
8.78	22102	Partial resection of vertebral component, spinous processes; lumbar	090
13.02	22105	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); cervical	090
11.59	22106	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); thoracic	090
11.59	22107	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); lumbar	090
*	22102	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet), for intrinsic bony lesion, single vertebral segment; lumbar	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of codes 22100-22102 was revised to include the work previously reported with codes 22105-22107 (these codes will be deleted). The wording was changed to make it clear that 22100-22102 are posterior procedures that are performed for intrinsic bony pathology and include any bony part, not just the spinous processes. **The survey median RVWs for 22100 (9.05), 22101 (9.00), and 22102 (9.00) are recommended** for this revised family of codes because they reflect the variability of work that the revised codes represent and because the survey median RVWs fall between the 1995 RVWs for 22100-22102 and 22105-22107. The slightly higher recommended RVW for 22100 takes into account that the pre-service time for the cervical procedure is slightly higher due to additional positioning requirements.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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Tracking/CPT: W8 22102 (revised) **Global Period:** 090 **Recommended RVW:** 9.00

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; lumbar

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 90 Low: 60 High: 180

Median Pre-Service Time: 75 Median Post-Service Time: 135

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 4

Sample Size: 137 Response Rate (%): 39 (28%) MEDIAN RVW: 9.00

25th pctl RVW: 8.78 75th pctl RVW: 11.30 Low: 3.26 High: 22.00

Tracking/CPT: W9 22103 (new) **Global Period:** ZZZ **Recommended RVW:** 2.34

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; each additional segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with osteomyelitis of a cervical, thoracic, and/or lumbar lamina undergoes incision and dissection to expose the lamina. After removal of a portion of the lamina at one vertebra, the posterior elements of an additional vertebrae are excised without decompression of the spinal canal. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for removing EACH ADDITIONAL involved vertebral component.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The skin, subcutaneous, and fascial incisions are extended as far as necessary to provide for retraction of adjacent muscles and ample exposure of the additional level. Muscles and periosteum are reflected from the spinous processes and laminae, and muscles from the posterior surface of the facet capsules. The lesion and undesired bony elements are removed with bone cutting instruments with special care to protect dura and neural elements. The traction is released from the muscles and hemostasis is secured. The fascia, muscles, subcutaneous tissue, and skin over the extended area are closed in layers.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W9 22103 (new) **Global Period:** ZZZ **Recommended RVW:** 2.34

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; each additional segment (List separately in addition to code for primary procedure)

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
8.19	22100	Partial resection of vertebral component, spinous processes; cervical	090
8.19	22101	Partial resection of vertebral component, spinous processes; thoracic	090
8.78	22102	Partial resection of vertebral component, spinous processes; lumbar	090
13.02	22105	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); cervical	090
11.59	22106	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); thoracic	090
11.59	22107	Partial resection of vertebral component for tumor (eg, partial facetectomy, without primary grafting); lumbar	090
12.11	63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk; one interspace, lumbar	090
3.15	63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disk; each additional interspace, cervical or lumbar	ZZZ
2.34*	22103	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet), for intrinsic bony lesion, single vertebral segment; each additional segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The relationship of 22100-22102 and 22103 correlates well with the relationship of laminotomy/disk codes 63030 and 63035 in terms of degree and depth of procedure. Using the RVW ratio of 63035 to 63030 (3.15/12.11=26%), an **RVW of 2.34 (26% of 9.00) is recommended** for 22103 instead of the survey median value of 5.00.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely
Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W9 22103 (new) **Global Period:** ZZZ **Recommended RVW:** 2.34

CPT Descriptor: Partial ~~resection~~ excision of posterior vertebral component, (e.g. spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment ~~spinous processes~~; each additional segment (List separately in addition to code for primary procedure)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 30 Low: 10 High: 80

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 4

Sample Size: 137 Response Rate (%): 39 (28%) MEDIAN RVW: 5.00

25th pctl RVW: 3.13 75th pctl RVW: 6.72 Low: 1.00 High: 16.00

Tracking/CPT: W13 22116 (new) **Global Period:** ZZZ **Recommended RVW:** 2.32

CPT Descriptor: Partial ~~resection~~ excision of ~~vertebrae~~ vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) ~~(eg, for osteomyelitis)~~ single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male presents with osteomyelitis of a cervical, thoracic, and/or lumbar vertebral body. Using an anterior approach to the spine, a portion of the lamina at one vertebra is excised plus a portion of a vertebral body at an additional vertebra without decompression of the vertebral canal. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for removing EACH ADDITIONAL vertebral segment.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The incision and dissection of superficial muscles for a single vertebral segment are extended to accommodate additional retraction of deep tissues. Muscle attachments to the anteromedial edges of the vertebral bodies are reflected over an additional segment and one or more additional segmental vessels are identified, ligated, and cut if necessary to further mobilize the soft tissues. Retractors are repositioned to expose the additional vertebral segment. The periosteum is reflected from the additional segment and the requisite bone removed and dissection performed with bone cutting instruments.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W13 22116 (new) **Global Period:** ZZZ **Recommended RVW:** 2.32

CPT Descriptor: Partial ~~resection~~ excision of ~~vertebrae~~ vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) ~~(eg, for osteomyelitis)~~ single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
11.59	22110	Partial excision of vertebrae (eg, for osteomyelitis); cervical	090
11.59	22112	Partial excision of vertebrae (eg, for osteomyelitis); thoracic	090
11.59	22114	Partial excision of vertebrae (eg, for osteomyelitis); lumbar	090
22.08	63081	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment	090
4.37	63082	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment	ZZZ
2.32*	22116	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The relationship of 22110-22114 and 22116 correlates well with the relationship of corpectomy codes 63081 and 63082 in terms of degree and depth of procedure. Using the RVW ratio of 63082 to 63081 (4.37/22.08=20%), an **RVW of 2.32 (20% of 11.59) is recommended** for 22116 instead of the survey median value of 5.18.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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Tracking/CPT: W13 22116 (new) **Global Period:** ZZZ **Recommended RVW:** 2.32

CPT Descriptor: Partial ~~resection~~ excision of ~~vertebrae~~ vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s) ~~(eg, for osteomyelitis)~~ single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 45 Low: 20 High: 180

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 5

Sample Size: 137 Response Rate (%): 36 (26%) MEDIAN RVW: 5.18

25th pctl RVW: 3.82 75th pctl RVW: 7.00 Low: 2.00 High: 12.00

Tracking/CPT: W17 22216 (new) **Global Period:** ZZZ **Recommended RVW:** 6.04

CPT Descriptor: Osteotomy of spine, posterior or posterolateral approach, one ~~single~~ vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with rheumatoid spondylitis presents with a fused spine in marked flexion so that he cannot look forward while walking. Using a posterior or posterolateral approach to the cervical, thoracic, and/or lumbar spine, after resection of posterior elements, including the pedicles and manipulation of the spine into extension, a similar resection procedure is carried out at another level in the same region through the same incision. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for EACH ADDITIONAL resection.]

Pre-service work: The amount of bone to be removed and the sites for removal are carefully assessed preoperatively from x-ray and clinical analysis. Provision for prepping, draping, and radiographic exposure is made sufficient to extend the exposure to include additional segments.

Intra-service work: Skin, muscle, and fascial incisions are extended to provide adequate exposure for an additional osteotomy. The spinous process and lamina of the central vertebra of the area for additional osteotomy are removed. Facets, pedicles, and lateral bone are removed to protect the nerve roots and the laminae above and below are undercut to protect the dura and central neural elements. (Instrumentation and grafting, if used, are coordinated with the manipulation and are coded separately.) The spine is manipulated into extension by table and body positioning and by manual force exerted by the surgeon. The added segment is inspected for apposition of bone and safety of neural elements.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
22.51	22210	Osteotomy of spine, posterior approach, single segment; cervical	090
18.14	22212	Osteotomy of spine, posterior approach, single segment; thoracic	090
18.14	22214	Osteotomy of spine, posterior approach, single segment; lumbar	090
6.04	22230	Osteotomy of spine, any approach, each additional segment	ZZZ
6.04*	22216	Osteotomy of spine, posterior or posterolateral approach, one vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22230 will be deleted and replaced with 22216 and 22226. The survey median **RVW of 6.04 is recommended.** This RVW represents a value that is 30% of the average RVW value for the primary procedure codes 22210-22214.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

Tracking/CPT: W17 22216 (new) **Global Period:** ZZZ **Recommended RVW:** 6.04

CPT Descriptor: Osteotomy of spine, posterior or posterolateral approach, one ~~single~~ vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ____ Commonly ____ Sometimes __X__ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 60 Low: 25 High: 120

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 2

Sample Size: 125 Response Rate (%): 27 (22%) MEDIAN RVW: 6.04

25th pctl RVW: 6.00 75th pctl RVW: 10.00 Low: 4.00 High: 15.00

Tracking/CPT: W21 22226 (new) **Global Period:** ZZZ **Recommended RVW:** 6.04

CPT Descriptor: Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male with rheumatoid spondylitis presents with a fused spine in marked flexion so that he cannot look forward while walking. Using an anterior approach to the cervical, thoracic, and/or lumbar spine, after resection of a bony element and disc, and manual manipulation of the spine into extension, a similar resection procedure is carried out at another level in the same region through the same incision. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for EACH ADDITIONAL resection.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Skin, muscle, and fascial dissection is extended sufficiently for the retraction needed for adequate exposure of the additional level. Additional segmental vessels are ligated and cut to adequately mobilize the great vessels to allow safe exposure. The additional disk space is identified and x-ray confirmation obtained. Soft tissues are reflected subperiosteally from the adjacent vertebrae. Bone cutting instruments are used to remove the disk and adjacent end-plates sufficiently to allow safe and adequate osteotomy of the lateral and posterior ossified anulus. The additionally mobilized soft tissues are closed in layers.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
20.15	22220	Osteotomy of spine, anterior approach, single segment; cervical	090
20.15	22222	Osteotomy of spine, anterior approach, single segment; thoracic	090
20.15	22224	Osteotomy of spine, anterior approach, single segment; lumbar	090
6.04	22230	Osteotomy of spine, any approach, each additional segment	ZZZ
*	22226	Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22230 will be deleted and replaced with 22216 and 22226. The survey median **RVW of 6.04 is recommended.** This RVW represents a value that is 30% of the average RVW value for the primary procedure codes 22220-22224.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

Tracking/CPT: W21 22226 (new) **Global Period:** ZZZ **Recommended RVW:** 6.04

CPT Descriptor: Osteotomy of spine, including diskectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ____ Commonly ____ Sometimes __X__ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

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 of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Sample Size: 125 Response Rate (%): 25 (20%) MEDIAN RVW: 6.04

25th pctl RVW: 6.04 75th pctl RVW: 9.00 Low: 4.25 High: 31.00

Tracking/CPT: W28 22328 (new) **Global Period:** ZZZ **Recommended RVW:** 4.61

CPT Descriptor: Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 35-year-old male, who was in an automobile accident, presents with a dislocation at more than one level of the cervical, thoracic, and/or lumbar spine. Using a posterior approach to the spine, after reduction of one dislocated segment, a similar reduction procedure is carried on an additional dislocated segment in the same region through the same incision. [In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for the reduction of EACH ADDITIONAL fractured vertebrae or dislocated segment.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The skin, fascial, and muscle dissection are extended as necessary to provide safe exposure of the additional injured vertebra and segment. The extent of muscle, ligament, bone, theca, and nerve injury is assessed at the additional injury site. bone is resected if necessary to protect theca or neural tissue. bone grasping and levering instruments and/or adjustment of table position are employed to effect a reduction. (Instrumentation and grafting, if used, are coordinated with the reduction and are coded separately.) The added incisions in muscle, fascia, and skin are sutured.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
17.19	22325	Open treatment of vertebral fracture and/or dislocation; lumbar, each	090
18.43	22326	Open treatment of vertebral fracture and/or dislocation; cervical, each	090
17.56	22327	Open treatment of vertebral fracture and/or dislocation; thoracic, each	090
4.60*	22328	Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Currently, each additional level of service for 22325-22327 is billed as a multiple procedure at 50% of the total RVW for each procedure. The survey RVW median of 10.00 is consistent with this previous billing procedure. However, for consistency in the valuation of add-on spinal procedures, the society consensus committee has chosen to use the relationship of laminotomy/disk codes 63030 and 63035 as comparable reference services in terms of degree and depth of procedure. Applying the RVW ratio of 63035 to 63030 (3.15/12.11=26%) to the average RVW for codes 22325-22327 (17.73), an **RVW of 4.61 (26% of 17.73) is recommended** for 22328 instead of the survey median value of 10.00

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

Tracking/CPT: W28 22328 (new) **Global Period:** ZZZ **Recommended RVW:** 4.61

CPT Descriptor: Open treatment and/or reduction of vertebral fracture(s) and/or dislocation(s), posterior approach, one fractured vertebrae or dislocated segment; each additional fractured vertebrae or dislocated segment (List separately in addition to code for primary procedure)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 45 Low: 15 High: 150

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 3

Sample Size: 139 Response Rate (%): 25 (18%) MEDIAN RVW: 10.00

25th pctl RVW: 7.00 75th pctl RVW: 14.42 Low: 3.20 High: 26.00

Tracking/CPT: W30 22554 (revised) **Global Period:** 090 **Recommended RVW:** 17.24

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2~~, with bone graft~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old man undergoes anterior arthrodesis of the cervical spine for degenerative disc disease. Using an anterior cervical approach, excision of the disc and preparation of the end plates for fusion is performed. [*Instrumentation and/or bone grafting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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: A transverse incision is made anteriorly over the level of the proposed arthrodesis. The platysma muscle is cut in line with the skin incision. The interval between the sternocleidomastoid and carotid sheath laterally and the trachea and esophagus medially is developed and the prevertebral fascia cleared from the front of the spine. The disk between the vertebrae to be fused is identified and the level confirmed by x-ray. The longus colli muscles are mobilized along their medial edges. Lateral and longitudinal self retaining traction devices are inserted. The anterior longitudinal ligament and anterior anulus are removed by sharp dissection. The disk and cartilaginous end-plates are removed by curettage. Bone cutting instruments are used to remove the bony end-plates and expose the cancellous bone of the vertebral body. With the disk space under distraction, the bone graft (coded separately) is inserted into the disk space. The traction is released and the graft checked for security. Any protruding parts of the graft are trimmed to avoid esophageal compression. A drain is placed in the wound as desired. The platysma muscle, subcutaneous tissue, and skin are sutured. Sterile dressings and a collar or brace are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W30 22554 (revised) **Global Period:** 090 **Recommended RVW:** 17.24

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2~~, with bone graft~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.14	22554	Arthrodesis, anterior interbody technique; cervical below C2, with bone graft	090
1.81*	209X2	Allograft for spine surgery only: structural	ZZZ
17.24*	22554	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of 22554 has been changed to make it clear that "minimal" diskectomy to prepare the disk space for arthrodesis in not reported separately, but to allow for separate reporting of formal diskectomy with decompression of the spinal cord. In addition, the reference to bone graft was removed to allow for separate reporting using the new specific bone graft codes 200X1-209X7.

The addition of the diskectomy wording did not change the service since minimal diskectomy, if performed, has always been a usual part of the procedure. However, it is estimated that approximately 50% of the cases involve structural bone allografts. Therefore, the society consensus committee recommends reducing the current RVW by 0.90 (50% of the RVW for 209X2) to account for the fact that approximately 50% of the cases will report the new bone graft code 209X2 as an add-on service. The **recommended RVW is 17.24** (18.14-0.90), instead of the survey median value of 18.14.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery __X__ Commonly ____ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W30 22554 (revised) **Global Period:** 090 **Recommended RVW:** 17.24

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); cervical below C2~~, with bone graft~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

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

Median Pre-Service Time: 75 Median Post-Service Time: 105

Length of Hospital Stay: 3 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 15 in Past 5 years: 60

Sample Size: 274 Response Rate (%): 56 (20%) MEDIAN RVW: 18.14

25th pctl RVW: 18.00 75th pctl RVW: 19.83 Low: 9.00 High: 25.00

Tracking/CPT: W31 22556 (revised) **Global Period:** 090 **Recommended RVW:** 22.27

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); thoracic~~, with local bone (eg, rib) and/or bone allograft~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old man undergoes anterior arthrodesis of the thoracic spine for degenerative disc disease. Using a transthoracic approach, excision of the disc and preparation of the end plates for fusion is performed. The wound is closed with chest tubes. [*Instrumentation and/or bone grafting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, with special emphasis on review of radiographic and surface anatomy landmarks in preparation for intraoperative location of the desired level to be fused; 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: Skin and muscles are incised to expose the rib chosen to expose the arthrodesis site(s). After the rib resection, the pleura is divided and the lung collapsed. Segmental vessels are ligated and cut to mobilize the great vessels. The segments to be fused are identified and a marker placed in the disk for x-ray confirmation. Subperiosteally, the fascia and muscle are removed from the adjacent vertebrae. By sharp dissection, the anterior longitudinal ligament and anterior portion of the anulus is removed. The nucleus and cartilaginous end-plates are removed by curettage and other bone cutting instruments. Bone cutting instruments are also used to remove the bony end-plates and expose the cancellous bone of the vertebral bodies above and below. The bone graft (coded separately) is placed in the prepared site and checked for stability and absence of protrusion against soft tissues. The chest wall and overlying muscles are sutured and the subcutaneous tissues and skin are closed. A chest tube is inserted. Sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of chest tube; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W31 22556 (revised) **Global Period:** 090 **Recommended RVW:** 22.27

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); thoracic~~, with local bone (eg, rib) and/or bone allograft~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
23.17	22556	Arthrodesis, anterior interbody technique; thoracic, with local bone (eg, rib) and/or bone allograft	090
1.81*	209X2	Allograft for spine surgery only: structural	ZZZ
22.27*	22556	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); thoracic	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of 22556 has been changed to make it clear that "minimal" diskectomy to prepare the disk space for arthrodesis in not reported separately, but to allow for separate reporting of formal diskectomy with decompression of the spinal cord. In addition, the reference to bone graft was removed to allow for separate reporting using the new specific bone graft codes 200X1-209X7.

The addition of the diskectomy wording did not change the service since minimal diskectomy, if performed, has always been a usual part of the procedure. However, it is estimated that approximately 50% of the cases involve structural bone allografts. Therefore, the society consensus committee recommends reducing the current RVW by 0.90 (50% of the RVW for 209X2) to account for the fact that approximately 50% of the cases will report the new bone graft code 209X2 as an add-on service. The **recommended RVW is 22.27** (23.17-0.90), instead of the survey median value of 23.17.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W31 22556 (revised) **Global Period:** 090 **Recommended RVW:** 22.27

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); thoracic~~, with local bone (eg, rib) and/or bone allograft~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 75 High: 300

Median Pre-Service Time: 85 Median Post-Service Time: 168

Length of Hospital Stay: 6 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 5

Sample Size: 274 Response Rate (%): 57 (21%) MEDIAN RVW: 23.17

25th pctl RVW: 22.50 75th pctl RVW: 24.00 Low: 8.53 High: 30.00

Tracking/CPT: W32 22558 (revised) **Global Period:** 090 **Recommended RVW:** 21.22

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); lumbar~~, with bone graft~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old man undergoes anterior arthrodesis of the lumbar spine for degenerative disc disease. Using a retroperitoneal approach, excision of the disc and preparation of the end plates for fusion is performed. [*Instrumentation and/or bone grafting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies, with special emphasis on review of radiographic and surface anatomy landmarks in preparation for intraoperative location of the desired level to be fused; 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: For fusion of L2-3, L3-4, or L4-5, a transverse or oblique skin incision is made over the site of the abdomen and flank. The external and internal oblique muscles and fascia are dissected and incised by electrocautery. The transversalis fascia is dissected and opened. The peritoneum is separated with an effort to preserve its integrity. With care to protect the ureter, genitofemoral nerve, and sympathetic chain, the retroperitoneal soft tissues are mobilized. The segmental vessels are ligated and cut to mobilize the great vessels. (Alternatively, for L1-2 exposure, a thoracolumbar tenth rib resection retroperitoneal approach with attention to the diaphragm and pleura may be necessary; whereas, for lumbosacral arthrodesis, an anterior paramedian, either retroperitoneal or transperitoneal approach with attention to the iliac vessels, parasympathetic nerves, and middle sacral artery may be needed.) The front of the psoas muscles are exposed and the medial edges reflected from the front of the spine. The disk at the center of the proposed fusion is identified and confirmed by x-ray. The anterior longitudinal ligament and anterior fibers of the anulus are removed by sharp dissection. The nuclear and cartilaginous end-plates are removed by curettage. The bony end-plates are removed by bone cutting instruments and the cancellous bone of the vertebral bodies above and below is exposed. With the space under distraction, the graft (coded separately) is placed and the distraction released. The graft is checked for stability and for absence of protrusion against surrounding soft tissues. The wound is drained through a separate stab wound. When necessary, the peritoneum and/or diaphragm are repaired. The transversalis fascia, abdominal muscles, subcutaneous tissues and skin are sutured in layers. Sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); removal of drain; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W32 22558 (revised) **Global Period:** 090 **Recommended RVW:** 21.22

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); lumbar~~, with bone graft~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
22.12	22558	Arthrodesis, anterior interbody technique; lumbar, with bone graft	090
1.81*	209X2	Allograft for spine surgery only: structural	ZZZ
21.22*	22558	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); lumbar	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording of 22558 has been changed to make it clear that "minimal" diskectomy to prepare the disk space for arthrodesis in not reported separately, but to allow for separate reporting of formal diskectomy with decompression of the spinal cord. In addition, the reference to bone graft was removed to allow for separate reporting using the new specific bone graft codes 200X1-209X7.

The addition of the diskectomy wording did not change the service since minimal diskectomy, if performed, has always been a usual part of the procedure. However, it is estimated that approximately 50% of the cases involve structural bone allografts. Therefore, the society consensus committee recommends reducing the current RVW by 0.90 (50% of the RVW for 209X2) to account for the fact that approximately 50% of the cases will report the new bone graft code 209X2 as an add-on service. The **recommended RVW is 21.22** (22.12-0.90), instead of the survey median value of 22.12.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W32 22558 (revised) **Global Period:** 090 **Recommended RVW:** 21.22

CPT Descriptor: Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); lumbar~~, with bone graft~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 50 High: 310

Median Pre-Service Time: 80 Median Post-Service Time: 150

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 4 in Past 5 years: 14

Sample Size: 274 Response Rate (%): 53 (19%) MEDIAN RVW: 22.12

25th pctl RVW: 22.00 75th pctl RVW: 24.00 Low: 12.00 High: 30.00

Tracking/CPT: W33 22585 (revised) **Global Period:** ZZZ **Recommended RVW:** 5.53

CPT Descriptor: ~~Arthrodesis, anterior or anterolateral,~~ Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old man undergoes anterior arthrodesis of the cervical, thoracic, and/or lumbar spine for degenerative disc disease. After excision of one disc and preparation of the end plates for fusion is performed, a similar excision procedure of an additional disc and preparation of the end plates for fusion is performed. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for EACH ADDITIONAL disc excision.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The incision and dissection of superficial muscles are extended to accommodate additional retraction of deep tissues. Additional segmental vessels are ligated and cut to provide for further reflection of the great vessels. Muscle attachments to the anteromedial edges of the vertebral bodies are reflected over the additional segment and retractors are repositioned. The periosteum is reflected from the bone of the additional segments. A marker is placed at the disk to confirm by x-ray if there is any question as to the location. The anterior longitudinal ligament and anterior fibers of the anulus are removed by sharp dissection. The nucleus and cartilaginous end-plates are removed by curettage. The bony end-plates are removed by bone cutting instruments and the cancellous bone of the vertebral bodies is exposed with the prepared site under distraction. With the space under distraction, the graft (coded separately) is placed and the distraction released. The graft is checked for stability and absence of protrusion against surrounding soft tissues.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.14	22554	Arthrodesis, anterior interbody technique; cervical below C2, with bone graft	090
23.17	22556	Arthrodesis, anterior interbody technique; thoracic, with local bone (eg, rib) and/or bone allograft	090
22.12	22558	Arthrodesis, anterior interbody technique; lumbar, with bone graft	090
5.53	22585	Arthrodesis, anterior or anterolateral, each additional interspace (list separately in addition to single level arthrodesis)	ZZZ
5.53*	22585	Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The wording change in 22585 represents no difference in work. Therefore, the survey median and current **RVW of 5.53 is recommended.** This RVW represents a value that is 26% of the average RVW value for the primary procedure codes 22665-22558.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

Tracking/CPT: W33 22585 (revised) **Global Period:** ZZZ **Recommended RVW:** 5.53

CPT Descriptor: ~~Arthrodesis, anterior or anterolateral,~~ Arthrodesis, anterior interbody technique, including minimal diskectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 45 Low: 20 High: 240

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 6 in Past 5 years: 30

Sample Size: 274 Response Rate (%): 54 (20%) MEDIAN RVW: 5.53

25th pctl RVW: 5.53 75th pctl RVW: 6.25 Low: 2.69 High: 10.00

Tracking/CPT: W34 22590 (revised) **Global Period:** 090 **Recommended RVW:** 19.82

CPT Descriptor: Arthrodesis, posterior technique, craniocervical (occiput-C2)~~, with bone graft and/or internal fixation~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old rheumatoid patient undergoes posterior fusion of occiput to C2 for instability. Using a posterior approach, preparation of the occiput and lamina of C1 and C2 for the bone graft is performed. Bone graft material is applied to the prepared bony surfaces. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. Provision for intraoperative stability and positioning, usually through skeletal traction on the skull, is necessary and intraoperative spinal cord function monitoring is arranged.

Intra-service work: A mid-line incision is made from the external occipital protuberance to the level of the spinous process of C5. Muscles and fascia are dissected subperiosteally from the squamous occipital bone on both sides of the mid-line over the posterior surface of the ring of the axis and the lateral surfaces of the spinous process of C2 and the posterior surfaces of the lamina of C2. If internal fixation is to be used, the occipital bone must be trephinated, often facilitated by resection of the posterior rim of the foramen magnum. Bone cutting instruments are used to remove the cortical surfaces of the exposed portion of the occipital bone and the posterior surfaces of the ring of the atlas and the exposed surfaces of the spinous process and laminae of C2. (Instrumentation and/or bone harvesting, if used, are coordinated at this stage of the procedure, and are coded separately.) Muscles and fascia are closed in layers over a drain. The subcutaneous tissues and skin are sutured. Sterile dressings are applied. External immobilization is accomplished using a halo device (coded separately).

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring and adjusting of the external immobilization device; reviewing x-rays to check the position of the bony elements; instructing patient on the wearing and care of the external immobilization device; removal of drain; 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 evaluation of periodic radiologic and laboratory reports and medication adjustments.

Tracking/CPT: W34 22590 (revised) **Global Period:** 090 **Recommended RVW:** 19.82

CPT Descriptor: Arthrodesis, posterior technique, craniocervical (occiput-C2)~~, with bone graft and/or internal fixation~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.96	22590	Arthrodesis, posterior technique, craniocervical (occiput-C2), with bone graft and/or internal fixation	090
19.24	22595	Arthrodesis, posterior technique, atlas-axis (C1-C2) with bone graft and/or internal fixation	090
19.82*	22590	Arthrodesis, posterior technique, craniocervical (occiput-C2)	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22590 and 22595 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 10% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22590 and 22595 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVWs for 22590 and 22595 at that time.

The current RVW values for 22590 and 22595 reflect a fee schedule anomaly because the work of 22590 is greater than the work of 22595, yet the current RVW for 22590 is less than the RVW for 22595. This fact is reinforced by the survey results for these codes, where the service times and RVW median for 22590 is greater than 22595. The consensus committee, therefore, recommends accepting the survey median of 20.00 to correct this anomaly, but subtracting 0.18 to account for the fact that approximately 10% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 19.82** (20.00-0.18).

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ___X___ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ___X___ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W34 22590 (revised) **Global Period:** 090 **Recommended RVW:** 19.82

CPT Descriptor: Arthrodesis, posterior technique, craniocervical (occiput-C2)~~, with bone graft and/or internal fixation~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 45 High: 300

Median Pre-Service Time: 95 Median Post-Service Time: 165

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 6

Sample Size: 274 Response Rate (%): 60 (22%) MEDIAN RVW: 20.00

25th pctl RVW: 18.96 75th pctl RVW: 22.00 Low: 12.50 High: 40.00

Tracking/CPT: W35 22595 (revised) **Global Period:** 090 **Recommended RVW:** 19.06

CPT Descriptor: Arthrodesis, posterior technique, atlas-axis (C1-C2) ~~with bone graft and/or internal fixation~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old rheumatoid patient undergoes posterior fusion of C1 to C2 for instability. Using a posterior approach, preparation of the occiput and lamina of C1 and C2 for the bone graft is performed. Bone graft material is applied to the prepared bony surfaces. After closure of the wound, a brace or cast is applied. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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 and intraoperative spinal cord function monitoring is arranged.

Intra-service work: With the patient prone and head secured, an incision is made in the mid-line from the caudal aspect of the occiput to the C3 spinous process. dissection is carried through the median raphe to the spinous process of C2 which, if necessary, is identified radiologically. Ligament, tendon, and muscle attachments to the posterior surface of the ring of C1 and the lateral surfaces of the spinous process of C2 and the posterior surface of the lamina of C2 out to the facet joints, but not beyond the facet joints, is accomplished. Subperiosteal dissection is carried out along the ring of C1 to the medial edge of the vertebral artery and vein. If decortication is necessary, it is carefully performed with bone cutting instruments along the exposed posterior cortices. (Instrumentation and/or bone harvesting, if necessary, are coordinated at this stage of the procedure, and are coded separately.) Bone graft material is applied to the prepared surfaces of the posterior bone of C1 and C2. The median raphe and paraspinal muscles are closed with interrupted sutures and the subcutaneous tissue and skin are closed in layers. A drain may be placed and sterile dressings are applied. Arrangement is made for immediate postoperative immobilization with a collar or brace (or halo device, coded separately).

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring and adjusting of the external immobilization device; instructing patient on the wearing and care of the external immobilization device; removal of drain, if placed; 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 evaluation of periodic radiographic and laboratory reports and medication adjustments.

Tracking/CPT: W35 22595 (revised) **Global Period:** 090 **Recommended RVW:** 19.06

CPT Descriptor: Arthrodesis, posterior technique, atlas-axis (C1-C2) ~~with bone graft and/or internal fixation~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.96	22590	Arthrodesis, posterior technique, craniocervical (occiput-C2), with bone graft and/or internal fixation	090
19.24	22595	Arthrodesis, posterior technique, atlas-axis (C1-C2) with bone graft and/or internal fixation	090
19.06*	22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22590 and 22595 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 10% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22590 and 22595 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVWs for 22590 and 22595 at that time.

The consensus committee recommends subtracting 0.18 from the current RVW for 22595 (also the survey median) to account for the fact that approximately 10% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 19.06** (19.24-0.18).

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W35 22595 (revised) **Global Period:** 090 **Recommended RVW:** 19.06

CPT Descriptor: Arthrodesis, posterior technique, atlas-axis (C1-C2) ~~with bone graft and/or internal fixation~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 150 Low: 45 High: 250

Médian Pre-Service Time: 90 Median Post-Service Time: 160

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 10

Sample Size: 274 Response Rate (%): 61 (22%) MEDIAN RVW: 19.24

25th pctl RVW: 19.24 75th pctl RVW: 21.00 Low: 12.50 High: 30.00

Tracking/CPT: W36 22600 (revised) **Global Period:** 090 **Recommended RVW:** 17.87

CPT Descriptor: Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment, ~~local bone or bone allograft and/or internal fixation~~

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes posterior fusion of C4 to C5 for post-traumatic instability. Using a posterior approach to the cervical spine, preparation of the lamina of C4 and C5 for the bone graft is performed. Bone graft material is applied to the prepared bony surfaces. After closure of the wound, a brace or cast is applied. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. Intraoperative spinal cord function monitoring is arranged..

Intra-service work: An incision is made in the mid-line and carried through the subcutaneous tissue. The ligamentum nuchae is identified and the exposure deepened through it as the paraspinal muscles are retracted laterally. Identification of the level is confirmed to avoid subperiosteal dissection beyond the limit chosen for arthrodesis. The muscles are subperiosteally stripped from the spinous processes and posterior lamina out to the mid-portions of the facet joints. Decortication is performed with bone cutting instruments. (Instrumentation and/or bone harvesting, if used, are coordinated at this point, and are coded separately.) The bone graft material is applied over the prepared bony surfaces. The paraspinal muscles and ligamentum nuchae are sutured. The subcutaneous tissues and skin are closed in layers over a drain, if necessary. Sterile dressings and an external immobilizing device are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); monitoring and adjusting of the external immobilization device; instructing patient on the wearing and care of the external immobilization device; removal of drain, if placed; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W36 22600 (revised) **Global Period:** 090 **Recommended RVW:** 17.87

CPT Descriptor: Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment, ~~local bone or bone allograft and/or internal fixation~~

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.05	22600	Arthrodesis, posterior technique, cervical below C2 segment, local bone or bone allograft and/or internal fixation	090
15.11	22610	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; thoracic	090
22.25	22612	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; lumbar	090
17.87	22600	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22600-22612 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 10% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22600-22612 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVWs for 22600-22612 at that time.

The consensus committee recommends subtracting 0.18 from the current RVW for 22600 (also the survey median) to account for the fact that approximately 10% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 17.87** (18.05-0.18).

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W36 22600 (revised) **Global Period:** 090 **Recommended RVW:** 17.87

CPT Descriptor: Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment, ~~local bone or bone allograft and/or internal fixation~~

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 120 Low: 45 High: 310

Median Pre-Service Time: 90 Median Post-Service Time: 135

Length of Hospital Stay: 4 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 4 in Past 5 years: 18

Sample Size: 274 Response Rate (%): 60 (22%) MEDIAN RVW: 18.05

25th pctl RVW: 18.00 75th pctl RVW: 20.00 Low: 6.44 High: 25.00

Tracking/CPT: W37 22610 (revised) **Global Period:** 090 **Recommended RVW:** 14.93

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; thoracic (with or without lateral transverse technique)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes posterior fusion of T11 to T12 for post-traumatic instability. Using a posterior approach to the thoracic spine, preparation of the lamina of T11 and T12 for the bone graft is performed. Bone graft material is applied to the prepared bony surfaces. After closure of the wound, a brace or cast is applied. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. Intraoperative spinal cord function monitoring is arranged.

Intra-service work: A mid-line incision is made and carried down to the spinous processes. The level to be fused is confirmed by x-ray. The muscles and fascia are subperiosteally stripped from the spinous processes and laminae out to the lateral edges of the facet joints and transverse processes. The cortical surfaces exposed are decorticated using bone cutting instruments. (Instrumentation and/or bone harvesting, if used, are coordinated at this point, and are coded separately.) Bone graft material is applied over the decorticated surfaces of bone and intervals between. The paraspinal muscles and mid-line fascia are closed. A drain is inserted through a separate stab wound. The subcutaneous tissues and skin are closed in separate layers. Sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); fitting and accommodation of the postoperative immobilization device; supervision of the mobilization and ambulation of the patient; care and removal of drain; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W37 22610 (revised) **Global Period:** 090 **Recommended RVW:** 14.93

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; thoracic (with or without lateral transverse technique)

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.05	22600	Arthrodesis, posterior technique, cervical below C2 segment, local bone or bone allograft and/or internal fixation	090
15.11	22610	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; thoracic	090
22.25	22612	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; lumbar	090
14.93*	22610	Arthrodesis, posterior or posterolateral technique, single level; thoracic (with or without lateral transverse technique)	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22600-22612 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 10% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22600-22612 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVWs for 22600-22612 at that time.

The consensus committee recommends subtracting 0.18 from the current RVW for 22610 (also the survey median) to account for the fact that approximately 10% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 14.93** (15.11-0.18).

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ___X___ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes ___X___ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W37 22610 (revised) **Global Period:** 090 **Recommended RVW:** 14.93

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; thoracic (with or without lateral transverse technique)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 150 Low: 20 High: 300

Median Pre-Service Time: 88 Median Post-Service Time: 138

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 10

Sample Size: 274 Response Rate (%): 55 (20%) MEDIAN RVW: 15.11

25th pctl RVW: 15.06 75th pctl RVW: 18.00 Low: 10.25 High: 24.00

Tracking/CPT: W38 22612 (revised) **Global Period:** 090 **Recommended RVW:** 22.07

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; lumbar, (with or without lateral transverse technique)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes posterior fusion of L1 to L2 for post-traumatic instability. Using a posterior approach to the lumbar spine, preparation of the lamina of L1 and L2 for the bone graft is performed. Bone graft material is applied to the prepared bony surfaces. After closure of the wound, a brace or cast is applied. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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: A mid-line incision is made over the spinous processes of the vertebrae to be fused plus one or more segments above and below in order to provide for adequate retraction and safe exposure of the bone to be prepared. The paraspinal muscles and fascia are stripped from the lateral surfaces of the spinous processes and the posterior surfaces of the laminae by subperiosteal dissection. The capsules of the facet joints to be fused are removed and cartilage removed from the joint surfaces. The muscle attachments and periosteum are stripped from the posterior cortices of the transverse processes of the vertebra to be fused and from the lateral edges of the pars and pedicles posterior to the transverse processes. (Instrumentation and/or bone harvesting, if used, are coordinated at this point, and are coded separately.) The bone graft material is applied over the prepared surfaces of the bone and in the intervals between. The muscles and fascia are sutured. One or more drains are placed through separate stab wounds. The subcutaneous tissue and skin are closed in layers. Sterile dressings are applied. (Alternatively, the posterolateral fusion can be accomplished through muscle splitting incisions on each side of the spine with exposure of the transverse processes and facet joints through two posterolateral approaches.)

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); ordering and checking fit of the postoperative immobilization device; supervision of the mobilization and ambulation of the patient; care and removal of drain;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 evaluation of periodic x-rays to assess fusion.

Tracking/CPT: W38 22612 (revised) **Global Period:** 090 **Recommended RVW:** 22.07

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; lumbar, (with or without lateral transverse technique)

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.05	22600	Arthrodesis, posterior technique, cervical below C2 segment, local bone or bone allograft and/or internal fixation	090
15.11	22610	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; thoracic	090
22.25	22612	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; lumbar	090
22.07*	22612	Arthrodesis, posterior or posterolateral technique, single level; lumbar (with or without lateral transverse technique)	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22600-22612 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 10% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22600-22612 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVWs for 22600-22612 at that time.

The consensus committee recommends subtracting 0.18 from the current RVW for 22612 (also the survey median) to account for the fact that approximately 10% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 22.07** (22.25-0.18).

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ___X___ Commonly ____ Sometimes ____ Rarely

Neurosurgery ___X___ Commonly ____ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W38 22612 (revised) **Global Period:** 090 **Recommended RVW:** 22.07

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; lumbar, (with or without lateral transverse technique)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 150 Low: 30 High: 300

Median Pre-Service Time: 90 Median Post-Service Time: 138

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 8 in Past 5 years: 25

Sample Size: 274 Response Rate (%): 59 (22%) MEDIAN RVW: 22.25

25th pctl RVW: 18.00 75th pctl RVW: 22.38 Low: 12.00 High: 30.00

Tracking/CPT: W39 22614 (new) **Global Period:** ZZZ **Recommended RVW:** 6.44

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes posterior fusion for post-traumatic instability. Using a posterior approach to the thoracic, cervical, and/or lumbar spine, preparation of the lamina for the bone grafts is performed. Bone graft material is applied to the prepared bony surfaces. After closure of the wound, a brace or cast is applied. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for arthrodesis of EACH ADDITIONAL vertebral segment.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Skin, fascial, and muscle dissection is extended to provide for retraction amply for safe exposure to extend an additional level. The subperiosteal dissection of soft tissues is undertaken over the additional level and all soft tissue that would be interposed in the proposed arthrodesis area is removed. The cortices of the exposed bone of the posterior and lateral elements of the additional vertebrae are removed and cartilage and end-plate bone are removed from the facets of the added segment. the graft material is extended to the prepared bone of the additional level. Muscle, fascia, and skin are closed over the extended exposure.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
18.05	22600	Arthrodesis, posterior technique, cervical below C2 segment, local bone or bone allograft and/or internal fixation	090
15.11	22610	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; thoracic	090
22.25	22612	Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation; lumbar	090
6.44	22650	Arthrodesis, posterior, posterolateral or lateral transverse process technique, each additional interspace	ZZZ
6.44*	22614	Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22650 will be deleted and replaced with 22614. The survey median RVW, which is the current **RVW of 6.44, is recommended.** This RVW represents a value that is 30% of the weighted average RVW value for the primary procedure codes 22600-22612 (weighting accounts for the fact that 22612 represents almost 90% of the "family" frequency).

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

same as 22650 use 6.44

Tracking/CPT: W39 22614 (new) **Global Period:** ZZZ **Recommended RVW:** 6.44

CPT Descriptor: ~~Arthrodesis, posterior or posterolateral technique, with local bone or bone allograft and/or internal fixation;~~ Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (List separately in addition to code for primary procedure)

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery __X__ Commonly ____ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 40 Low: 15 High: 120

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 30

Sample Size: 274 Response Rate (%): 58 (21%) MEDIAN RVW: 6.44

25th pctl RVW: 6.00 75th pctl RVW: 9.50 Low:2.79 High: 20.65

Tracking/CPT: W40 22630 (revised) **Global Period:** 090 **Recommended RVW:** 20.03

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; ~~with local bone or bone allograft and/or internal wire fixation,~~ lumbar

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 48-year-old male with a history of previous diskectomy and posterolateral fusion of L4-5, presents with pseudarthrosis, minimal signs of nerve root dysfunction, and intractable back pain that improves with recumbency or back bracing. Using a posterior approach to L4-5, the canal and roots are exposed, the dural sac is mobilized, the disk interspace is evacuated, and the vertebral end plates are prepared for fusion. [*Instrumentation and/or bone preparation or harvesting would be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; 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. Care is taken to position the patient to reduce intra-abdominal pressure and to provide for intraoperative radiographs.

Intra-service work: An incision is made in the mid-line and carried through the subcutaneous tissue to the spinous processes. Muscles and fascia are removed from both sides of the spinous process and the posterior surface of the lamina out over the facets of the segment to be fused. The ligamentum flavum and/or scar are removed from between the laminae of the vertebrae to be fused. bone cutting tools are used to remove as much of the lamina above and below and as much of the medial edges of the facets as is necessary for adequate decompression and for safe exposure of the disk space. The nerve root is carefully mobilized from adhesions and/or peridural membrane. Epidural veins are cauterized and cut. The nerve root is protected by packing and retraction. The anulus is incised and an ample section of it removed by sharp dissection. The nucleus is removed from within the disk space with rongeurs and curettes. Bone cutting instruments are used to remove cartilaginous and subchondral end-plates of the vertebrae above and below the disk to be fused. the bone dissection is fashioned to accept the graft in a way that will provide for contact, maintenance of disk space height, and stability. (Instrumentation and/or bone harvesting, if used, are coordinated at this point, and are coded separately.) The graft(s) is impacted into the recipient site. From the other side of the table, the entire exposure, bone preparation, and graft insertion and impaction are repeated on the other side. The nerve roots are inspected to confirm that they are free of any impingement over the graft site or in the foramen. Interposition membrane, as by free fat graft, is used to cover the exposed dura and nerve root. Muscles and fascia are sutured. A drain is inserted through a separate stab wound. The subcutaneous tissues and skin are closed and sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family and the referring physician (including written and telephone reports and orders); removal of drain; 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 evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W40 22630 (revised) **Global Period:** 090 **Recommended RVW:** 20.03

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; ~~with local bone or bone allograft and/or internal wire fixation,~~ lumbar

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
20.93	22630	Arthrodesis, posterior interbody technique, with local bone or bone allograft and/or internal wire fixation, lumbar	090
20.03*	22630	Arthrodesis, posterior interbody technique, single interspace; lumbar	090

*Specialty recommended value for new/revised code

RATIONALE:

The wording for 22630 has been changed to remove the references to bone graft and instrumentation to allow for separate reporting. It is estimated that approximately 50% of the cases will report the new bone graft code 209X2. However, the consensus committee has withdrawn the new instrumentation code W49 that may have been used to separately report internal fixation because the wording in that new code was too variable in terms of work. The intention of the new code was to allow for reporting of minimal internal wire fixation only, and not formal/extensive internal fixation involving plates, clamps, and screws. In addition, the text preceding the instrumentation procedures adds to the confusion of the applicability of the new instrumentation code W49 because of the ambiguous use of the terms "motion" segments and "vertebral" segments.

Given this development, the consensus committee recommends that the descriptor changes to 22630 go forward as presented, with the caveat that when/if a new instrumentation code to account for minimal internal fixation with wire is developed and approved, the value assigned to that add-on code should be subtracted from the RVW for 22630 at that time.

The consensus committee recommends subtracting 0.90 from the current RVW for 22630 (also the survey median) to account for the fact that approximately 50% of the cases will now separately report the new bone graft code 209X2. The **recommended RVW is 20.03** (20.93-0.90).

FREQUENCY INFORMATION

How was this service previously reported? **Please see Attachment A.**

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? **Please see Attachment A.**

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

Tracking/CPT: W40 22630 (revised) **Global Period:** 090 **Recommended RVW:** 20.03

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; ~~with local bone or bone allograft and/or internal wire fixation,~~ lumbar

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 30 High: 300

Median Pre-Service Time: 85 Median Post-Service Time: 144

Length of Hospital Stay: 5 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Sample Size: 274 Response Rate (%): 46 (17%) MEDIAN RVW: 20.93

25th pctl RVW: 20.93 75th pctl RVW: 22.00 Low: 15.00 High: 25.00

Tracking/CPT: W41 22632 (new) **Global Period:** ZZZ **Recommended RVW:** 5.23

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 48-year-old male with a history of previous diskectomy and posterolateral fusion, presents with pseudarthrosis, minimal signs of nerve root dysfunction, and intractable back pain that improves with recumbency or back bracing. Using a posterior approach to the lumbar spine, the canal and roots are exposed, the dural sac is mobilized, the disk interspace is evacuated, and the vertebral end plates are prepared for fusion for each additional interspace. [This is an "add-on" service to be reported in addition to the code for the definitive procedure. In estimating physician work/time, you are asked to consider ONLY the intra-service physician work/time for arthrodesis of EACH ADDITIONAL interspace.]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Skin, muscle, and fascia incisions are extended to provide for enough retraction to safely expose the additional interspace. The ligamentum flavum and/or scar is removed from between the laminae of the additional interspace. The laminae and medial edges of the facets are removed with bone cutting instruments to a degree sufficient to allow safe exposure of the disk space. The additional nerve roots are mobilized so that they can be safely retracted away from the disk. Epidural veins are cauterized and cut. The posterior anulus is partially excised. The nucleus is evacuated from the disk space. subchondral bone and cartilage are removed from the disk space with bone cutting instruments. The removal is done in a way to facilitate stable locking of a graft, maintenance of the height of the disk and adequate contact between the decorticated bone and the graft material. The entire procedure is repeated from the other side. (Instrumentation and/or bone harvesting, if used, are coordinated at this point, and are coded separately.) The graft is impacted into the disk space. The nerve roots are inspected to be sure they are free of impingement as they pass over the graft site and into the foramen. An interposition membrane, as by fat graft, is applied over the exposed dura and nerve roots of the additional space. The extended incision in muscle, subcutaneous tissue, and skin is closed. Tissues are placed and attached to external receptacles.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W41 22632 (new) **Global Period:** ZZZ **Recommended RVW:** 5.23

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
22.12	22558	Arthrodesis, anterior interbody technique; lumbar, with bone graft	090
5.53	22585	Arthrodesis, anterior or anterolateral, each additional interspace (list separately in addition to single level arthrodesis)	ZZZ
20.93	22630	Arthrodesis, posterior interbody technique, with local bone or bone allograft and/or internal wire fixation, lumbar	090
5.23*	22632	Arthrodesis, posterior interbody technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The relationship of arthrodesis codes 22558 and 22585 are comparable reference service in terms of degree and depth of procedure. Applying the RVW ratio of these codes (5.53/22.12=25%) to the RVW for the primary procedure 22630 (20.93), an **RVW of 5.23 (25% of 20.93) is recommended** for 22632 instead of the survey median value of 8.00.

[Note: A study of estimation of total-service work for multiple procedures and added procedures was undertaken as part of the Harvard University's Phase IV national study of resource-based relative value scales for physician services. The results of this study established a range of 16-31% for the work of additional services as a percentage of total services for arthrodesis and osteotomy procedures (Harvard University MFS Refinement, Final Report, Phase 4, Volume 1, Table 6.1, July 1993). This range was used as a validity check for RVW recommendations for spinal procedure "add-on" codes.]

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W41 22632 (new) **Global Period:** ZZZ **Recommended RVW:** 5.23

CPT Descriptor: Arthrodesis, posterior interbody technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 60 Low: 30 High: 150

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Sample Size: 274 Response Rate (%): 48 (18%) MEDIAN RVW: 8.00

25th pctl RVW: 6.44 75th pctl RVW: 12.00 Low: 3.85 High: 25.00

Tracking/CPT: W42 22800 (revised) **Global Period:** 090 **Recommended RVW:** 16.92

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; up to 6 ~~or less vertebrae~~ vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 20-year-old achondroplastic dwarf presents with scoliosis and progression. Using a posterior approach, a midline incision with bilateral subperiosteal retraction of muscle is performed. A bony bed over lamina and transverse process to accept a bone graft is prepared, and bone graft material is applied to the prepared bony surfaces, with or without application of a cast. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms and laboratory studies; 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. A detailed plan for the fusion is drawn up. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient. Preparation is necessary for scheduling and intraoperative monitoring of neurologic functions and intraoperative x-ray assessment.

Intra-service work: A mid-line incision is made over the vertebrae proposed for arthrodesis. Intraoperative x-ray confirms the level. Fascia and muscles are subperiosteally dissected from the lateral surfaces of the spinous processes and from the posterior surfaces of the laminae and facets and transverse processes. All soft tissue is carefully removed from the exposed areas of bone, including the interspinous ligaments, but excluding the ligamentum flavum. Capsules of the facets are removed. The cortices of all exposed bone surfaces are removed and/or cut and shingled to provide for exposed cancellous bone over all of the posterior bony surfaces of the vertebrae to be arthrodesed. Bone cutting instruments are used to remove cartilage and subchondral bone from the facet joints. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft material is applied to the prepared bony surfaces. The muscles and fascia, subcutaneous tissues, and skin are all sutured in layers. A drain is inserted through a separate stab wound. Sterile dressings are applied. Cast or other form of immobilization is added as required.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the drain; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 repeated measurements of the curvature on radiographs, evaluation of periodic laboratory reports, and medication adjustments.

Tracking/CPT: W42 22800 (revised) **Global Period:** 090 **Recommended RVW:** 16.92

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; up to 6 ~~or less vertebrae~~ vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
16.92	22800	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 6 or less vertebrae	090
31.31	22802	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 7 or more vertebrae	090
16.92*	22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:

The term "with bone graft" in codes 22800-22802 implies bone allograft, however a bone allograft is never performed with these procedures. Therefore, the editorial change to correct the descriptors and remove the phrase "with bone graft" has no impact on total work. The survey median and **current RVW of 16.92 is recommended.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely
Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 90 High: 300

Median Pre-Service Time: 90 Median Post-Service Time: 155

Length of Hospital Stay: 6 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 15

Sample Size: 131 Response Rate (%): 34 (26%) MEDIAN RVW: 16.92

25th pctl RVW: 16.92 75th pctl RVW: 18.75 Low: 14.00 High: 29.00

Tracking/CPT: W43 22802 (revised) **Global Period:** 090 **Recommended RVW:** 31.31

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; 7 ~~or more~~ to 12 vertebrael segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 7-year-old female presents with rapidly increasing congenital scoliosis beyond 70°. Bending films correct the curve moderately. Using a posterior approach, a midline incision with bilateral subperiosteal retraction of muscle is performed. A bony bed over lamina and transverse process to accept a bone graft is prepared, and bone graft material is applied to the prepared bony surfaces, with or without application of a cast. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms and laboratory studies; 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. Autologous blood donation is coordinated and a plan for the fusion is developed. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient. Preparation is necessary for intraoperative monitoring of neurologic functions and intraoperative x-ray assessment.

Intra-service work: A mid-line incision is made over the vertebrae proposed for arthrodesis. Intraoperative x-ray confirms the level. Fascia and muscles are subperiosteally dissected from the lateral surfaces of the spinous processes and from the posterior surfaces of the laminae and facets and transverse processes. All soft tissue is carefully removed from the exposed areas of bone, including the interspinous ligaments, but excluding the ligamentum flavum. Capsules of the facets are removed. The cortices of all exposed bone surfaces are removed and/or cut and shingled to provide for exposed cancellous bone over all of the posterior bony surfaces of the vertebrae to be arthrodesed. Bone cutting instruments are used to remove cartilage and subchondral bone from the facet joints. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft material is applied to the prepared bony surfaces. The muscles and fascia, subcutaneous tissues, and skin are all sutured in layers. A drain is inserted through a separate stab wound. Sterile dressings are applied. Cast or other form of immobilization is added as required.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the drain; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 repeated measurements of the curvature on radiographs, evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W43 22802 (revised) **Global Period:** 090 **Recommended RVW:** 31.31

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; 7 ~~or more~~ to 12 vertebrael segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
16.92	22800	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 6 or less vertebrae	090
31.31	22802	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 7 or more vertebrae	090
31.31*	22802	Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:

The term "with bone graft" in codes 22800-22802 implies bone allograft, however a bone allograft is never performed with these procedures. Therefore, the editorial change to correct the descriptors and remove the phrase "with bone graft" has no impact on total work. The survey median and **current RVW of 31.31 is recommended.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely
Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 200 Low: 120 High: 300

Median Pre-Service Time: 90 Median Post-Service Time: 170

Length of Hospital Stay: 6 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 20

Sample Size: 131 Response Rate (%): 34 (26%) MEDIAN RVW: 31.31

25th pctl RVW: 23.25 75th pctl RVW: 31.31 Low: 17.00 High: 37.46

Tracking/CPT: W44 22804 (new) **Global Period:** 090 **Recommended RVW:** 35.00

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; 13 or more vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 12-year-old male presents with a long paralytic scoliotic curve secondary to muscular dystrophy. Using a posterior approach, a midline incision with bilateral subperiosteal retraction of muscle is performed. A bony bed over lamina and transverse process to accept a bone graft is prepared, and bone graft material is applied to the prepared bony surfaces, with or without application of a cast. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms, cardiac and pulmonary function studies, if indicated, and laboratory studies; 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. Autologous blood donation is coordinated. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient Preparation is necessary for intraoperative monitoring of neurologic functions, intraoperative x-ray assessment, and cell saver.

Intra-service work: A mid-line incision is made over the vertebrae proposed for arthrodesis. Intraoperative x-ray confirms the level. Fascia and muscles are subperiosteally dissected from the lateral surfaces of the spinous processes and from the posterior surfaces of the laminae and facets and transverse processes. All soft tissue is carefully removed from the exposed areas of bone, including the interspinous ligaments, but excluding the ligamentum flavum. Capsules of the facets are removed. The cortices of all exposed bone surfaces are removed and/or cut and shingled to provide for exposed cancellous bone over all of the posterior bony surfaces of the vertebrae to be arthrodesed. Bone cutting instruments are used to remove cartilage and subchondral bone from the facet joints. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft material is applied to the prepared bony surfaces. The muscles and fascia, subcutaneous tissues, and skin are all sutured in layers. A drain is inserted through a separate stab wound. Sterile dressings are applied. Cast or other form of immobilization is added as required.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the drain; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 repeated measurements of the curvature on radiographs, evaluation of periodic laboratory reports and medication adjustments.

Tracking/CPT: W44 22804 (new) **Global Period:** 090 **Recommended RVW:** 35.00

CPT Descriptor: Arthrodesis, posterior, for spinal deformity, with or without cast~~, with bone graft~~; 13 or more vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
16.92	22800	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 6 or less vertebrae	090
31.31	22802	Arthrodesis, posterior, for spinal deformity, with or without cast, with bone graft; 7 or more vertebrae	090
35.00*	22804	Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:
22804 was added to allow for reporting of long segment arthrodesis, which is a significantly larger procedure than revised code 22802 (7 to 12 segments). The survey median **RVW of 35.00 is recommended** because it is valued appropriately relative to 22800 and 22802 and takes into account that these long segment procedures were probably reported as 22802-22 in the past.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?
Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely
Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 240 Low: 135 High: 360

Median Pre-Service Time: 95 Median Post-Service Time: 203

Length of Hospital Stay: 7 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 25

Sample Size: 131 Response Rate (%): 35 (27%) MEDIAN RVW: 35.00

25th pctl RVW: 30.00 75th pctl RVW: 38.00 Low: 17.00 High: 50.00

Tracking/CPT: W45 22808 (new) **Global Period:** 090 **Recommended RVW:** 25.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: An 18-year-old male presents with thoracic kyphosis, second to Scheuermann's disease. Using a transthoracic, thoracoabdominal approach, osteotomies are performed (2 to 3 vertebral segments) and vertebrae are prepared to accept graft and bone graft material is applied to the prepared bony surfaces. A cast may or may not be applied. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms and laboratory studies; 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. Preparation is necessary for intraoperative monitoring of neurologic functions and intraoperative x-ray assessment. Preoperative x-rays are analyzed to select the site of the incision and rib to be excised.

Intra-service work: The skin and muscles are incised to expose the rib(s) chosen for excision. After rib resection, pleura is divided and the lung collapsed. If necessary, the diaphragm is incised and detached from the chest wall. The intercostal and/or lumbar vessels are clamped, neurologic function monitored, and, if stable, they are ligated as close to the aorta as possible and the aorta and vena cava are displaced. Periosteal and muscle attachments are mobilized from the anterior surfaces of the spine in the area to be fused. The level is confirmed by x-ray. The anulus is removed from the anterior portion of the disks of the segments to be fused. The nucleus is evacuated from the disk space. Bone cutting instruments are used to remove the cartilaginous end-plates and bony end-plates of the vertebrae above and below in a fashion to accept the proposed grafting material. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft is inserted and impacted into the disk spaces. (Alternatively, bone cutting instruments may be used to prepare sites for the graft within the bodies of the vertebrae to be fused and strut grafts impacted across the proposed fusion area and supplemented with cancellous bone packing.) Impaction of the graft is coordinated with manipulation of the vertebrae so that stability of the graft is insured. The stability of the graft, the integrity of the great vessels, and hemostasis are confirmed. The pleura is repaired. The muscles of the chest and/or abdominal wall are closed in layers. A chest tube is inserted and sutured. The subcutaneous tissues and skin are sutured. Sterile dressings are applied. If needed in the immediate postoperative period, casting or another external immobilization device is applied.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the chest tube and drain; monitoring chest x-rays; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 evaluation of periodic curve measurement, laboratory reports, and medication adjustments.

Tracking/CPT: W45 22808 (new) **Global Period:** 090 **Recommended RVW:** 25.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
29.00	22810	Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft; 4 to 7 vertebrae	090
25.00*	22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:

The new code 22808 was added to allow reporting arthrodesis of fewer than 4 segments. The survey median **RVW of 25.00 is recommended** because it is appropriate relative to the RVW for the existing code 22810. Note: The term "with bone graft" in code 22810 implies bone allograft, however a bone allograft is never performed with this procedure. Therefore, the editorial change to correct the descriptor and remove the phrase "with bone graft" has no impact on total work and should not be considered in the determination of the RVW for 22808.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery	__X__	Commonly	____	Sometimes	____	Rarely
Neurosurgery	____	Commonly	____	Sometimes	__X__	Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 180 Low: 90 High: 300

Median Pre-Service Time: 90 Median Post-Service Time: 191

Length of Hospital Stay: 7 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 10

Sample Size: 131 Response Rate (%): 34 (26%) MEDIAN RVW: 25.00

25th pctl RVW: 23.17 75th pctl RVW: 29.00 Low: 16.00 High: 40.00

Tracking/CPT: W46 22810 (revised) **Global Period:** 090 **Recommended RVW:** 29.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebrael segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: An 18-year-old male presents with thoracic kyphosis, second to Scheuermann's disease. Using a transthoracic, thoracoabdominal or retroperitoneal approach, osteotomies are performed (4 to 7 vertebral segments) and vertebrae are prepared to accept graft. A cast may or may not be applied. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms and laboratory studies; arranging for autologous blood donation; 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. Preparation is necessary for intraoperative cell-saver and monitoring of neurologic functions and intraoperative x-ray assessment. Preoperative x-rays are analyzed to select the site of the incision and rib to be excised.

Intra-service work: The skin and muscles are incised to expose the rib(s) chosen for excision. After rib resection, pleura is divided and the lung collapsed. If necessary, the diaphragm is incised and detached from the chest wall. The intercostal and/or lumbar vessels are clamped, neurologic function monitored, and, if stable, they are ligated as close to the aorta as possible and the aorta and vena cava are displaced. Periosteal and muscle attachments are mobilized from the anterior surfaces of the spine in the area to be fused. The level is confirmed by x-ray. The anulus is removed from the anterior portion of the disks of the segments to be fused. The nucleus is evacuated from the disk space. Bone cutting instruments are used to remove the cartilaginous end-plates and bony end-plates of the vertebrae above and below in a fashion to accept the proposed grafting material. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft is inserted and impacted into the disk spaces. (Alternatively, bone cutting instruments may be used to prepare sites for the graft within the bodies of the vertebrae to be fused and strut grafts impacted across the proposed fusion area and supplemented with cancellous bone packing.) Impaction of the graft is coordinated with manipulation of the vertebrae so that stability of the graft is insured. The stability of the graft, the integrity of the great vessels, and hemostasis are confirmed. The pleura is repaired. The muscles of the chest and/or abdominal wall are closed in layers. A chest tube is inserted and sutured. The subcutaneous tissues and skin are sutured. Sterile dressings are applied. If needed in the immediate postoperative period, casting or another external immobilization device is applied.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the chest tube and drain; monitoring chest radiographs; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 evaluation of periodic radiographs of the curve, laboratory reports, and medication adjustments.

Tracking/CPT: W46 22810 (revised) **Global Period:** 090 **Recommended RVW:** 29.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebrael segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
29.00	22810	Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft; 4 to 7 vertebrae	090
29.00*	22810	Arthrodesis, anterior, for spinal deformity, with or without case; 4 to 7 vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:

The term "with bone graft" in code 22810 implies bone allograft, however a bone allograft is never performed with this procedure. Therefore, the editorial change to correct the descriptor and remove the phrase "with bone graft" has no impact on total work. The survey median and **current RVW of 29.00 is recommended.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery	X	Commonly	___	Sometimes	___	Rarely
Neurosurgery	___	Commonly	___	Sometimes	X	Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 240 Low: 100 High: 360

Median Pre-Service Time: 90 Median Post-Service Time: 191

Length of Hospital Stay: 7 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 4 x 15 minutes

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 10

Sample Size: 131 Response Rate (%): 34 (26%) MEDIAN RVW: 29.00

25th pctl RVW: 27.00 75th pctl RVW: 29.75 Low: 17.00 High: 45.00

Tracking/CPT: W47 22812 (revised) **Global Period:** 090 **Recommended RVW:** 31.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebrael segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: An 18-year-old male presents with thoracic kyphosis, second to Scheuermann's disease. Using a transthoracic, thoracoabdominal or retroperitoneal approach, osteotomies are performed (8 or more vertebral segments) and vertebrae are prepared to accept graft. A cast may or may not be applied. [*Instrumentation and/or bone grafting is to be reported separately using the appropriate code(s).*]

Pre-service work: includes obtaining and reviewing pre-operative and hospital admission roentgenograms and laboratory studies; arranging or autologous blood donation; 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. Preparation is necessary for intraoperative cell-saver and monitoring of neurologic functions and intraoperative x-ray assessment. Preoperative x-rays are analyzed to select the site of the incision and rib to be excised.

Intra-service work: The skin and muscles are incised to expose the rib(s) chosen for excision. After rib resection, pleura is divided and the lung collapsed. If necessary, the diaphragm is incised and detached from the chest wall. The intercostal and/or lumbar vessels are clamped, neurologic function monitored, and, if stable, they are ligated as close to the aorta as possible and the aorta and vena cava are displaced. Periosteal and muscle attachments are mobilized from the anterior surfaces of the spine in the area to be fused. The level is confirmed by x-ray. The anulus is removed from the anterior portion of the disks of the segments to be fused. The nucleus is evacuated from the disk space. Bone cutting instruments are used to remove the cartilaginous end-plates and bony end-plates of the vertebrae above and below in a fashion to accept the proposed grafting material. (Instrumentation and/or bone grafting, if used, are coordinated at this point, and are coded separately.) The bone graft is inserted and impacted into the disk spaces. (Alternatively, bone cutting instruments may be used to prepare sites for the graft within the bodies of the vertebrae to be fused and strut grafts impacted across the proposed fusion area and supplemented with cancellous bone packing.) Impaction of the graft is coordinated with manipulation of the vertebrae so that stability of the graft is insured. The stability of the graft, the integrity of the great vessels, and hemostasis are confirmed. The pleura is repaired. The muscles of the chest and/or abdominal wall are closed in layers. A chest tube is inserted and sutured. The subcutaneous tissues and skin are sutured. Sterile dressings are applied. If needed in the immediate postoperative period, casting or another external immobilization device is applied.

Post-service work: includes patient stabilization and monitoring of neurologic status; communication with the family and the referring physician (including written and telephone reports and orders); care and removal of the chest tube and drain; monitoring chest radiographs; monitoring of the patient's tolerance of the immobilization device and ambulatory functions; and discharge day management with instructions to the patient on wearing and care of the immobilization device. 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 evaluation of periodic radiographs of curve, laboratory reports, and medication adjustments.

Tracking/CPT: W47 22812 (revised) **Global Period:** 090 **Recommended RVW:** 31.00

CPT Descriptor: Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebrael segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
29.00	22810	Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft; 4 to 7 vertebrae	090
27.20	22812	Arthrodesis, anterior, for spinal deformity, with or without cast, with bone graft; 8 or more vertebrae	090
31.00*	22812	Arthrodesis, anterior, for spinal deformity, with or without case; 8 or more vertebral segments	090

*Specialty recommended value for new/revised code

RATIONALE:
The current RVW values for 22810 and 22812 reflect a Medicare fee schedule anomaly because the work of 22810 is greater than the work of 22812, yet the current RVW for 22810 is less than the RVW for 22812. This relativity is reinforced by the survey results for these codes, where the service times and RVW median for 22812 is greater than 22810. The consensus committee, therefore, **recommends the survey median RVW of 31.00** to correct this anomaly.

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?
Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely
Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 270 Low: 120 High: 600

Median Pre-Service Time: 90 Median Post-Service Time: 191

Length of Hospital Stay: 7 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 5 at 15 minutes

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 5

Sample Size: 131 Response Rate (%): 33 (25%) MEDIAN RVW: 31.00

25th pctl RVW: 29.00 75th pctl RVW: 34.00 Low: 18.00 High: 50.00

Tracking/CPT: W50 22842 (revised) **Global Period:** ZZZ **Recommended RVW:** 14.37

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes a posterior lumbar arthrodesis of L3 to L5 for degenerative disc disease. After the dissection and preparation of the lamina for the bone graft, screws are placed in both of the pedicles of L3, L4, and L5. X-rays confirm the proper positioning of the screws. The screws are attached to rods fashioned to fit the contours of the spine. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: After a detailed plan for the instrumentation is drawn on the radiograph or on paper, each of the two to six vertebrae to be fused are completely cleaned of soft tissue attachments from the posterior elements, those vertebrae selected for segmental fixation are prepared by removal of those portions of the ligamentum flavinum and bone that would interfere with proper seating of the fixation device. For pedicle fixation at certain levels, the posterior cortex directly posterior to the pedicle is drilled or removed with bone cutting tools. Entry into the central portion of the pedicle is confirmed by biplane or C-arm x-ray. Pathway for a screw is prepared through the pedicle and into the vertebral body and the depth measured. (Alternatively, ligament flavum is dissected from the undersurface of the lamina at each segment to be segmentally fixed and a passageway for sublaminar wires is prepared with careful protection of the underlying dura and neural elements; or, laminae and/or transverse processes and/or spinous processes are prepared for multiple segmental fixation with wires or hooks.) Screws are placed through the pedicle into the vertebral body on each side of each vertebra to be segmentally fixed. (Alternatively, wires are placed under each lamina centrally and separated so that a wire is under each side of each lamina; or, hooks or claws are placed about the transverse processes and laminae at the chosen vertebrae; or, button and wire devices are placed through both sides of each spinous process.) (Decortication and other preparation for arthrodesis and/or bone graft preparation, coded separately if used, are coordinated at this point.) The rod or plate device to be fixed by the segmental fixation is bent to contour to the spine and to achieve the desired posture of the instrumented segments. The rods or plates are then attached to the segmental fixation by application of nuts or other devices unique to the chosen instrumentation. Correction of the deformity is achieved by sequentially compressing or distracting between appropriate hooks or screws. Wires are carefully tightened around the rods with care to provide secure fixation without over stressing the wires or the bone. All components of the instrumentation are carefully checked for secure positioning and freedom from impingement against dura or neural structures. Spinal cord monitoring is checked. Radiographic confirmation of the placement of the devices and spinal posture is obtained. Hook or wire and rod position is monitored on each postoperative radiograph and compared with the prior radiograph.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W50 22842 (revised) **Global Period:** ZZZ **Recommended RVW:** 14.37

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
14.42	22842	Posterior instrumentation; segmental fixation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires)	000
14.37*	22842	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22842 has been expanded into the family of codes 22842-22844 to allow for separate reporting of posterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22842 (99%); 22843 (<1%); and 22844(<1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22842 (14.42); 22843 (18.00); and 22844 (22.00). However, to maintain Medicare budget neutrality, the value for 22842 will have to be less than the current RVW, if the value for 22843 and 22844 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: (0.99)X + (0.005)Y + (0.005)Z = 14.42 (current RVW for 22842). Work relationship: X/14.42 = Y/18.00 = Z/20.00. Where X is the RVW for 22842; Y is the RVW for 22843; and Z is the RVW for 22844. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22842 = 14.37; 22843=17.94; and 22844=21.92.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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Tracking/CPT: W50 22842 (revised) **Global Period:** ZZZ **Recommended RVW:** 14.37

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 2 to 6 vertebral segments

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 105 Low: 40 High: 300

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 11 in Past 5 years: 48

Sample Size: 251 Response Rate (%): 51 (20%) MEDIAN RVW: 14.42

25th pctl RVW: 14.42 75th pctl RVW: 18.50 Low: 7.16 High: 32.00

Tracking/CPT: W51 22843 (new) **Global Period:** ZZZ **Recommended RVW:** 17.94

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 7 to 12 vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 12-year-old female undergoes correction of a scoliosis and fusion of T4 to T12. After preparation of the lamina, Luque rods are fashioned to fit the contours of the corrected spine and attached at every other level with wires passed under the lamina and tightened around the rods. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: After a detailed plan for the instrumentation is drawn on the radiograph or on paper, each of the seven to 12 vertebrae to be fused are completely cleaned of soft tissue attachments from the posterior elements, those vertebrae selected for segmental fixation are prepared by removal of those portions of the ligamentum flavinum and bone that would interfere with proper seating of the fixation device. For pedicle fixation at certain levels, the posterior cortex directly posterior to the pedicle is drilled or removed with bone cutting tools. Entry into the central portion of the pedicle is confirmed by biplane or C-arm x-ray. Pathway for a screw is prepared through the pedicle and into the vertebral body and the depth measured. (Alternatively, ligament flavum is dissected from the undersurface of the lamina at each segment to be segmentally fixed and a passageway for sublaminar wires is prepared with careful protection of the underlying dura and neural elements; or, laminae and/or transverse processes and/or spinous processes are prepared for multiple segmental fixation with wires or hooks.) Screws are placed through the pedicle into the vertebral body on each side of each vertebra to be segmentally fixed. (Alternatively, wires are placed under each lamina centrally and separated so that a wire is under each side of each lamina; or, hooks or claws are placed about the transverse processes and laminae at the chosen vertebrae; or, button and wire devices are placed through both sides of each spinous process.) (Decortication and other preparation for arthrodesis and/or bone graft preparation, coded separately if used, are coordinated at this point.) The rod or plate device to be fixed by the segmental fixation is bent to contour to the spine and to achieve the desired posture of the instrumented segments. The rods or plates are then attached to the segmental fixation by application of nuts or other devices unique to the chosen instrumentation. Correction of the deformity is achieved by sequentially compressing or distracting between appropriate hooks or screws. Wires are carefully tightened around the rods with care to provide secure fixation without over stressing the wires or the bone. All components of the instrumentation are carefully checked for secure positioning and freedom from impingement against dura or neural structures. Spinal cord monitoring is checked. Radiographic confirmation of the placement of the devices and spinal posture is obtained. Hook or wire and rod position is monitored on each postoperative radiograph and compared with the prior radiograph.to be fused.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W51 22843 (new) **Global Period:** ZZZ **Recommended RVW:** 17.94

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 7 to 12 vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
14.42	22842	Posterior instrumentation; segmental fixation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires)	000
17.94*	22843	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 7 to 12 vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22842 has been expanded into the family of codes 22842-22844 to allow for separate reporting of posterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22842 (99%); 22843 (<1%); and 22844(<1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22842 (14.42); 22843 (18.00); and 22844 (22.00). However, to maintain Medicare budget neutrality, the value for 22842 will have to be less than the current RVW, if the value for 22843 and 22844 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: (0.99)X + (0.005)Y + (0.005)Z = 14.42 (current RVW for 22842). Work relationship: X/14.42 = Y/18.00 = Z/20.00. Where X is the RVW for 22842; Y is the RVW for 22843; and Z is the RVW for 22844. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22842 = 14.37; 22843=17.94; and 22844=21.92.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W51 22843 (new) **Global Period:** ZZZ **Recommended RVW:** 17.94

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 7 to 12 vertebral segments

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 120 Low: 90 High: 420

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 9 in Past 5 years: 40

Sample Size: 147 Response Rate (%): 37 (25%) MEDIAN RVW: 18.00

25th pctl RVW: 16.00 75th pctl RVW: 22.00 Low: 10.00 High: 35.00

Tracking/CPT: W52 22844 (new) **Global Period:** ZZZ **Recommended RVW:** 21.92

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 13 or more vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 12-year-old female undergoes correction of a scoliosis and fusion of more than 13 vertebral segments. After preparation of the lamina, Luque rods are fashioned to fit the contours of the corrected spine and attached at every other level with wires passed under the lamina and tightened around the rods. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: After a detailed plan for the instrumentation is drawn on the radiograph or on paper, each of the 13 or more vertebrae to be fused are completely cleaned of soft tissue attachments from the posterior elements, those vertebrae selected for segmental fixation are prepared by removal of those portions of the ligamentum flavinum and bone that would interfere with proper seating of the fixation device. For pedicle fixation at certain levels, the posterior cortex directly posterior to the pedicle is drilled or removed with bone cutting tools. Entry into the central portion of the pedicle is confirmed by biplane or C-arm x-ray. Pathway for a screw is prepared through the pedicle and into the vertebral body and the depth measured. (Alternatively, ligament flavum is dissected from the undersurface of the lamina at each segment to be segmentally fixed and a passageway for sublaminar wires is prepared with careful protection of the underlying dura and neural elements; or, laminae and/or transverse processes and/or spinous processes are prepared for multiple segmental fixation with wires or hooks.) Screws are placed through the pedicle into the vertebral body on each side of each vertebra to be segmentally fixed. (Alternatively, wires are placed under each lamina centrally and separated so that a wire is under each side of each lamina; or, hooks or claws are placed about the transverse processes and laminae at the chosen vertebrae; or, button and wire devices are placed through both sides of each spinous process.) (Decortication and other preparation for arthrodesis and/or bone graft preparation, coded separately if used, are coordinated at this point.) The rod or plate device to be fixed by the segmental fixation is bent to contour to the spine and to achieve the desired posture of the instrumented segments. The rods or plates are then attached to the segmental fixation by application of nuts or other devices unique to the chosen instrumentation. Correction of the deformity is achieved by sequentially compressing or distracting between appropriate hooks or screws. Wires are carefully tightened around the rods with care to provide secure fixation without over stressing the wires or the bone. All components of the instrumentation are carefully checked for secure positioning and freedom from impingement against dura or neural structures. Spinal cord monitoring is checked. Radiographic confirmation of the placement of the devices and spinal posture is obtained. Hook or wire and rod position is monitored on each postoperative radiograph and compared with the prior radiograph.

Post-service work: [N/A - This is an "add-on" service.]

Tracking/CPT: W52 22844 (new) **Global Period:** ZZZ **Recommended RVW:** 21.92

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 13 or more vertebral segments

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KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
14.42	22842	Posterior instrumentation; segmental fixation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires)	000
21.92	22844	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 13 or more vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22842 has been expanded into the family of codes 22842-22844 to allow for separate reporting of posterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22842 (99%); 22843 (<1%); and 22844(<1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22842 (14.42); 22843 (18.00); and 22844 (22.00). However, to maintain Medicare budget neutrality, the value for 22842 will have to be less than the current RVW, if the value for 22843 and 22844 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: (0.99)X + (0.005)Y + (0.005)Z = 14.42 (current RVW for 22842). Work relationship: X/14.42 = Y/18.00 = Z/20.00. Where X is the RVW for 22842; Y is the RVW for 22843; and Z is the RVW for 22844. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22842 = 14.37; 22843=17.94; and 22844=21.92.**

FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

Tracking/CPT: W52 22844 (new) **Global Period:** ZZZ **Recommended RVW:** 21.92

CPT Descriptor: Posterior segmental ~~fixation~~ instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires); 13 or more vertebral segments

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 150 Low: 75 High: 480

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 4 in Past 5 years: 14

Sample Size: 147 Response Rate (%): 37 (25%) MEDIAN RVW: 22.00

25th pctl RVW: 18.00 75th pctl RVW: 25.00 Low: 12.00 High: 38.00

Tracking/CPT: W53 22845 (revised) **Global Period:** ZZZ **Recommended RVW:** 11.96

CPT Descriptor: Anterior instrumentation; 2 to 3 vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 20-year-old male presents with congenital scoliosis secondary to hemivertebrae over a short segment. After diskectomy and preparation of the end plates for fusion, screws are placed in the vertebral bodies and attached to a plate spanning 3 vertebral segments. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The sites of diskectomy over the two to three vertebral segments to be fixed by instrumentation are checked to be certain that the end-plates have been removed back to the posterior longitudinal ligaments and that orientation is accurate. A depth gauge is placed across the disk space to determine the depth and ideal angle of inclination of the fixation screw. Passageway for the screw through the vertebral body is prepared in accordance with the protocol for the selected device. Screws are placed in each vertebral body to be internally fixed. Care is taken that the portions of the device that will remain external to the bone do not create pressure upon the great vessels and that there is no impingement of dura or neural tissues at the depth of the device. The plate, rod, or cable as selected is secured to the screws by the technique according to the protocol of the particular device. Alternatively, hooks or other devices may be sued to anchor to the anterior elements and methacrylate can be added to supplement the fixation. The chosen device is contoured to produce the desired posture of the spine or is adjusted in situ, depending upon the type of instrumentation used.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
12.48	22845	Anterior instrumentation	000
11.96*	22845	Anterior instrumentation; 2 to 3 vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22845 has been expanded into the family of codes 22845-22847 to allow for separate reporting of anterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22845 (89%); 22846 (10%); and 22847 (1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22845 (13.00); 22846 (18.00); and 22847 (20.00). However, to maintain Medicare budget neutrality, the value for 22845 will have to be less than the current RVW, if the value for 22846 and 22847 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: $(0.89)X + (0.10)Y + (0.01)Z = 12.48$ (current RVW for 22845). Work relationship: $X/13 = Y/18 = Z/20$. Where X is the RVW for 22845; Y is the RVW for 22846; and Z is the RVW for 22847. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22845 = 11.96; 22846=16.55; and 22847=18.39.**

Tracking/CPT: W53 22845 (revised) **Global Period:** ZZZ **Recommended RVW:** 11.96

CPT Descriptor: Anterior instrumentation; 2 to 3 vertebral segments

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FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery	_X_	Commonly	___	Sometimes	___	Rarely
Neurosurgery	___	Commonly	_X_	Sometimes	___	Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 90 Low: 25 High: 420

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay:N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Sample Size: 251 Response Rate (%): 51 (20%) MEDIAN RVW: 13.00

25th pctl RVW: 12.48 75th pctl RVW: 15.50 Low: 8.00 High: 28.00

Tracking/CPT: W54 22846 (new) **Global Period:** ZZZ **Recommended RVW:** 16.55

CPT Descriptor: Anterior instrumentation; 4 to 7 vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 60-year-old female presents with severe degenerative thoracic scoliosis. Using a transthoracic approach, diskectomies are performed and screws are placed through 5 vertebral bodies. X-rays confirm the proper positioning of the screws and the screws are attached to cables. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The sites of diskectomy over the four to seven vertebral segments to be fixed by instrumentation are checked to be certain that the end-plates have been removed back to the posterior longitudinal ligaments and that orientation is accurate. A depth gauge is placed across the disk space to determine the depth and ideal angle of inclination of the fixation screw. Passageway for the screw through the vertebral body is prepared in accordance with the protocol for the selected device. Screws are placed in each vertebral body to be internally fixed. Care is taken that the portions of the device that will remain external to the bone do not create pressure upon the great vessels and that there is no impingement of dura or neural tissues at the depth of the device. The plate, rod, or cable as selected is secured to the screws by the technique according to the protocol of the particular device. Alternatively, hooks or other devices may be sued to anchor to the anterior elements and methacrylate can be added to supplement the fixation. The chosen device is contoured to produce the desired posture of the spine or is adjusted in situ, depending upon the type of instrumentation used.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
12.48	22845	Anterior instrumentation	000
16.55*	22846	Anterior instrumentation; 4 to 7 vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22845 has been expanded into the family of codes 22845-22847 to allow for separate reporting of anterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22845 (89%); 22846 (10%); and 22847 (1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22845 (13.00); 22846 (18.00); and 22847 (20.00). However, to maintain Medicare budget neutrality, the value for 22845 will have to be less than the current RVW, if the value for 22846 and 22847 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: $(0.89)X + (0.10)Y + (0.01)Z = 12.48$ (current RVW for 22845). Work relationship: $X/13 = Y/18 = Z/20$. Where X is the RVW for 22845; Y is the RVW for 22846; and Z is the RVW for 22847. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22845 = 11.96; 22846=16.55; and 22847=18.39.**

Tracking/CPT: W54 22846 (new) **Global Period:** ZZZ **Recommended RVW:** 16.55

CPT Descriptor: Anterior instrumentation; 4 to 7 vertebral segments

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FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 120 Low: 35 High: 480

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 3

Sample Size: 251 Response Rate (%): 47 (19%) MEDIAN RVW: 18.00

25th pctl RVW: 15.00 75th pctl RVW: 20.75 Low: 10.00 High: 30.00

Tracking/CPT: W55 22847 (new) **Global Period:** ZZZ **Recommended RVW:** 18.39

CPT Descriptor: Anterior instrumentation; 8 or more vertebral segments

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 60-year-old female presents with severe degenerative thoracic scoliosis. Using a transthoracic approach, diskectomies are performed and screws are placed through more than 8 vertebral bodies. X-rays confirm the proper positioning of the screws and the screws are attached to cables. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The sites of diskectomy over the eight or more vertebral segments to be fixed by instrumentation are checked to be certain that the end-plates have been removed back to the posterior longitudinal ligaments and that orientation is accurate. A depth gauge is placed across the disk space to determine the depth and ideal angle of inclination of the fixation screw. Passageway for the screw through the vertebral body is prepared in accordance with the protocol for the selected device. Screws are placed in each vertebral body to be internally fixed. Care is taken that the portions of the device that will remain external to the bone do not create pressure upon the great vessels and that there is no impingement of dura or neural tissues at the depth of the device. The plate, rod, or cable as selected is secured to the screws by the technique according to the protocol of the particular device. Alternatively, hooks or other devices may be sued to anchor to the anterior elements and methacrylate can be added to supplement the fixation. The chosen device is contoured to produce the desired posture of the spine or is adjusted in situ, depending upon the type of instrumentation used.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
12.48	22845	Anterior instrumentation	000
18.39*	22847	Anterior instrumentation; 8 or more vertebral segments	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Code 22845 has been expanded into the family of codes 22845-22847 to allow for separate reporting of anterior instrumentation at different levels. The society consensus committee estimates the breakdown of reporting for the new codes as: 22845 (89%); 22846 (10%); and 22847 (1%). The committee also believes that the relationship between the survey median RVWs for the three codes is accurate: 22845 (13.00); 22846 (18.00); and 22847 (20.00). However, to maintain Medicare budget neutrality, the value for 22845 will have to be less than the current RVW, if the value for 22846 and 22847 are to be higher.

The following algebraic expressions take into account the issues of budget neutrality and accurate work relationship between the procedures as determined by this survey. Budget neutrality: $(0.89)X + (0.10)Y + (0.01)Z = 12.48$ (current RVW for 22845). Work relationship: $X/13 = Y/18 = Z/20$. Where X is the RVW for 22845; Y is the RVW for 22846; and Z is the RVW for 22847. Solving for X, Y, and Z results in the following **recommended RVW for each code: 22845 = 11.96; 22846=16.55; and 22847=18.39.**

Tracking/CPT: W55 22847 (new) **Global Period:** ZZZ **Recommended RVW:** 18.39

CPT Descriptor: Anterior instrumentation; 8 or more vertebral segments

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FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly ____ Sometimes __X__ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 120 Low: 45 High: 480

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Sample Size: 147 Response Rate (%): 33 (22%) MEDIAN RVW: 20.00

25th pctl RVW: 16.00 75th pctl RVW: 24.00 Low: 10.95 High: 35.00

Tracking/CPT: W56 22848 (new) **Global Period:** ZZZ **Recommended RVW:** 12.00

CPT Descriptor: Pelvic fixation (eg, attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 13-year-old female undergoes correction of a lumbar scoliosis that includes the lumbosacral joint. After preparation of the lamina, Luque rods are inserted. The distal end of the rod is fashioned to be placed into the wing of the ilium down to the sciatic notch. X-rays confirm the proper position of the fixation. [*For this code, please consider only that portion of the procedure that is the actual insertion of the instrumentation. Arthrodesis and/or bone grafting would* be reported separately using the appropriate code(s).]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: Pelvic fixation is an extension of multi-segment fixation of the spine (coded separately), which provides stabilization to the pelvis. The rods used for the multi-segment fixation must be specially contoured in multiple planes to provide for fit and correction of the spinal deformity and for placement between the tables of the iliac crest. Alternatively, separate rods are fashioned to fit between the tables of the iliac crest and to be apposed to the caudad end of the multi-segment fixation rods where the tow rods are linked together with a cross fixation device. The mid-line exposure of the spine is extended to expose the posterior superior iliac spines, the wings of the ilium being exposed by dissection between the erector spinae fascia and the subcutaneous fat. The ilium is exposed from the posterior superior iliac spine to the mid-portion of the iliac wing and to the sciatic notch. A guide pin is inserted inside the wing of the ilium next to the posterior surface of the sacrum with care to avoid the sacroiliac joint. The surgeon places a finger in the sciatic notch to direct the positioning of the guide pin. A similar procedure is performed on the other side. The guide pins are then used as reference for the contouring of the rods. The rods must be contoured to conform to pelvic, sacral, and spinal segments. The pelvic guide pin is removed with a vice grip and extractor. The pelvic section of the rod is introduced into the iliac insertion hole and tapped into the wing of the ilium with a rod pusher and mallet. The spinal section is rotated to fit into the prepared multi-segmented spine fixation or alongside the rod to which it is to be connected. Segmental fixation (coded separately) to the spine is accomplished or the pelvic fixation device is linked to the spinal rod by cross linking instruments. Identical procedures are performed on both sides of the pelvis.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
12.54	22840	Posterior instrumentation; without segmental fixation (eg, single Harrington rod technique)	000
14.42	22842	Posterior instrumentation; segmental fixation (eg, pedicle fixation, dual rods with multiple hooks and sublaminal wires)	000
12.00	22848	Pelvic fixation (eg, attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

Although this is a new procedure currently reported using an unlisted procedure code, the overall work is similar to 22840 and 22842. Therefore, the survey median **RVW of 12.00 is recommended.**

Tracking/CPT: W56 22848 (new) **Global Period:** ZZZ **Recommended RVW:** 12.00

CPT Descriptor: Pelvic fixation (eg, attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum

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FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery __X__ Commonly ____ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

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

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SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 68 Low: 30 High: 360

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 12

Sample Size: 251 Response Rate (%): 51 (20%) MEDIAN RVW: 12.00

25th pctl RVW: 8.00 75th pctl RVW: 16.50 Low: 3.00 High: 38.00

Tracking/CPT: W57 22851 (new) **Global Period:** ZZZ **Recommended RVW:** 6.71

CPT Descriptor: Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 50-year-old male undergoes an anterior fusion of L5-S1 for degenerative disease. An retroperitoneal incision is made and an arthrodesis is performed using a BAK cage. A distractor is placed in the interspace, a hole is drilled in the interspace, and the BAK cage is placed in the hole. The spacer is removed and replace with another BAK cage. Both cages are filled with bone graft. [*Arthrodesis and/or bone grafting would be reported separately using the appropriate code(s).*]

Pre-service work: [N/A - This is an "add-on" service.]

Intra-service work: The exposed disk space and adjacent vertebrae are prepared with bone cutting instruments for acceptance of the prosthetic device. Preparation of the recipient site is made according to the protocol of the particular device. If methylmethacrylate is to be used, a screw or pin is inserted into adjacent vertebral surfaces to anchor the methylmethacrylate. Provision is made for cooling of adjacent tissues and protection of heat sensitive tissue from the exothermic reaction of the curing of the methylmethacrylate. For cages, the recipient site is prepared by bone dissection, a trial fit with the device or a spacer or template as indicated by the protocol is inserted and removed for any final modifications of the recipient site. The prosthetic device is then screwed, impacted, or injected into place according to protocol for the particular device. (Additional fixation, other provision for arthrodesis, or bone grafting are coordinated with the placement of the prosthetic device and are coded separately.) For devices that incorporate graft material, the graft material is appropriately placed into the device prior to it final insertion.

Post-service work: [N/A - This is an "add-on" service.]

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	global
22.19	22140	Reconstruction of spine with bone graft (autograft, allograft) and/or methylmethacrylate following resection of single vertebral body; cervical	090
25.44	22141	Reconstruction of spine with bone graft (autograft, allograft) and/or methylmethacrylate following resection of single vertebral body; thoracic	090
25.44	22142	Reconstruction of spine with bone graft (autograft, allograft) and/or methylmethacrylate following resection of single vertebral body; lumbar	090
6.71	22145	Reconstruction of spine following vertebral body resection, each additional vertebral body	ZZZ
6.71*	22851	Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace	ZZZ

*Specialty recommended value for new/revised code

RATIONALE:

The survey median was determined to lack face validity for this add-on instrumentation code. Review of survey responses showed that the respondents valued a global procedure that included more than the add-on work of 22851.

The consensus committee has chosen to refer to deleted code 22145 (which was an add-on code to 22140-22142) as a key reference because it represents very similar work relative to the use of prosthetic material. **An RVW of 6.71 is recommended** for this very new technology service.

Tracking/CPT: W57 22851 (new) **Global Period:** ZZZ **Recommended RVW:** 6.71

CPT Descriptor: Application of prosthetic device (eg, metal cages, methylmethacrylate) to vertebral defect or interspace

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FREQUENCY INFORMATION

How was this service previously reported? Please see Attachment A.

How often do physicians in your specialty perform this service?

Orthopaedic Surgery ____ Commonly __X__ Sometimes ____ Rarely

Neurosurgery ____ Commonly __X__ Sometimes ____ Rarely

Estimate the number of times this service might be provided nationally in a one-year period? Please see Attachment A.

Is this service performed by many physicians across the United States?

__X__ Yes (metal cages) __X__ No (methylmethacrylate)

SURVEY DATA:

Specialty(s): American Academy of Orthopaedic Surgeons (AAOS); American Association of Neurological Surgeons (AANS); Pediatric Orthopaedic Society of North American (POSNA); North American Spine Society (NASS); Scoliosis Research Society (SRS); Cervical Spine Research Society (CSRS); American Spinal Injury Association (ASIA)

Median Intra-Service Time: 90 Low: 30 High: 420

Median Pre-Service Time: N/A Median Post-Service Time: N/A

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 0

Sample Size: 251 Response Rate (%): 45 (18%) MEDIAN RVW: 20.00

25th pctl RVW: 12.50 75th pctl RVW: 22.50 Low: 3.00 High: 30.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

APPLICATION OF CASTS AND STRAPPING - TAB 14

HCFA asked the RUC to review any potential frequency changes as a result of the revision to the notes that will precede the section on the application of casts and strapping in the 1996 edition of the CPT book. The proposed language is as follows:

> The listed procedures apply when the cast application or strapping is a replacement procedure used during or after the period of follow-up care. Additional ~~visits~~ evaluation and management services are reportable only if significant identifiable further services are provided at the time of the cast application or strapping.
>
> If cast application or strapping is provided as an initial ~~procedure~~ service in which no ~~surgery~~ procedure is performed (eg, casting of a sprained ankle or knee) use the appropriate ~~office~~ evaluation and management code in addition to the casting, ~~99070 for supplies~~ strapping and/or supply codes.

The American College of Emergency Physicians (ACEP) reviewed the proposed language and determined that the new language would not represent a change in current coding and medical practice, but once the instructions become universally recognized, there could be an increase in reporting Evaluation and Management codes for initial cast or strapping. Conversely, there would be a decline in the use of the closed fracture care codes with the -54 modifier. ACEP also discussed this issue with the American Academy of Orthopaedic Surgeons and American Academy of Family Physicians, both of which did not anticipate any increased coding as a result of the new language.

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BRONCHOPLASTY - TAB 15

Code 32501 [Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy of segmentectomy (list separately in addition to code for primary procedure)] is usually done for patients that have lung cancer. A portion of the lung is removed and a segment of the bronchus is resected and repaired with anastomosis. It is provided infrequently with approximately 200 operations per year. 32501 is an add-on procedure for intraoperative work only. This code was created to allow the surgeon to accurately report bronchoplasty when it is performed at the same time as partial pneumonectomies. Previously, 32501 was reported as 32485 or by appending the -22 modifier to other respiratory procedures that may include bronchoplasty such as 32480, 32482, 32484, and 32500. As a result of the creation of code 32501, code 32485 was deleted.

Based on a survey of 50 thoracic surgeons, the specialty society recommended 5.50 RVUs for 32501. However, the RUC determined that, since 32501 is an add-on procedure, the relative value should be the same as what it would have been if the previous code 32485 had been used. The "parent" code of 32485 was 32480 [Removal of lung, other than total pneumonectomy; single lobe (lobectomy)] which has 16.84 RVUs. Code 32485 [Removal of lung, other than total pneumonectomy; with bronchoplasty] had an RVU of 21.53. Since 21.53-16.84 is 4.69, there were previously 4.69 additional RVUs for bronchoplasty with partial pneumonectomy. The RUC recommends that code 32501 be assigned 4.69 RVUs.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
32480		Removal of lung, other than total pneumonectomy; single lobe (lobectomy)	090	16.84 (No Change)
32482		two lobes (bilobectomy)	090	18.54 (No Change)
32484		single segment (segmentectomy)	090	19.52 (No Change)

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
32485		~~with bronchoplasty~~ (32485 has been deleted. To report, use 3250X)	090	N/A
•32501	AA1	Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy or segmentectomy (List separately in addition to code for primary procedure) (Use 3250X only for codes 32480, 32482, 32484) 3250X is to be used when a portion of the bronchus to preserved lung is removed and requires plastic closure to preserve function of that preserved lung. It is not to be used for closure for the proximal end of a resected bronchus).	ZZZ	4.69

SUMMARY OF RECOMMENDATIONS

Tracking Number: AA1 Global Period: ZZZ **Recommended RVW:** 5.50

CPT Descriptor: Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy or segmentectomy (List separately in addition to code for primary procedure)

(Use 32501 only for codes 32480, 32482, 32484)

This code is to be used when a portion of the bronchus to preserved lung is removed and requires plastic closure to preserve function of that preserved lung. It is not to be used for closure for the proximal end of a resected bronchus).

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Following superior segmentectomy of the right lower lobe for bronchial carcinoid tumor in a patient who has limited pulmonary reserve (PEV_1: 1.2 L/s), pathology reports the bronchial margins as contained residual carcinoid tumor. To obtain a free margin the orifice of the closed superior segmental bronchus is now excised by resecting a wedge portion of the remaining right lower lobe bronchus. The bronchus is then reconstructed with a V-plasty technique by approximating the edges of the wedge.

Description of Pre-Service Work: None required

Description of Intra-Service Work: Wedge excision of segmental bronchial orifice and closure with V-plasty.

Description of Post-Service Work: None required

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
38746	Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes (list separately in addition to primary procedure)	4.39
33572	Coronary endarterectomy, open, any method (list separately in addition to primary procedure)	4.45
33530	Reoperation, coronary artery bypass procedure or valve procedure (list separately in addition to primary procedure)	5.86
32095	Thoracotomy, limited, for biopsy of lung or pleura	7.13

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale:

This new code is an add-on code representing intraoperative work only. In that regard, it represents similar effort to that of the three add-on reference procedures. Code 32095, limited thoracotomy, is the existing thoracic surgical reference procedure that comes closest in work intensity and time to this new code.

SUMMARY OF RECOMMENDATIONS

Tracking Number: AA1 Global Period: ZZZ **Recommended RVW:** 5.50

CPT Descriptor: Resection and repair of portion of bronchus (bronchoplasty) when performed at time of lobectomy or segmentectomy (List separately in addition to code for primary procedure)

(Use 32501 only for codes 32480, 32482, 32484)

This code is to be used when a portion of the bronchus to preserved lung is removed and requires plastic closure to preserve function of that preserved lung. It is not to be used for closure for the proximal end of a resected bronchus).

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Following superior segmentectomy of the right lower lobe for bronchial carcinoid tumor in a patient who has limited pulmonary reserve (PEV_1: 1.2 L/s), pathology reports the bronchial margins as contained residual carcinoid tumor. To obtain a free margin the orifice of the closed superior segmental bronchus is now excised by resecting a wedge portion of the remaining right lower lobe bronchus. The bronchus is then reconstructed with a V-plasty technique by approximating the edges of the wedge.

Description of Pre-Service Work: None required

Description of Intra-Service Work: Wedge excision of segmental bronchial orifice and closure with V-plasty.

Description of Post-Service Work: None required

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
38746	Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes (list separately in addition to primary procedure)	4.39
33572	Coronary endarterectomy, open, any method (list separately in addition to primary procedure)	4.45
33530	Reoperation, coronary artery bypass procedure or valve procedure (list separately in addition to primary procedure)	5.86
32095	Thoracotomy, limited, for biopsy of lung or pleura	7.13

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(S) AND/OR OTHER RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale:

This new code is an add-on code representing intraoperative work only. In that regard, it represents similar effort to that of the three add-on reference procedures. Code 32095, limited thoracotomy, is the existing thoracic surgical reference procedure that comes closest in work intensity and time to this new code.

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

FREQUENCY INFORMATION

How was this service previously reported? As part of CPT 32485 and with modifier -22 attached to the other respiratory procedures that may include a bronchoplasty, such as 32480, 32482, 32484, 32500

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? 400-500

1993 Medicare NCH data indicate 194 procedures for all specialties for Code 32485. We really can't tell what proportion of the other respiratory procedures listed above reported with modifier -22 were reporting bronchoplasties, but it was probably a small percentage.

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

SURVEY DATA:

Specialty: Society of Thoracic Surgeons/American Association for Thoracic Surgery

Median Intra-Service Time: 25 Low: 15 High: 35

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: n/a Number of ICU Days: n/a

Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 15

Other Data:

Sample Size: 50 Response Rate (%): 60% (30) Median RVW: 5.50

25th Percentile RVW: 4.80 75th Percentile RVW: 7.10 Low: 2.0 High: 10.0

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

MULTIPLE INTERRUPTED ATRIOTOMIES (MAZE PROCEDURE) - TAB 16

Code 33253 [Operative incisions and reconstruction of atria for treatment of atrial fibrillation or atrial flutter (eg, maze procedure)] is a new code added for physicians to report the treatment of atrial fibrillation. Atrial fibrillation is the most common of all cardiac arrhythmias. It is estimated to be present in 0.15% to 1.0% of the general population, in 8-17% of the population over 60 years of age, and in up to 79% of patients with mitral valve disease. This new code describes the first definitive surgical treatment of atrial fibrillation for patients who do not respond to medical or other surgical antiarrhythmic therapies. This procedure is also known as the maze procedure, which involves multiple atriotomy incisions to restore the normal atrial pacemaker complex and allow activation of the entire atrial myocardium to preserve atrial transport function. The new code is specifically for the treatment of atrial fibrillation and involves reconstruction of both atria. This surgery is rare, with approximately 140 cases performed per year.

This service was previously reported as 33999 [Unlisted cardiac procedure] or using CPT code 33261 [Operative ablation of ventricular arrhythmogenic focus or pathway with cardiopulmonary bypass] with the -22 modifier. This procedure is significantly more difficult than code 33261 because the surgeon is working on both sides of the heart as opposed to just the left side in 33261. In essence the surgeon is dismantling the entire atrium. The work of this procedure is similar to the repair of the tricuspid valve [Code 33615, Repair of complex cardiac anomalies (eg, tricuspid atresia) by closure of atrial septal defect and anastomosis of atria or vena cava to pulmonary artery (simple Fontan procedure)] which involves working on a single ventricle to create a pathway for blood to circulate from the venous system directly into pulmonary circulation without the aid of a ventricular pump.

The RUC reduced the specialty society's recommendation by 1.00 RVUs to account for the portion of pre-service work included in the procedure that is separately reported with Evaluation and Management codes. The RUC recommends 30.00 RVUs for this procedure.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•33253	AB1	Operative incisions and reconstruction of atria for treatment of atrial fibrillation or atrial flutter (e.g., maze procedure)	090	30.00
33260		Operative ablation of ventricular arrhythmogenic focus or pathway; without cardiopulmonary bypass	090	16.19 (No Change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AB1 Global Period: 090 **Recommended RVW:** 31.00

CPT Descriptor: Operative incisions and reconstruction of atria for treatment of atrial fibrillation or atrial flutter (e.g., maze procedure)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 43-year-old woman presented with a two-year history of paroxysmal atrial fibrillation that was unresponsive to antiarrhythmia medications. Preoperatively, an echocardiogram and a cardiac catheterization demonstrated no coronary artery disease and good ventricular function. The surgeon reevaluated the patient, reviewed laboratory and x-ray imaging, obtained informed consent and discussed the procedure with the patient. Under general anesthesia and through a median sternotomy and on cardiopulmonary bypass a series of atriotomy incisions (maze incisions) were performed in the atria. (See attached operative note for details). Mediastinal chest tubes and external pacing wires were placed. Postoperatively the patient was stabilized, with monitoring of ventilation, hemodynamics, rhythm, and drainage. She was extubated on postoperative day 1 and transferred out of the ICU on day 2. She was discharged on postop day 7, with follow-up visits in 6 weeks and 3 months.

Description of Pre-Service Work: Preoperatively, an echocardiogram and a cardiac catheterization were reviewed. The surgeon reevaluated the patient, reviewed laboratory and x-ray imaging, obtained informed consent and discussed the procedure with the patient.

Description of Intra-Service Work: A median sternotomy was performed. The ascending aorta was cannulated for arterial infolow from the cardiopulmonary bypass unit, The superior vena cava was cannulated and then the inferior vena cava was cannulated. Cardiopulmonary bypass was instituted. The right atrial appendage was excised. A lateral incision was placed from the base of the excised right atrial appendage in the direction of the IVC. This incision was stopped approximately 3 cm proximal to the IVC. A separate longitudinal incision was then placed from the posterior SVC down the back of the right atrium to the posterior IVC orifice. The lower portion of this incision was then closed with a running 4-0 Prolene suture up to a level approximately 1.5 m above the IVC orifice. A "T" incision was then carried from the posterior longitudinal incision across the free wall of the lower right atrium to the level of the posterior tricuspid valve annulus just anterior to the os of the cronary sinus. A 3 mm cryolesion was then placed at the level of the tricuspid annulus at the end of this incision. This incision was then closed with a continuous 3-0 Prolene suture from the level of the posterior tricuspid valve annulus up to the edge of the epicardial reflection off the posterior right atrial free wall.

An anterior incision was then placed from the base of the excised right atrial appendage to the anterior tricuspid valve annulus. A 3 mm cryolesion was also placed at the level of the anterior tricuspid valve annulus at the end of this incision. This incision was then closed with a 3-0 Prolene suture up to the base of the excised right atrial appendage. The aorta was then cross-clamped and the heart arrested with cold potassium cardioplegia. A standard left atriotomy was then made in the interatrial groove and carried superiorly across the dome of the left atrium just posterior to Bachmann's bundle. The lower extent of this standard left atriotomy was then carried inferiorly onto the posterior left atrial free wall beneath the orifice of the right inferior pulmonary vein.

A transmural septal incision was then placed across the posterior-superior portion of the atrial septum perpendicular to the standard left atriotomy and the longitudinal posterior right atriotomy. This septal incision was carried directly across the anterior limbus of the fossa ovalis and the fossa ovalis itself down to the level

expose all of the orifices of the pulmonary veins. The inferior portion of the left atriotomy was then carried across the posterior-inferior left atrium between the orifices of the inferior pulmonary veins and the AV groove on the left free-wall of the heart. This incision was continued around the lateral margin of the left inferior and left superior pulmonary veins to reach the left atrial dome incision. This completed the encirclement of all four pulmonary vein orifices.

The left atrial appendage was then inverted and excised. The site of the appendage excision was then connected to the pulmonary vein encircling incision. The base of the excised left atrial appendage was then closed with continuous 3-0 Prolene suture. The incision encircling the pulmonary veins was then closed with 3-0 Prolene beginning at the lateral margin of the left inferior pulmonary vein and continuing in both directions up to the left atrial dome incisions superiorly and along the posterior-inferior left atrial free-wall inferiorly. A vertical atriotomy ws then placed from beneath the pulmonary vein incision down to the level of the mitral valve annulus. The coronary sinus lying in the interatrial groove was then completely encircled and cryoablated at that level. The vertical incision down to the level of the mitral valve annulus was then closed with 3-0 Prolene suture up to the level of the incision that was used to encircle the pulmonary veins. This pulmonary vein encircling incision was then closed from the site of the posterior vertical atriotomy around the orifice of the right inferior pulmonary vein back to the level of the standard left atriotomy in the interatrial groove.

The left atrial dome incision was then closed from the lateral base of the excised left atrial appendage, across the dome of the left atrium to the top of the interatrial septum. The atrial septal incision was then closed with 3-0 Prolene and the remaining portion of the standard left atriotomy was closed with a 3-0 Prolene suture. Air was evacuated from the left side of the heart and the aortic crossclamp was released. During the rewarming phase, the longitudinal posterior right atriotomy was closed with continuous 3-0 Prolene suture. After adequate rewarming and reperfusion, the patient was weaned from cardiopulmonary bypass without difficulty. During the weaning process, the SVC cannula was removed first and the cannulation site was repaired with continuous 5-0 Prolene suture.

Description of Post-Service Work: Postoperatively the patient was stabilized, with monitoring of ventilation, hemodynamics, rhythm, and drainage. She was extubated on postoperative day 1 and transferred out of the ICU on day 2. She was discharged on postop day 7, with follow-up visits in 6 weeks and 3 months.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
33430	Replacement, mitral valve, with cardiopulmonary bypass	29.42
33860	Ascending aortic graft with cardiopulmonary bypass, with or without valve suspension	31.24
33405	Replacement, aortic valve, with cardiopulmonary	28.47
33261	Operative ablation of arrhythmogenic focus or pathway with cardiopulmonary bypass	22.57

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 in the same family of codes as 33261. However, it is substantially more complex with more time and work intensity involved in the intraservice period. Thus, the other reference procedures (33430, 33860, and 33405) are better standards by which to make a comparison in terms of work intensity.

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

FREQUENCY INFORMATION

How was this service previously reported? Code 33999 (unlisted cardiac procedure) or possibly 33261-22

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
This is a "guesstimate" because there are no 1993 NCH data to give us good guidelines. There were a total of 57 procedures reported under 33261 in 1993 Medicare data, and probably only a small percentage of those were mazes. There were 826 procedures reported for 33999, but we don't know the percentage of mazes.

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

SURVEY DATA:

Specialty: Society of Thoracic Surgeons/American Association for Thoracic Surgery

Median Intra-Service Time: 300min Low: 120min High: 500min

Median Pre-Service Time: 90min Median Post-Service Time: 150min

Length of Hospital Stay: 7da Number of ICU Days: 2da

Number & Level of Post-Hospital Visits: 2 (1- 99214, 1- 99212)

Number of Times Provided in Past 12 months (Median): 4 in Past 5 years: 12

Other Data: _____

Sample Size: 50 Response Rate (%): 60%(30) Median RVW: 31.00

25th Percentile RVW: 30.00 75th Percentile RVW: 34.00 Low: 27.00 High: 55.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
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SYSTEMIC-TO-PULMONARY ARTERY SHUNT - TAB 17

Code 33924 [Ligation and takedown of a systemic-to-pulmonary artery shunt performed in conjunction with a congenital heart procedure (list separately in addition to code for primary procedure)] is a new add-on code that is performed in conjunction with several congenital heart procedures. The placement of a systemic-to-pulmonary shunt is commonly performed on "blue babies" and other newborns because their physiology will not tolerate a complete repair. When the patient is able to tolerate a more definitive procedure the shunt is taken down. This procedure is performed rarely, and is considered extremely risky. Among the most common risks are potential damage to the phrenic nerve which controls the diaphragm. The margin for physician error in this procedure is small. If the physician is unable to control the shunt inside the pulmonary artery, the operation will not be successful, resulting in death to the patient.

Code 33924 is currently reported as part of codes 33696 [Complete repair of tetralogy of Fallot without pulmonary atresia; with closure of previous shunt] and 33698 [Complete repair of tetralogy of Fallot with pulmonary atresia including construction of conduit from right ventricle to pulmonary artery and closure of ventricular septal defect; with closure of previous shunt]. 33924 is performed with several other types of congenital heart procedures and reported using a -22 modifier. In particular, this type of shunt is often found in patients undergoing Fontan procedures (33615 and 33617), operations for transposition of the great arteries with ventricular septal defect and pulmonary stenosis (37770 and 33771), and bidirectional cavopulmonary shunts (33767), in addition to the tetralogy of Fallot repair procedures.

The RUC reduced the specialty society recommendation by 0.75 RVUs and recommends 5.5 RVUs for code 33924.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•33924	AC1	Ligation and takedown of a systemic-to-pulmonary artery shunt, performed in conjunction with a congenital heart procedure (List separately in addition to code for primary procedure) (Use 3392X only with 33470-33475, 33600-33619, 33684-33688, 33692-33697, 33735-33767, 33770-33781, 33786, 33918-33922)	ZZZ	5.50

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
33692		Complete repair tetralogy of Fallot without pulmonary atresia;	090	29.28 (No Change)
33696		~~with closure of previous shunt~~ (33696 has been deleted. To report, see 3392X)	090	N/A
33697		Complete repair tetralogy of Fallot with pulmonary atresia including construction of conduit from right ventricle to pulmonary artery and closure of ventricular septal defect;	090	32.21 (No Change)
33698		~~with closure of previous shunt~~ (33698 has been deleted. To report, see 3392X)	090	N/A

SUMMARY OF RECOMMENDATION

Tracking Number: AC1 Global Period: ZZZ **Recommended RVW:** 6.25

CPT Descriptor: Ligation and takedown of a systemic-to-pulmonary artery shunt performed in conjunction with a congenital heart procedure (List separately in addition to code for primary procedure)

(Use 3392X only with 33470-33475, 33600-33619, 33684-33688, 33692-33697, 33735-33767, 33770-33781, 33786, 33918-33922)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 3 year old child with single ventricle and pulmonary atresia underwent a Blalock-Taussig shunt (right subclavian artery to right pulmonary artery) as a neonate to provide pulmonary blood flow and allow survival. The shunt has provided satisfactory palliation, but there has been increasing cyanosis. The child is now referred for a reparative (Fontan) operation in order establish normal oxygenation and to relieve the volume load on the single ventricle which is imposed by the systemic-to-pulmonary artery shunt. The heart and great vessels are exposed through a midline sternotomy incision, and the shunt, which lies outside the pericardium posteriorly, is located by palpation of the thrill in the posterior mediastinum. The posterior pericardium is incised, and the shunt is then carefully dissected out from the surrounding scar tissue and is surrounded with a heavy ligature. Care is taken to avoid the areas of proximal and distal anastomoses to the pulmonary artery and the systemic artery in order to prevent exsanguinating hemorrhage. Then pursestring sutures and cannulas are placed in preparation for the initiation of cardiopulmonary bypass. Immediately after bypass is started, the ligature on the shunt is tied to prevent runoff from the systemic circulation into the pulmonary artery and systemic hypoperfusion. Once the ligature is tied, then the shunt is further mobilized, and it is then divided and a portion of the shunt is excised in order to prevent pulmonary artery distortion. The two ends of the shunt are oversewn. Then the remainder of the reparative (Fontan) operation is carried out.

Description of Pre-Service Work: None required

Description of Intra-Service Work: The heart and great vessels are exposed through a midline sternotomy incision, and the shunt, which lies outside the pericardium posteriorly, is located by palpation of the thrill in the posterior mediastinum. The posterior pericardium is incised, and the shunt is then carefully dissected out from the surrounding scar tissue and is surrounded with a heavy ligature. Care is taken to avoid the areas of proximal and distal anastomoses to the pulmonary artery and the systemic artery in order to prevent exsanguinating hemorrhage. Then pursestring sutures and cannulas are placed in preparation for the initiation of cardiopulmonary bypass. Immediately after bypass is started, the ligature on the shunt is tied to prevent runoff from the systemic circulation into the pulmonary artery and systemic hypoperfusion. Once the ligature is tied, then the shunt is further mobilized, and it is then divided and a portion of the shunt is excised in order to prevent pulmonary artery distortion. The two ends of the shunt are oversewn

Description of Post-Service Work: None required

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
38746	Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes (list separately in addition to primary procedure)	4.39
33572	Coronary endarterectomy, open, any method (list separately in addition to primary procedure)	4.45
33530	Reoperation, coronary artery bypass procedure or valve procedure (list separately in addition to primary procedure)	5.86
33820	Repair of patent ductus arteriosus; by ligation	15.62

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 this new code will be an add-on code, as are the others listed in the reference procedures, we believe it is more difficult and involves more time and work intensity than the other add-ons. Therefore, we also compared it to the patent ductus ligation, which is one of the least complex of the congenital heart procedures and comes the closest in work to the shunt takedown and ligation. After review of the data, the Consensus Committee felt that the median recommended RVW was slightly high, and chose to recommend the 25th percentile RVW of 6.25 to the RUC.

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

FREQUENCY INFORMATION

How was this service previously reported? It was part of 33696 and 33698 (which have now been deleted) and was reported with a modifier -22 on several other procedures (i.e., 33470-33475; 33600-33619; 33684-33688; 33692-33697; 33735-33767; 33770-33781; 33786; 33918-33922)

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? This is very difficult to do, since we can't sort out when the services listed above had a shunt takedown and when they didn't. We believe there are less than 200 of these procedures per year.

1993 NCH Medicare data showed no procedures for 33696, 33698, and a total of 19 procedures for all the other codes listed above, inclusively.

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

SURVEY DATA:

Specialty: Society of Thoracic Surgeons/American Association for Thoracic Surgery

Median Intra-Service Time: 30 min Low: 20 min High: 60 min

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: n/a Number of ICU Days: n/a

Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 45

Other Data: _____

Sample Size: 50 Response Rate (%): 60%(30) Median RVW: 8.00

25th Percentile RVW: 6.25 75th Percentile RVW: 13.00 Low: 3.00 High: 15.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
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BLOOD-DERIVED STEM CELLS - TAB 18

Code 38231 [Blood-derived peripheral stem cell harvesting for transplantation, per collection] is done for patients with various forms of cancer that are amenable to high dose chemotherapy. The patient undergoes apheresis in which stem cells (in this case leukocytes) are separated and retained. Following high dose chemotherapy and/or radiation therapy, the stem cells are reinfused into the patient.

Blood-derived stem cell transplantation differs from bone marrow transplantation (CPT code 38241) with respect to the source of the transplanted stem cells. In the case of bone marrow transplants, the stem cells are harvested from bone marrow. In the case of blood-derived stem cell transplants, these cells are acquired through one or more apheresis procedures. 38231 is new technology and has been used with increasing frequency since the mid-1980s.

The specialty society recommended a value of 2.00 for 38231. The RUC reduced the RVUs to make them equivalent to the work of code 36520 [Therapeutic apheresis (plasma and/or cell exchange)], which has 1.74 RVUs.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
38230		Bone marrow harvesting for transplantation	010	3.16 (No Change)
•38231	AD1	Blood-derived peripheral stem cell harvesting for transplantation, per collection	000	1.74
38240	AD2	Bone marrow or blood-derived peripheral stem cell transplantation; allogenic	XXX	2.24 (No Change)
38241	AD3	autologous (For comparability studies, see 86812-88682)	XXX	2.24 (No Change)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AD1 Global Period: XXX **Recommended RVW:** 2.00

CPT Descriptor: Blood-derived peripheral stem cell harvesting for transplantation, per collection

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 42 year old female with Stage II breast cancer, 15 lymph nodes positive. Following 7 days of G-CSF administration, white count is 20,000, platelet count is 300,000, hematocrit is 35. Patient has leukapheresis procedure lasting 4 hours to obtain peripheral blood stem cells for bone marrow reconstitution after receiving high dose chemotherapy.

Description of Pre-Service Work:

Physical examination of patient; review of laboratory results; writing orders for procedure.

Description of Intra-Service Work:

Supervision of harvesting procedure; monitoring patient's vital signs; periodic re-evaluation of whether to continu the procedure; dealing with problems as they arise.

Description of Post-Service Work:

Re-evaluate vital signs; review post-procedure laboratory results; prepare progress notes.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
38240	Bone marrow transplantation; allogenic	2.24
38241	Bone marrow transplantation; autologous	2.24
96445	Chemotherapy administration, into peritoneal cavity, requiring and including peritoneocentesis	2.20
96450	Chemotherapy administration, into CNS (EG. intrathecal), requiring and including lumbar puncture	1.89

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 a time-consuming procedure, requiring periodic monintoring and re-evaluation of the patient during the 4 hours of leukapheresis. In addition, the procedure encompasses visit-type services before and after the leukapheresis during which the patient is examined and laboratory results are reviewed.

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

FREQUENCY INFORMATION

How was this service previously reported? New procedure--no code.

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? No estimate available.

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

SURVEY DATA:

Specialty: Medical Oncology

Median Intra-Service Time: 30 minutes Low: 0 minutes High: 810 minutes

Median Pre-Service Time: 30 minutes Median Post-Service Time: 15 minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 87.5 in Past 5 years: 200

Other Data:

Sample Size: 30/54 Response Rate (%): 56% Median RVW: 2.0

25th Percentile RVW: 1.37 75th Percentile RVW: 2.5 Low: 0.5 High: 12

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

TRAUMA CARE - TAB 19

New codes 20100-20103 are to be used primarily to report exploration of gunshot wounds. Currently, there is no way for physicians to accurately report this procedure. The procedures may include wound debridement if necessary, but if repairs are done requiring thoracotomy or laparotomy, or simple, intermediate, or complex repair of the wound, then the use of the specific codes for these procedures would supersede the use of the new trauma care codes. The recommended RVUs for these services are based on completed survey responses from 50 surgeons.

Code 20100 [Exploration of penetrating wound (separate procedure); neck] includes exploration of the neck structures, including the trachea, esophagus, cranial nerves, carotid sheath and its contents. The recommended RVUs are 9.50.

Code 20101 [Exploration of penetrating wound (separate procedure); chest (without thoracotomy)] is a local wound exploration of the chest after penetrating trauma to determine the penetration into the thoracic and/or abdominal cavity by examination of subcutaneous tissue, fascia, and intercostal muscles. This procedure is most frequently utilized for stab and gunshot wounds which are thought to be tangential and requires enlargement of the wound and a precise dissection of all of the chest wall layers. 20101 is less physician work than code 32020 [Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure)] which always requires debridement. The recommended RVUs for CPT code 20101 are 3.00.

Code 20102 [Exploration of penetrating wound (separate procedure); abdomen/flank/back] is done for local wound exploration after penetrating trauma to determine penetration of the peritoneal cavity or retroperitoneal structures. This procedure is most commonly performed for stab wounds but on occasion is utilized for tangential gunshot wounds. During this procedure, physicians must take care not to cause further injury as the result of the exploration. It is more complex than code 20101, as the physician must explore more layers to get to the peritoneal cavity as opposed to the chest. The recommended RVUs are 3.68.

Code 20103 [Exploration of penetrating wound (separate procedure); extremity] would be reported for gunshot and stab wounds. This exploration is more complex than codes 20100, 20101, and 20102 because the structures that are present in the extremities, such as tendons, vessels, and nerves, are more complex. The recommended RVUs are 4.95.

Codes 47361 and 47362 are new codes for the management of very complex, life-threatening liver hemorrhage. Code 47361 [Management of liver hemorrhage; exploration of hepatic wound, extensive debridement, coagulation and/or suture, with or without packing of the liver] is a procedure that is used to stabilize patients with complex liver wounds and extensive hemorrhage that cannot be otherwise controlled. The extensive trauma and uncontrollable bleeding makes the patient highly unstable and causes a relatively high level of stress to the physician. In 50% of the cases the physician will pack the liver wound. The RUC recommends 28.00 RVUs for this procedure, which also represents the survey median.

For patients requiring packing of the liver when the procedure described by code 47361 is done, and who are still alive several days later, the new code 47362 [Management of liver hemorrhage; re-exploration of hepatic wound for removal of packing] is used to report re-exploration of the abdomen for removal of the hepatic packing. This procedure is usually done when the physician does not have to further debride or remove portions of the liver, and the surgeon must be careful to prevent bleeding during the procedure. The RUC recommends 10.00 RVUs for code 47362. Some questions were also raised about what the global period should be for this service and how it should be reported during the global period of code 47361. The specialty had recommended a global period of 000 days. The RUC is not making a formal recommendation to HCFA on this issue but suggests that HCFA consider what the appropriate period should be and how the code should be reported by the surgeon.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
WOUND EXPLORATION - TRAUMA (e.g., penetrating gunshot, stab wound) **201X1-201X4 relate to wound(s) resulting from penetrating trauma. These codes describe surgical exploration and enlargement of the wound, extension of dissection (to determine penetration), debridement, removal of foreign body(s), ligation or coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle, not requiring thoracotomy or laparotomy. If a repair is done to major structure(s) or major blood vessels(s) requiring thoracotomy or laparotomy, then those specific code(s) would supersede the use of codes 201X1-201X4. To report Simple, Intermediate or Complex repair of wound(s) that do not require enlargement of the wound, extension of dissection, etc., as stated above, use specific Repair code(s) in the Integumentary System section.**				
•20100	AE1	Exploration of penetrating wound (separate procedure); neck	010	9.50
•20101	AE2	chest	010	3.00
•20102	AE3	abdomen/flank/back	010	3.68
•20103	AE4	extremity	010	4.95

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
LIVER REPAIR				
47350	AE5	~~Hepatorrhaphy;~~ Management of liver hemorrhage; simple suture of liver wound or injury~~; simple~~	090	11.29 (no change)
47355		~~with common duct or gallbladder drainage~~ (47355 has been deleted)	090	N/A
47360	AE6	complex, suture of liver wound, with or without hepatic artery ligation	090	15.34 (no change)
•47361	AE7	exploration of hepatic wound, extensive debridement, coagulation and/or suture, with or without packing of liver	090	28.00
•47362	AE8	re-exploration of hepatic wound for removal of packing	???	10.00

The following cross references were added for clarification:

INTEGUMENTARY SYSTEM

SKIN, SUBCUTANEOUS AND ACCESSORY STRUCTURES

INCISION AND DRAINAGE

(To report wound exploration due to penetrating trauma without laparotomy or thoracotomy, use 201X1-201X4, as appropriate)

10120* Incision and removal of foreign body, subcutaneous tissues; simple

10121 complicated

REPAIR (CLOSURE): Definitions

Simple "exploration" of nerves, blood vessels or tendons exposed in an open wound is also considered part of the essential treatment of the wound and is not a separate procedure unless appreciable dissection is required. If the wound requires enlargement, extension of the dissection (to determine penetration), debridement, removal of foreign body(s), ligation of coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle, not requiring thoracotomy or laparotomy, use codes 201X1-201X4, as appropriate.

LUNGS AND PLEURA

INCISION

32095 Thoracotomy, limited, for biopsy of lung or pleura

(To report wound exploration due to penetrating trauma without thoracotomy, use 201X2)

32100 Thoracotomy, major; with exploration and biopsy

ABDOMEN, PERITONEUM, AND OMENTUM

INCISION

49000 Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) (separate procedure)

(To report wound exploration due to penetrating trauma without laparotomy, see 201X3)

49002 Reopening of recent laparotomy

(To report re-exploration of hepatic wound for removal of packing, see 4736X)

49010 Exploration, retroperitoneal area with or without biopsy(s) (separate procedure)

(To report wound exploration due to penetrating trauma without laparotomy, see 201X3)

Tracking/CPT: AE1 201X1 (new) **Global Period:** 010 **Recommended RVW:** 9.50

CPT Descriptor: Exploration of penetrating wound (separate procedure); neck
(Use specific code(s) for repair of blood vessel(s), trachea, larynx, or esophagopharynx)

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 27-year-old male victim of a drug-related shooting presents to the Emergency Department with a low velocity handgun wound to the left neck in zone II. The patient is neurologically and hemodynamically stable with a moderate hematoma over the left mid-neck area, which is non-expanding and pulsatile. Anterior and lateral neck x-rays reveal the bullet to be embedded in the vertebral body. The patient is given antibiotics, taken to the operating room where he is electively intubated, and prepared for neck exploration. The neck is explored through a left sternomastoid incision along the sternocleidomastoid muscle. Branches of the external jugular vein are found to be bleeding and are ligated. The bullet traversed the posterior aspect of the sternocleidomastoid muscle. The carotid sheath is opened, and the internal jugular and common carotid artery are uninjured. The phrenic nerve is identified and is intact. There are several bleeding muscular branches, which are coagulated. The esophagus and trachea are then mobilized. There is no evidence of trauma to the laryngotracheal area or the esophagus. The bullet track appeared to traverse posterior to the esophagus into the vertebral body. There is a moderate amount of hemorrhage from the area. The left lateral portion of the thyroid gland is exposed and uninjured. The left superior laryngeal nerve appears to be intact. The wound is irrigated, closed suction drains are placed and brought out interiorly and laterally to the skin, and the fascia over the sternocleidomastoid is closed with interrupted 2-0 vicryl sutures. Skin staples are applied, and the procedure is terminated.

Pre-service work: includes airway management, breathing assessment, and establishment of circulatory stability. This involves placing intravenous lines and preparing the patient for endotracheal intubation. A precise neurologic evaluation is required to rule out cranial nerve and/or spinal cord injury. A decision must be made relative to angiography prior to entering the operating room. Preoperative antibiotics are ordered. Attention is directed toward trying to obtain consent from the patient or responsible family member. Pre-service work, which is frequently performed under adverse circumstances relative to uncooperative patients (including the unpredictability of life threatening injuries), also includes pre-operative scrubbing and positioning, prepping, and draping the patient. Prior to the operation, continuous observation of the patient for expanding hematoma and hemorrhage from the site in necessary, while intubation is performed and anesthesia is administered.

Intra-service work: includes planning the incision; and enlarging the neck wound to explore the neck structures, including the trachea, esophagus, cranial nerves, carotid sheath and its contents. Any necessary debridement, removal of foreign body(s), ligation or coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle is performed. Exposure of the three columns of the neck is required including visceral, vascular, and neural. (Any necessary repair to major structures or major blood vessel(s) is coded separately.) Hemostasis is secured. The wound is irrigated, closed suction drains are placed and brought out interiorly and laterally to the skin. The wound is closed in layers. Skin staples, if necessary, and sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family (including written and telephone reports and orders); assessment of safety of extubation based on evaluation of the patient's neck; review of postoperative chest x-ray; monitoring the patient for cranial nerve disfunction or hemorrhage and infection; removal of a drain, if used; pain medication management; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 10 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of sutures and staples and evaluation of laboratory reports, if needed, and antibiotic and pain medication adjustments. It should be noted that for these cases, litigation, deposition, and communication with police are frequent components of post service work.

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
9.86	60220	Total thyroid lobectomy, unilateral; with or without isthmusectomy	090
6.04	35800	Exploration for postoperative hemorrhage, thrombosis or infection; neck	090
4.54	35701	Exploration (not followed by surgical repair), with or without lysis of artery; carotid artery	090
10.19	43420	Closure of esophagostomy or fistula; cervical approach	090
15.19	31360	Laryngectomy; total, without radical neck dissection	090
9.40	49002	Reopening of recent laparotomy	090

RATIONALE:

In comparison to all of the key reference services, AE1 includes the "unpredictability" of life threatening injuries that adds to the total work stress. AE1 is more work than 35701 because more structures are explored, requiring additional careful dissection and debridement, if necessary, during an emergent situation. AE1 is less work than 31360 because removal and/or repair is not included. The total work of AE1 is comparable to 60220 and 43420, where the intraoperative dissection of traumatic neck exploration may be more extensive and somewhat more stressful than 60220 and 43420, but the pre-service and post-service effort is less. Because the key reference services each represent some of the components of what a neck exploration for cervical trauma entails, the survey median RVW of 9.50 appears relationally reasonable and is recommended.

FREQUENCY INFORMATION

How was this service previously reported? 21899 (unlisted procedure, neck or thorax)

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? Approximately 1,200 per year in the United States, assuming a 30% negative neck exploration rate. Additionally, 20% of the total frequency may require bilateral (-50) neck exploration. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma; American Academy of Otolaryngology - Head and Neck Surgery, Inc.

Median Intra-Service Time: 90 Low: 50 High: 240

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

Length of Hospital Stay: 4 Number of ICU Days: 1

Number & Level of Post-Hospital Visits: 1 x 99213

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 20

Sample Size: 130 Response Rate (%): 50 (38%) MEDIAN RVW: 9.50

25th pctl RVW: 7.50 75th pctl RVW: 11.96 Low: 4.54 High: 27.67

Tracking/CPT: AE2 201X2 (new) **Global Period:** 010 **Recommended RVW:** 3.00

CPT Descriptor: Exploration of penetrating wound (separate procedure); chest (without thoracotomy) (Use specific code(s) for repair of major blood vessel(s) and/or major structure(s))

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 34-year-old male presented with an anterior chest stab wound in the mid-clavicular line in the fourth intercostal space. The patient was hemodynamically stable without complaints of shortness of breath. A chest x-ray was negative. It was a non-sucking chest wound approximately 3/4-inch with a minimal amount of hemorrhage. The patient had no neck vein distension or hypotension. Xylocaine was infiltrated into the incision, and the incision was enlarged approximately one-half inch in each direction. Dissection was then carried down to the costochondral junction. The intercostal muscles were identified by further dissection of the soft tissues of the stab wound. By finger palpation and hemostat probe, there was no obvious evidence of thoracic or pericardial penetration. The wound was irrigated and closed loosely with 2-0 nylon sutures. The patient was observed for six hours in the Emergency Department and underwent a repeat chest x-ray, which was normal. The patient was then discharged for follow-up in the clinic.

Pre-service work: includes assessing airway, breathing, and circulatory status; obtaining and reviewing hospital admission roentgenograms and laboratory studies; and communicating with other health care professionals. Attention is directed toward trying to obtain consent from the patient or responsible family member. Preoperative antibiotics are ordered. Pre-service work, which is frequently performed under adverse circumstances relative to uncooperative patients, also includes pre-operative scrubbing and positioning, prepping, and draping the patient, and administering a local anesthetic.

Intra-service work: The wound is enlarged to inspect for thoracic or pericardial penetration. Any necessary debridement, removal of foreign body(s), ligation or coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle, not requiring a thoracotomy, is performed. (Any necessary repair to major structures or major blood vessel(s) is coded separately.) The wound is irrigated and closed in layers, and a sterile dressing applied.

Post-service work: includes patient stabilization; communication with the family (including written and telephone reports and orders); review of postoperative chest x-ray; pain medication management; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 10 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of sutures, evaluation of laboratory reports, if needed, and antibiotic and pain medication adjustments. It should be noted that for these cases, litigation, deposition, and communication with police are frequent components of post service work.

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
3.98	32020	Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure)	000
2.64	10121	Incision and removal of foreign body, subcutaneous tissues; complicated	010
1.83	11043	Debridement; skin, subcutaneous tissue, and muscle	010
2.96	99245	Office consultation for a new or established patient, which requires these three key components: 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 moderate to high severity. Physicians typically spend 80 minutes face-to-face with the patient and/or family.	XXX
3.87	13101	Repair, complex, trunk; 2.6 cm to 7.5 cm	010

RATIONALE:
AE2 is more work than 10121 because is requires dissection through the entire thickness of the chest wall with precision to determine penetration. Although the total work stress level for AE2 is greater than 13101 due to the emergent nature of the situation, the overall work is similar (enlarge a wound, explore the cavity, and close in layers). Intraoperative work for AE2 may be slightly lower than 13101 in that it does not include the repair and debridement of the ragged edges as would be done in a complex wound repair. The survey median RVW of 3.00, which is between the RVWs for 10121 and 13100, is recommended.

FREQUENCY INFORMATION

How was this service previously reported? 21899 (unlisted procedure, neck or thorax). Alternative, 12001-12007 (simple repair of wounds) or 12031-12037 (layered closure of wounds) may have been used, however these codes only describe wound closure, but do not describe the exploration which frequently requires extending the wound and promoting further dissection.

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? Approximately 2,000 per year in the United States. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma

Median Intra-Service Time: 30 Low: 15 High: 120

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

Length of Hospital Stay: 0 Number of ICU Days: 0

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

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 10

Sample Size: 92 Response Rate (%): 33 (36%) MEDIAN RVW: 3.00

25th pctl RVW: 2.64 75th pctl RVW: 4.00 Low: 1.00 High: 7.00

Tracking/CPT: AE3 201X3 (new) **Global Period:** 010 **Recommended RVW:** 3.68

CPT Descriptor: Exploration of penetrating wound (separate procedure); abdomen/flank/back (without laparotomy)
(Use specific code(s) for repair of major blood vessel(s) and/or major structure(s))

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: This 30-year-old obese female presented with a self-inflicted stab wound to the left mid-abdomen area. The patient was hemodynamically stable and hysterical. An abdominal exam was equivocal. Due to the patient's inability to cooperate, after initial ATLS assessment, the half-inch wound was infiltrated with local anesthesia and was enlarged approximately one-inch from each corner. The subcutaneous tissue was then dissected and the external oblique aponeurosis was identified and had been penetrated. This was enlarged and the underlying internal oblique and transverse muscles had minimal bleeding and no evidence of subsequent penetration into the peritoneal cavity. Retractors were placed in the wound, which was approximately 5 cm in depth, mostly through the fatty subcutaneous tissue. Exploration of the wound tract revealed no obvious penetration. The fascia was then closed with 2-0 interrupted vicryl sutures after irrigating the wound. The skin was closed loosely with 3-0 nylon simple sutures. Based on the satisfactory local stab wound exploration, it was elected not to pursue diagnostic peritoneal lavage or CAT scan of the abdomen. The patient was then observed clinically for 18 hours and discharged from the hospital.

Pre-service work: includes assessing airway, breathing, and circulatory status; obtaining and reviewing hospital admission roentgenograms and laboratory studies; and communicating with other health care professionals. Attention is directed toward trying to obtain consent from the patient or responsible family member. Preoperative antibiotics are ordered. Attention is directed toward trying to obtain consent from the patient or responsible family member. Pre-service work, which is frequently performed under adverse circumstances relative to uncooperative patients, also includes pre-operative scrubbing and positioning, prepping, and draping the patient, and administering a local anesthetic.

Intra-service work: After enlarging the wound, retractors are placed to identify underlying structures and to determine the depth of penetration. Any necessary debridement, removal of foreign body(s), ligation or coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle, not requiring a laparotomy, is performed. (Any necessary repair to major structures or major blood vessel(s) is coded separately.) The fascia is then closed with 2-0 interrupted vicryl sutures after irrigating the wound. The skin is closed in layers, and a sterile dressing is applied.

Post-service work: includes patient stabilization and continued observation for missed penetration; communication with the family (including written and telephone reports and orders); pain medication management; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 10 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of sutures, evaluation of laboratory reports, if needed, and antibiotic and pain medication adjustments. It should be noted that for these cases, litigation, deposition and communication with police are frequent components of post service work.

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
2.64	10121	Incision and removal of foreign body, subcutaneous tissues; complicated	010
1.83	11043	Debridement; skin, subcutaneous tissue, and muscle	010
6.56	22900	Excision, abdominal wall tumor, subfascial (eg, desmoid)	090
6.55	21930	Excision, tumor, soft tissue of back or flank	090
6.06	44950	Appendectomy;	090
3.98	32020	Tube thoracostomy with or without water seal (eg, for abscess, hemothorax, empyema) (separate procedure)	000
3.87	13101	Repair, complex, trunk; 2.6 cm to 7.5 cm	010

RATIONALE:
The work of AE3 is similar to 44950, except the appendix is not taken out. AE3 is substantially more work than 10121 because is requires precise dissection through the entire thickness of the abdominal or flank wall to determine penetration and injury to internal structures. Although the total work stress level for AE3 is greater than 13101 due to the emergent nature of the situation, the overall work is similar (enlarge a wound, explore the cavity, and close in layers). Intraoperative work for AE2 may be slightly lower than 13101 in that it does not include the repair and debridement of the ragged edges as would be done in a complex wound repair. In addition, the intraoperative work of AE3 is greater than AE2. The survey median RVW of 3.68, which is slightly less than the RVW for 13101 and greater than the recommendation for AE2, is recommended for AE3.

FREQUENCY INFORMATION

How was this service previously reported? 21899 (unlisted procedure, neck or thorax). Alternative, 12001-12007 (simple repair of wounds) or 12031-12037 (layered closure of wounds) may have been used, however these codes only describe wound closure, but do not describe the exploration which frequently requires extending the wound and promoting further dissection.

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? Approximately 3,000 per year in the United States. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma

Median Intra-Service Time: 30 Low: 15 High: 120

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

Length of Hospital Stay: 1 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 1 x 99212

Number of Times Provided in Past 12 months (Median): 5 in Past 5 years: 23

Sample Size: 92 Response Rate (%): 32 (35%) MEDIAN RVW: 3.68

25th pctl RVW: 2.93 75th pctl RVW: 5.13 Low: 1.30 High: 7.00

Tracking/CPT: AE4 201X4 (new) **Global Period:** 010 **Recommended RVW:** 4.95

CPT Descriptor: Exploration of penetrating wound (separate procedure); extremity
(Use specific code(s) for repair of blood vessel(s) and/or major structure(s))

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 20-year-old male was involved in an altercation when he suffered a two-inch stab wound to the medial anterior elbow and presented to the Emergency Department with moderate hemorrhage controlled with pressure. The patient had no neurovascular deficits distally. It was elected to explore this wound in the operating room under local anesthesia, with general anesthesia on stand-by if necessary. The transverse incision was infiltrated with xylocaine and irrigated. The wound was then enlarged, and the proximal and distal flaps were mobilized to inspect the underlying structures. The brachial artery and vein were intact. The antecubital veins had been lacerated and thrombosed. These were identified and ligated. The median nerve was intact. There was no obvious tendinous injury to the lacertus fibrosis of the elbow. There was some moderate bleeding from the partial laceration of the medial biceps, which was easily controlled with cautery. No structural repair was necessary. The wound was copiously irrigated. The fascia was reapproximated loosely with 2-0 vicryl sutures, and the skin was closed with 3-0 nylon vertical mattress sutures.

Pre-service work: includes obtaining and reviewing hospital admission roentgenograms and laboratory studies; evaluating the patient for neurovascular injury; exposing the wound, taking a history as to the incident; and communicating with other health care professionals. Attention is directed toward trying to obtain consent from the patient or responsible family member. Preoperative antibiotics and tetanus prophylaxis are ordered. Pre-service work, which is frequently performed under adverse circumstances relative to uncooperative patients, also includes pre-operative scrubbing and positioning, prepping, and draping the patient. It should be noted that the patient's extremity is most often explored in the operating room.

Intra-service work: The wound is enlarged to inspect the underlying structures and, with careful dissection, the ligaments, nerves, and blood vessels of the wound. Any necessary debridement, removal of foreign body(s), ligation or coagulation of minor subcutaneous and/or muscular blood vessel(s), of the subcutaneous tissue, muscle fascia, and/or muscle is performed. (Any necessary repair to major structures or major blood vessel(s) is coded separately.) The wound is copiously irrigated. The fascia is reapproximated loosely with 2-0 vicryl sutures, and the skin is closed with 3-0 nylon vertical mattress sutures. Sterile dressings are applied.

Post-service work: includes patient stabilization; communication with the family (including written and telephone reports and orders); pain medication management; and discharge day management. Additionally, all hospital visits and post-discharge office visits for this procedure for 10 days after the day of the operation are considered part of the post-operative work for this procedure; including removal of sutures, evaluation of laboratory reports, if needed, and antibiotic and pain medication adjustments. It should be noted that for these cases, litigation, deposition and communication with police are frequent components of post service work.

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
4.95	24066	Biopsy, soft tissue of upper arm or elbow area; deep	090
2.78	23930	Incision and drainage, upper arm or elbow area; deep abscess or hematoma	010
6.55	21930	Excision, tumor, soft tissue of back or flank	090
5.71	64708	Neuroplasty, major peripheral nerve, arm or leg; other than specified	090
4.54	35761	Exploration (not followed by surgical repair), with or without lysis of artery; other vessels	090

RATIONALE:
The work of AE4 is greater than 35761 because it includes exploring more structures (vessel(s), nerve(s) and tendon(s)). The work of AE4 is somewhat less than 64708 because the exploration and repair of a nerve frequently entails entrapment and scar tissue making a much more tedious and difficult dissection. Although the postoperative work of 24066 may be greater than AE4, the intraoperative effort of AE4 is greater than 24066. The survey median RVW of 4.95 is recommended because it accurately reflects these comparisons.

FREQUENCY INFORMATION

How was this service previously reported? XXX99 (unlisted procedure for appropriate area of extremity). Alternative, 12001-12007 (simple repair of wounds) or 12031-12037 (layered closure of wounds) may have been used, however these codes only describe wound closure, but do not describe the exploration which frequently requires extending the wound and promoting further dissection.

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? Approximately 4,000 per year in the United States. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma

Median Intra-Service Time: 60 Low:30 High: 120

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

Length of Hospital Stay: 1 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 1 x 99212

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 11

Sample Size: 92 Response Rate (%): 33 (36%) MEDIAN RVW: 4.95

25th pctl RVW: 3.50 75th pctl RVW: 5.50 Low: 2.50 High: 10.00

Tracking/CPT: AE7 4735X (new) **Global Period:** 090 **Recommended RVW:** 28.00

CPT Descriptor: Management of liver hemorrhage; exploration of hepatic wound, extensive debridement, coagulation and/or suture, with or without packing of liver

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: A 23-year-old female unrestrained driver is involved in a motor vehicular crash. The patient arrives hypotensive with a distended abdomen, pallor and tachycardia. Intravenous lines are started. A DPL is consistent with blood, and the patient is taken to the operating room for exploratory laparotomy. Upon opening the abdomen, massive hemoperitoneum is encountered with a bear claw laceration of the right lobe of the liver. The liver is temporarily packed and compressed to replace volume. Multiple segments of the liver are devitalized and require debridement. Several large bleeding venous structures are identified in the depths of the wound and are ligated and clipped. The raw edges of the liver then undergo argon beam coagulation and subsequent debridement. Several segments of the right inferior portion of the liver are removed as well as a 4 x 6 cm anterior inferior segment of the liver, which has been devitalized. Several of the lacerations are sutured but the bear claw nature does not lend itself to suture. Hemostasis is finally secured with argon beam coagulation, debridement and individual ligation with placement of the omentum and drains in this region. The abdomen is then closed. The patient was transfused 8 units of exogenous blood and 4 units of autotransfused blood during the procedure. Two large closed suction drains are brought out through the right lateral abdominal wall.

In some cases, the patient described above may continue to have hemorrhage from the liver despite partial hepatorrhaphy, debridement, suture ligation, and coagulation. The patient is cold and acidotic and has had massive fluid and blood resuscitation. The patient may or may not have associated injuries. Multiple non-biologic packs are then placed tightly under, over, and around the liver to gain hemostasis. The abdomen is then closed tightly over these packs to control bleeding until reversal of the coagulopathy, hypothermia, and acidosis with planned re-exploration.

Pre-service work: includes assessment of airway, breathing, circulatory, and neurologic status; obtaining and reviewing hospital admission roentgenograms and laboratory studies; and communicating with other health care professionals. Attention is directed toward trying to obtain consent from the patient or responsible family member. Preoperative antibiotics, a large intravenous line, nasogastric tube, and foley catheter are ordered. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient, and continued extensive resuscitation prior to surgery.

Intra-service work: After assuring that there is large vascular access, a mid-line abdominal exploratory laparotomy is performed. Attempts at hemostasis and restraining torrential hemorrhages is done with compression, while trying to maintain control of the blood pressure, temperature and coagulation status. The liver is mobilized in order to expose the bleeding areas. Because the liver wound is shredded, it requires careful debridement through a section by section area. Blood is continuously suctioned from the peritoneal cavity and retransfused during the operative procedure. After debriding the wound and suturing blood vessels, the wound is then packed tightly with multiple packs. During the operative procedure, attention is directed toward adequate volume resuscitation, which requires communication with the anesthesiologists. After repairing the liver wounds, a thorough, inch by inch, exploration of the esophagus, intestines and mesentery, stomach, both kidneys, porta hepatic, and other internal structures is carried out. A Kocher maneuver is performed to better examine the duodenum. The lesser sack is opened to identify and inspect the pancreas and spleen. The pelvic viscera is inspected in females (Repair to other internal structures, if necessary, is coded separately.) The peritoneal cavity is then irrigated, drains placed, and the incision is closed using towel clips to reapproximate the skin and/or fascia. Sterile dressings are applied. The patient requires continued resuscitation of fluid and blood and component therapy during the operative procedure, requiring the surgeon to attend to the resuscitation of the patient as well as the operation, and adding to the difficulty and stress of the operation.

Post-service work: includes patient stabilization in the ICU for ongoing resuscitation; communication with the family (including written and telephone reports and orders); management of cardio-pulmonary stability; monitoring for and correction of coagulopathy, hypothermia, and acidosis; assessing the need for transfusion; monitoring the wound for infection; and assessment and decision regarding re-exploration. After the packs are removed, the patient returns to the ICU for stabilization and continued resuscitation. Hospitalization is usually two to three weeks. Decisions are made relative to removal of the nasogastric tube and management of a progressive diet and care and removal of drains. 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 sutures, evaluation of laboratory reports, if needed, and antibiotic and pain medication adjustments. It should be noted that this procedure is notorious for a complicated postoperative course. In addition, many of the cases requiring this service also frequently require litigation, deposition and communication with police.

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
31.56	47130	Hepatectomy, resection of liver; total right lobectomy	090
19.99	47120	Hepatectomy, resection of liver; partial lobectomy	090
15.34	47360	Hepatorrhaphy, suture of liver wound or injury; complex, with or without hepatic artery ligation	090
40.25	48150	Pancreatectomy, proximal subtotal with total duodenectomy, partial gastrectomy, choledochoenterostomy and gastrojejunostomy (Whipple-type procedure); with pancreatojejunostomy	090
28.82	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	090

RATIONALE:
AE7 is less work than 47130 because it does not include ligating all the branches the hepatic veins. AE7 is more work than 47120 in that there is more extensive bleeding and devitalized tissue. AE7 is similar to 35082 as both are unplanned, severe life-threatening emergencies with extensive blood loss. The stress and effort for AE7 is extremely high because of the uncontrollable hemorrhaging which creates poor viability and because the patient's physiological milieu is totally disrupted. The surgeon is required to continuously monitor and correct pre-, intra-, and post-service coagulopathy, hypothermia, and acidosis. AE7 entails a wide spectrum of work, where the patient is quite variable in terms of blood loss and physiological status (i.e. requiring constant assessment regarding when to abandon the operation and pack to wait for patient stability). The survey median RVW of 28.00 is recommended.

FREQUENCY INFORMATION

How was this service previously reported? 47399

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? Approximately 2,000 per year in the United States, with approximately 50% of the cases requiring packing of the liver. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma

Median Intra-Service Time: 180 Low: 60 High: 480

Median Pre-Service Time: 40 Median Post-Service Time: 180

Length of Hospital Stay: 15 Number of ICU Days: 5

Number & Level of Post-Hospital Visits: 1 x 99214; 1 x 99213; 2 x 99212

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 12

Sample Size: 92 Response Rate (%): 33 (36%) MEDIAN RVW: 28.00

25th pctl RVW: 24.70 75th pctl RVW: 31.56 Low: 18.00 High: 41.50

Tracking/CPT: AE8 4736X (new) ~~**Global Period: 090**~~ **Recommended RVW:** 10.00

RECOMMENDED Global Period: 000

CPT Descriptor: Management of liver hemorrhage; re-exploration of hepatic wound for removal of packing

CLINICAL DESCRIPTION OF SERVICE:

Survey Vignette: The patient described in the vignette for code AE7 is returned to the operating room 36 hours after the initial liver packing. The acidosis, hypothermia and coagulopathy have been reversed. The patient has been hemodynamically stable, is taken to the operating room where the abdomen is reopened, and the packs are carefully teased from the liver with saline irrigation and forceps. On occasion, additional debridement and/or coagulation is necessary. Also on occasion, repacking is required, should bleeding restart. The packs are teased away, bleeding is controlled. The rest of the abdomen is systematically examined. Drains are usually placed through the right abdominal wall, and the abdomen is closed in routine fashion.

Pre-service work: includes monitoring the patient for stability and assessing the optimal time to return the patient to the operating room for re-exploration and removal of the liver packing. Coordination of multiple efforts relative to anesthesia, blood bank, the operating room, and surgical assistance is necessary. Laboratory studies must be assessed and abnormalities reasonably corrected. Extensive communication and explanation of the re-exploration with the patient and family is necessary and along with consent from the patient or responsible family member. Preoperative antibiotics, a large intravenous line, nasogastric tube, and foley catheter are ordered. Pre-service work also includes pre-operative scrubbing and positioning, prepping, and draping the patient.

Intra-service work: The mid-line incision is opened and old blood and clot are removed from the peritoneal cavity. The multiple packs are then carefully teased and dissected from the liver with care to avoid re-exacerbating the recurrent hemorrhage. Additional debridement and/or coagulation may be necessary. After removal of the packs, drains are placed in the liver bed and the peritoneal cavity is then carefully inspected again. Postoperative nutrition access is determined. The peritoneal cavity is irrigated and the incision is closed in layers. Sterile dressings are applied.

Post-service work: includes patient stabilization in the ICU and communication with the family (including written and telephone reports and orders).

KEY REFERENCE SERVICE(S):

'95 RVW	CPT	1995 Descriptor	Global
9.40	49002	Reopening of recent laparotomy	090

RATIONALE:

AE8 is more work than 49002 because it includes removing the packing and debriding. Instead of the survey median RVW of 12.00, an RVW of 10.00 is recommended, which is consistent with the relationship of AE8 to AE7. AE8 is totally dependent on AE7 and involves one-half as much time.

***In addition, it is recommended that the global period be changed to 000, consistent with other procedures of this nature.

FREQUENCY INFORMATION

How was this service previously reported? 47399-78

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? Approximately 1,000 per year in the United States. [This estimate is based on an extrapolation of data from the North Carolina Medical Data Base (250,000 patients) and the Pennsylvania Trauma Outcome Study (150,000 patients).]

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

SURVEY DATA:

Specialty(s): American College of Surgeons; American Association for the Surgery of Trauma

Median Intra-Service Time: 85 Low: 30 High: 120

Median Pre-Service Time: 45 Median Post-Service Time: 120

Length of Hospital Stay: 14 Number of ICU Days: 4

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

Number of Times Provided in Past 12 months (Median): 3 in Past 5 years: 12

Sample Size: 92 Response Rate (%): 33 (36%) MEDIAN RVW: 12.00

25th pctl RVW: 11.00 75th pctl RVW: 14.00 Low: 7.00 High: 30.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
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LAPAROSCOPIC SALPINGONEOSTOMY AND FIMBRIOPLASTY - TAB 20

Code 56343 [Laparoscopy, surgical; with salpingostomy (salpingoneostomy)] is the establishment of an artificial opening in a fallopian tube for patients that have tubal disease that is characterized by distal tubal lesions and/or have infertility problems. Approximately 20-30% of the patients that have infertility have tubal disease and a large number of these patients would be candidates for this procedure. Code 56344 [Laparoscopy, surgical; with fimbrinoplasty] is a corrective operation performed on the tubal fimbriae in the fallopian tube. The tubal fimbriae are branched processes that surround the ampulla opening at the abdominal opening of the uterine tube. During this operation which is performed via laparoscope, fimbriael adhesions are lysed using laser electrocautery or scissors. Similar to CPT code 56343, the typical patient for 56344 has experienced tubal disease and/or infertility.

The specialty society recommended the survey medians for both codes, however, the RUC determined that the since the work of both of these laparoscopic procedures is comparable to the corresponding open procedures, the RVUs for both the open and the laparoscopic procedures should be valued the same. Therefore, the RUC recommends that code 56543 have **6.96** RVUs in 1996, which is the same as the open procedure code 58770 [Salpingostomy (neosalpingostomy)]. The RUC recommends that code 56344 have **7.16** RVUs in 1996, which is the same as the open procedure CPT code 58760 [Fimbrioplasty]. The RUC also noted that both 58770 and 58760 are under review as part of the five-year refinement process, so if any adjustments are made to the values of those codes for 1997, the values of 56343 and 56344 should be adjusted to maintain their equivalence.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
56301 (58982 in CPT 1992)		Laparoscopy, surgical; with fulguration of oviducts (with or without transection)	010	3.68 (No Change)
•56343	AF1	with salpingostomy (salpingoneostomy)	090	6.96 (=58770)

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
●56344	AF2	with fimbrioplasty (Codes 563XX and 563XX are used to report unilateral procedures unless otherwise specified)	090	7.16 (=58760)

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AF1 Global Period: 090 **Recommended RVW:** 7.50

CPT Descriptor: Laparoscopy, surgical; with salpingostomy (salpingoneostomy)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G_0 who recently underwent a hysterosalpingogram which showed nonpatent hydrosalpinges now undergoes laparoscopy. The right tube is noted to be completely free. However, the distal end is completed closed and dilated with no evidence of fimbria. At the same operative setting, the distal right tube is isolated. The avascular planes are identified and cruciate incisions made in the distal tube with either scissors, electrosurgery, or laser. Multiple flaps are created. Meticulous hemostasis is obtained with care not to damage the tubal flaps. Each of these flaps is "flowered" back with the laser or electrosurgery or sewn back to create the new opening in the fallopian tube. Chromotubation is performed to document patency.

Pre-Service Work

Pre-service work includes a pre-operative interval history and physical, review of results of the previous hysterosalpingogram and other relevant medical records, and communication with the patient, family, and operating room staff.

Intra-Service Work

Under appropriate anesthesia, the patient undergoes diagnostic laparoscopy which confirms the results of the previous hysterosalpingogram. The right tube is noted to be completely free. However, the distal end is completed closed and dilated with no evidence of fimbria. At the same operative setting, the distal right tube is isolated. The avascular planes are identified and cruciate incisions made in the distal tube with either scissors, electrosurgery, or laser. Multiple flaps are created. Meticulous hemostasis is obtained with care not to damage the tubal flaps. Each of these flaps is "flowered" back with the laser or electrosurgery or sewn back to create the new opening in the fallopian tube. Chromotubation is performed to document patency.

Post-service Work

The patient is observed closely in the hospital for 8-24 hours and discharge home with instructions for follow-up care and possible complications. She is seen in the office about 14 days post-discharge.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
58770	Salpingostomy (neosalpingostomy)	6.96

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AF1 requires approximately the same amount of work as CPT 58770,although intra-service time and intensity may be somewhat greater for AF1 than for CPT 58770. Therefore, the survey median seems reasonable in relationship to the current value of CPT 58770. Note, however, that both ACOG and ASRM consider CPT 58770 to be significantly undervalued. It will be resurveyed for the 5 year refinement; if its value changes as a result of the five year refinement, the value of AF1 should be changed accordingly. In addition, both societies believe that 010 would be a more appropriate global period.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 58770 or 58999

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? Approximately 20-30% of patients with infertility have tubal disease. A large number of these would be candidates for this procedure.

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

SURVEY DATA:

Specialty: American College of Obstetricians and Gynecologists, American Society for Reproductive Medicine

Median Intra-Service Time: 112 min. Low: 30 min. High: 210

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

Length of Hospital Stay: 0 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99213 10 days post-op

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 43

Other Data:

Sample Size: 150 Response Rate (%): 33 (22%) Median RVW: 7.50

25th Percentile RVW: 6.96 75th Percentile RVW: 8.50 Low: 4.37 High: 28.32

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AF2 Global Period: 090 **Recommended RVW:** 7.25

CPT Descriptor: Laparoscopy, surgical; with fimbrioplasty

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G_0 who recently underwent a hysterosalpingogram which showed that the distal tube was dilated, though patent, now undergoes laparoscopy. Adhesions involving the fimbria of the right tube with narrowing of the opening of the tube and dilation of the ampullary portion of the tube are noted. The fimbriael adhesions are meticulously lysed with care not to damage the fimbriae. Either laser, electrosurgery, or scissors are used to lyse the adhesions. Once these fimbriael adhesions are lysed, the distal end opens and a relatively normal fimbria is present. The distal tube may be "flowered" back or sutured if needed. Chromotubation is performed to document patency.

Pre-Service Work

Pre-service work includes a pre-operative interval history and physical, review of results of the previous hysterosalpingogram and other relevant medical records, and communication with the patient, family, and operating room staff.

Intra-Service Work

Under appropriate anesthesia, the patient undergoes diagnostic laparoscopy which confirms the results of the previous hysterosalpingogram. Adhesions involving the fimbria of the right tube with narrowing of the opening of the tube and dilation of the ampullary portion of the tube are noted. The fimbriael adhesions are meticulously lysed with care not to damage the fimbriae. Either laser, electrosurgery, or scissors are used to lyse the adhesions. Once these fimbriael adhesions are lysed, the distal end opens and a relatively normal fimbria is present. The distal tube may be "flowered" back or sutured if needed. Chromotubation is performed to document patency.

Post-service Work

The patient is observed closely in the hospital for 8-24 hours and discharge home with instructions for follow-up care and possible complications. She is seen in the office about 14 days post-discharge.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
58760	Fimbrioplasty	7.16

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AF2 requires approximately the same amount of work as CPT 58760, although intra-service time and intensity may be somewhat greater for AF1 than for CPT 58770. Therefore, the survey median seems reasonable in relationship to the current value of CPT 58770. Note, however, that both ACOG and ASRM consider CPT 58760 to be significantly undervalued. It will be resurveyed for the 5 year refinement; if its value changes as a result of the five year refinement, the value of AF2 should be changed accordingly. In addition, both societies believe that 010 would be a more appropriate global period.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 58760

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? Approximately 20-30% of patients with infertility have tubal disease. A large number of these would be candidates for this procedure.

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

SURVEY DATA:

Specialty: American College of Obstetricians and Gynecologists, American Society of Reproductive Surgeons

Median Intra-Service Time: 90 min. Low: 20 High: 240

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

Length of Hospital Stay: 0 Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99213 10 days post-op

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 37.5

Other Data:

Sample Size: 130 Response Rate (%): 33 (22%) Median RVW: 7.25

25th Percentile RVW: 6.90 75th Percentile RVW: 8.00 Low: 4.37 High: 20.18

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
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PARAVAGINAL REPAIR - TAB 21

The RUC recommendation for CPT code 57284 is based on a survey of 43 gynecologists. Code 57284 [Paravaginal defect repair (including repair of cystocele, stress urinary incontinence, and/or incomplete vaginal prolapse)] is a new code that will allow physicians to accurately report the complex services involved in paravaginal repair for stress urinary incontinence. This procedure, which is also referred to as a paravaginal suspension, requires between 90 and 270 minutes to complete. This code was often inaccurately reported as a simple Marshall Marchetti Krantz (MMK) operation (CPT code 51840) which requires 20 to 25 minutes to complete. A simple MMK only requires a midline dissection behind the pubic bone, however, the paravaginal defect repair requires more complex dissection laterally down the pelvic sidewalls. A simple MMK requires placement of sutures at the vesical neck on both sides which are easily attached to the periosteum of the pubic symphysis. In contrast, during a paravaginal repair, the antero-lateral sulcus must be identified, a suture must be placed at the level of the vesical neck and then in through the arcus tendinous fascia pelvis on the pelvic sidewall. This same procedure is performed on the left pelvic sidewall so that normal restoration of the vaginal anatomy can be accomplished. The technical expertise that is required to perform paravaginal defect repair far exceeds that of CPT 51840, but is similar in difficulty to CPT code 51841 which is a complex MMK operation. Therefore, the RUC recommends an RVU of 12.10 for CPT code 57284 which is the same RVU as the complex MMK operation.

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
●57284	X1	Paravaginal defect repair (including repair of cystocele, stress urinary incontinence, and/or incomplete vaginal prolapse)	090	12.10

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: X1 Global Period: 090 **Recommended RVW:** 12.10

CPT Descriptor: Paravaginal defect repair (including repair of cyctocele, stress urinary incontinence, and/or incomplete vaginal prolapse

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 54 year old G5 P5 female patient presents complaining of involuntary loss of urine associated with stress activities such as coughing, sneezing or vigorous exercise. In addition, she also complains of vaginal pressure like discomfort or heaviness associated with prolonged standing. She also describes mild urgency, as well as urinary frequency. There is no history of urge incontinence per se or nocturia. The incontinence is affecting her social activities and has had a negative effect on the quality of her life. Her past medical history is negative except for a prior hysterectomy performed for the diagnosis of chronic dysfunctional uterine bleeding refractory to medical therapy. Her pertinent physical exam reveals anterior vaginal wall relaxation to the hymenal ring. The vaginal vault apex itself descends only minimally. There is no appreciated rectocele, enterocele, or perineal defect. There is hypermobility of the urethral vesical junction as demonstrated by a markedly abnormal Q-tip test. Her standing stress test with a comfortably full bladder is positive. Careful inspection of the anterior vaginal wall relaxation reveals bilateral paravaginal defects. You perform a paravaginal defect repair and provide post-operative care.

Pre-Service Work

A comprehensive history and physical examination is performed to evaluate the presence of concomitant medical conditions and assess the patient's operative risk. A chemical workup is performed which includes blood analysis and a urine culture. Urodynamic testing is performed to confirm adequate intrinsic urethral sphincter function, a stable bladder and the presence of genuine stress urinary incontinence. Informed consent is obtained after alternative therapies and the risk benefit ratio of the surgery is explained in detail to the patient and her family.

Pre-service activities in the 90 day global period consists of a hospital admission history and physical, record review and chart preparation, review of lab work, pre-operative discssion and evaluation, waiting time, scrub time, waiting during anesthesia induction.

Intra-Service Work

An abdominal paravaginal repair is a procedure developed to correct the fibromuscular supports of the proximal periurethral tissues as well as the vagina to the arcus tendineus fasciae pelvis (ATFP). The ATFP is a band of fibers from the pubic bone to the ischial spine along the obturator internus muscle which can be exposed through a transabdominal incision by completely opening the space of Retzius and extending it along the entire paravaginal region. Several permanent sutures (5 to 6) are passed along the anterior lateral vaginal sulcus (on each side) through the pubocervical fascia, guided by a retractor or instrument placed within the vaginal cavity. The operator must be completely knowledgeable of the anatomy of the entire region to avoid hemorrhage and damage to vital blood vessels and nerves within the operative field. The procedure offers excellent long term results for correction of both stress urinary incontinence and cystocele formation with extremely low postoperative voiding dysfunction. The procedure requires approximately 1.5 to 2.5 hours to complete depending on the patient's body habitus or scar tissue formation from previous surgery.

Post-Operative Work

The physician writes orders for post-operative care, accompanies the patient to the recovery room, and talks with the patient's family. The patient is then evaluated in the recovery room. The drainage catheter is normally removed on post op day 1 and the patient is monitored for normal voiding. The patient is most often discharged on post op day 2 or 3 with instructions for follow-up care. The patient is reevaluated at two and six weeks post operatively.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
51840	Anterior vesicourethropexy, or urethropexy (Marshall-Marchetti-Kranz type); simple	9.78
51841	Anterior vesicourethropexy, or urethropexy (Marshall-Marchetti-Kranz type); complicated	12.10

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

X1 is approximately equivalent in time, mental effort/judgment, technical skill and stress to CPT 51841. Therefore the survey median seems reasonable.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? CPT 53899 or 51840, with -22 modifier

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? We estimate approximately 80,000 patients would have a paravaginal defect. An unknown subset would have this surgery.

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

SURVEY DATA:

Specialty: ACOG

Median Intra-Service Time: 95 min. Low: 40 High: 180

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

Length of Hospital Stay: 3 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99213 14 days post-op, 99213 30 days post-op, 99212/99213 90 days post-op

Number of Times Provided in Past 12 months (Median): 15 in Past 5 years: 50

Other Data:

Sample Size: 43 Response Rate (%): 31 (72%) Median RVW: 12.10

25th Percentile RVW: 11.00 75th Percentile RVW: 12.74 Low: 10.00 High: 20.00

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VAGINAL BIRTH AFTER CESAREAN (VBAC) - TAB 22

The RUC recommendations for VBAC codes are based on a survey of 72 obstetricians. The CPT Editorial Panel added six new codes that describe vaginal birth after cesarean. Physicians have only recently begun doing these types of deliveries and they are still only a very small percentage of deliveries nationally. The RUC concluded that the work of these services is not reflected in the current vaginal delivery codes. Previously, there was no way to accurately report these procedures and, as a result, many institutions were unable to track the incidence of these procedures.

The RUC recommendations for all the VBAC codes are based on comparisons to the equivalent vaginal and cesarean delivery codes 59400, 59409, 59410, 59514, and 59515. Each of the VBAC services is estimated to require an additional 45 minutes of physician time counseling and reviewing the patient record and an additional 80 minutes monitoring and coordinating patient care during labor. Therefore, the RUC recommends the survey median values for all these services, which are from 1.36 and 1.72 RVUs higher than the reference service for each code.

The HCFA representative at the RUC meeting raised a question regarding a comment made by a member of the CPT Editorial Panel that the new codes were editorial and were for tracking purposes only. During discussion, it was clear that the existing codes did not include VBAC since these services are new, that there is more physician work involved in these services than in the reference services, and that the Panel member is not the specialty's CPT Advisor and was not authorized to speak for the American College of Obstetricians and Gynecologists.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
DELIVERY AFTER PREVIOUS CESAREAN DELIVERY (VBAC) Patients who have had a previous cesarean delivery and now present with the expectation of a vaginal delivery are coded using codes 596X1-596X9. If the patient has a successful vaginal delivery after a previous cesarean delivery (VBAC) use codes 596X1-596X3. If the attempt is unsuccessful and another cesarean delivery is carried out, use codes 596X7-596X9. To report elective cesarean deliveries use code 59510, 59514 or 59515.				

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•59610	AG1	Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care, after previous cesarean delivery	MMM	22.63
•59612	AG2	Vaginal delivery only, after previous cesarean delivery (with or without episiotomy and/or forceps);	MMM	15.00
•59614	AG3	including postpartum care	MMM	16.00
•59618	AG4	Routine obstetric care including antepartum care, cesarean delivery, and postpartum care, following attempted vaginal delivery after previous cesarean delivery	MMM	25.03
•59620	AG5	Cesarean delivery only, following attempted vaginal delivery after previous cesarean delivery;	MMM	16.75
•59622	AG6	including postpartum care	MMM	17.94

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG1 Global Period: MMM **Recommended RVW:** 22.63

CPT Descriptor: Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care, after previous cesarean delivery

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 woman who has a history of a previous cesarean delivery for breech presentation presents for prenatal care at 8 weeks gestation. She is counseled regarding undergoing a trial of labor for this delivery. She has an uneventful prenatal course and enters labor at 40 weeks. After 8 hours of labor she has a vaginal delivery with no complications.

Prenatal Care: Routine prenatal care consists of monthly visits until 28 weeks of gestation, biweekly visits to 36 weeks gestation and weekly visits until delivery. For the typical patient, this schedule results in 13 prenatal visits if delivery occurs by 40 weeks. A patient with a history of a previous cesarean would be considered a candidate for for attempting a vaginal birth after cesarean (VBAC) unless there are specific contraindications, or the patient, after appropriate counseling, refuses a trial of labor. In addition to providing routine prenatal services to the pregant patient who has undergone a previous cesarean delivery, the physician must also review extensively the patient's delivery records to ascertain whether she is a candidate for a trial of labor and counsel the patient regarding her options for attempting VBAC and the risks and potential benefits of VBAC compared to a repeat cesarean.

Management of Labor: Management of labor typically begins with a telephone call from the patient who believes that labor has started. The physician advises the patient when to come to hospital, alerts hospital personnel of the patient's arrival, and provides initial instructions for the patient's care. With a VBAC patient, the physician must usually be at the hospital soon after the patient arrives. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician consults with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with a typical vaginal delivery includes: performing an episiotomy, delivery of the baby, delivery and gross examination of the placenta, examination of the uterus, cervix, and vagina, repair of episiotomy and any lacerations, and immediate post-delivery monitoring of the mother. Common, but less typical procedures required during delivery include use of forceps or vacuum extraction.

Postpartum Care: Assuming a one-day hospital stay, the in-hospital portion of postpartum care for a vaginal delivery consists of hospital discharge day management. The out-of-hospital portion typically includes one follow-up office visit.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59400	Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care	20.99
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AG1 requires substantially more physician time, mental effort and judgment, and stress than CPT 59400. More time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.64 RVUs between the survey median of 22.63 RVUs and 20.99 RVUs for CPT 59400 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? CPT 59400 (with -22 modifier, if justified)

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 45 min. Low: 15 min. High: 120 min.

Median Pre-Natal Time: 175 min. Median Time Managing Labor: 240 minutes

Median Post-Service Time: 30 min.

Length of Hospital Stay: 2 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99213 42 days after delivery

Number of Times Provided in Past 12 months (Median): 8 in Past 5 years: 40

Other Data: See Attachment

Sample Size: 72 Response Rate (%): 33 (46%) Median RVW: 22.63

25th Percentile RVW: 22.26 75th Percentile RVW: 23.92 Low: 14.00 High: 40.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG2 Global Period: MMM **Recommended RVW:** 15.00

CPT Descriptor: Vaginal delivery only, after previous cesarean delivery (with or without episiotomy and/or forceps);

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 with a history of a previous cesarean delivery due to fetal distress in labor receives prenatal care from another physician. You are asked to manage her trial of labor and vaginal delivery. She enters labor at term and after 8 hours of labor has a vaginal delivery with no complications. The other physician provides the postpartum care.

Management of Labor: Management of labor typically begins with a telephone call from the patient who believes that labor has started. The physician advises the patient when to come to hospital, alerts hospital personnel of the patient's arrival, and provides initial instructions for the patient's care. With a VBAC patient, the physician must usually be at the hospital soon after the patient arrives. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Since the patient has not received her prenatal care from the physician, the history-taking and examination must be more extensive and the physician must obtain and review the patient's previous delivery records to determine whether a trial of labor may be attempted safely. Also the extensive counseling normally done during the prenatal period for VBAC patients would have to be done at this time. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician may consult with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with a typical vaginal delivery includes: performing an episiotomy, delivery of the baby, delivery and gross examination of the placenta, examination of the uterus, cervix, and vagina, repair of episiotomy and any lacerations, and immediate post-delivery monitoring of the mother. Common, but less typical procedures required during delivery include use of forceps or vacuum extraction.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59409	Vaginal delivery only (with or without episiotomy and/or forceps);	13.28
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AG2 requires substantially more physician time, mental effort and judgment, and stress than CPT 59409. More time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.72 RVUs between the survey median of 15.00 RVUs and 13.28 RVUs for CPT 59409 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? CPT 59409, with -22 modifier, if appropriate

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 45 min. Low: 15 min. High: 120 min.

Median Pre-Natal Time: NA Median Time Managing Labor: 210 min.

Median Post-Service Time: 30 min.

Length of Hospital Stay: 2 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 2.5

Other Data: see Attachment

Sample Size: 72 Response Rate (%): 33 (46%) Median RVW: 15.00

25th Percentile RVW: 14.27 75th Percentile RVW: 16.25 Low: 8.00

High: 26.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG3 Global Period: MMM **Recommended RVW:** 16.00

CPT Descriptor: Vaginal delivery only, after previous cesarean delivery (with or without episiotomy and/or forceps); including postpartum care

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 woman enters the hospital in active labor. She has had no prenatal care. A medical records search confirms her report of a previous low transverse cesarean delivery due to an outbreak of active herpes when labor began. After 8 hours of labor she has a vaginal delivery with no complications. You provide the postpartum care.

Management of Labor: Management of labor begins when the physician is summoned to the labor and delivery unit to care for a patient who has unexpectedly presented in labor. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Since the patient has not received prenatal care from the physician, the history-taking and examination must be more extensive and the physician must obtain and review the patient's previous delivery records to determine whether a trial of labor may be attempted safely. Also the extensive counseling normally done during the prenatal period for VBAC patients would have to be done at this time. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician may consult with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with a typical vaginal delivery includes: performing an episiotomy, delivery of the baby, delivery and gross examination of the placenta, examination of the uterus, cervix, and vagina, repair of episiotomy and any lacerations, and immediate post-delivery monitoring of the mother. Common, but less typical procedures required during delivery include use of forceps or vacuum extraction.

Postpartum care: Assuming a one-day hospital stay, the in-hospital portion of postpartum care for a vaginal delivery consists of hospital discharge day management. The out-of-hospital portion typically includes one follow-up office visit.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59410	Vaginal delivery only (with or without episiotomy and/or forceps); including postpartum care	14.44
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AG3 requires substantially more physician time, mental effort and judgment, and stress than CPT 59410. More time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.56 RVUs between the survey median of 16.00 RVUs and 14.44 RVUs for CPT 59410 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 59410, with -22 modifier if appropriate

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 45 min. Low: 15 min. High: 240 min.

Median Prenatal Time: NA Median Time Managing Labor: 300 min.

Median Post-Service Time: 30 min.

Length of Hospital Stay: 2 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99213 42 days post-delivery

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3

Other Data: See Attachment

Sample Size: 72 Response Rate (%): 32 (44%) Median RVW: 16.00

25th Percentile RVW: 15.50 75th Percentile RVW: 17.80 Low: 8.00 High: 30.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG4 Global Period: MMM **Recommended RVW:** 25.03

CPT Descriptor: Routine obstetric care including antepartum care, cesarean delivery, and postpartum care, following attempted vaginal delivery after previous cesarean delivery

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 woman who has a history of a previous cesarean delivery for breech presentation presents for prenatal care at 8 weeks gestation. She is counseled regarding undergoing a trial of labor for this delivery. She has an uneventful prenatal course and enters labor at 40 weeks. After 8 hours of adequate labor the decision is make to perform a repeat cesarean delivery. No complications arise during the delivery or the postpartum course.

Prenatal Care: Routine prenatal care consists of monthly visits until 28 weeks of gestation, biweekly visits to 36 weeks gestation and weekly visits until delivery. For the typical patient, this schedule results in 13 prenatal visits if delivery occurs by 40 weeks. A patient with a history of a previous cesarean would be considered a candidate for for attempting a vaginal birth after cesarean (VBAC) unless there are specific contraindications, or the patient, after appropriate counseling, refuses a trial of labor. In addition to providing routine prenatal services to the pregant patient who has undergone a previous cesarean delivery, the physician must also review extensively the patient's delivery records to ascertain whether she is a candidate for a trial of labor and counsel the patient regarding her options for attempting VBAC and the risks and potential benefits of VBAC compared to a repeat cesarean.

Management of Labor: Management of labor typically begins with a telephone call from the patient who believes that labor has started. The physician advises the patient when to come to hospital, alerts hospital personnel of the patient's arrival, and provides initial instructions for the patient's care. With a VBAC patient, the physician must usually be at the hospital soon after the patient arrives. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician may consult with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with the intra-service portion of a typical cesarean delivery includes: lower abdominal incision with intra- or extraperitoneal exposure of the lower uterine segment, dissection of the urinary bladder away from the uterus, transverse or longitudinal incision of the lower uterine segment, rupturing of the membranes to release the amniotic fluid, delivery of the fetus manually or with a vacuum cup or forceps, administration of a uterotonic agent, manual removal of the placenta and membranes, palpation of the uterine cavity, closure of the uterine wall in one or two layers, covering of the uterine closure with peritoneum, closure of the abdominal incision.

Postpartum Care: Assuming a three-day hospital stay, the in-hospital portion of postpartum care for a cesarean delivery consists of a recovery room visit, 2 post-delivery hospital visits and hospital discharge day management. The out-of-hospital portion typically includes two follow-up office visits.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59510	Routine obstetric care including antepartum care, cesarean delivery, and postpartum care	23.67
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

AG4 requires substantially more physician time, mental effort and judgment, and stress than CPT 59510. Mo time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.36 RVUs between the survey median of 25.03 RVUs and 23.67 RVUs for CPT 59510 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 59510, with a -22 modifier, if appropriate

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 60 min. Low: 30 min. High: 120 min.

Median Prenatal Time: 175 min. Median Time Managing Labor: 180 min.

Median Post-Service Time: 47.50 min.

Length of Hospital Stay: 3 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99212/99213 14 days post-delivery, 99213 42 days post-delivery

Number of Times Provided in Past 12 months (Median): 6 in Past 5 years: 30

Other Data: See Attachment

Sample Size: 72 Response Rate (%): 33 (46%) Median RVW: 25.03

25th Percentile RVW: 24.70 75th Percentile RVW: 26.08 Low: 14.00 High: 45.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG5 Global Period: MMM **Recommended RVW:** 16.75

CPT Descriptor: Cesarean delivery only, following attempted vaginal delivery after previous cesarean delivery;

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 with a history of a previous cesarean delivery due to cephalopelvic disproportion receives prenatal care from another physician. You are asked to manage her trial of labor and vaginal delivery. She enters labor at term. After 8 hours of labor a cesarean delivery is performed because labor has not progressed. The other physician provides the postpartum care.

Management of Labor: Management of labor typically begins with a telephone call from the patient who believes that labor has started. The physician advises the patient when to come to hospital, alerts hospital personnel of the patient's arrival, and provides initial instructions for the patient's care. With a VBAC patient, the physician must usually be at the hospital soon after the patient arrives. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Since the patient has not received her prenatal care from the physician, the history-taking and examination must be more extensive and the physician must obtain and review the patient's previous delivery records to determine whether a trial of labor may be attempted safely. Also the extensive counseling normally done during the prenatal period for VBAC patients would have to be done at this time. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician may consult with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with the intra-service portion of a typical cesarean delivery includes: lower abdominal incision with intra- or extraperitoneal exposure of the lower uterine segment, dissection of the urinary bladder away from the uterus, transverse or longitudinal incision of the lower uterine segment, rupturing of the membranes to release the amniotic fluid, delivery of the fetus manually or with a vacuum cup or forceps, administration of a uterotonic agent, manual removal of the placenta and membranes, palpation of the uterine cavity, closure of the uterine wall in one or two layers, covering of the uterine closure with peritoneum, closure of the abdominal incision.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59514	Cesarean delivery only;	15.39
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AG5 requires substantially more physician time, mental effort and judgment, and stress than CPT 59514. More time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.36 RVUs between the survey median of 15.39 RVUs and 16.75 RVUs for CPT 59514 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 59514, with a -22 modifier, if appropriate

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 60 min. Low: 20 High: 240 min.

Median Prenatal Time: NA Median Time Managing Labor: 300 min.

Median Post-Service Time: 42.50

Length of Hospital Stay: 3 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 2

Other Data: See Attachment

Sample Size: 72 Response Rate (%): 33 (46%) Median RVW: 16.75

25th Percentile RVW: 16.00 75th Percentile RVW: 18.99 Low: 9.00 High: 30.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AG6 Global Period: MMM **Recommended RVW:** 17.94

CPT Descriptor: Cesarean delivery only, following attempted vaginal delivery after previous cesarean delivery; including postpartum care

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 28 year old G2 P1 woman enters the hospital in active labor. She has had no prenatal care. A medical records search confirms her report of a previous low transverse cesarean delivery due to a diagnosis of footling breech presentation. After 8 hours of adequate labor, fetal distress in labor is documented and a cesarean delivery is performed. You also provide postpartum care.

Management of Labor: Management of labor begins when the physician is summoned to the labor and delivery unit to care for a patient who has unexpectedly presented in labor. The physician performs an initial history and physical examination to determine that labor has indeed begun, assesses the mother's and fetus' condition, develops a treatment plan, and communicates with nursing staff and anesthesia and pediatric staff as needed. Since the patient has not received her prenatal care from the physician, the history-taking and examination must be more extensive and the physician must obtain and review the patient's previous delivery records to determine whether a trial of labor may be attempted safely. Also the extensive counseling normally done during the prenatal period for VBAC patients would have to be done at this time. Following the initial evaluation, the physician periodically re-evaluates the condition of the pregnant woman and her fetus throughout the course of labor and alters the treatment plan as needed. During the first stage of labor this generally occurs every 30 minutes and during the second stage of labor the patient is evaluated at 5 to 15 minute intervals. Monitoring of the VBAC patient occurs with greater frequency and is more intense than monitoring of other patients in labor because of the risk of uterine rupture. Often the constant presence of the physician is required. In addition to bedside evaluation of the patient, the physician may consult with anesthesiologists, operating/delivery room staff, and the pediatrician or neonatologist.

Delivery: Physician work associated with the intra-service portion of a typical cesarean delivery includes: lower abdominal incision with intra- or extraperitoneal exposure of the lower uterine segment, dissection of the urinary bladder away from the uterus, transverse or longitudinal incision of the lower uterine segment, rupturing of the membranes to release the amniotic fluid, delivery of the fetus manually or with a vacuum cup or forceps, administration of a uterotonic agent, manual removal of the placenta and membranes, palpation of the uterine cavity, closure of the uterine wall in one or two layers, covering of the uterine closure with peritoneum, closure of the abdominal incision.

Postpartum Care: Assuming a three-day hospital stay, the in-hospital portion of postpartum care for a cesarean delivery consists of a recovery room visit, 2 post-delivery hospital visits and hospital discharge day management. The out-of-hospital portion typically includes two follow-up office visits.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
59515	Cesarean delivery only; including postpartum care	16.55
99402	Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 30 minutes	.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

AG6 requires substantially more physician time, mental effort and judgment, and stress than CPT 59515. More time is spent in counseling and record review (survey participants estimated approximately 45 additional minutes for counseling and record review) and in monitoring the patient in labor and coordinating care (survey respondents estimated approximately 80 additional minutes during labor). Stress and mental effort/judgment are also greater during management of labor due to the risk of uterine rupture. The difference of 1.39 RVUs between the survey median of 16.55 RVUs and 17.94 RVUs for CPT 59515 seems reasonable in comparison to CPT 99402, which is assigned .98 RVUs for 30 minutes of counseling alone.

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

NA

FREQUENCY INFORMATION

How was this service previously reported? 59515, with a -22 modifier

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? Currently it is difficult to track the number of patients undergoing a trial of labor after a previous cesarean. We estimate that between 3% and 4% of the approximately 4 million deliveries that occur each year would fall into this group of six codes (AG1-AG6).

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

SURVEY DATA:

Specialty: ACOG

Median Delivery Time: 60 min. Low: 30 min. High: 120 min.

Median Prenatal Time: NA Median Time Managing Labor: 250 min.

Median Post-Service Time: 45 min.

Length of Hospital Stay: 3 days Number of ICU Days: 0

Number & Level of Post-Hospital Visits: 99212/99213 14 days post-delivery, 99213 42 days post-delivery

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 3.5

Other Data: See Attachment

Sample Size: 72 Response Rate (%): 33 (46%) Median RVW: 19.57

25th Percentile RVW: 17.00 75th Percentile RVW: 19.96 Low: 9.00 High: 32.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

RETINAL DETACHMENT - TAB 23

An editorial change was made to code 67112 [Repair of retinal detachment; by scleral buckling or vitrectomy, on patient having previous ipsilateral retinal detachment repair(s) using scleral buckling or vitrectomy techniques] to clarify that this code will be used only for re-operations for which the same techniques were previously used. HCFA was concerned about the potential impact of this editorial change on the frequency of future claims. The American Academy of Ophthalmology indicated that 67112 is rarely used (approximately 753 were performed in 1993) and making the code more specific would probably result in a further reduction in its use. The RUC recommends that the current RVUs of 16.15 for CPT code 67112 be retained.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
67107		Repair of retinal detachment; scleral buckling (such as lamellar scleral dissection, imbrication, or encircling procedure), with or without implant, with or without cryotherapy, photocoagulation, and drainage of subretinal fluid	090	13.99 (No Change)
67108		with vitrectomy, any method, with or without air or gas tamponade focal endolaser photocoagulation, cryotherapy, drainage of subretinal fluid, scleral buckling, and/or removal of lens by same technique	090	19.90 (No Change)
67109		~~by technique other than 67101-67108 and 67110~~ (67109 has been deleted. To report see 67299)	090	N/A
67110		by injection of air or other gas (e.g., pneumatic retinopexy)	090	8.14 (No Change)
67112	Y1	~~previously operated upon, any technique~~ by scleral buckling or vitrectomy, on patient having previous ipsilateral retinal detachment repair(s) using scleral buckling or vitrectomy techniques	090	16.15 (No Change)

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VISUAL EVOKED POTENTIAL TESTING - TAB 24

Code 95930 [Visual evoked potential (VEP) testing central nervous system, checkerboard or flash] is a test used to evaluate function of central nervous system pathways. The purpose of these tests is to confirm the location of a lesion within the nervous system and to discover the etiology of the lesion. Neuroimaging studies such as CT and MRI evaluate structure but not function of sensory pathways. VEP is particularly useful in assessing the presence of a lesion in the optic nerve and spinal cord, both of which have certain characteristics that are not easily visualized on the neuroimaging tests. The physician work of this test involves the review and interpretation of brain electrical activity measurements. This service was previously reported as CPT code 92280 [Visually evoked potential (response) study, with medical diagnostic evaluation] and the RUC recommends that 95930 have the same RVUs as 92280, which is 0.35.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
92280		~~Visually evoked potential (response) study, with medical diagnostic evaluation~~ (92280 has been deleted. To report visual evoked potential testing of the central nervous system, see 9593X)	XXX	N/A
•95930	AH1	Visual evoked potential (VEP) testing central nervous system, checkerboard or flash	XXX	0.35

Note: The Panel clarified that medical vision evaluations are to be reported by the appropriate-level Evaluation and Management Service code(s) or the General Ophthalmological Services code(s).

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AH1 Global Period: XXX **Recommended RVW:** 0.57

CPT Descriptor: Visual evoked potential (VEP) testing central nervous system, checkerboard or flash

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A middle aged woman presents for outpatient consultation complaining of intermittent bilateral lower extremity weakness and past history of transient loss of vision in one eye. Physical examination is suspicious for central nervous system impairment, but the eye and vision exams were normal. Visual evoked potentials are requested to evaluate the history of two weeks of diminished vision in the left eye one year ago, as possible optic neuritis. Over 45 minutes of testing time, a technologist applies electrodes to the patient's scalp, patches one eye at a time and records brain electrical activity while the patient watches a checkerboard on a projector or television screen. The pattern reverses black-for-white repeatedly and brain electrical activity is measured after each pattern reversal. Approximately 300-400 reversals are needed for each eye, tested separately. The brain electrical activity measurements are averaged and printed on paper for subsequent interpretation by a physician. Identification of a 20-50 msec delay in conduction from the left eye would be typical of a patient who had suffered optic neuritis in that eye in year's past. In such a clinical setting, this would indicate a CNS involvement, probably Multiple Sclerosis, as a cause for the patient's complaints. In this clinical setting, VEP is more sensitive than MRI for confirming a past history of optic neuritis.

Description of Pre-Service Work: Discussion with the attending physician regarding the needs for the test as well as any other requirements. Instruction to the technician regarding performance of the test and/or any special techniques which may be required.

Description of Intra-Service Work: Review of the pages containing printed results of the brain electrical activity measurements and interpretation of this information.

Description of Post-Service Work: Generation of a report based on the findings and discussion with the attending physician if appropriate.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95900	Nerve conduction, velocity and/or latency study; motor, each nerve	0.42
95904	Nerve conduction, velocity and/or latency study; sensory, each nerve	0.34
92280	Visually evoked potential study, with medical diagnostic evaluation	0.35
95819	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation	1.08
95860	Needle electromyography, one extremity and related paraspinal areas	0.96
99241	Office consultation for a new or established patient. Problem focused history and exam; and straightforward decision making (typically requires 15 minutes of face-to-face time)	0.54

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(S) AND/OR OTHE 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 services listed on the previous page are closely related services in regards to the time and/or intensity of the physician work involved. This new code considers only the physician work and does not include any of the work performed by technicians or other professionals. The new code does not include distinct evaluation and management services which may be provided in addition to the procedure.

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

FREQUENCY INFORMATION:

How was this service previously reported? CPT 92280 - The existing descriptor for CPT 92280 does not appropriately define the visual evoked potential procedure as performed by neurologists. Unrelated ophthalmology services were also being coded using CPT 92280 which is currently found in the ophthalmology section but has been deleted for CPT 1996.

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? Approximately 25% of the total procedures currently coded as CPT 92280.

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

SURVEY DATA:

Specialty: American Academy of Neurology

Median Intra-Service Time: 10 min. Low: 1 min. High: 20 min

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 20 in Past 5 years: 150

Other Data:

Sample Size: 50 Response Rate (%): 40% Median RVW: 0.57

25th Percentile RVW: 0.40 75th Percentile RVW: 0.81 Low: 0.17 High: 1.20

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
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PERCUTANEOUS BALLOON VALVULOPLASTY, MITRAL - TAB 25

The procedure described by CPT code 92987 [Percutaneous balloon valvuloplasty; mitral valve] is now a widely accepted alternative to surgical mitral commissurotomy in patients with rheumatic mitral valve stenosis. This is a definitive procedure performed via transseptal approach to the left atrium and requires catheterization techniques that are both unique and different from balloon valvuloplasty of the aortic and pulmonary valves. While this procedure is frequently performed in conjunction with cardiac catheterization, it is a separate and distinct procedure and represents a new alternative to surgical valvotomy. Code 92987 is considered a more difficult procedure than the reference codes 92990 [Percutaneous balloon valvuloplasty; pulmonary valve] and 92986 [Percutaneous balloon valvuloplasty; aortic valve] because a transseptal puncture is required in addition to positioning of the balloon catheter. This service was previously reported using code 93799 [Unlisted cardiovascular service or procedure].

The RUC reduced the specialty society's initial recommendation from 22.00 RVUs to 20.69 RVUs to make the value equivalent to the open mitral valve procedure 33420 [Valvotomy, mitral valve; closed heart].

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
92986		Percutaneous balloon valvuloplasty; aortic valve	090	20.34 (No Change)
•92987	AJ1	mitral valve	090	20.69

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SUMMARY OF RECOMMENDATION

Tracking Number: AJ1 Global Period: 90 Days **Recommended RVW: 22.0**

CPT Descriptor: Percutaneous balloon valvuloplasty; mitral valve

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: After an assessment of the severity of mitral stenosis the decision is made to proceed with balloon catheter dilatation and this is discussed fully with the patient and family, as well as the referring physician. Oral anticoagulation is discontinued prior to the procedure. In some cases hospitalization a day or more prior to the procedure is necessary for intravenous heparin therapy. The patient is taken to the catheterization laboratory where the right and left femoral areas are prepared and the left femoral artery and vein and the right femoral vein are cannulated. If diagnostic cardiac catheterization has not been performed previously, a complete right and left heart catheterization, coronary angiography, and left ventriculography are performed, when indicated (coded separately). Via the left femoral artery a pigtail catheter is placed in the left ventricle and a right heart catheter with cardiac output measurement capability is placed via the left femoral vein into the pulmonary artery. From the right femoral venous puncture, transseptal cannulation of the left atrium via puncture of the intra-atrial septum is performed. A 0.025 inch spring tip guidewire is placed through the transseptal catheter into the left atrium and the left atrial sheath is removed. A 14-French dilator is passed over the wire to dilate the subcutaneous area at the right femoral puncture site and then the puncture in the inter-atrial septum. The dilator is removed over the exchange wire and the Inoue catheter is elongated (stretched) and passed over the guidewire and into the left atrium through the transseptal puncture. The balloon is unstretched and the guidewire removed. The operator introduces a steering stylet into the shaft of the balloon catheter and with the distal portion of the balloon inflated, manipulates the catheter across the mitral valve into the left ventricle. The balloon is withdrawn until the partially inflated distal portion engages the mitral valve. Full inflation of the balloon is then accomplished using a solution containing saline-contrast to expand the balloon. The balloon is then deflated by withdrawing the saline-contrast solution and the catheter is withdrawn into the left atrium and left atrial pressure is again measured through the balloon catheter. Left ventricular pressure is measured via the left femoral arterial pigtail catheter. If sufficient diminution of the pressure gradient has not occurred an assessment is made of any potential resultant mitral regurgitation using either left ventriculography or Doppler echocardiography in the catheterization laboratory. The process of crossing the mitral valve, inflating the balloon to a larger diameter, and then assessing the resultant improvement in transmitral pressure gradient and potential for mitral regurgitation is repeated in a stepwise fashion with increasingly larger volumes of solution until either optimal opening of the mitral valve is accomplished or evidence of mitral valve regurgitation begins to appear. When the operator is confident that an optimal result has been achieved, the deflated balloon is stretched and withdrawn from the left atrium and then removed from the vascular system. The pigtail and pulmonary artery catheters are removed. The vascular sheaths are removed, usually within a few hours after the procedure is completed and hemostasis of the puncture sites is performed. Bed rest for at least six hours after sheath removal and pre-discharge monitoring are necessary. Hospital and office visits related to the procedure for 90 days following the procedure are included in this code.

Description of Pre-Service Work:
After an assessment of the severity of mitral stenosis, including review of transthoracic and transesophageal echocardiograms, the decision is made to proceed with balloon catheter dilatation and this is discussed fully with the patient and family, as well as the referring physician. Oral anticoagulation is discontinued prior to the procedure. In some cases hospitalization a day or more prior to the procedure is necessary for intravenous heparin therapy.

Description of Intra-Service Work:
The patient is taken to the catheterization laboratory where the right and left femoral areas are prepared and the left femoral artery and vein and the right femoral vein are cannulated. If diagnostic cardiac catheterization has not been performed previously, a complete right and left heart catheterization, coronary angiography, and left ventriculography are performed, when indicated (coded separately). Via the left femoral artery a pigtail catheter is placed in the left ventricle and a right heart catheter with cardiac output measurement capability is placed via the left femoral vein into the pulmonary artery. From the right femoral venous puncture, transseptal cannulation of the left atrium via puncture of the intra-atrial septum is performed. A 0.025 inch spring tip guidewire is placed through the transseptal catheter into the left atrium and the left atrial sheath is removed. A 14-French dilator is passed over the wire to dilate the subcutaneous area at the right femoral puncture site and then the puncture in the inter-atrial septum. The dilator is removed over the exchange wire and the Inoue catheter is elongated (stretched) and passed over the guidewire and into the left atrium through the transseptal puncture. The balloon is unstretched and the guidewire removed. The operator introduces a steering stylet into the shaft of the balloon catheter and with the distal portion of the balloon inflated, manipulates the catheter across the mitral valve into the left ventricle. The balloon is withdrawn until the partially inflated distal portion engages the mitral valve. Full inflation of the balloon is then accomplished using a solution containing saline-contrast to expand the balloon. The balloon is then deflated by withdrawing the saline-contrast solution and the catheter is withdrawn into the left atrium and left atrial pressure is again measured through the balloon catheter. Left ventricular pressure is measured via the left femoral arterial pigtail catheter. If sufficient diminution of the pressure gradient has not occurred an assessment is made of any potential resultant mitral regurgitation using either left ventriculography or Doppler echocardiography in the catheterization laboratory. The process of crossing the mitral valve, inflating the balloon to a larger diameter, and then assessing the resultant improvement in transmitral pressure gradient and potential for mitral regurgitation is repeated in a stepwise fashion with increasingly larger volumes of solution until either optimal opening of the mitral valve is accomplished or evidence of mitral valve regurgitation begins to appear. When the operator is confident that an optimal result has been achieved, the deflated balloon is stretched and withdrawn from the left atrium and then removed from the vascular system. The pigtail and pulmonary artery catheters are removed.

Description of Post-Service Work:
The vascular sheaths are removed, usually within a few hours after the procedure is completed and hemostasis of the puncture sites is performed. Bed rest for at least six hours after sheath removal and pre-discharge monitoring are necessary. Hospital and office visits related to the procedure for 90 days following the procedure are included in this code.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
92990	Percutaneous balloon valvuloplasty; pulmonary valve	16.22
92986	Percutaneous balloon valvuloplasty; aortic valve	20.34
92982	Percutaneous transluminal coronary balloon angioplasty; single vessel	10.98

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):**

Percutaneous balloon mitral valvuloplasty is a more complicated procedure than either pulmonary or aortic angioplasty in that a transseptal puncture is required in addition to positioning of the balloon catheter. This technique requires additional skill and training, entails additional stress and poses greater risk to the patient than either pulmonary or aortic valvuloplasty. Additionally, due to the transseptal puncture, it is necessary to perform oxygen saturation measurements after dilating the valve which add to the intraservice time.

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

N/A

FREQUENCY INFORMATION

How was this service previously reported? 93799 - Unlisted cardiovascular service or procedure

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? 2000

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

SURVEY DATA:

Specialty: Cardiology

Median Intra-Service Time: 150 minutes Low: 60 High: 180

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

Length of Hospital Stay: 2 Days Number of ICU Days: 1 Day

Number & Level of Post-Hospital Visits: 3 x 99213

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 55

Other Data:

Sample Size: 56 Response Rate (%): 54% Median RVW: 22.0

25th Percentile RVW: 21.0 75th Percentile RVW: 24.0 Low: 18.5 High: 42.0

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
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END STAGE RENAL DISEASE (ESRD) SERVICES - TAB 26

The CPT system includes four codes (90918, 90919, 90920, and 90921) for monthly care of patients with end stage renal disease (ESRD), which are differentiated by the age of the patient. Under the previous ESRD monthly capitation program, however, the same payment was made for all four codes. Code 90922 [End stage renal disease (ESRD) related services (less than full month), per day] was used to report each day of provision of less than a full month's care (because the patient was hospitalized for part of the month or for another reason). This service was reimbursed at 1/30 of the monthly payment amount.

When the ESRD codes were moved to Medicare's RBRVS payment system, HCFA adopted the RUC's recommendation to assign higher values to the codes for infant, pediatric, and adolescent patients (90918, 90919, 90920) than for the code for patients 20 years of age or older (code 90921). This means that the work involved in one day of monthly care for pediatric ESRD patients is also greater than the work involved in one day of care for adult ESRD patients. To report these services, the CPT Editorial Panel revised code 90922 and added three new codes corresponding to the age categories in the monthly codes. The RUC recommends that, like the previous code 90922, the three new codes be valued at 1/30 of the RVUs for the corresponding monthly codes. In 1994, the RUC had recommended that 90918 (patients under 2 years of age) have 13.27 RVUs, 90919 (patients between 2 and 11 years of age) have 9.13 RVUs, and 90920 (patients between 12 and 19 years of age) have 6.64 RVUs. A refinement panel is reviewing a final RUC recommendation for code 90921 (patients 20 and over) of 5.06. The corresponding RVUs for the per day codes would be 0.44 (90922), 0.30 (90923), 0.22 (90924), and 0.17 (90925), respectively. (If the RVU recommendation for code 90921 is accepted and the published RVUs for the monthly codes for pediatric patients are adjusted proportionately, the RVUs for the per day codes should be similarly adjusted to equal 1/30 of the corresponding monthly code.)

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
90918		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	XXX	13.27 (Recommendation previously accepted by RUC)

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
90919		~~between the second and twelfth birthdays~~ for patients between two and eleven years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	XXX	9.13 (Recommendation previously accepted by RUC)
90920		~~through age nineteen~~ for patients between twelve and nineteen years of age to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	XXX	6.64 (Recommendation previously accepted by RUC)
90921		for patients twenty years of age and over	XXX	5.06 (Recommendation accepted at Feb95 RUC meeting)
90922		End stage renal disease (ESRD) related services (less than full month), per day; for patients under 2 years of age	XXX	0.44 (1/30 of 90918)
●90923		for patients between two and eleven years of age	XXX	0.30 (1/30 of 90919)
●90924		for patients between twelve and nineteen years of age	XXX	0.22 (1/30 of 90920)
●90925		for patients twenty years of age and over	XXX	0.17 (1/30 of 90921)

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1995

END STAGE RENAL DISEASE SERVICES - TAB 14

Although a survey was conducted of the work involved in the monthly end stage renal disease (ESRD) codes, the unique "monthly" aspect of the codes made it difficult to identify any appropriate reference services for which total work could be compared with the total work of the monthly codes. The approach ultimately adopted by the RUC, therefore, involved identifying the appropriate equivalent CPT-coded services and average number of each that is provided to patients in this program 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 requiring 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.

In addition to dialysis visits and office visits, other commonly provided services 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 building block method described above yielded a **final RUC recommended value of 5.06 for code 90921** [End stage renal disease (ESRD) related services per full month; for patients twenty years of age and over]. This method incorporates various levels of evaluation and management services determined by previous studies of the services rendered to dialysis patients. Oversight care is also included in the calculation of the work value.
Substantial support for the RUC-recommended value is provided in a 1983 study undertaken by the University of Southern California, Division of Research in Medical Education under contract from HCFA and DHHS entitled Physicians who care for End Stage Renal Disease Patients: A National Study of their Practices, Patients and Patient Care, more commonly known as the Mendenhall study. In an effort to update the Mendenhall data from 1983, the Renal Physicians Association (RPA) utilized a 1991 RPA physician activity survey, as well as the responses from the RUC survey completed in 1994.

Mendenhall Study

The Mendenhall study found that nephrologists have face-to-face encounters with ESRD patients an average of **1.7 times per week**. The activity of the physician regarding "other encounters" was also studied. The study found that the amount of activities such as phone encounters with the patient and other health care providers (nurse, dialysis technician, social worker, dietician, nursing home, etc.) increased with age and complexity of the patient.

RPA 1991 MCP Survey

This survey, conducted by the RPA, was sent to 1000 randomly chosen nephrologists in practice during 1991. The survey instrument consisted of a series of questions regarding the frequency of visits in the dialysis unit, the level of activity as judged by the assessment of diagnostic tests, therapeutic procedures, and the occurrence of patient care conferences, patient family meetings, patient/family telephone encounters, and non-renal patient care activity rendered to dialysis patients. The survey found that physicians typically visited their patients **5.7 times per month** in the dialysis unit and **1.2 times per**

month in the office. The survey also found that physician interventions in dialysis (eg, dialysis prescription changes or medication changes) occurred **3.3 times per month.**

RPA-RUC Survey

The RUC survey was distributed to 104 nephrologists randomly chosen from the Renal Physician Association Nephrology Database. The cited services used by the majority of the survey respondents included Evaluation and Management services related to an established patient outpatient visit: 99215 was utilized by 98% of the survey participants; other E/M services (in descending order) included 99213 (69.7%), 99214 (60%), 99211 (58%), and 99205 (39.5%). These responses indicate that the level of physician service delivered to the patient has increased in complexity compared to the Mendenhall study.

Care Plan Oversight Services

The ESRD program has functioned with a multidisciplinary approach to patient care. As part of the quality review process, all patients must have at least yearly "long-term care plans" and at least biannual "short term care plans," these latter frequently developed in the more complicated patient at monthly intervals. A significant amount of time is spent in direct meetings with other health care providers (dietary, social service, nursing, administration) in an attempt to help these chronic patients through the rigors of dialytic supports, and in treating the complications of both their renal-related conditions as well as other underlying entities which may have influence on overall patient well-being and outcome. The renal physician acts as the team leader in these discussions and is actively involved in the implementation. This activity has been documented in the Mendenhall study and the RPA 1991 MCP survey.

Since HCFA has determined that care plan oversight services eligible for separate payment "include the physician supervision and management of complex or multidisciplinary care modalities involving regular physician development or revision" (Federal Register, vol 59, no 235, p 63419), and further that these services "necessitate a high level of decision-making and go beyond administrative function", the RUC believes that this service rendered for the dialysis patient should be including in the value of the code. Although all patients will receive the mandated team coordination and discussion, the RUC also believes there are increasing numbers of patients with highly complex health care needs which require increasing time from the physician. This patient demographic can be easily extracted from the USRDS database, and substantiated by HCFA BMAD data. It is therefore essential that physician work for care plan oversight be incorporated into the work value for 90921.

CALCULATION OF CURRENT RVW RECOMMENDATION

FOR HEMODIALYSIS:

Total number of dialysis per month	13	(Standard - patient receives dialysis 3 times per week)
Total number of visits per month	6.9	(Mendenhall = 6.8/1991 RPA Survey = 6.9)
visits in office	1.2	(1991 RPA Survey)
visits in dialysis unit	5.7	(1991 RPA Survey)
interventions in dialysis	3.3	(1991 RPA Survey)

Translation to Equivalent Work Values

Face to Face:

99215 (1.51) X 1.2	1.812	(1991 RPA Survey and 1994 RUC Survey)
99213 (0.55) X 3.3	1.815	(3.3 interventions per month - 1991 RPA Survey)
99212 (0.38) X 2.4	0.912	(remaining dialysis visits per month)
Total Visits 6.9		

Care Plan Oversight:

99375 (1.06) X 1	1.060	

Hemodialysis Relative Work Value 5.599

FOR PERITONEAL DIALYSIS:

47% of Hemodialysis (5.599 X .47) 2.632 (Ratio used by RUC and CMD panel in previous calculations)

CALCULATION FOR FINAL RVW FOR CPT CODE 90921:

Blend of Hemodialysis (82% of Patients) and Peritoneal Dialysis (18% of Patients) (Frequency ratio used by RUC and CMD panel in previous calculations)

(0.82 X 5.599) + (0.18 X 2.632) = **5.06**

MONTHLY CAPITATED OUTPATIENT PHYSICIAN SERVICES (MCP) DELIVERED TO ADULT END STAGE RENAL DISEASE PATIENTS ON CHRONIC DIALYSIS

CPT Code # 90921 - End Stage Renal Disease Related Services per full month; for patients twenty years of age and over

Background Information

The original End Stage Renal Disease regulation (Social Security Amendments 1972), allowed for the physician to be paid a per treatment amount which was included in the "composite rate" paid to the dialysis units for the provision of dialysis services. This was known as the "Initial Method". Additional services rendered to the dialysis patient could be billed on a fee-for-service basis. Based upon the objections of physicians to this method of payment, and the failure of some facilities to be capable of employing physicians, plus HCFA's refusal to accept a per dialysis direct physician payment, a monthly global fee was proposed by the nephrologists. While the American Medical Association did not then accept any capitation of physician fees, it was reasoned that these bundled physician services might be compared to obstetrical services or other situations where a set of predictable services needed for a particular condition was covered by a single payment. Given AMA approval, HCFA created the Alternate Reimbursement Method (ARM) as an option for direct physician payment in July, 1974 (Social Security Amendments of 1974). This single monthly payment was lower for patients on home dialysis (where the average number of visits were less) than payment for in-center dialysis where the visit number and intensity were higher.

The bundle of physician services was described in 1983 (ss 414.314) in relation to the ARM and provided for "all outpatient services related to the patients renal (ESRD) condition and any services furnished during a visit that was necessitated by the patients renal condition". Responding to OBRA 81, Pub.L. 97-35, section 2145, regulations established a Monthly Capitated Payment (MCP) system for physician services rendered to a dialysis patient to replace the ARM, and to eliminate the "Initial Method" of payment. The MCP payment was set at the same for both home and in-center out patient dialysis in an effort to promote use of home dialysis modalities. The payment rate was established using prevailing charge rates for visit codes (brief follow-up visit for an established patient) as a unit of service multiplied by the number of dialyses per month to produce a rate. It was recognized that this method did not account for the variability of practice patterns, the differences among patient needs and the geographic differences among intermediaries. The MCP was separate and unrelated to the newly enacted Medicare physician fee schedule (RBRVS).

CPT 90921 - RPA RVW SUBMISSION

On March 1, 1986, the MCP was reduced by one percent due to Gramm-Rudman-Hollings budget reduction mandated cuts. This was followed later that year by a seven percent reduction required by regulation, a two percent Gramm-Rudman-Hollings reduction in 1989 and a final Gramm-Rudman-Hollings reduction of 1.42 percent on April 1, 1990. While other primary care services have been subject to Gramm-Rudman-Hollings reductions, these have been offset through the benefits of the Medicare Economic Index (MEI), which was not applied to the MCP given its non-RBRVS status.

The 1990 decision by HCFA to not include the MCP under the RBRVS system was based upon: (a) the legal viewpoint that the MCP did not fall under the reasonable-charge provision as established in the physician payment reform act language, and (b) The MCP is set by HCFA and not calculated by carriers on a reasonable charge basis. The 1974 visit code used as the basis for the visit code in 1983 has effectively dictated payment, although this was not the original intention.

Examination of the costs of medical practice further demonstrated the decreases imposed on the level of the MCP. The Consumer Price Index (medical care) rose 29% from 1983-1988; the Physician Mean Professional Expenses rose 65% over the same time period; the Medicare Economic Index increased by 116% during this time-frame. **The MCP decreased 33.7% in real terms over the same years.** Although HCFA had the ability to update the MCP, it never chose to due so, nor did it re-evaluate the factors that make up the MCP service.

Responding to OBRA 87, congress asked the Institute of Medicine to study the ESRD program. In its 1991 report, *Kidney Failure and the Federal Government,* an Institute of Medicine committee recommended that HCFA review the MCP payment policy "in light of its exclusion from the Medicare fee schedule" and "regarding the impact of this policy on quality of care provided".

Ongoing discussions with HCFA lead to an agreement that the issue of relative work values assigned to physician services rendered under the MCP should be included under the Medicare Fee Schedule (MFS) for physician services. To this end, HCFA requested that the AMA/Specialty Society RVS Update Committee (RUC) assist "in the development of relative value units for physician work (RVWs) for the monthly physician's services furnished to end stage renal disease patients undergoing dialysis." (Ault letter march, 1994).

The RPA and RUC have been working together since January 1994 on the conversion of the Monthly Capitation Payment to the Medicare Fee Schedule. To this end, the RPA administered several surveys to its members and utilized several approaches to establishing a relative work value for the physician work rendered under the MCP. In virtually all formats, the values obtained for adults ranged from 6.0 to 8.0. These results were submitted to the RUC along with the RUC designed survey tool (which also yielded a recommended RVW of 6.64) and discussions were generated through a RUC facilitation committee. Since this committee

expressed "uncertainty surrounding the estimates of total physician work from the surveys" and further felt the "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", an alternate method for valuing each service was developed. This "building block" approach to work values was well described in both the RUC May 1994 Recommendations to HCFA: Monthly End Stage Renal Disease Services - Tab Q, and the Federal Register vol 59, no 235 pg 63449. The same approach was utilized by the HCFA Carrier Medical Director (CMD) panel in its adjustment of the RUC proposed interim values submitted. While the RUC panel utilized survey results and data, albeit imperfect, the CMD panel "adjusted the RUC value to correspond to what the CMDs believed to be the amount of physician work for the typical chronic outpatient dialysis patient."

The RPA recommended in its comment on the proposed rule that the RVUs proposed by AMA-RUC should have been accepted by HCFA for establishment of interim final work RVUs for the MCP 1995. However, HCFA did not accept the RUC values and instead developed their own (lower) values for CPT codes 90918 through 90922.

Because these are interim values, the RPA and RUC should work to develop a final physician work RVU for the MCP which HCFA should accept. Listed below are the work RVUs recommended by the RUC as compared to the HCFA assigned RVUs.

Code	(Comparison) RUC Recommended work RVUs	HCFA Work RVUs	HCFA Practice Expense RVUs	HCFA Malpractice RVUs
90918	13.27	**9.77**	**2.18**	**0.14**
90919	9.13	**7.13**	**2.18**	**0.14**
90920	6.64	**5.86**	**2.18**	**0.14**
90921	5.24	**3.06**	**2.18**	**0.14**
90922	0.17	**0.10**	**0.07**	**0.01**

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Current Submission To RUC

Based on the concerns of the facilitation committee, the RUC's Research Subcommittee was directed "to develop an alternate survey instrument that will allow a more reliable assessment of the work involved in these capitated services". To this end, this research committee met on September 29 1994 and after reviewing one proposed questionnaire, suggested that a prospective "case log study" be considered. A small group of the Research Subcommittee was established to "work with them to develop an appropriate method for the study". The RUC study group consisted of Drs Kwass, Hoehn, Tudor and Powe and the Renal Physicians Association RVW subcommittee included Drs Paganini, Hamburger, Charytan and Diamond.

A single conference call took place on November 18, 1994 where the discussion of appropriate tools and valuing actual physician work was again discussed. Shortly prior to this call, the 1983 publication of a study undertaken by the University of Southern California, Division of Research in Medical Education under contract from HCFA and DHHS entitled *"Physicians who care for End Stage Renal Disease Patients: A National Study of their Practices, Patients and Patient Care"* (Mendenhall Study) was distributed to the participants. Although there was not time for the material to be completely studied prior to the conference call, the consensus was in support of a through review of this study, since it was performed by a third party, and the establishment of some method of "updating" the data since this study was finalized in 1983.

The RPA Board in its december meeting concluded that it could not undertake a repeat of the "time and motion" activities contained in the Mendenhall Study since time and finance were both short, and the data might be suspect. The RPA Board felt that the data enclosed in this study could be utilized as a description of physician work. In an effort to update this data, the RPA RVW committee elected to utilize a 1991 RPA physician activity survey (n=421), as well as the responses from the RUC MCP survey just completed in 1994.

The Mendenhall Study

Operating under a grant from HCFA, the University of Southern California studied physicians and physician practices where ESRD patient care was the predominant type practiced. The purpose of this study was to gain insight into "practice content". As noted in the introduction to the study: *"We know from past national studies of physician practices, there is a substantive difference in what they actually do as compared to what they estimate what they do when asked for retrospective assessment"* The instruments used were based upon former studies and had ample verification of effectiveness. Physician consultants were asked to help design the questions around the ESRD target population who were being care for under the "alternate (capitation-based) plan". The "universe" from which the study participants were drawn was described by HCFA to include all dialysis facilities that were being reimbursed under this plan. 300 facilities were randomly chosen from this universe, and 267 facilities returned the

"Physician Enumeration form" which yielded 1116 physician names (approx 4.2 per facility). After dropping 190 duplicate names, a 60% random sample from the remaining 926 names which yielded a survey sample size of 554 physicians.

The survey instrument was a log-diary tool which had been adapted to capture the required data specific to the ESRD target patient population. Physicians were assigned "study weeks" during which time the instrument was completed at 15-30 minute intervals, describing the type of services being rendered, the level of activity and other pertinent data regarding physician activity during the study week. Also obtained was the demographic picture of both the physician provider and the patient population served by that provider. The overall response rate was 65.2%.

The results can be summarized with the overview that patients are seen an average of 1.6-1.7 times per week by their nephrologist. Four variables that measure actions taken by the physician in the course of the patient encounter were defined as the "dependant" variables, and included:

(a) the time the physician spends with the patient
(b) number of diagnostic tests
(c) number of therapeutic procedures
(d) complexity of service

There were also two interval level patient encounter characteristics noted:

(a) patient age
(b) number of problems recorded

The results for the four dependant variables are listed in tables 1-5. These variable were entered into the regression such that the description of the service would fall along predicted lines with variation from the mean as described in the tables themselves. For example, Table 2 shows that the time constant was 12.89 minutes. If the patient were seen in the office, the addition of 11.04 minutes would be the usual time delivered to these patients. However, if the visit were to take place in the dialysis unit, only 11.19 minutes would be needed (12.89 - 1.70).

Another example might be seen in table 5, where the constant level of severity for this patient population was 1.22 (scale 0 (non severe) - 5 (very severe)). An office visit would yield a severity level of 2.01, while a dialysis visit would drop to 0.93. The variation was noted to be in the range of 30% among patients and physicians, with complexity being closely associated with the number of problems recorded for the particular patient.

Patient encounter case-mix indices are listed in table 6. Notice the mean age of 53.4 years, percentage of non-ambulatory patients at 28.3%, and the mean number of problems at 1.81/pt. This data along with tables 7-9, describes a dialysis population where diabetes is only 8.3% of the primary diagnoses, 5.6% of secondary, and 0.6% of tertiary diagnoses. Contrast this with the 1994 United States Renal Data System (USRDS) demographic of the current dialysis patient

population in figures 1-3, and table 10 where diabetes is the single most frequent cause of ESRD and indeed comprises 33.8% of the population, whose age has increased to 62 years, and whose comorbidity has increased dramatically with more than 4.2 conditions noted in the average hemodialysis ESRD patient.

The activity of the physician regarding "other encounters" was also studied. The number of phone encounters with either the patient (considered for E&M services as included in the pre- or post-work category) or other health care providers (nurse, dialysis technician, social worker, dietician, nursing home, etc) reveals an increase in phone encounters with increasing age, and an association of other health care provider contacts with increasing complexity of the patient. Both an increase in age and complexity since 1983 are easily supported from the USRDS database.

Finally, the focus of the patient problem during the various encounters is clearly in areas that are frequently outside of the ESRD and ESRD-related distribution. While 16% of the foci are renal or urinary tract related (compared to 30% for the non-ESRD population), 12% is access device related, 16% circulatory system related and the balance of ESRD foci are distributed in proportions quite similar to those for non-ESRD patients. This generalist view of care rendered to the ESRD patient under the MCP places the patient care delivery by the nephrologist in the realm of primary care.

The RPA 1991 MCP SURVEY

In an attempt to capture the overall work delivered by the nephrologist under the MCP, a one page survey was sent to 1000 randomly chosen nephrologists in practice during the year 1991. The survey instrument consisted of a series of questions regarding the frequency of visits in the dialysis unit, the level of activity as judged by the assessment of diagnostic tests, therapeutic procedures, and the occurrence of patient care conferences, patient family meetings and patient/family telephone encounters and non-renal patient care activity rendered to dialysis patients. Two areas were also provided for "write-in" answers re:what services were rendered under the MCP payment, and what services the respondent considered outside of these services. 413 responses were received (41.3% return). The responses showed that 40% of the physicians visited their patient at each dialysis session, while the overall intradialysis visits averaged 5.7 per month. 60% of the physicians saw their patients only at the dialysis unit, but an average of 1.2 extra visits were claimed. A comprehensive history and physical exam was performed by 81.9% of the responding physicians and this service was rendered to the "stable" dialysis patient and average of 2.2 times per year. Of the monthly activities performed which were considered dialysis related, the dialysis prescription (3.3 times/month), diagnostic testing (3.1 times/month), and reviewing medications (2.2 times/month) were performed by virtually every nephrologist. While 100% of the respondents participate in regular patient care conferences with other health care team members, patient and family telephone conferences were also frequent activities

(92.7%). Non-renal service is afforded to these same patients by their nephrologist. This includes non-access related infections, glycemic control in the diabetic, as well as management of other diabetic complications. The write-in portion of the survey included virtually all medical services that did not require a consultation, and excluded all in-hospital services, all temporary catheter placements, chemotherapy, and other obvious "non-renal" conditions.

While this survey cannot establish the level of service rendered, it does establish the frequency of physician visits, and the breath of service rendered to the dialysis patient under the MCP. This data can be used to "update" the Mendenhall survey, since the frequency of patient encounters has remained the same (Mendenhall: 6.8/month :: RPA: 6.9/month), the type of encounters seems to have remained constant, while the patient demographic has changed dramatically (based upon the USRDS data presented above).

The RPA-RUC Survey

Using the methodology developed by the RUC for evaluation of single visit services, and altering the clinical description to include two vignettes (one hemodialysis and one peritoneal), the survey tool was sent to 104 nephrologists randomly chosen from the Renal Physician Association Nephrology Database, following the RUC process for survey and reporting. In this submission, the RPA recommended RVW was 6.64 for the services described under the CPT Code Number 90921, "End stage renal disease (ESRD) related services per full month; for patients 20 years of age and over".

The derivation of the submitted work value did not follow the "building block" approach which was used by the facilitation committee to derive the RUC RVW value of 5.2, but rather used equivalent values of known work entities to derive an overall work value for the series of activities rendered by the nephrologist during the months care of a dialysis patient. The cited services used by the majority of the respondents included Evaluation and Management services related to an established outpatient visit. Thus 99215 was utilized by 98% of the survey participants, while other physician work descriptors (in descending order) included 99213 (69.7%), 99214 (60%), 99211 (58%), and 99205 (39.5%). If we were to use these levels of service as the blocks for the construction of the MCP work value, it would seem that the level of physician service delivered to the patient has increased in complexity compared to the Mendenhall study. This would seem to follow the trend as described in that study with increasing complexity paralleling age and patient comorbidity.

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Care Plan Oversight Services

The ESRD program has functioned with a multidisciplinary approach to patient care. As part of the quality review process, all patients must have at least yearly "long-term care plans" and at least biannual "short-term care plans", these latter frequently developed in the more complicated patient at monthly intervals. A significant amount of time is spent in both direct meetings with other health care providers (dietary, social service, nursing, administration) in an attempt to help these chronic patients through the rigors of dialytic support, and the complications of both their renal-related conditions as well as other underlying entities which may have influence on overall patient well-being and outcome. The renal physician acts as the team leader in these discussions and is actively involved in their implementation. This activity has been documented both in the Mendenhall Study, and in the RPA 1991 MCP survey.

Since HCFA has determined that care plan oversight services eligible for separate payment "include the physician supervision and management of complex or multidisciplinary care modalities involving regular physician development or revision" (Federal Register, vol 59, no 235, p 63419), and further that these services "necessitate a high level of decision-making and go beyond administrative function", we believe that this service rendered for the dialysis patient should have value in the composite building of the MCP. Although all patients will receive the mandated team coordinations and discussion, we also believe there are increasing numbers of patients with highly complex health care needs which require increasing times from the physician. This patient demographic can be easily extracted from the USRDS database, and substantiated by HCFA BMAD data. It is therefore essential that this component of physician work be incorporated into the MCP, as was done in the original submission from the RUC, but eliminated by the CMD during their "building" of the MCP work value.

The MCP is a Primary Care Service

Primary care services have been defined by congress as "office medical services, emergency department services, home medical services, skilled nursing, intermediate care, and long term care medical services, or nursing home, boarding home, domiciliary or custodial care medical services" (OBRA 93). Most nephrologists consider the dialysis unit activity to be a direct extension of their office practice, and further consider themselves as the principle physician for these dialysis patients. The care rendered is compatible with the definition of primary care as recently published by the Institute of Medicine.

Recent publications from carriers have extended the definition of renal related to encompass virtually all medical conditions which may be even minimally influenced by the patients renal condition (Medicare B Bulletin for Illinois - October 1994). This dramatic and controversial all-inclusive bundling initiative by a carrier underlines the perception that the MCP includes virtually all non-consultative care of the dialysis patient.

RUC 1.5 x 44214 +.50 case mgt
4 x 99213
1 x 99215

HCFA 4 x 99212
2 x 99214

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The RPA submission of RVW for CPT code 90921

The method utilized by both the RUC and the HCFA CMD panel ("building block") will be followed for the development of the current "final value" for physician work associated with services rendered under the Monthly Capitated Payment System (MCP). Included among the blocks are various levels of evaluation and management service which capture the work value of services rendered to dialysis patients. Oversight care is included for both the hemodialysis and the peritoneal dialysis patient, albeit at differing levels reflecting the differing activity levels of the physician with both dialysis modalities.

FOR HEMODIALYSIS:

Total number of dialysis per month	13	Standard 3 times per week
Total number of visits per month	6.9	Mendenhall (1.7x4wks) / RPA 1991 Survey 6.9
visits in office	1.2	RPA Survey - Mendenhall study (25 min visit)
visits in dialysis unit	5.7	RPA Survey
interventions in dialysis	3.3	RPA Survey

(medication Δ, prescription Δ, other Δ)

TABLE 2 12.89t 11.04

Translation to Work Values	RVW
Face to Face:	
99215 X 1.2	1.836
99213 X 3.3	1.848
99212 X 2.4	0.91
"Incident to" services:	
99211 X 7.3	1.241
Oversight care:	0.5
Relative Work Value	6.335

recalc in 1995 scale

substitute 1.06

no different than chemo admin performed incident to

nurses spend 3 1/2 hrs per mo w/ patient

99215 - office visit
99213 - dialysis visit
99212
- RUC Survey -

length of visit is higher longer than 1981 Mendenhall (sicker older patient)

FOR PERITONEAL DIALYSIS:

Face to Face:	
Formula for conversion	
(0.47 X 6.335)	2.977
Oversight Care:	1.0
Relative Work Value	3.977

CALCULATION FOR FINAL RVW FOR CPT CODE 90921

0.82 x 6.335 + 0.18 x 3.977 = **5.91**

5.06

4.29 w/o incident to svcs and level 4 instead of 5

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Relativity of MCP value to other "composite" physician services:

CPT Code	Description	Work RVU
77419	Weekly Radiation Therapy	3.64
77420		1.63
77425		2.47
77430		3.64
59425	Antepartum Care only (4-6 visits)	4.08
59426	(7 or more)	6.99

Conclusion:

The MCP method for the payment of outpatient physicians services to dialysis ESRD patients has been in place for over 20 years. The physicians have adapted their practice patterns and documentation to such a system. The program has been extremely beneficial to the growth and financial stability of the ESRD program. The goal is to now take this existing monthly charge for capitated care of a "sick" cadre of patients and move it into the Medicare Fee Schedule based upon the RBRVS process. This conversion process poses some unique and difficult problems. There is no historically capitated system of care in relative value system and thus no model. The MCP is not an E/M service and cannot logically be equated with a series of E/M services even as a crosswalk. It is not payment for specific encounters or procedures. It includes services encompassing the totality of care which might otherwise be fractionated into separate codes without revealing the entire scope of physicians services, such as, team meetings where there is physician led multidisciplinary decision making.

The dialysis population is an aging "sick" population which regularly undergoes a therapy which has actually become more complex during the tenure of the MCP. The intensity of the decision making (management) has increased despite no increase in reimbursement. The capitated payment methodology has permitted this but does not lend itself to retrospective audit or to a time and motion study. Multiple physician work activities are routinely accomplished during any time interval.

Three different groups of knowledgeable physicians were surveyed to establish the physician work involved in the MCP. All rated the work above 6 units. The RUC had difficulty

comparing this capitated "sick" patient service with any other services and thus could only establish an interim value. We believe that the nephrologists have more understanding of the work involved in a months care of a dialysis patient than anyone else and are familiar with work value units. Thus the survey value is clearly superior to any other value and should be supported by the RUC.

The RPA committee does not believe a time and motion study is useful or realistic but believes that the research committee of the RUC must develop an entirely new method of assessing such capitated "sick" patient services as we expect that such services will be contracted by managed care plans and thus are part of the future of medicine. The ESRD program has been on point for many changes and this is another.

The radiology oncology clinical treatment management codes 77419, 77420, 77425, 77430 are a family of weekly clinical management codes which are akin. The obstetrical codes 59400 to 59430 are a series of global codes reflecting capitated payment for patients with a known condition. Both of these series are more similar to the MCP than any of the procedure or E/M codes.

The RPA would be delighted to actively participate with the RUC in the development of a method to assess physician work or to crosswalk any capitated "sick" patient care schema.

PHYSICIANS WHO CARE FOR END-STAGE RENAL DISEASE PATIENTS: A NATIONAL STUDY OF THEIR PRACTICES, PATIENTS AND PATIENT CARE

Final Report

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The University of Southern California, Division of Research in Medical Education, has conducted a nationwide survey of the professional activities of physicians who provide care for patients with end-stage renal disease. The survey, based on a target population of physicians affiliated with dialysis facilities, achieved a 65.2% response rate and included 336 respondents. Each respondent provided data on workload, allocation of time to various professional activities, and information of each patient treated during an assigned study period, as well as data on characteristics of the practice. The survey, conducted during October of 1982, yielded a study population that was far different from the general population of nephrologists, with more office-based and board certified physicians. Data from the survey show that ESRD physicians' workloads parallel the busy practices of generalist physicians more than they do the practice patterns of most subspecialists in initial medicine (except that the outpatient load occurs mainly in the dialysis unit). Patient encounter data show that the majority of their visits are with ESRD patients, and that over half of all ESRD patients (facility and self care combined) are seen once a week or more. ESRD physicians report seeing facility hemodialysis patients an average of between 1.6 and 1.7 times a week. The telephone is used primarily for communicating with other health professionals, and calls with patients are primarily with non-ESRD patients. There are pronounced differences in the morbidity profiles of patients on different types of dialysis; home hemodialysis patients were found to have low rates of serious systemic illnesses, whereas peritoneal dialysis patients have high rates of diabetes mellitus. IPD patients are the sickest patients on a number of criteria, but there is little evidence to indicate that patients treated in hospital-based hemodialysis centers are any sicker than those in freestanding facilities. Finally, physicians with the highest workloads provide less resource-intensive care (less time spent with the patient and fewer diagnostic tests employed) even when medical complications and other sources of variation in care are controlled for statistically.

TABLE 6. REGRESSION OF SELECTED PATIENT ENCOUNTER CHARACTERISTICS: VARIABLES ENTERED INTO THE REGRESSION (ESRD PATIENTS)[1]

Variable	Mean	Standard Deviation	Number of Cases
DEPENDENT VARIABLES			
Time Per Encounter	9.65	10.90	6164
Number of Diagnostic Tests	0.84	1.30	6411
Number of Therapeutic Procedures	0.98	1.21	6411
Complexity of Service	2.33	1.10	6297
PATIENT/ENCOUNTER CHARACTERISTICS			
Patient Age	53.37	15.69	6361
Race Ethnicity (Ref: White, Non-Hispanic)			
Black Patient*	0.34	0.47	6411
Hispanic Patient*	0.08	0.27	6411
Asian/American Indian*	0.03	0.16	6411
Dialysis Modality (Ref: Hospital Center Hemodialysis)			
Freestanding Facility Hemodialysis*	0.50	0.50	6411
Home Hemodialysis*	0.02	0.13	6411
CAPD*	0.05	0.22	6411
IPD/CCPD*	0.03	0.18	6411
Encounter Location (Ref: Dialysis Unit)			
Office or OPD/Clinic*	0.05	0.21	6411
Hospital Encounter*	0.19	0.40	6411
Other (ER, Nursing Home) Locations*	0.01	0.07	6411
Number of Problems Recorded	1.81	0.70	6231
PHYSICIAN/PRACTICE CHARACTERISTICS			
Practice Arrangement (Ref: Solo)			
Group Practice*	0.59	0.49	6411
Institutional Practice*	0.37	0.48	6411
Physician Age	41.19	6.44	5984
Board Certification (Ref: Nephrology Board)			
Internal Medicine Board*	0.25	0.43	6411

TABLE 61. (continued)

Variable	Mean	Standard Deviation	Number of Cases
No Board Certification*	0.13	0.34	6411
Metropolitan/Non-Metropolitan Practice (Ref: Metropolitan)			
Non-Metropolitan Practice*	0.03	0.17	6411
Number of Dialysis Facilities	2.18	1.03	6266
Reimbursement for Dialysis (Ref: Alternate Method)			
Fee for Service Reimbursement*	0.12	0.32	6411
Owner of Dialysis Facility (Ref: Non-Owner)			
Facility Owner*	0.15	0.36	6411
Number of Dialysis Stations	20.21	10.62	6114
Number of Dialysis Patients	71.61	54.27	6114
Weekly Workload	147.66	64.58	6037

[1] Asterisks (*) indicate nominal-level (categorical) characteristics represented in the regression equations by dummy variables. Reference categories for each set of dummy variables are shown in parentheses.

TABLE 82. REGRESSION OF TIME PER ENCOUNTER (ESRD PATIENTS)[1]

Variable	B	Beta	Cumulative R Square
Hospital Encounter	8.50	0.31	0.110
Office or OPD/Clinic	11.04	0.21	0.168
Other Locations	27.64	0.19	0.205
Weekly Workload	-0.03	-0.16	0.237
Freestanding Facility Hemodialysis	-1.70	-0.08	0.247
Number of Dialysis Patients	-0.01	-0.05	0.251
Institutional Practice	-0.91	-0.04	0.253
Number of Problems Recorded	0.65	0.04	0.255
CAPD	2.20	0.04	0.257
Number of Dialysis Stations	-0.04	-0.04	0.259
Black Patient	-0.82	-0.04	0.260
(Constant)	12.89		

[1] Reference categories for dummy variable regression are a white (non-Hispanic) patient on hospital center hemodialysis, being treated in a dialysis unit (outpatient or inpatient) by a board-certified nephrologist in solo practice, who is located in a metropolitan area, does not own a dialysis facility, and is reimbursed under the alternate (capitation) plan. Regression equations and variables listed are all significant; therefore F values and significance levels are not presented.

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TABLE 8. REGRESSION OF DIAGNOSTIC TESTS (ESRD PATIENTS)[1]

Variable	B	Beta	Cumulative R Square
Hospital Encounter	0.76	0.23	0.081
Number of Problems Recorded	0.30	0.16	0.113
Office or OPD/Clinic	0.54	0.09	0.128
Other Encounter Location	1.36	0.08	0.135
Weekly Workload	<-0.01	-0.08	0.141
Institutional Practice	-0.19	-0.07	0.146
CAPD	0.42	0.07	0.151
Home Hemodialysis	0.48	0.05	0.153
Group Practice	0.14	0.06	0.155
Number of Dialysis Patients	<-0.01	-0.06	0.157
Number of Dialysis Facilities	0.07	0.05	0.159
Freestanding Facility Hemodialysis	-0.14	-0.05	0.161
Internal Medicine Board	0.12	0.04	0.162
(Constant)	0.29		

[1] Reference categories for dummy variable regression are a white (non-Hispanic) patient on hospital center hemodialysis, being treated in a dialysis unit (outpatient or inpatient) by a board-certified nephrologist in solo practice, who is located in a metropolitan area, does not own a dialysis facility, and is reimbursed under the alternate (capitation) plan. Regression equations and variables listed are all significant; therefore F values and significance levels are not presented.

TABLE 4. REGRESSION OF THERAPEUTIC PROCEDURES (ESRD PATIENTS)

Variable	B	Beta	Cumulative R Square
Number of Problems Recorded	0.36	0.21	0.064
Hospital Encounter	0.38	0.12	0.086
Office or OPD/Clinic	0.51	0.09	0.099
Freestanding Facility Hemodialysis	-0.16	-0.06	0.108
No Board Certification	0.25	0.07	0.116
Fee for Service Reimbursement	-0.28	-0.07	0.123
Institutional Practice	-0.20	-0.08	0.128
Black Patient	-0.10	-0.04	0.131
Number of Dialysis Facilities	-0.07	-0.06	0.133
CAPD	0.35	0.06	0.136
Home Hemodialysis	0.54	0.06	0.139
Physician Age	0.01	0.05	0.141
Number of Dialysis Stations	-0.01	-0.05	0.143
Non-Metropolitan Practice	-0.40	-0.06	0.146
Other Encounter Location	0.76	0.05	0.148
Number of Dialysis Patients	<-0.01	-0.04	0.149
Dialysis Facility Owner	0.12	0.04	0.150
(Constant)	0.29		

[1] Reference categories for dummy variable regression are a white (non-Hispanic) patient on hospital center hemodialysis, being treated in a dialysis unit (outpatient or inpatient) by a board-certified nephrologist in solo practice, who is located in a metropolitan area, does not own a dialysis facility, and is reimbursed under the alternate (capitation) plan. Regression equations and variables listed are all significant; therefore F values and significance levels are not presented.

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TABLE 6S. REGRESSION OF COMPLEXITY OF SERVICE (ESRD PATIENTS)[1]

Variable	B	Beta	Cumulative R Square
Hospital Encounter	1.01	0.36	0.167
Office or OPD/Clinic	0.79	0.15	0.198
Freestanding Facility Hemodialysis	-0.29	-0.13	0.220
No Board Certification	0.26	0.08	0.237
Number of Problems Recorded	0.18	0.11	0.251
Other Encounter Location	1.48	0.10	0.262
Institutional Practice	-0.25	-0.11	0.269
Physician Age	0.02	0.10	0.276
Group Practice	-0.26	-0.12	0.284
Number of Dialysis Facilities	0.08	0.08	0.289
Black Patient	-0.13	-0.05	0.293
Dialysis Facility Owner	0.18	0.06	0.296
CAPD	0.30	0.06	0.299
Non-Metropolitan Practice	0.36	0.06	0.302
(Constant)	1.22		

[1] Reference categories for dummy variable regression are a white (non-Hispanic) patient on hospital center hemodialysis, being treated in a dialysis unit (outpatient or inpatient) by a board-certified nephrologist in solo practice, who is located in a metropolitan area, does not own a dialysis facility, and is reimbursed under the alternate (capitation) plan. Regression equations and variables listed are all significant; therefore F values and significance levels are not presented.

TABLE 78. CASE-MIX INDICES BY DIALYSIS TYPE (ESRD PATIENTS)[1]

Type of Dialysis (RAW DIFFERENCES)	CASE-MIX INDICES: RENAL DISEASE ETIOLOGY RATIO $\bar{X}$	MEAN NUMBER OF PROBLEMS (DIAGNOSES) $\bar{X}$	MEAN PATIENT AGE $\bar{X}$	PERCENTAGE NON-ANGLO PATIENTS %	PERCENTAGE NON-AMBULATORY CARE %	PERCENTAGE SPECIALIZED/ CONSULTATIVE CARE %
Total	0.6	1.81	53.4	44.0	28.3	13.4
Hemodialysis						
Hospital-Based Center	0.6	1.86	54.5	37.2	32.6	8.5
Freestanding Facility	0.6	1.74	53.0	52.2	17.4	18.4
Home	0.2	1.89	48.9	20.3	59.3	6.0
Peritoneal Dialysis						
CAPD	1.0	2.01	48.7	24.3	62.3	7.5
IPD	2.4	2.05	57.5	49.4	74.0	9.2
CCPD[2]	1.3	1.81	48.9	22.9	68.8	6.5
Statistical Significance	*.000*	*.000*	*.000*	*.000*	*.000*	*.000*

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TABLE 70. (Continued)

Type of Dialysis (DIFFERENCES ADJUSTED FOR EACH OF THE OTHER INDICES)	CASE-MIX INDICES: RENAL DISEASE ETIOLOGY RATIO $\bar{X}$	MEAN NUMBER OF PROBLEMS (DIAGNOSES) $\bar{X}$	MEAN PATIENT AGE $\bar{X}$	PERCENTAGE NON-ANGLO PATIENTS %	PERCENTAGE NON-AMBULATORY CARE %	PERCENTAGE SPECIALIZED/ CONSULTATIVE CARE %
Total	0.6	1.89	51.2	39.3	27.8	13.2
Hemodialysis						
Hospital-Based Center	0.6	1.91	52.0	33.9	30.0	9.5
Freestanding Facility	0.6	1.86	51.2	47.9	15.4	18.7
Home	0.3	1.85	46.8	22.9	56.7	3.8
Peritoneal Dialysis						
CAPD	1.0	1.91	46.8	15.4	67.3	2.6
IPD	1.2	2.12	55.3	57.5	79.5	10.4
CCPD[2]	1.9	1.60	45.9	5.0	72.0	1.4
Statistical Significance	*.000*	*.011*	*.000*	*.000*	*.000*	*.063*

[1]The renal disease etiology ratio is the ratio of the number of patients with serious systemic disease (diabetic nephropathy, amyloidosis, multiple myeloma) to the number with organ-specific, relatively uncomplicated causes of ESRD (glomerulonephritis, polycystic kidney disease); with the organ-specific cases set at "1," the number shown is the corresponding ratio of systemic disease. Thus for all ESRD patients, there were 1,868 with either glomerulonephritis or polycystic kidney disease and 1,201 with diabetic nephropathy, amyloidosis, or multiple myeloma (see Table 41 or Tabel 67). The resulting ratio of 1:0.6 is shown as 0.6 in the "Total" column for the renal disease etiology ratio.

[2]Means and mean percentages for this category may be unreliable due to the small number of encounters.

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TABLE 5Q. OUTPATIENT/INPATIENT ENCOUNTERS: PRIMARY DIAGNOSIS

Category Label	NON-ESRD PATIENTS N	%	ESRD PATIENTS N	%	TOTAL N	%
Chronic renal failure	185	3.9	2650	41.3	2835	25.5
Hypertensive renal disease	338	7.2	641	10.0	979	8.8
Diabetes mellitus	288	6.1	530	8.3	818	7.4
Chronic glomerulonephritis	115	2.4	501	7.8	616	5.5
Acute renal failure	355	7.5	21	0.3	376	3.4
Essential hypertension	354	7.5	17	0.3	371	3.3
No recorded diagnosis	168	3.6	201	3.1	369	3.3
Nephritis/nephrology, not specified as acute or chronic	88	1.9	194	3.0	282	2.5
Renal failure, unspecified	93	2.0	151	2.4	244	2.2
Congenital anomalies of urinary system	53	1.1	196	3.1	249	2.2
Other disorders of urethra and urinary tract	127	2.7	83	1.3	210	1.9
Organ or tissue replaced by transplant	163	3.5	44	0.7	207	1.9
Complications peculiar to certain specified procedures	27	0.6	122	1.9	149	1.3
Heart failure	96	2.0	33	0.5	129	1.1
Erythematous conditions	66	1.4	59	0.9	125	1.1
Infections of kidney	53	1.1	63	1.0	116	1.0
Disorders of fluid, electrolyte, and acid-base balance	86	1.8	27	0.4	113	1.0
Septicemia	56	1.2	32	0.5	88	0.8
Other symptoms involving abdomen and pelvis	47	1.0	30	0.5	77	0.7
Other chronic ischemic heart disease	55	1.2	15	0.2	70	0.6
Total	4,706	59.7	6,411	87.5	11,117	75.5

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TABLE 54. OUTPATIENT/INPATIENT ENCOUNTERS: SECONDARY DIAGNOSIS

Category Label	NON-ESRD PATIENTS N	%	ESRD PATIENTS N	%	TOTAL N	%
No recorded diagnosis	1793	38.1	2395	37.4	4188	37.7
Hypertensive renal disease	253	5.4	553	8.6	806	7.3
Chronic renal failure	126	2.7	512	8.0	638	5.7
Diabetes mellitus	240	5.1	361	5.6	601	5.4
Nephritis/nephrology, not specified as acute or chronic	135	2.9	383	6.0	518	4.7
Chronic glomerulonephritis	47	1.0	288	4.5	335	3.0
Other chronic ischemic heart disease	94	2.0	140	2.2	234	2.1
Essential hypertension	151	3.2	33	0.5	184	1.7
Heart failure	83	1.8	100	1.6	183	1.7
Renal failure, unspecified	47	1.0	79	1.2	126	1.1
Complications peculiar to certain specified procedures	23	0.5	88	1.4	111	1.0
Other disorders of urethra and urinary tract	66	1.4	40	0.6	106	1.0
Congenital anomalies of urinary system	22	0.5	82	1.3	104	1.0
Chronic obstructive pulmonary disease	51	1.1	52	0.8	103	1.0
Acute renal failure	88	1.9	8	0.1	96	0.9
Disorders of fluid, electrolyte, and acid-base balance	53	1.1	31	0.5	84	0.8
Depressive disorders, not classified	46	1.0	36	0.6	82	0.8
Other unspecified anemias	17	0.4	63	1.0	80	0.8
Septicemia	60	1.3	19	0.3	79	0.7
Ill-defined descriptions and complications of heart disease	36	0.8	31	0.5	67	0.6
Total	4,706	73.2	6,411	82.7	11,117	79.0

TABLE 52. OUTPATIENT/INPATIENT ENCOUNTERS: TERTIARY DIAGNOSIS

Category Label	NON-ESRD PATIENTS N	%	ESRD PATIENTS N	%	TOTAL N	%
No recorded diagnosis	4120	87.6	5372	83.8	9492	85.4
Hypertensive renal disease	50	1.1	125	2.0	175	1.6
Nephritis/nephrology, not specified as acute or chronic	21	0.5	98	1.6	119	1.1
Other chronic ischemic heart disease	24	0.6	68	1.1	92	0.9
Chronic renal failure	16	0.3	66	1.0	82	0.8
Heart failure	35	0.7	46	0.8	81	0.8
Diabetes mellitus	34	7.2	40	0.6	74	0.7
Other unspecified anemias	16	0.3	28	0.4	44	0.4
Chronic obstructive pulmonary disease	10	0.2	31	0.5	41	0.4
Depressive disorders, not classified	16	0.3	21	0.4	37	0.3
Angina pectoris	13	0.3	23	0.4	36	0.3
Septicemia	18	0.4	14	0.3	32	0.3
Essential hypertension	23	0.5	5	0.1	28	0.3
Complications peculiar to certain specified procedures	3	0.1	25	0.4	28	0.3
Disorders of fluid, electrolyte, and acid-base balance	16	0.3	11	0.2	27	0.2
Other, unspecified protein-calorie malnutrition	22	0.5	4	0.1	26	0.2
Cardiac dysrhythmias	11	0.2	12	0.2	23	0.2
Renal failure, unspecified	10	0.2	10	0.2	20	0.2
General symptoms	6	0.1	13	0.2	19	0.2
Disorders of parathyroid gland	6	0.1	11	0.2	17	0.2
Total	4,706	101.5	6,411	94.5	11,117	94.8

Incidence of treated ESRD by Detailed Primary Disease, Age, Sex, Race and One-Year Transplant and Death Status for all Patients, 1988-1991

Primary Disease	Total 1988-91[1]	% of Total	Median Age	% Male	Percent by Race				Percent	
					White	Black	Asian	Native Amer.	Tx'ed in 1st year[2,3]	Died in 1st year[2]
All ESRD, (reference)	177,660	100.0	62	54.2	100.0	100.0	100.0	100.0	11.6	22.3
Diabetes	60,052	33.8	61	47.4	34.0	32.5	36.8	63.9	9.2	22.8
Hypertension	50,347	28.3	68	58.0	25.2	37.9	23.0	11.9	6.1	26.4
Glomerulonephritis	22,517	12.6	54	61.9	13.6	10.2	20.0	9.7	19.7	14.2
Goodpasture's Syndrome	589	0.3	64	47.3	0.4	<0.1	0.1	0.2	7.9	22.2
Focal glomerulosclerosis, focal GN	2,637	1.4	40	66.5	1.2	2.1	1.1	0.6	19.8	9.3
Membranous nephropathy	846	0.4	55	70.8	0.5	0.3	0.1	0.1	20.7	12.0
Membranoproliferative GN	692	0.3	41	60.6	0.4	0.1	0.5	0.5	32.1	8.3
All other glomerulonephritis	17,753	9.9	56	61.3	10.9	7.3	18.0	8.0	19.4	15.0
Cystic Kidney Diseases	5,394	3.0	54	53.4	3.9	1.1	2.3	1.8	24.7	6.9
Interstitial Nephritis	5,464	3.0	63	46.3	3.7	1.5	3.0	1.9	16.6	18.7
Analgesic nephropathy	1,449	0.8	64	47.3	0.9	0.4	0.6	0.5	14.5	20.4
All other interstitial nephritis	4,015	2.2	62	45.9	2.7	1.1	2.4	1.3	17.3	18.1
Obstructive Nephropathy	3,716	2.0	68	72.5	2.5	1.1	1.4	1.3	11.3	26.7
Collagen Vascular Diseases	3,779	2.1	41	26.7	2.0	2.2	3.0	1.4	10.0	17.1
Lupus erythematosus	2,406	1.3	35	18.6	1.0	1.9	2.7	1.0	11.0	10.9
Scleroderma	413	0.2	58	26.2	0.2	0.1	0.1	<0.1	3.5	39.4
Wegener's granulomatosis	407	0.2	62	52.8	0.3	<0.1	<0.1	0.2	11.8	22.3
Hemolytic uremic syndrome / TTP	367	0.2	48	34.7	0.2	<0.1	<0.1	0.0	5.5	25.3
Polyarteritis	97	<0.1	58	62.9	<0.1	<0.1	<0.1	<0.1	11.6	30.9
Henoch-Schonlein Purpura	68	<0.1	29	60.3	<0.1	<0.1	<0.1	<0.1	22.2	4.4
Rheumatoid arthritis	21	<0.1	63	42.9	<0.1	<0.1	<0.1	0.0	8.3	19.0
Malignancies	2,248	1.2	68	61.8	1.5	0.7	0.5	0.4	1.1	45.9
Multiple myeloma, chain disease	1,502	0.8	68	58.6	0.9	0.5	0.4	0.3	0.1	49.6
Renal and urinary tract neoplasms	706	0.3	66	68.4	0.4	0.2	0.1	<0.1	2.3	38.1
Lymphomas	40	<0.1	66	65.0	<0.1	<0.1	0.0	0.0	11.1	47.5
Metabolic Diseases	884	0.4	62	59.2	0.6	0.2	0.1	0.1	9.9	33.2
Amyloidosis	630	0.3	64	56.2	0.4	0.1	0.1	0.1	5.2	40.9
Gouty / Uric acid nephropathy	87	<0.1	63	71.4	<0.1	<0.1	0.0	0.0	12.7	19.5
Oxalate nephropathy	63	<0.1	53	54.0	<0.1	<0.1	0.0	0.0	12.5	14.2
Cystinosis	37	<0.1	12	45.9	<0.1	<0.1	0.0	0.0	50.0	5.4
Fabry's disease	36	<0.1	41	97.2	<0.1	<0.1	0.0	0.0	42.8	5.5
Macroglobulinemia	9	<0.1	65	77.8	<0.1	<0.1	<0.1	0.0	0.0	22.2
Congenital/Other Hereditary Dis.	1,331	0.7	22	70.4	0.9	0.3	0.4	0.8	34.2	6.4
Congenital obstructive uropathy	348	0.1	26	77.4	0.2	<0.1	<0.1	0.2	26.6	8.0
Renal dysgenesis, agenesis, dysplasia	338	0.1	23	63.7	0.2	<0.1	0.1	0.1	34.0	9.1
Alport's Syndrome	645	0.3	20	75.6	0.4	0.1	0.1	0.4	38.0	4.1
Sickle Cell Disease	154	<0.1	36	55.2	<0.1	0.2	0.0	0.0	2.9	15.5
AIDS-Related	586	0.3	36	83.8	<0.1	1.0	<0.1	<0.1	0.3	48.8
Other ESRD	1,879	1.0	66	61.9	1.3	0.5	0.3	0.5	6.2	34.6
Cause Labeled Unknown	10,145	5.7	65	58.8	6.0	4.9	6.7	4.7	13.1	25.2
Missing Information	9,175	5.1	51	55.2	4.2	4.9	1.8	1.0	15.4	15.1

[1]Divide total by 4 to determine average annual counts. Note these figures include patients in Puerto Rico and U.S. Territories.

See introduction to Section A of the Reference Tables for an explanation.

[2]Comparisons of death and transplant rates across primary disease should be done with caution since rates do not adjust for age, sex, or race.

[3]Only patients ages 20-64.

Medicare Patients Only.

Table ~~IV-3~~ 10

Treated ESRD Point Prevalence Counts by Age, 1982-91

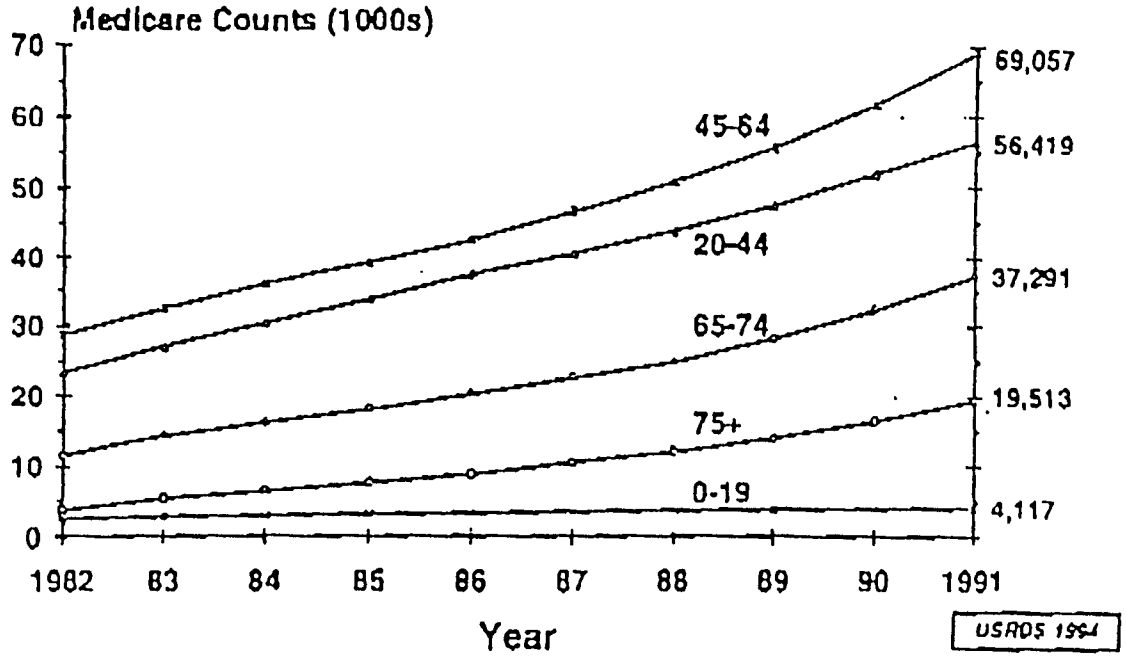

FIGURE 1

Reported ESRD point prevalence counts (patients alive on December 31) by age at onset of ESRD and year, 1982-91. No adjustments over time for changes in demographic characteristics. Excludes patients lost to follow-up. Patients in Puerto Rico and U.S. Territories are not included. Medicare patients only. Sources: Reference Table B.1

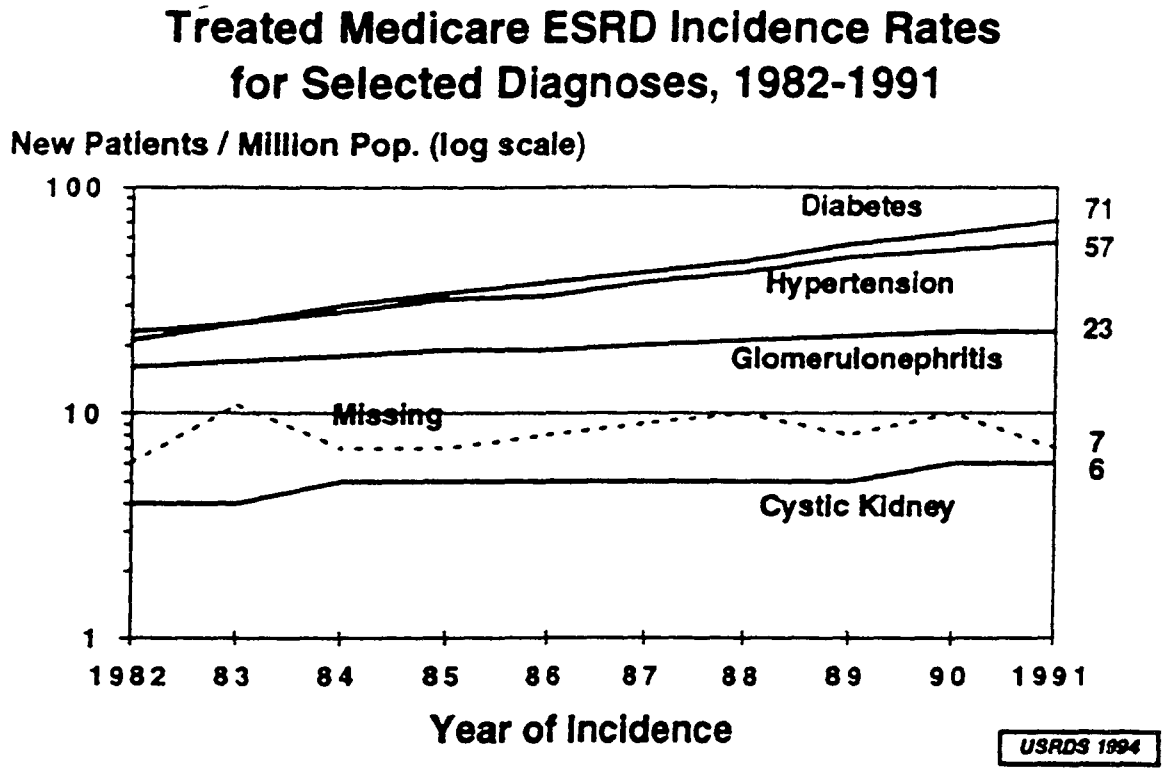

FIGURE 2

ıcidence rates of treated ESRD per million population, by selected primary disease groups, 1982-1. Rates are unadjusted. Semi-log scale used to show smaller rates. Rates do not include atients from Puerto Rico or U.S. Territories. Medicare patients only. Source: Reference Table A3

↑ co-morbidity

Annualized Change in Treated Medicare ESRD Incidence Rate by Age Group, from 1986-1988 to 1989-1991

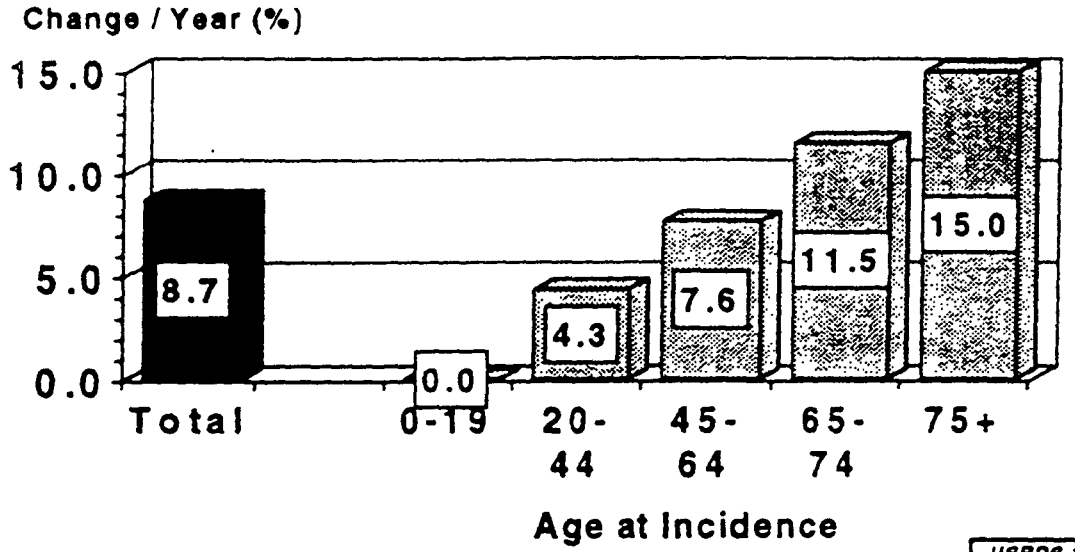

FIGURE 3

Change in treated ESRD incidence rates for the years 1986-88 versus 1989-91, by age group. Percent change per year is defined as the percent annual compound rate of change. Total rate adjusted for age, race, and sex. Rates by age adjusted for sex and race. Rates do not include patients from Puerto Rico or the U.S. Territories. Medicare patients only. Source: Reference Table A.35.

change per yr in age D population

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administra

6325 Security Boulevard
Baltimore, MD 21207

MAR 0 8 1994

Grant V. Rodkey, M. D.
Chairman
AMA/Specialty Society RVS Update Committee
515 North Street
Chicago, Illinois 60610

Dear Dr. Rodkey:

On behalf of the Health Care Financing Administration (HCFA), I am requesting the assistance of the AMA/Specialty Society RVS Update Committee (RUC) in the development of relative value units for physician work (RVWs) for the monthly physician's services furnished to end stage renal disease patients undergoing dialysis. These services are described by CPT codes 90918 - 90921.

For almost 20 years, nephrologists have been paid a monthly capitation payment (MCP) to cover all professional services related to the treatment of the patient's renal condition except those listed in regulations at 42 CFR 414.314 (copy enclosed). The current average payment of approximately $179 has not been changed for many years in spite of repeated requests for increases from the Renal Physicians Association (RPA).

The MCP services were studied during Phase II of the Harvard Resource Based Relative Value Scale (RBRVS) study. The work value, converted to the 1994 MFS, was 1.6 RVWs. The RPA disputes this value which they believe seriously underestimates the physician work. We believe the value must be given careful consideration since it was based on the responses of approximately 100 practicing nephrologists. These physicians should have been fully aware of the services included under the payment for the MCP since the MCP payment had been in place for many years prior to the survey.

Both HCFA and the RPA now believe the most equitable and appropriate means of resolving our differences is to treat the MCP services like all other physician services and include them under the Medicare Fee Schedule (MFS) for physician services. The RPA's advisor to the RUC is Emil Paganini, M.D. He agrees with the approach of requesting recommended RVWs from the RUC which we believe is the most qualified organization for producing objective estimates of relative physician work. We also understand the RPA's recommended values will be subject to a rigorous multidisciplinary review that will take into consideration the Phase II results.

We would appreciate inclusion of these codes on the RUC calendar for this year so that we may publish interim RVWs this fall. Please advise me of any further information you may require in order to expedite this request.

Sincerely,

Thomas Ault
Director
Bureau of Policy Development

Enclosure

cc:Emil Paganini

three subsequent hospital visit, which has a time of 35 minutes and an assignment of 1.26 RVUs. We therefore assigned 1.32 RVUs to CPT code 76936.

(10) Nephrology.

ESRD-related services, month (CPT code 90921). The recommendations for the assignment of RVUs from the Renal Physicians Association (RPA) to the RUC and from the RUC to us follow:

CPT code	RPA-recommended work RVUs	RUC-recommended work RVUs
90921:		
Facility	6.92	5.69
Home	5.00	2.68
Weighted Average	6.24	5.24

Since the same MCP is paid for services to home dialysis patients as for services to facility patients, these two values are therefore combined in proportion to the percentages of the dialysis population that dialyzes at home (18 percent) and in a facility (82 percent) resulting in a recommended weighted 6.24 RVUs. The physicians surveyed by the RPA reported a total physician work time of 120 minutes per month for facility dialysis and 90 minutes per month for home dialysis.

The RUC evaluated the RPA RVUs using a "building block" approach, using the values of the "office, established patient" visit codes. The RUC recommended the following mix of "office, established patient" visits as most appropriately representing the monthly work in treating a typical dialysis patient:

Facility hemodialysis—

1.5xCPT code 99214 (established patient office visit, 25 minutes)+4xCPT code 99213 (established patient office visit, 15 minutes)+1xCPT code 99215 (established patient office visit, 40 minutes)+0.50 (case management)=5.69 RVUs.

Home peritoneal dialysis—

1.5xCPT code 99214 (established patient office visit, 25 minutes)+1/6xCPT code 99215 (established patient office visit, 40 minutes)+1.00 (case management)=2.68 RVUs.

Combining these two RVUs and weighting by the respective percentages of the population in the facility and in the home resulted in a combined recommended 5.24 RVUs. The RUC considered its recommendation to be "interim."

We convened a panel of our CMDs to review the recommended RVUs. We included a representative from the RUC in the panel discussion. In evaluating this service, we used the RUC's overall approach of using different office visit codes as "building blocks" for the MCP, but we adjusted the mix of the visits used by the RUC. We believe that the following mix of visit code "building blocks" most appropriately represents the typical mix of encounters with the ESRD patient who is dialyzed in a dialysis facility and accounts for the service intensity and complexity of decision-making and the preservice and postservice work for a month's care of a typical dialysis patient.

The results follow for CPT code 90921:

4xCPT code 99212 (established patient office visit, 10 minutes)+2xCPT code 99214 (established patient office visit, 25 minutes)=4x 0.38+2x0.95=1.52+1.9=3.42 RVUs. These are the RVUs for facility hemodialysis.

To establish RVUs for treating a home dialysis patient, we used the ratio of work for a home patient versus a facility patient from the RUC's recommended RVUs: 2.68/5.69=0.47. Substituting this value in the formula:

0.82x3.42+0.18x{0.47x3.42}=3.09 RVUs.

Where, 0.82=percentage of facility dialysis population

3.42=RVUs for facility dialysis

0.18=percentage of home dialysis population

0.47=ratio of work for home versus facility dialysis.

Thus, we have assigned 3.09 RVUs to CPT code 90921.

ESRD-related services, month (CPT codes 90918 through 90920). For the three codes used to identify MCP services for pediatric patients, we received the following recommendations from the RUC:

CPT code	RUC-recommended RVUs
90918	13.27
90919	9.13
90920	6.64

Following the same "building block" methodology described above, we arrived at the following results:

For CPT code 90918:

16xCPT code 99212 (established patient office visit, 10 minutes)+4 x CPT code 99214 (established patient office visit, 25 minutes) =16x0.38+4x0.95=6.08+3.8=9.88 RVUs.

For CPT code 90919:

12xCPT code 99212 (established patient office visit, 10 minutes)+2xCPT code 99214 (established patient office visit, 25 minutes) =12x0.38+2x0.95=4.56+1.9=6.46 RVUs.

For CPT code 90920:

8xCPT code 99212 (established patient office visit, 10 minutes)+2xCPT code 99214 (established patient office visit, 25 minutes) =8x0.38+2x0.95=3.04+1.9=4.94 RVUs.

However, the RVUs for these codes are disproportionate to the RVUs that resulted from the survey performed by the pediatric nephrologists. We believe that the relationship between the RVUs resulting from a single surveyed group are reliable even when the absolute values are questionable. Therefore, we decided to adjust the two lower-valued pediatric codes (CPT codes 90919 and 90920) to be in proportion to the RVUs for CPT code 90918 by using the relationship between the RVUs resulting from the pediatric nephrologists' survey. The surveyed RVUs are:

CPT code 90918=18.71 RVUs

CPT code 90919=13.68 RVUs; RVUs=13.68/18.71=0.73

CPT code 90920=11.28 RVUs; RVUs=11.28/18.71=0.60

Applying these relative values to the RVUs for CPT code 90918:

CPT code 90919=0.73xCPT code 90918=0.73x9.88=7.21 RVUs.

CPT code 90920=0.60xCPT code 90918=0.60x9.88=5.93 RVUs.

The pediatric dialysis codes were not explicitly weighted by a factor for facility and home dialysis patients because the difference in physician work between the two therapies for these patients is not significant.

Thus, we assigned the following RVUs to these codes:

CPT code	Assigned work RVUs
90918	9.88
90919	7.21
90920	5.93

ESRD-related services, daily (CPT code 90922).

The RUC recommended 0.17 RVUs. The overwhelming majority of MCP patients are adults. Therefore, for CPT code 90922, we based our assignment of 0.10 RVUs on 1/30 (per day) of the RVUs for CPT code 90921. For the pediatric patients, physicians must bill the appropriate monthly code (CPT codes 90918 through 90920) with the modifier -52 and units that represent the number of days.

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 = 5.24
	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		6.64
90919	between the second and twelth 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		9.13
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		13.27
90922	End stage renal disease (ESRD) related services (less than full month, per day	1/30 of 90921				.17

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):

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) ÷ ({median pre- + post-service time} x avg. office consult intensity)] = 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: 53.50

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):

CPT Code	CPT Descriptor	RVW
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

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) + ({median pre- − post-service time} x avg. office consult intensity)] = 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):

CPT Code	CPT Descriptor	RVW
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

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) ÷ ({median pre- ÷ post-service time} x avg. office consult intensity)] = 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):

CPT Code	CPT Descriptor	RVW
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:

FINAL RVW = (Hemodialysis RVW value x 0.856) + (Peritoneal RVW value x 0.144)
= (6.92 x 0.856) − (5.00 x 0.144)
= 6.64

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

120
90

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):

CPT Code	CPT Descriptor	RVW

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: _____

RENAL PHYSICIANS ASSOCIATION
1991 MONTHLY CAPITATION PAYMENT (MCP) SURVEY

We need your assistance in completing this brief questionnaire to help RPA define the services that renal physicians provide under the MCP for ESRD patient care. Please indicate which of the following services you provide under the MCP.

1. Intradialytic visit and assessment by Nephrologist — YES ___ NO ___
   a. Is this done at each patient visit to the dialysis facility? — YES ___ NO ___
   b. If no, how many times each month — NUMBER ___
2. Do you assess patients monthly at a location other than dialysis? — YES ___ NO ___
3. Comprehensive history and physical evaluation? — YES ___ NO ___
   a. If yes, how often is this done? (indicate frequency per year) — NUMBER ___
4. Ordering/reassessing the dialysis prescription — YES ___ NO ___
   a. If yes, how often is this done? (indicate frequency per month) — NUMBER ___
5. Ordering/assessing diagnostic tests — YES ___ NO ___
   a. If yes, how often is this done? (indicate frequency per month) — NUMBER ___
6. Ordering therapeutic procedures — YES ___ NO ___
   a. If yes, how often is this done? (indicate frequency per month) — NUMBER ___
7. Review and ordering medications — YES ___ NO ___
   a. If yes, how often is this done? (indicate frequency per month) — NUMBER ___
8. Patient or family telephone conferences — YES ___ NO ___
9. Patient/family management conferences — YES ___ NO ___
10. Patient Care Conferences with other members of health care team — YES ___ NO ___
11. Pre-transplant evaluation of patient — YES ___ NO ___
12. Outpatient assessment and management of failed dialysis access — YES ___ NO ___
13. Inpatient management of failed dialysis access — YES ___ NO ___
    a. If no, do you bill for this inpatient service separately? — YES ___ NO ___
14. Outpatient assessment and management of dialysis access infection — YES ___ NO ___

Please complete the questions on the other side of this sheet.

15. Inpatient management of dialysis access infection YES NO

a. If no, do you bill for this inpatient service separately? YES NO

16. Outpatient assessment/management of non-access infection YES NO

a. If no, do you bill for this outpatient service separately? YES NO

17. Outpatient glycemic control of diabetic dialysis patients YES NO

a. If no, do you bill for this outpatient service separately? YES NO

18. Outpatient management of other diabetic complications YES NO

a. If no, do you bill for this outpatient service separately? YES NO

19. List any service(s) not mentioned above that you provide under the MCP

_____

_____

_____

20. List any service(s) which you exclude from the MCP

_____

_____

_____

MCPSURVY.91

Please fold and tape completed survey with return mailing panel facing out and return to RPA as soon as possible. The postage is prepaid by RPA. Thanks for your help.

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 18143 WASHINGTON, DC

POSTAGE WILL BE PAID BY ADDRESSEE

Renal Physicians Association
1101 Vermont Avenue, NW, Suite 500
Washington, DC 20077-2108

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
MAY 1994

END STAGE RENAL DISEASE SERVICES - TAB Q

Renal Physicians Association

CPT Code	CPT Descriptor	Global Period	RVW Recommendation
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			
90918	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	XXX	14.07
90919	between the second and twelfth birthdays to include monitoring for the adequacy of nutrition, assessment of growth and development, and counseling of parents	XXX	11.06
90920	through age nineteen to include monitoring for the adequancy of nutrition, assessment of growth and development, and counseling of parents	XXX	10.98
90921	for patients twenty years of age and over	XXX	6.64
90922	End stafe renal disease (ESRD) related services (less than full month), per day	XXX	0.22 (1/30 of 90921)

Staff Note: **Recommendations for Monthly Capitation Payment (MCP) Codes for End Stage Renal Disease Patients**

This tab contains a letter to Doctor Rodkey from Thomas Ault at HCFA asking the RUC to develop relative value recommendations for the five CPT codes, 90918-90922, that describe monthly physicians' services provided to ESRD patients. As the letter indicates, nephrologists have been paid an MCP for these services for almost 20 years and, despite repeated requests, Congress has not updated the monthly payment amount of $179 for many years.

In addition, although most ESRD patients are adults, pediatric nephrologists have long argued that more work is involved in the MCP services for pediatric patients (90918-90920) than the more common adult patients (code 90921). The MCP has always been the same for all four codes, however, and one of the issues to be considered by the RUC is whether the work is in fact different, as the attached survey results suggest.

Mr. Ault's letter also mentions that the MCP services were studied during Phase II of the Harvard study and the result on the 1994 Medicare scale is a work value of 1.6. The letter states, "We also understand the RPA's recommended values will be subject to a rigorous multidisciplinary review that will take into consideration the Phase II results." In discussing this request with Doctor Kwass, we believed the specialty recommendations for these services fell into a category similar to the "compelling evidence" category, with the important difference that no relative value has ever been published for these services. According to the RUC procedure allowing a member of the Research Subcommittee to be assigned to work with specialties developing compelling arguments, Doctor Kwass volunteered to assist the RPA and AAP by reviewing their proposed vignettes and other aspects of the survey.

To assist the RUC in considering the work done by Harvard as well as the specialty surveys, information from the Phase II study of these services is provided below. These services were not included in Phases III or IV of the Harvard study, so they have not been through any type of refinement process.

Two vignettes were used in the survey of nephrologists:

1. Monthly global physician services for a chronic hemodialysis patient, dialyzed three times weekly in a facility; services may include seeing the patient and communicating further with the patient, family, and other professionals.

2. Monthly global physician services for a CAPD (chronic ambulatory peritoneal dialysis) patient; services may include seeing the patient and communicating further with the patient, family, and other professionals.

99 physicians responded to vignette 1, and the standard error of the mean was 6.0; 97 physicians responded to vignette 2, and the standard error of the meand was 4.5. These standard errors were at the high end relative to the other nephrology services studied, but were in the lower mid-range of those for all study services: the typical standard error was 7. The standard error of the intraservice time estimates for these two vignettes were even higher, at 9.3 for a mean time of 64.3 minutes for vignette 1 and 6.6 for a mean time of

48.6 minutes for vignette 2. These estimates compare to total service time results from the current RUC survey of code 90921 of 90 minutes and 120 minutes for the two vignettes used in the survey.

The Harvard Phase II report also contains the following report from the Nephrology TCG meeting which appears relevant to consideration of these study results:

> Session 3 Intra-Service Work and Time
> A prolonged discussion occurred about the estimate of intra-work for services P and J, representing monthly capitation payment for hemo- and peritoneal dialysis. It was felt that the period of estimation, one month, was much too long for accurate recall of the services provided, and that there was no consensus within the nephrology community as to what services should be a standard part of monthly care.
>
> Session 4 Pre- and Post-Service Work and Time
> In addition to the problem with servies P and J noted above, the panelists were concerned that these services included a significant component of Pre- and Post-Work, but neither Pre-, Post- or global work were directly estimated. RBRVS staff were reminded that Dr. Diamond had written us previously about the problem of dialysis-related services, that the values for Intra-Work were of dubious merit, and that staff ought seriously to consider convening a group representing clinical nephrologists, RBRVS staff, and perhaps staff of the PPRC in the Fall of 1990 to address this and related issues.

The point raised above regarding a lack of consensus about what services should be a standard part of the MCP appears to have been corrected in the RUC survey. The one-page regulatory language that was attached to Mr. Ault's letter was also attached to the surveys so the respondents would have a common understanding of what was included and excluded from the services being rated.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administration

6325 Security Boulevard
Baltimore, MD 21207

MAR [illegible] 1994

Grant V. Rodkey, M. D.
Chairman
AMA/Specialty Society RVS Update Committee
515 North Street
Chicago, Illinois 60610

Dear Dr. Rodkey:

On behalf of the Health Care Financing Administration (HCFA), I am requesting the assistance of the AMA/Specialty Society RVS Update Committee (RUC) in the development of relative value units for physician work (RVWs) for the monthly physician's services furnished to end stage renal disease patients undergoing dialysis. These services are described by CPT codes 90918 - 90921.

For almost 20 years, nephrologists have been paid a monthly capitation payment (MCP) to cover all professional services related to the treatment of the patient's renal condition except those listed in regulations at 42 CFR 414.314 (copy enclosed). The current average payment of approximately $179 has not been changed for many years in spite of repeated requests for increases from the Renal Physicians Association (RPA).

The MCP services were studied during Phase II of the Harvard Resource Based Relative Value Scale (RBRVS) study. The work value, converted to the 1994 MFS, was 1.6 RVWs. The RPA disputes this value which they believe seriously underestimates the physician work. We believe the value must be given careful consideration since it was based on the responses of approximately 100 practicing nephrologists. These physicians should have been fully aware of the services included under the payment for the MCP since the MCP payment had been in place for many years prior to the survey.

Both HCFA and the RPA now believe the most equitable and appropriate means of resolving our differences is to treat the MCP services like all other physician services and include them under the Medicare Fee Schedule (MFS) for physician services. The RPA's advisor to the RUC is Emil Paganini, M.D. He agrees with the approach of requesting recommended RVWs from the RUC which we believe is the most qualified organization for producing objective estimates of relative physician work. We also understand the RPA's recommended values will be subject to a rigorous multidisciplinary review that will take into consideration the Phase II results.

We would appreciate inclusion of these codes on the RUC calendar for this year so that we may publish interim RVWs this fall. Please advise me of any further information you may require in order to expedite this request.

Sincerely,

Thomas Ault
Director
Bureau of Policy Development

Enclosure

cc:Emil Paganini

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.

(a) *Basic rules.* (1) Under the monthly capitation payment (MCP) method, the carrier pays an MCP amount for each patient, to cover all professional services furnished by the physician, except those listed in paragraph (b) of this section.

(2) The carrier pays the MCP amount, subject to the deductible and coinsurance provisions, either to the physician if the physician accepts assignment or to the beneficiary if the physician does not accept assignment.

(3) The MCP method recognizes the need of maintenance dialysis patients for physician services furnished periodically over relatively long periods of time, and the capitation amounts are consistent with physicians' charging patterns in their localities.

(4) Payment of the capitation amount for any particular month is contingent upon the physician furnishing to the patient all physician services required by the patient during the month, except those listed in paragraph (b) of this section.

(5) Payment for physician administrative services (§414.310) is made to the dialysis facility as part of the facility's composite rate (§413.170) and not to the physician under the MCP.

(b) *Services not included in the MCP.* (1) Services that are not included in the MCP and which may be paid in accordance with the reasonable charge rules set forth in subpart E of part 405 of this chapter are limited to the following:

(i) Administration of hepatitis B vaccine.

(ii) Covered physician services furnished by another physician when the patient is not available to receive, or the attending physician is not available to furnish, the outpatient services as usual (see paragraph (b)(3) of this section).

(iii) Covered physician services furnished to hospital inpatients, including services related to inpatient dialysis, by a physician who elects not to continue to receive the MCP during the period of inpatient stay.

(iv) Surgical services, including declotting of shunts, other than the insertion of catheters for patients on maintenance peritoneal dialysis who do not have indwelling catheters.

(v) Needed physician services that are—

(A) Furnished by the physician furnishing renal care or by another physician;

(B) Not related to the treatment of the patient's renal condition; and

(C) Not furnished during a dialysis session or an office visit required because of the patient's renal condition.

(2) For the services described in paragraph (b)(1)(v) of this section, the following rules apply:

(i) The physician must provide documentation to show that the services are not related to the treatment of the patient's renal condition and that additional visits are required.

(ii) The carrier's medical staff, acting on the basis of the documentation and appropriate medical consultation obtained by the carrier, determines whether additional payment for the additional services is warranted.

(3) The MCP is reduced in proportion to the number of days the patient is—

(i) Hospitalized and the physician elects to bill separately for services furnished during hospitalization; or

(ii) Not attended by the physician or his or her substitute for any reason, including when the physician is not available to furnish patient care or when the patient is not available to receive care.

(c) *Determination of payment amount.* The factors used in determining the MCP are related to program experience and to the charging practices of comparable physicians for comparable services. The factors are re-evaluated periodically on the basis of program experience and may be adjusted, as determined necessary by HCFA, to reflect changes in these charging practices and modes of furnishing services.

(d) *Publication of payment amount.* Revisions to the MCP are published in the FEDERAL REGISTER in accordance with the Department's established rulemaking procedures.

rpa
Renal Physicians Association

[redacted]ident
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Chicago, Illinois

April 26, 1994
VIA FEDERAL EXPRESS

Grant V. Rodkey, M.D.
Chairman
AMA/Specialty Society RVS Update Committee
THE AMERICAN MEDICAL ASSOCIATION
515 North State Street
Chicago, Illinois 60610

Dear Dr. Rodkey:

Per the March 3, 1994 request of Thomas Ault, Director of the Bureau of Policy Development of the Health Care Financing Administration (HCFA), I am, on behalf of the Renal Physicians Association (RPA), herewith submitting RPA's recommended relative value of physician work (RVW) for the CPT codes pertaining to the monthly dialysis care of adult End-Stage Renal Disease patients.

RUC survey and background information is enclosed for the following CPT codes:

90921	**End-Stage Renal Disease (ESRD) related services per full month; for patients twenty years of age and over.**
90922	**End-Stage Renal Disease (ESRD) related services (less than full month), per day.**

RPA hereby requests that these RVW recommendations be considered at the May 12-15, 1994 RUC Meeting in Boston, Massachusetts.

Please contact us if you need additional information.

Sincerely,
FOR THE RENAL PHYSICIANS ASSOCIATION

Emil P. Paganini, M.D., FACP
Past President and RUC Representative

Enclosures

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American
Academy of
Pediatrics

141 Northwest Point Blvd
PO Box 927
Elk Grove Village, IL 60009-0927
Phone 708/228-5005
Fax 708/228-5097

April 21, 1994

Sandy Sherman
Department of Payment Systems
American Medical Association
515 N. State Street
Chicago, IL 60610

Dear Ms. Sherman:

The American Academy of Pediatrics (AAP) and The American Society of Pediatric Nephrology (ASPN) conducted a survey of the End Stage Renal Disease (ESRD) Services for pediatric patients per the request of the HCFA. The AAP took the lead and surveyed 62 AAP and ASPN members. A consensus panel of physicians from both specialty societies and AAP staff convened a conference call to review the survey results and finalize the recommendations. Enclosed are the recommendations for the End Stage Renal Disease (ESRD) Services for pediatric patients (90918-90920).

Regarding the letter from Mr. Alt to Dr. Rodkey, the AAP and ASPN believe the current RVW of 1.6 for the monthly capitation payment severely undervalues the physician work involved in providing care to these critically ill patients, especially for the pediatric services. The AAP and ASPN feel that the Harvard RVW for ESRD Services should be treated with caution because it did not go through a rigorous review process like that performed by the RUC. In addition, the use of a single RVW for five very distinct services is inappropriate.

With regards to the enclosed recommended RVWs, the consensus panel felt that the survey respondents overvalued the ESRD services due to unfamiliarity with the RBRVS fee schedule. Therefore, using the survey median times and the panel's evaluation of intensity of physician work, the panel developed the following formula for calculating the RVW for each code:

[(median intra-service time x critical care intensity) + ({median pre- + post-service time} x avg. office consult intensity)] = RVW.

The panel felt this methodology was appropriate since the intensity of the face-to-face intra-service work of caring for pediatric patients who are 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 American Academy of Pediatrics and The American Society of Pediatric Nephrology would like to thank you for the opportunity to participate in the process for recommending work values for the End Stage Renal Disease Services. If you have any questions about this letter or the enclosed recommendations, please contact me at (213)263-9866, or Kara Taff at (708)981-4325. Thank you.

Sincerely,

Anthony Hirsch, MD (kat)

Anthony Hirsch, MD
AAP RUC Advisor

cc: Arthur Garson, Jr, MD
Richard Tuck, MD
Steven R. Alexander, MD,
Watson C. Arnold, Jr, MD
Eileen D. Brewer, MD
Robert J. Cunningham, MD
Ira Greifer, MD
Julie Ingelfinger, MD
Craig Langman, MD
F. Bruder Stapleton, MD
Kara Taff
Ed Zimmerman

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):

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) + ({median pre- + post-service time} x avg. office consult intensity)] = 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):

CPT Code	CPT Descriptor	RVW
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

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) + ({median pre- + post-service time} x avg. office consult intensity)] = 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):

CPT Code	CPT Descriptor	RVW
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

CPT Code	CPT Descriptor	RVW
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:

[(median intra-service time x critical care intensity) + ({median pre- + post-service time} x avg. office consult intensity)] = 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):

CPT Code	CPT Descriptor	RVW
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:

FINAL RVW = (Hemodialysis RVW value x 0.856) + (Peritoneal RVW value x 0.144)
= (6.92 x 0.856) + (5.00 x 0.144)
= 6.64

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):

CPT Code	CPT Descriptor	RVW

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:

ATTACHMENT 2

NEPHROLOGY

Renal Physicians Association

Reference Services

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
1	99211	Office or other outpatient visit for the evaluation and management of an established patient, that may not require the presence of a physician. Usually, the presenting problem(s) are minimal. Typically, 5 minutes are spent performing or supervising these services. Vignette: Office visit for a 50-year-old female, established patient, seen for her gold injection by the nurse. (Rheumatology)	0.17	XXX
2	99201	Office or other outpatient visit for the evaluation and management of a new 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 problems are self limited or minor. Physicians typically spend 10 minutes face-to-face with the patient and/or family. Vignette: Initial office visit for a 10-year-old male, for limited subungual hematoma not requiring drainage. (Internal Medicine)	0.38	XXX
3	99212	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 problem focused history; a problem focused examination; 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 10 minutes face-to-face with the patient and/or family. Vignette: Office visit for a 10-year-old female, established patient, who has been swimming in a lake, now presents with a one day history of left ear pain with purulent drainage. (Family Medicine)	0.38	XXX
4	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 presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family. Vignette: Office visit for a 55-year-old male, established patient, with hypertension managed by a beta blocker/thiazide regime; now experiencing mild fatigue. (Nephrology)	0.56	XXX

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
5	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. Vignette: Initial office visit for a 13-year-old patient with comedopapular acne of the face unresponsive to over-the-counter medications. (Family Medicine)	0.76	XXX
6	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. Vignette: Office visit for a 32-year-old female, established patient, with large obstructing stone in left mid-ureter, to discuss management options including urethroscopy, with extraction or ESWL. (Urology)	0.95	XXX
7	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. Vignette: Initial office visit for a 33-year-old male with painless gross hematuria without cystoscopy (Internal Medicine)	1.15	XXX
8	90935	Hemodialysis procedure with single physician evaluation	1.19	000
9	36489	Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, over age 2	1.23	000
10	90945	Dialysis procedure other than hemodialysis (eg, peritoneal, hemofiltration), with single physician evaluation	1.24	000
11	49081	Peritoneocentesis, abdominal paracentesis, or peritoneal lavage (diagnostic or therapeutic); subsequent	1.27	000
12	36488	Placement of central venous catheter (subclavian, jugular, or other vein) (eg. for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, age 2 years or under	1.36	000
13	49080	Peritoneocentesis, abdominal paracentesis, or peritoneal lavage (diagnostic or therapeutic); initial	1.36	000

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
14	99215	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 comprehensive history; a comprehensive examination; 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 moderate to high severity. Physicians typically spend 40 minutes face-to-face with the patient and/or family. Vignette 1: Office visit for a 36-year-old, established patient, three months status post transplant, with new onset of peripheral edema, increased blood pressure and progressive fatigue. (Nephrology) Vignette 2: Office visit for a 60-year-old, established patient, with diabetic nephropathy with increasing edema and dyspnea. (Endocrinology)	1.53	XXX
15	99253	Initial inpatient consultation for a new or established 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 55 minutes at the bedside and on the patient's hospital floor or unit. Vignette: Initial hospital consultation of a 33-year-old female, post-abdominal surgery, who now has a fever. (Internal Medicine)	1.58	XXX
16	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. Vignette: Initial office visit for a 17-year-old female with depression. (Internal Medicine)	1.73	XXX
17	59430	Postpartum care only (separate procedure)	2.03	MMM
18	90937	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription	2.09	000
19	90947	Dialysis procedure other than hemodialysis (eg, peritoneal, hemofiltration) requiring repeated evaluations, with or without substantial revision of dialysis prescription	2.12	000

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
20	99244	Office consultation for a new or established 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 60 minutes face-to-face with the patient and/or family. Vignette: Initial office consultation for a 34-year-old male with new onset nephrotic syndrome. (Nephrology)	2.25	XXX
21	99205	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 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 moderate to high severity. Physicians typically spend 60 minutes face-to-face with the patient and/or family. Vignette: Initial office visit for a 34-year-old uremic Tupe-I diabetic patient referred for ESRD modality assessment and planning. (Nephrology)	2.31	XXX
22	36800	Insertion of cannula for hemodialysis, other purpose; vein to vein	2.46	000
23	50200	Renal biopsy; percutaneous, by trocar or needle	2.66	000
24	99255	Initial inpatient consultation for a new or established patient, which requires these three key components: 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 moderate to high severity. Physicians typically spend 110 minutes at the bedside and on the patient's hospital floor or unit. Vignette 1: Initial inpatient consultation for a 75-year-old, admitted to intensive care with acute respiratory distress syndrome, who is hypersensitive, has a moderate metabolic acidosis and a rising serum creatinine. (Nephrology) Vignette 2: Initial hospital consultation for a 66-year-old female, two days post-abdmonimal aneurysm repair, with oliguria and hypertension of one day duration. (Nephrology)	3.17	XXX
25	59425	Antepartum care only; 4-6 visits	4.08	MMM
26	59426	Antepartum care only; 7 or more visits	6.99	MMM
27	36830	Creation of arteriovenous fistula; nonautogenous graft	7.87	090
28	36825	Creation of arteriovenous fistula; autogenous graft	9.46	090

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
29	59400	Routine obstetric care including antepartum care, vaginal delivery (with or without episiotomy, and/or forceps) and postpartum care	21.22	MMM
30	59510	Routine obstetric care including antepartum care, cesarean delivery, and postpartum care	23.93	MMM

*These work RVUs are taken from the Medicare Payment Schedule published in the Federal Register on December 2, 1993.

**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.

Table 1

PEDIATRIC NEPHROLOGY

American Academy of Pediatrics

Reference Services

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
1	99211	Office or other outpatient visit for the evaluation and management of an established patient, that may not require the presence of a physician. Usually, the presenting problem(s) are minimal. Typically, 5 minutes are spent performing or supervising these services.	0.17	XXX
2	36400	Venipuncture, under age 3 years: femoral, jugular or sagittal sinus	0.18	XXX
3	36410	Venipuncture, child over age 3 years or adult, necessitating physician's skill (separate procedure), for diagnostic or therapeutic purposes. Not to be used for routine venipuncture.	0.18	XXX
4	99261	Follow-up inpatient consultation for an established 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 responding inadequately to therapy or has developed a minor complication. Physicians typically spend 10 minutes at the bedside and on the patient's hospital floor or unit.	0.36	XXX
5	99212	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 problem focused history; a problem focused examination: 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 10 minutes face-to-face with the patient and/or family.	0.38	XXX
6	99201	Office or other outpatient visit for the evaluation and management of a new 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 problems are self limited or minor. Physicians typically spend 10 minutes face-to-face with the patient and/or family.	0.38	XXX
7	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 presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.	0.56	XXX

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
8	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.	0.57	XXX
9	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	XXX
10	99262	Follow-up inpatient consultation for an established patient which requires at least two of these three key components: an expanded problem focused interval history; an expanded problem focused 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 patient is responding inadequately to therapy or has developed a minor complication. Physicians typically spend 20 minutes at the bedside and on the patient's hospital floor or unit.	0.78	XXX
11	51000	Aspiration of bladder by needle	0.79	000
12	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.	0.95	XXX
13	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 self limited or minor. Physicians typically spend 30 minutes face-to-face with the patient and/or family.	1.12	XXX

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
14	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	XXX
15	90935	Hemodialysis procedure with single physician evaluation	1.19	000
16	99263	Follow-up inpatient consultation for an established patient which requires at least two of these three key components: a detailed interval history; a detailed examination; 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 patient is unstable or has developed a significant complication or a significant new problem. Physicians typically spend 30 minutes at the bedside and on the patient's hospital floor or unit.	1.21	XXX
17	36489	Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, over age 2	1.23	000
18	90945	Dialysis procedure other than hemodialysis (eg, peritoneal, hemofiltration), with single physician evaluation	1.24	000
19	49081	Peritoneocentesis, abdominal paracentesis, or peritoneal lavage (diagnostic or therapeutic); subsequent	1.27	000
20	36488	Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, age 2 years or under	1.36	000
21	49080	Peritoneocentesis, abdominal paracentesis, or peritoneal lavage (diagnostic or therapeutic); initial	1.36	000
22	99243	Office consultation for a new or established 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 40 minutes face-to-face with the patient and/or family.	1.49	XXX
23	99215	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 comprehensive history; a comprehensive examination; 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 moderate to high severity. Physicians typically spend 40 minutes face-to-face with the patient and/or family.	1.53	XXX

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
24	99253	Initial inpatient consultation for a new or established 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 55 minutes at the bedside and on the patient's hospital floor or unit.	1.58	XXX
25	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	XXX
26	99292	Critical care, evaluation and management of the critically ill or critically injured patient, requiring the constant attendance of the physician; each additional 30 minutes	1.86	XXX
27	90997	Hemoperfusion (eg, with activated charcoal or resin	1.86	000
28	90937	Hemodialysis procedure requiring repeated evaluation(s) with or without substantial revision of dialysis prescription	2.09	000
29	90947	Dialysis procedure other than hemodialysis (eg, peritoneal, hemofiltration) requiring repeated evaluations, with or without substantial revision of dialysis prescription	2.12	000
30	99244	Office consultation for a new or established 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 60 minutes face-to-face with the patient and/or family.	2.25	XXX
31	99205	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 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 moderate to high severity. Physicians typically spend 60 minutes face-to-face with the patient and/or family.	2.31	XXX
32	36800	Insertion of cannula for hemodialysis, other purpose; vein to vein	2.46	000
33	50200	Renal biopsy; percutaneous, by trocar or needle	2.66	000

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
34	99245	Office consultation for a new or established patient, which requires these three key components: 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 self limited or minor. Physicians typically spend 80 minutes face-to-face with the patient and/or family.	2.99	XXX
35	99255	Initial inpatient consultation for a new or established patient, which requires these three key components: 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 moderate to high severity. Physicians typically spend 110 minutes at the bedside and on the patient's hospital floor or unit.	3.17	XXX
36	99291	Critical care, evaluation and management of the critically ill or critically injured patient, requiring the constant attendance of the physician; first hour	3.68	XXX
37	99297	Subsequent NICU care, per day, for the evaluation and management of a critically ill and unstable neonate or infant A critically ill and unstable neonate represents a neonate who is still intubated and requires invasive cardiopulmonary monitoring but whose vital signs are stable; who is not seizing; whose metabolic status is table but who is still NPO and receiving parenteral nutrition and IV medications; and who is not yet over the acute phase of the initial problem. This description represents care provided on dates subsequent to the admission date. Such care includes the folloging, as necessary: ventilatory support and treatment; total parenteral nutrition; invasive or non-invasive electronic monitoring of vital signs; apnea management and/or monitoring of blood gases or oxygen saturation.	3.71	XXX
38	36810	Insertion of cannula for hemodialysis, other purpose; arteriovenous, external (Scribner type)	4.01	000
39	99296	Subsequent NICU care, per day, for the evaluation and management of a critically ill and unstable neonate or infant A critically ill and unstable neonate represents a neonate whose cardiopulmonary and metabolic status is unstable; whose neurologic status may be unstable; who requires frequent ventilator changes, inotropic and chronotropic support; who requires frequent IV changes and whose condition is changing almost minute to minute. Such as infant requires almost constant attention by a physician. This description represents care provided on dates subsequent to the admission date. Such care includes the folloging, as necessary: mechanical ventilation or CPAP; surfactant administration; pharmacologic control of the circulatory system; total parenteral nutrition; seizure management; invasive or non-invasive electronic monitoring of vital signs, and/or monitoring of blood gases or oxygen saturation.	7.46	XXX

Number	Procedure	CPT DESCRIPTOR	1994 RVW*	Global Period**
40	36830	Creation of arteriovenous fistula; nonautogenous graft	7.87	090
41	99295	Initial NICU care, per day, for the evaluation and management of a critically ill neonate or infant This care is provided on the date of admission of a neonate who requires cardiopulmonary monitoring and support. Such care includes the following, as necessary: initiation of mechanical ventilation or continuous positive airway pressure (CPAP); surfactant administration; pharmacologic control of the circulatory system; intravascular fluid administration; transfusion of blood components; vascular punctures; and blood gas interpretation.	14.96	XXX

*These work RVUs are taken from the Medicare Payment Schedule published in the Federal Register on December 2, 1993.

**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.

rpa
Renal Physicians Association

March 31, 1994

Mr. Thomas Ault
Director
Bureau of Policy Development
Health Care Financing Administration
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
6325 Security Boulevard
Baltimore, Maryland 21207

Dear Mr. Ault:

The Renal Physicians Association (RPA) is in receipt of a copy of your letter dated March 3, 1994 to Dr. Grant V. Rodkey, Chairman of the AMA/Specialty Society RVS Update Committee (RUC), regarding HCFA's desire for the RUC to develop relative value units (RVWs) for the physician services performed under the ESRD Program's Monthly Capitation Payment (MCP) for outpatient dialysis. These services are described by CPT codes 90918 - 90922.

Dr. Emil P. Paganini, RPA's representative to the RUC, has formed an RVS Committee which is proceeding with the development of patient vignettes for the physician services provided under the MCP. RPA anticipates surveying a representative sample of its membership within the next several weeks, and presenting its recommendations for RVWs for MCP services to the RUC at the May 12-15, 1994 meeting. As this surveying process continues, however, the RPA Board of Directors has voiced serious concerns with several statements in your March 3rd HCFA letter to the RUC.

Specifically, paragraph 2 states that ". . . nephrologists have been paid a monthly capitation payment (MCP) to cover **all** professional services related to the treatment of the patient's renal condition except those listed in regulations at 42 CFR 414.314 . . ." (emphasis added). The RUC survey of MCP services RPA is now preparing is predicated solely upon those physician services published in RPA's *MCP Description of Services* document (copy enclosed). This MCP description, as HCFA is aware, was developed over a two-year period as a consensus understanding of the RPA membership. This document has been widely distributed to both RPA members and non-member U.S. nephrologists over the past 18 months.

There will be understandable confusion, both among survey participants as well as the RUC, if HCFA intends to include other services related to the patient's renal condition in the MCP bundle of services. Those services are supposed to be excluded from the MCP, according to the original Federal Register regulations published for the ESRD Program in 1973. The RPA, in its *MCP Description of Services* document, has emphasized that these services are not to be considered as part of the work under the MCP. CPT codes and their respective RVWs already exist for all of the physician services RPA has excluded from the MCP in our "bundle" description.

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Therefore, if such a global bundling of **all** renal-related outpatient physician services is HCFA's intent in this conversion of the MCP to the Medicare Fee Schedule, then RPA strongly recommends that the RVWs already established for those heretofore excluded physician services be added to the relative value of physician work developed for the Monthly Capitation Payment by the AMA/ RVS Specialty Society RVS Update Committee.

Furthermore, RPA feels strongly that the prior Harvard estimate of the RVW for the MCP (1.6) grossly underestimates its true value. Although the 100 nephrologists responding to the original survey may have been aware of the "...services included under the payment for the MCP since the MCP payment had been in place many years prior to the survey," the MCP descriptor vignette was unfairly vague and limited in its definition. This clearly led to an underestimate of the RVW. RPA's own data indicates that physicians place a higher (more appropriate) RVW on the MCP when they are aware of the full scope of physician services that are intended to be captured.

Please do not hesitate to contact RPA if we may provide further information.

Sincerely,
FOR THE RENAL PHYSICIANS ASSOCIATION

Derrick L. Latos, M.D., FACP
President

Enclosure

cc (w/encl): ✓ Grant V. Rodkey, M.D.
Chairman
AMA/Specialty Society RVS Update Committee
AMERICAN MEDICAL ASSOCIATION
515 North State Street
Chicago, Illinois 60610

cc (w/o encl): Members of the RPA Executive Committee
Members of the RPA RVS Committee

Staff Note #2: All of the remaining materials in this tab are provided to augment the RUC members' understanding of the work involved in the monthly ESRD services and the basis for the frequency-weighted averages where multiple vignettes were used. These materials were <u>not</u> provided to the survey respondents.

DEFINITION

The Monthly Capitation Payment (MCP) is a capitated payment arrangement developed and implemented by the Health Care Financing Administration (HCFA) to reimburse Nephrologists for the care of patients with End-Stage Renal Disease (ESRD) on dialysis under the Medicare program. This arrangement is a global service payment for outpatient dialysis, and ongoing evaluation and management of dialysis-related problems in these patients on an outpatient basis. While evaluation and management of dialysis-related problems and the metabolic aberrations of ESRD are included in the MCP, non-renal-related and non-renal end organ disease evaluation and management and all non-dialysis procedures are excluded from the MCP and are reimbursable according to the Medicare Fee Schedule (MFS) for the accepted CPT codes for those services.

When these patients require hospitalization in an acute hospital setting, reimbursement of Nephrologists may convert to inpatient reimbursement codes. When patients are hospitalized and Nephrologists are reimbursed according to inpatient reimbursement codes, payment of the MCP is suspended for the period of hospitalization.

The following narrative describes those services which should be provided under the MCP and describes services which are not provided under the MCP.■

SERVICES INCLUDED IN THE MCP

The Nephrologist . . .

1. assesses and determines the need for outpatient chronic dialysis therapy.

2. assesses the need for a specified diet and the need for nutritional supplementation for the control of chronic renal failure and specifies the quantity of total protein, high biologic protein, sodium, potassium, and amount of fluids to be allowed during a given time period. For diabetic patients with chronic renal failure, the prescription usually includes specification of the number of calories in the diet.

SERVICES INCLUDED IN THE MCP

The Nephrologist . . .

3. assesses which mode(s) of chronic dialysis (types of hemodialysis or peritoneal dialysis) are suitable for a given patient and recommends the type(s) of therapy for a given patient. Not all forms of chronic dialysis therapy are suitable for all patients.

4. assesses and determines which type of dialysis access is best suited for a given patient, and arranges for creation of dialysis access.

   When the Nephrologist personally establishes the dialysis access by inserting a temporary dialysis catheter or implanting a permanent dialysis catheter, these procedures are NOT included in the MCP.

5. assesses whether or not the patient meets preliminary criteria as a renal transplant candidate and presents this assessment to the patient and family.

6. prescribes the parameters of intradialytic management.

   For chronic hemodialysis therapies, this includes the type of dialysis access, the type and amount of anticoagulant to be employed, blood flow rates, dialysate flow rate, ultrafiltration rate, dialysate temperature, type of dialysate (acetate versus bicarbonate) and composition of the electrolytes in the dialysate, size of hemodialyzer (surface area) and composition of the dialyzer membrane (Conventional versus High Flux), duration and frequency of treatments, the type and frequency of measuring indices of clearance, and intradialytic medications to be administered.

   For chronic peritoneal dialysis therapies, this includes the type of peritoneal dialysis (such as CAPD, CCPD, etc.), the volume of dialysate, concentration of dextrose in the dialysate, electrolyte composition of the dialysate, duration

SERVICES INCLUDED IN THE MCP

The Nephrologist . . .

of each exchange, and addition of medication to the dialysate, such as heparin, and the type and frequency of measuring indices of clearance. For diabetics, the quantity of insulin to be added to each exchange is prescribed.

7. assesses whether or not the patient has significant renal failure-related anemia, determines the etiology(s) for the anemia based on diagnostic tests, and prescribes therapy for correction of the anemia, such as vitamins, oral or parenteral iron, and hormonal therapy such as erythropoietin.

8. assesses whether or not the patient has hyperparathyroidism and/or renal osteodystrophy secondary to chronic renal failure and prescribes appropriate therapy, such as calcium and phosphate binders for control of hyperphosphatemia.

   Based upon assessment of parahormone levels, serum calcium levels, and evaluation for the presence of metabolic bone disease, the Nephrologist determines whether oral or parenteral therapy with Vitamin D or its analogs is indicated, and prescribes the appropriate therapy.

   Based upon assessment and diagnosis of aluminum bone disease, the Nephrologist may prescribe specific chelation therapy with desferoxamine and the use of hemoperfusion for removal of aluminum and the chelator.

9. assesses whether or not the patient has dialysis-related arthropathy or neuropathy and adjusts the patient's prescription accordingly, and refers the patient for any additional needed specialist evaluation and management of these end-organ problems.

10. assesses whether or not the patient has fluid overload resulting from renal failure and establishes an estimated "ideal (dry) weight." The Nephrologist determines the need for fluid removal independent of the dialysis prescription and implements such measures when indicated.

SERVICES INCLUDED IN THE MCP

The Nephrologist . . .

11. determines the need for and prescribes antihypertensive medications and their timing relative to dialysis when the patient is hypertensive in spite of correction of fluid overload.

12. periodically reviews the dialysis records to ascertain whether or not the patient is receiving the prescribed amount of dialysis and orders indices of clearance, such as urea kinetics, in order to ascertain whether or not the dialysis prescription is producing adequate dialysis. If the indices of clearance suggest that the prescription requires alteration, the Nephrologist orders changes in the hemodialysis prescription, such as blood flow rate, dialyzer surface area, dialysis frequency, and/or dialysis duration (length of treatment).

    For peritoneal dialysis patients, the Nephrologist may order changes in the volume of dialysate, dextrose concentration of the dialysate, and duration of the exchanges.

13. periodically visits the patient during dialysis to ascertain whether or not the dialysis is working well and whether or not the patient is tolerating the procedure well (physiologically and psychologically). During these visits, the Nephrologist determines whether or not alteration in any aspect of a given patient's prescription is indicated, such as changes in the estimate of the patient's dry weight, and reviews the treatment with the nurse or technician performing the therapy. The frequency of these visits will vary depending upon the patient's medical status, complicating conditions, and other determinants. (Please refer to **Appendix A**).

14. performs periodic physical assessments, based upon the patient's clinical stability, in order to determine the necessity for alterations in various aspects of the patient's prescription. Similarly, the Nephrologist reviews the results of periodic laboratory testing in order to determine the need for alterations in the patient's

SERVICES INCLUDED IN THE MCP

The Nephrologist . . .

prescription, such as changes in the amount and timing of phosphate binders or dose of erythropoietin.

15. periodically assesses the adequacy and function of the patient's dialysis access. (Please refer to **Appendix B**).

16. assesses patients on peritoneal dialysis for evidence of peritonitis and orders appropriate tests and antibiotic therapy.

17. periodically reviews and updates the patient's short-term and long-term care plans with staff.

18. coordinates and directs the care of patients by other professional staff, such as Dieticians and Social Workers.

19. completes or certifies a multitude of forms and prescriptions that are required, but are not otherwise reimbursed, for the dialysis patient. Examples include durable equipment prescriptions, home health care services, and other medical necessity certifications. ■

SERVICES THAT ARE NOT INCLUDED IN THE MCP

1. All procedures are excluded; examples are as follows:
   a. Temporary hemodialysis catheter placement
   b. Permanent hemodialysis catheter placement
   c. Temporary peritoneal dialysis catheter placement
   d. Permanent peritoneal dialysis catheter placement
   e. Repair of existing dialysis accesses
   f. Placement of catheter(s) for thrombolytic therapy
   g. Thrombolytic therapy (Systemic, regional or access catheter only; hemodialysis or peritoneal dialysis)
   h. Thrombectomy of clotted cannula

SERVICES THAT ARE NOT INCLUDED IN THE MCP

   i. Arthrocentesis
   j. Bone marrow aspiration
   k. Bone marrow biopsy

2. Interpretation of tests which have a professional component are excluded; examples are as follows:
   a. Electrocardiograms (12 lead, Holter monitor, Stress Tests, etc.)
   b. Echocardiograms
   c. 24-hour blood pressure monitor
   d. Nerve conduction velocity and EMG studies
   e. Flow doppler studies
   f. Bone densitometry studies
   g. Biopsies
   h. Spirometry and complete pulmonary function tests

3. Evaluation for renal transplantation is excluded. While the Nephrologist assesses whether or not the patient meets preliminary criteria as a renal transplant candidate under the MCP, the complete evaluation for renal transplantation is not included in the MCP.

4. Evaluation of potential living transplant donors is excluded.

5. The training of patients to perform home hemodialysis, self hemodialysis, and the various forms of self peritoneal dialysis are excluded.

6. The general medical non-dialysis-related management of Diabetes Mellitus is excluded.

7. The general non-renal-related (non-dialysis) evaluation and management of all dialysis patients is excluded.

8. The Nephrologist may elect not to include acute hospital care services in the MCP. If this election is made, the MCP is suspended for the period of time that the patient is receiving care under hospital codes.

9. All physician services that antedate the initiation of outpatient dialysis are excluded. ■

APPENDIX A
VISIT FREQUENCY UNDER THE MONTHLY CAPITATION PAYMENT (MCP)

The RPA has examined the question of whether or not it is appropriate to define a minimum visit frequency for the MCP. For other existing global service payments, such as surgeries, there is no minimum visit frequency defined. After careful analysis, it was apparent that the frequency of visits by a Nephrologist to see a patient during dialysis therapy will vary depending upon the patient's medical status, complicating conditions, and other determinants. It is also apparent that the best judge of the patient's need for follow-up assessments is the attending Nephrologist. Thus, the RPA has determined that the specification of a minimum visit frequency is inappropriate and fails to acknowledge the importance of the Nephrologist's clinical judgment.

For those physicians desiring guidance concerning the frequency of visits with their dialysis patients, the following recommendations are made. For patients receiving hemodialysis in a dialysis unit, visits should usually be done one time per week. For patients on various forms of home dialysis, a physician visit with the patient should usually be done one time per month. Depending on clinical circumstances, the frequency of visits may need to be more or less often.■

APPENDIX B
DETAILED EXAMPLES OF NEPHROLOGIST SERVICES PROVIDED FOR PATIENT'S DIALYSIS ACCESS UNDER THE MONTHLY CAPITATION PAYMENT (MCP)

The specific details of each aspect of the services included within the MCP bundle of services is beyond the scope of the "Description of Services" document. This appendix provides more detailed examples of the services provided when the nephrologist periodically assesses the adequacy and function of the patient's dialysis access. (See Description of Services #15).

For temporary or permanent hemodialysis catheters, this includes confirmation of proper function of the "arterial" and "venous" lumens of the catheter. If the "arterial" lumen does not permit adequate aspiration blood flow rates or the "venous" lumen demonstrates occlusion or elevated pressures, the Nephrologist orders appropriate

APPENDIX B (continued)

aspiration and/or flushing of the catheter. If it becomes necessary for the Nephrologist to instill thrombolytic enzymes, such as urokinase, or to replace the catheter, these services are **NOT** included in the MCP. The Nephrologist also assesses the exit site to ascertain whether or not there is evidence of exit site inflammation and/or infection. If evidence of infection is identified, the Nephrologist orders appropriate cultures, catheter care or removal and appropriate antibiotic therapy.

For hemodialysis arteriovenous shunts, such as Scribner or Thomas shunts, the Nephrologist orders appropriate aspiration and/or flushing of the cannula. If it becomes necessary for the Nephrologist to perform a thrombectomy using a balloon-tipped catheter, such as a Fogarty embolectomy catheter, or to instill a thrombolytic enzyme, such as urokinase, these services are **NOT** included in the MCP.

For a hemodialysis arteriovenous fistula or subcutaneous graft fistula, this consists of evaluation of blood flow rates and ascertaining whether or not there is evidence of the presence of elevated intradialytic "venous" pressures which would suggest the development of outflow stenosis. The Nephrologist also assesses whether or not the fistula demonstrates signs of infection or occlusion along its course. If there is evidence of infection, the Nephrologist orders appropriate cultures, antibiotics and surgical consultation. If there is evidence of occlusion, the Nephrologist may choose to open the occluded vessel with thrombolytic therapy or may seek consultation for surgical thrombectomy and possible revision or replacement. If the Nephrologist places a catheter in the occluded fistula for thrombolytic therapy, this is **NOT** included in the MCP.

For hemodialysis accesses where abnormal amounts of blood recirculation are suspected, the Nephrologist orders appropriate studies to determine the amount of recirculation.

For peritoneal dialysis catheters, the Nephrologist assesses the inflow and outflow of the catheter and inspects the exit site for evidence of inflammation and/or inflection. If there are signs of infection, appropriate cultures, antibiotics and surgical revision or replacement of the catheter is ordered. If the Nephrologist performs thrombolytic therapy, surgical revision, removal or replacement procedures on the dialysis catheter, this is **NOT** included in the MCP.■

Description of Services
Monthly Capitation Payment (MCP)
for Pediatric Dialysis Patients

Definition:

The Monthly Capitation Payment (MCP) is a capitated payment arrangement developed and implemented by the Health Care Financing Administration (HCFA) to reimburse Nephrologists for the care of patients with End-State Renal Disease (ESRD) on dialysis under the Medicare program. This arrangement is a global service payment for outpatient dialysis, and ongoing evaluation and management of dialysis related problems in these patients on an outpatient basis. While evaluation and management of dialysis related problems and the metabolic aberrations of ESRD are included in the MCP, non-renal-related and non-renal end organ disease evaluation and management and all non-dialysis procedures are excluded from the MCP and are reimbursable according to the Medicare Fee Schedule (MFS) for the accepted CPT codes for those services.

When these patients require hospitalization in an acute hospital setting, reimbursement of Nephrologists may convert to inpatient reimbursements codes. When patients are hospitalized and Nephrologists are reimbursed according to inpatient reimbursement codes, payment under the MCP is suspended for the period of hospitalization.

The following narrative describes those services which should be provided under the MCP and describes services which are not provided under the MCP.

SERVICES INCLUDED IN THE MCP

- For patients under 2 years of age: (CPT Code 90918):

The Nephrologist....

1. Assesses and determines the need for outpatient chronic dialysis therapy.

2. Assesses the need for a specified diet and the need for nutritional supplementation for the control of chronic renal failure and specifies the quantity of total protein, high biologic protein, sodium, potassium, and amount of fluids to be allowed during a given time period. This assessment includes the determination of the route of nutritional supplementation, whether by ad-lib feedings, nasogastric tube, gastrostomy, transpyloric tube and whether feedings will be continuous via a feeding pump or intermittent bolus. The optimal infant formula must be designed with regard to protein, sodium, fat and carbohydrate additives. Special attention is paid to daily formula volume in order to maintain euvolemia. Both hyper and hypokalemia are special risks in infants. Assessment and treatment of vomiting, delayed gastric emptying and gastroesophageal reflux is required. Sodium supplementation is required in the majority of these patients to replace urinary and dialysate sodium losses. Dietary prescriptions must include a consideration of trace mineral and water soluble vitamin supplements. Assessment includes evaluation of complications associated with forced enteral feeding including dentition abnormalities, difficulties with self alimentation, and future speech impediments.

3. Assesses which mode(s) of chronic dialysis (types of hemodialysis or peritoneal dialysis) are suitable for a given patient and recommends the type(s) of therapy for a given patient. Not all forms of chronic dialysis therapy are suitable for all patients. Special attention must be placed on family dynamics and resources in order to determine the optimal dialytic modality for this age group. Congenital anomalies are also taken into consideration in the choice of dialysis modality.

4. Assesses and determines which type of dialysis access is best suited for a given patient. and arranges for creation for dialysis access. Urinary tract diversions are common in this age group and must be considered in decisions regarding peritoneal dialysis access. The need for central venus access must be considered in many infants.

   When the Nephrologist personally establishes the dialysis access by inserting a temporary dialysis catheter or implanting a permanent dialysis catheter, these procedures are NOT included in the MCP.

5. Assesses whether or not the patient meets primary criteria as a renal transplant candidate and presents this assessment to the patient and family. Timing of transplantation requires assessment of patient size, stability on dialysis, growth and development status. Extensive discussions with parents are required in this age group in which live related donor (usually a parent) is the most common transplant option.

6. Prescribes the parameters of intradialytic management.

   For chronic hemodialysis therapies, this includes the type of dialysis access, single needle dialysis, the type and amount of anti-coagulant to be employed, blood flow rates, dialysate flow rate, ultrafiltration rate, dialysate temperature, type of dialysate and composition of the electrolytes in the dialysate, size of hemodialyzer (surface area), extracorporeal circuit volume. and composition of the dialyzer membrane (conventional vs high flux), duration and frequency of treatments, the type and frequency of measuring indices of clearance, and intradialytic medications to be administered.

   For chronic peritoneal dialysis therapies, this includes the type of peritoneal dialysis (such CAPD, CCPD, NIPD, etc.), the volume of dialysate exchange, concentration of dextrose in the dialysate, electrolyte composition of the dialysate, duration of each exchange, and addition of medications to the dialysate, such as heparin, and the type and frequency of measuring indices of clearance.

   Reassessment of the dialysis prescription must be performed every one to four weeks because of the rapid rate of change in body composition and body size in this age group.

7. Assesses whether or not the patient has significant renal failure -related anemia, determines the etiology for the anemia based on diagnostic tests, and prescribes therapy for correction of the anemia, such as vitamins, oral or parental iron, and hormonal therapy such as erythropoietin.

8. Assesses whether or not the patient has hyperparathyroidism and/or renal osteodystrophy secondary to chronic renal failure and prescribes appropriate therapy, such as calcium and phosphate binders for control of hyperphosphatemia.

Based upon assessment of parathyroid hormone levels, serum calcium levels, and evaluation for the presence of metabolic bone disease, the Nephrologist determines whether parenteral or oral therapy with vitamin D or its analogs is indicated, and prescribes the appropriate therapy.

Bone deformities and fractures with the subsequent potential for orthopedic surgery are the most serious complications of renal bone disease in this age group. Serum parathyroid hormone levels are assessed at least every three months and radiological skeletal evaluation at least every six months.

9. Assesses whether or not the patient has fluid overload resulting from renal failure and establishes an estimated "ideal dry weight". The Nephrologist determines the need for fluid removal independent of the dialysis prescription and implements such measures when indicated. The potential for hypovolemia due to sodium wasting in this age group requires assessment of the need for sodium supplementation. The dialysis prescription and feeding schedule must be coordinated to avoid hypo- or hypervolemia in infants receiving controlled enteral nutrition (tube feeding).

10. Determines the need for and prescribes antihypertensive medications and their timing relative to dialysis when the patient is hypertensive in spite of correction of fluid overload.

11. Periodically reviews the dialysis records to ascertain whether or not the patient is receiving the prescribed amount of dialysis and orders indices of clearance, such as urea kinetics, in order to ascertain whether or not the dialysis prescription is producing adequate dialysis. If the indices of clearance suggest that the prescription requires alteration, the Nephrologist orders changes in the hemodialysis prescription such as blood flow rate, dialyzer surface area, dialysis frequency, and or dialysis duration (length of treatment).

For peritoneal dialysis patients, the Nephrologist may order changes in the volume of dialysate exchange, dextrose concentration of the dialysate, and number of daily exchanges.

Assessment of growth and neurological development are used in this age group to help determine the adequacy of the dialysis prescription.

12. Periodically visits the patients during hemodialysis or sees the peritoneal dialysis patient in the out patient setting, to ascertain whether or not the dialysis is working well and whether or not the patient is tolerating the procedure well (physiologically and psychologically). During these visits, the Nephrologist determines whether or not alteration of any aspect of a given patient's prescription is indicated, such as changes in the estimate of the patient's dry weight and reviews the treatment with the hemodialysis nurse, or peritoneal dialysis nurse, and family.. The frequency of these visits will vary depending upon the patient's medical status, complicating conditions and other determinants, but in this age group frequent assessment by the Nephrologist is required.

13. Performs periodic physical assessments, based upon the patient's clinical stability in order to determine the necessity for alteration in various aspects of the patient's prescription. Similarly, the Nephrologist reviews the results of periodic laboratory testing in order to determine the need for alterations in the patient's prescription, such as changes in the amount and timing of phosphate binders or dose of erythropoietin.

    In this age group frequent laboratory and physical assessment by the Nephrologist is required because of the relatively rapid changes in body composition and the complexity of nutritional and dialytic therapy.

14. Periodically assesses the adequacy and function of the patient's dialysis access.

15. Assesses patients on peritoneal dialysis for evidence of peritonitis and orders appropriate tests and antibiotic therapy. This assessment includes the possible need for hospitalization, intravenous antibiotics versus intra peritoneal antibiotics and the need for additional nutritional supplementation during peritonitis episodes.

16. Periodically reviews and updates the patient's short-term and long-term care plans with staff.

17. Coordinates and directs the care of patients and their families by other professional staff such as dieticians, social workers, physical therapists, speech therapists, family therapists, child life therapists, developmental therapist, chaplains, financial counselors, home health care agencies and visiting nurses.

18. Completes or certifies a multitude of forms and prescriptions that are required, but are not otherwise reimbursed for the dialysis patient. Examples include durable equipment prescriptions, home health care services, and other medical necessity certifications.

19. Performs at least monthly assessments of growth and anthropomorphic parameters, such as skin fold thickness, mid-arm circumference, head circumference, height, weight, and standard deviation scores, using standard growth charts derived from measurements of normal healthy children. Interpretation of these parameters may result in changes in nutritional, dialytic, hormonal, or other interventions.

20. Determines the need for periodic assessment of neurological development, the results of which may produce modifications in therapy and for early childhood intervention.

21. Spends extensive amounts of time in direct counseling with the family in order to assess the impact of the disease and its therapy on the family, including parents, the patient and siblings.

22. Assesses and manages mechanical complications related to peritoneal dialysis such as hernias and leaks, adjusting dialytic therapy and determines optimum timing for surgical repair.

23. Assesses need for intravenous gammaglobulin therapy in those infants with frequent infections and/or documented hypo gammaglobulinemia.

24. Assesses the need for recombinant human growth hormone therapy.

25. Immunizations.

• For children between the second and 12th birthdays (CPT Code 90919):

The Nephrologist....

1. Assesses and determines the need for outpatient chronic dialysis therapy.

2. Assesses the need for a specified diet and the need for nutritional supplementation for the control of chronic renal failure and specifies the quantity of total protein, high biologic protein, sodium, potassium, and amount of fluids to be allowed during a given time period. This assessment includes the determination of the route of nutritional supplementation, whether by ad-lib feedings, nasogastric tube, gastrostomy, transpyloric tube and whether feedings will be continuous via a feeding pump or intermittent bolus. Assessment and treatment of vomiting, delayed gastric emptying and gastroesophageal reflux is required. Sodium supplementation is required in many of these patients to replace urinary and dialysate sodium losses. Dietary prescriptions must include a consideration of trace mineral and water soluble vitamin supplements. Assessment includes evaluation of complications associated with forced enteral feeding including dentition abnormalities, difficulties with self alimentation, and speech impediments.

3. Assesses which mode(s) of chronic dialysis (types of hemodialysis or peritoneal dialysis) are suitable for a given patient and recommends the type(s) of therapy for a given patient. Not all forms of chronic dialysis therapy are suitable for all patients. Special attention must be placed on family dynamics and resources in order to determine the optimal dialytic modality for this age group. Congenital anomalies are also taken into consideration in the choice of dialysis modality.

4. Assesses and determines which type of dialysis access is best suited for a given patient, and arranges for creation for dialysis access. Urinary tract diversions must be considered in decisions regarding peritoneal dialysis access.

   When the Nephrologist personally establishes the dialysis access by inserting a temporary dialysis catheter or implanting a permanent dialysis catheter, these procedures are NOT included in the MCP.

5. Assesses whether or not the patient meets primary criteria as a renal transplant candidate and presents this assessment to the patient and family. Timing of transplantation requires assessment of patient size, stability on dialysis, growth and development status. Extensive discussions with parents are required in this age group in which live related donor (usually a parent) is the most common transplant option.

6. Prescribes the parameters of intradialytic management.

For chronic hemodialysis therapies, this includes the type of dialysis access, single needle dialysis, the type and amount of anti-coagulant to be employed, blood flow rates, dialysate flow rate, ultrafiltration rate, dialysate temperature, type of dialysate and composition of the electrolytes in the dialysate, size of hemodialyzer (surface area), extracorporeal circuit volume, and composition of the dialyzer membrane (conventional vs high flux), duration and frequency of treatments, the type and frequency of measuring indices of clearance, and intradialytic medications to be administered.

For chronic peritoneal dialysis therapies, this includes the type of peritoneal dialysis (such CAPD, CCPD, NIPD, etc.), the volume of dialysate exchange, concentration of dextrose in the dialysate, electrolyte composition of the dialysate, duration of each exchange, and addition of medications to the dialysate, such as heparin, and the type and frequency of measuring indices of clearance.

7. Assesses whether or not the patient has significant renal failure -related anemia, determines the etiology for the anemia based on diagnostic tests, and prescribes therapy for correction of the anemia, such as vitamins, oral or parental iron, and hormonal therapy such as erythropoietin.

8. Assesses whether or not the patient has hyperparathyroidism and/or renal osteodystrophy secondary to chronic renal failure and prescribes appropriate therapy, such as calcium and phosphate binders for control of hyperphosphatemia.

Based upon assessment of parathyroid hormone levels, serum calcium levels, and evaluation for the presence of metabolic bone disease, the Nephrologist determines whether parenteral or oral therapy with vitamin D or its analogs is indicated, and prescribes the appropriate therapy.

Bone deformities and fractures with the subsequent potential for orthopedic surgery are the most serious complications of renal bone disease in this age group. Serum parathyroid hormone levels are assessed at least every three months and radiological skeletal evaluation at least every six months. Hypophosphatemia must also be prevented to avoid the development of rickets in rapidly growing children.

9. Assesses whether or not the patient has fluid overload resulting from renal failure and establishes an estimated "ideal dry weight". The Nephrologist determines the need for fluid removal independent of the dialysis prescription and implements such measures when indicated. The potential for hypovolemia due to sodium wasting in this age group requires assessment of the need for sodium supplementation. The dialysis prescription and feeding schedule must be coordinated to avoid hypo- or hypervolemia in children receiving controlled enteral nutrition (tube feeding).

10. Determines the need for and prescribes antihypertensive medications and their timing relative to dialysis when the patient is hypertensive in spite of correction of fluid overload.

11. Periodically reviews the dialysis records to ascertain whether or not the patient is receiving the prescribed amount of dialysis and orders indices of clearance, such as urea kinetics, in order to ascertain whether or not the dialysis prescription is producing adequate dialysis. If the indices of clearance suggest that the prescription requires alteration, the Nephrologist orders changes in the hemodialysis prescription such as blood flow rate, dialyzer surface area, dialysis frequency, and or dialysis duration (length of treatment).

    For peritoneal dialysis patients, the Nephrologist may order changes in the volume of dialysate exchange, dextrose concentration of the dialysate, and number of daily exchanges.

    Assessment of growth and school performance are used to help determine the adequacy of the dialysis prescription.

12. Periodically visits the patient during hemodialysis or sees the peritoneal dialysis patient in the outpatient setting, to ascertain whether or not the dialysis is working well and whether or not the patient is tolerating the procedure well (physiologically and psychologically). During these visits, the Nephrologist determines whether or not alteration of any aspect of a given patient's prescription is indicated, such as changes in the estimate of the patient's dry weight and reviews the treatment with the hemodialysis nurse, or peritoneal dialysis nurse, and family.

    The frequency of these visits will vary depending upon the patient's medical status, complicating conditions and other determinants, but in this age group frequent assessment by the Nephrologist is required.

13. Performs periodic physical assessments, based upon the patient's clinical stability in order to determine the necessity for alteration in various aspects of the patient's prescription. Similarly, the Nephrologist reviews the results of periodic laboratory testing in order to determine the need for alterations in the patient's prescription, such as changes in the amount and timing of phosphate binders or dose of erythropoietin.

14. Periodically assesses the adequacy and function of the patient's dialysis access.

15. Assesses patients on peritoneal dialysis for evidence of peritonitis and orders appropriate tests and antibiotic therapy. This assessment includes the possible need for hospitalization, intravenous antibiotics versus intra peritoneal antibiotics and the need for additional nutritional supplementation during peritonitis episodes.

16. Periodically reviews and updates the patient's short-term and long-term care plans with staff.

17. Coordinates and directs the care of patients and their families by other professional staff such as dieticians, social workers, physical therapists, speech therapists, family therapists, child life therapists, developmental therapists, school teachers and counselors, chaplains, financial counselors, home health care agencies and visiting nurses.

18. Completes or certifies a multitude of forms and prescriptions that are required, but are not otherwise reimbursed for the dialysis patient. Examples include durable equipment prescriptions, home health care services, and other medical necessity certifications.

19. Assesses the need for recombinant human growth hormone therapy.

20. Performs at least monthly assessments of growth and anthropomorphic parameters. such as skin fold thickness, mid arm circumference, head circumference. height, weight, and standard deviation scores, using standard growth charts derived from measurements of normal healthy children. Interpretation of these parameters may result in changes in nutritional, dialytic. hormonal, or other interventions.

21. Determines the need for periodic assessment of neurological development, the results of which may produce modifications in therapy or psychological, school or developmental services.

22. Spends extensive amounts of time in direct counseling with the family in order to assess the impact of the disease and its therapy on the family, including parents, the patient and siblings.

23. Communicates with the child's school teacher, school counselor, school nurse, and coaches regarding integration of the child into normal childhood activities outside the home.

24. Immunizations.

• For pediatric patients 12 to 19 years of age (90920):

The Nephrologist ...

1. Assesses and determines the need for outpatient chronic dialysis therapy.

2. Assesses the need for a specified diet and the need for nutritional supplementation for the control of chronic renal failure and specifies the quantity of total protein, high biologic protein, sodium, potassium, and amount of fluids to be allowed during a given time period.

3. Assesses which mode(s) of chronic dialysis (types of hemodialysis or peritoneal dialysis) are suitable for a given patient and recommends the type(s) of therapy for a given patient. Not all forms of chronic dialysis therapy are suitable for all patients. Special attention must be placed on family dynamics and resources in order to determine the optimal dialytic modality for this age group. Congenital anomalies are also taken into consideration in the choice of dialysis modality.

4. Assesses and determines which type of dialysis access is best suited for a given patient, and arranges for creation for dialysis access. Urinary tract diversions must be considered in decisions regarding peritoneal dialysis access.

When the Nephrologist personally establishes the dialysis access by inserting a temporary dialysis catheter or implanting a permanent dialysis catheter, these procedures are NOT included in the MCP.

5. Assesses whether or not the patient meets preliminary criteria as a renal transplant candidate and presents this assessment to the patient and family. Special consideration regarding compliance with the transplant medical regimen and the effects of transplantation and immunosuppression therapy on body image in the adolescent patient influence this process.

6. Prescribes the parameters of intradialytic management.

   For chronic hemodialysis therapies, this includes the type of dialysis access, the type and amount of anti-coagulant to be employed, blood flow rates, dialysate flow rate, ultrafiltration rate, dialysate temperature, type of dialysate and composition of the electrolytes in the dialysate, size of hemodialyzer (surface area) extracorporeal circuit volume, and composition of the dialyzer membrane (conventional vs high flux), duration and frequency of treatments, the type and frequency of measuring indices of clearance, and intradialytic medications to be administered.

   For chronic peritoneal dialysis therapies, this includes the type of peritoneal dialysis (such CAPD, CCPD, NIPD, etc.), the volume of dialysate exchange, concentration of dextrose in the dialysate, electrolyte composition of the dialysate, duration of each exchange, and addition of medications to the dialysate, such as heparin, and the type and frequency of measuring indices of clearance.

7. Assesses whether or not the patient has significant renal failure -related anemia, determines the etiology for the anemia based on diagnostic tests, and prescribes therapy for correction of the anemia, such as vitamins, oral or parental iron, and hormonal therapy such as erythropoietin.

8. Assesses whether or not the patient has hyperparathyroidism and/or renal osteodystrophy secondary to chronic renal failure and prescribes appropriate therapy, such as calcium and phosphate binders for control of hyperphosphatemia.

   Based upon assessment of parathyroid hormone levels, serum calcium levels, and evaluation for the presence of metabolic bone disease, the Nephrologist determines whether parenteral or oral therapy with vitamin D or its analogs is indicated, and prescribes the appropriate therapy.

   Bone deformities and fractures with the subsequent potential for orthopedic surgery are serious complications of renal bone disease in pediatric patients. Serum parathyroid hormone levels are assessed at least every three months and radiological skeletal evaluation at least every six to twelve months. Slipped capital femoral epiphyses and avascular necrosis with subsequent potential for orthopedic surgery require careful monitoring in this age group.

9. Assesses whether or not the patient has fluid overload resulting from renal failure and establishes an estimated "ideal dry weight". The Nephrologist determines the need for fluid removal independent of the dialysis prescription and implements such measures when indicated.

10. Determines the need for and prescribes antihypertensive medications and their timing relative to dialysis when the patient is hypertensive in spite of correction of fluid overload.

11. Periodically reviews the dialysis records to ascertain whether or not the patient is receiving the prescribed amount of dialysis and orders indices of clearance, such as urea kinetics, in order to ascertain whether or not the dialysis prescription is producing adequate dialysis. If the indices of clearance suggest that the prescription requires alteration, the Nephrologist orders changes in the hemodialysis prescription such as blood flow rate, dialyzer surface area, dialysis frequency, and or dialysis duration (length of treatment).

    For peritoneal dialysis patients, the Nephrologist may order changes in the volume of dialysate exchange, dextrose concentration of the dialysate, and number of daily exchanges.

12. Periodically visits the patient during hemodialysis or sees the peritoneal dialysis patient in the out patient setting, to ascertain whether or not the dialysis is working well and whether or not the patient is tolerating the procedure well (physiologically and psychologically). During these visits, the Nephrologist determines whether or not alteration of any aspect of a given patient's prescription is indicated, such as changes in the estimate of the patient's dry weight and reviews the treatment with the hemodialysis nurse, or peritoneal dialysis nurse, and family. The frequency of these visits will vary depending upon the patient's medical status, complicating conditions and other determinants.

13. Performs periodic physical assessments, based upon the patient's clinical stability in order to determine the necessity for alteration in various aspects of the patient's prescription. Similarly, the Nephrologist reviews the results of periodic laboratory testing in order to determine the need for alterations in the patient's prescription, such as changes in the amount and timing of phosphate binders or dose of erythropoietin.

14. Periodically assesses the adequacy and function of the patient's dialysis access.

15. Assesses patients on peritoneal dialysis for evidence of peritonitis and orders appropriate tests and antibiotic therapy. This assessment includes the possible need for hospitalization, intravenous antibiotics versus intra peritoneal antibiotics and the need for additional nutritional supplementation during peritonitis episodes.

16. Periodically reviews and updates the patient's short-term and long-term care plans with staff.

17. Coordinates and directs the care of patients and their families by other professional staff such as dieticians, social workers, physical therapists, speech therapists, family therapists, child life therapists, school teachers and counselors, chaplains, financial counselors, home health care agencies, and visiting nurses.

18. Completes or certifies a multitude of forms and prescriptions that are required, but are not otherwise reimbursed for the dialysis patient. Examples include durable equipment prescriptions, home health care services, and other medical necessity certifications and school forms.

19. Performs at least monthly assessments of growth and anthropomorphic parameters, such as skin fold thickness, mid-arm circumference, height, weight and standard deviation scores for height and weight, using standard growth charts derived from measurements of normal healthy children. Interpretation of these parameters may result in changes in nutritional, dialytic, hormonal, or other interventions. This assessment includes Tanner Staging of pubertal development after age 10 - 11 years.

    In this age group of puberty and the need for endocrinologic consultation must be assessed by the Nephrologist.

20. Determines the need for periodic assessment of neurological development and school performance, the results of which may produce modifications in therapy or psychological, school or developmental services.

21. Spends extensive amounts of time in direct counseling with the family in order to assess the impact of the disease and its therapy on the family, including parents, the patient and siblings.

22. Communicates on a regular basis with the child's school teacher, school counselor, nurse and coaches regarding integration of the child into normal childhood activities outside the home.

23. Assesses the adolescent's ability to adhere independently to the dialysis and medication regimen and compliance with therapeutic regimens.

24. Directs the education of the adolescent in the effects of renal disease on reproductive potential and sexuality.

25. Assesses the need for referral for vocational rehabilitation and career planning.

26. Determines the timing of the transfer to an adult dialysis unit and counsels the patient and family to ease this transition.

27. Assesses the need for recombinant human growth hormone therapy.

28. Assesses immunization status, timing, injections and status of childhood diseases such as chickenpox and mononucleosis.

SERVICES THAT ARE NOT INCLUDED IN THE MCP

1. All procedures are excluded; examples are as follows:

   a. Temporary hemodialysis catheter placement
   b. Permanent hemodialysis catheter placement
   c. Temporary peritoneal dialysis catheter placement
   d. Permanent peritoneal dialysis catheter placement
   e. Repair of existing dialysis accesses
   f. Placement of catheter(s) for thrombolytic therapy
   g. Thrombolytic therapy (Systemic, regional or access catheter only; hemodialysis or peritoneal dialysis)
   h. Thrombectomy of clotted cannula
   i. Arthrocentesis
   j. Bone marrow aspiration
   k. Bone marrow biopsy
   l. Starting IVs at any age or drawing blood for tests.

2. Interpretation of tests which have a professional component are excluded; examples are as follows:

   a. Electrocardiograms (12 lead, Holter monitor, Stress Tests, etc.)
   b. Echocardiograms
   c. 24 hour blood pressure monitor
   d. Nerve conduction velocity and EMG studies
   e. Flow doppler studies
   f. Bone densitometry studies
   g. Biopsies
   h. Spirometry and complete pulmonary function tests
   i. Bone age
   j. Psychological testing

3. Evaluation for renal transplantation is excluded. While the Nephrologist assesses whether or not the patient meets preliminary criteria as a renal transplant candidate under the MCP, the complete evaluation for renal transplantation is not included in the MCP.

4. Evaluation of potential living transplant donors is excluded.

5. The training of patients to perform home hemodialysis, self hemodialysis, and the various forms of self peritoneal dialysis are excluded.

6. The general medical non-dialysis-related management of Diabetes Mellitus is excluded.

7. The general non-renal-related (non-dialysis) evaluation and management of all dialysis patients is excluded.

8. The Nephrologist may elect not to include acute hospital care services in the MCP. If this election is made, the MCP is suspended for the period of time that the patient is receiving care under hospital codes.

9. All physician services that antedate the initiation of outpatient dialysis are excluded.

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Maintenance dialysis in North American children and adolescents: A preliminary report

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Maintenance dialysis in North American children and adolescents: A preliminary report. During 1992 the North American Pediatric Renal Transplant Cooperative Study (NAPRTCS) began to develop a pediatric Dialysis Patient Data Base by collecting data on pediatric patients who had received either hemodialysis (HD) or peritoneal dialysis (PD), or both, at a participating NAPRTCS center. This preliminary report describes study methods and contains detailed, though short-term observations reported by 64 of 87 NAPRTCS centers on 762 patients who were <21 years of age at enrollment and who received treatment between January 1, 1992 and September 15, 1992. In these 762 patients, a total of 810 independent courses of dialysis therapy were identified (PD = 534 [65.9%]; HD = 276 [34.1%]). Patient age groupings showed a significantly greater proportion of PD patients among younger age groups. Automated peritoneal dialysis was used by about 75% of registered PD patients at one and six months after registration. A total of 196 peritonitis episodes were reported, yielding a peritonitis rate of one episode every 7.1 patient-months. Ten percent of PD catheters were replaced, primarily for mechanical malfunction and leaks. Percutaneous catheters were used for vascular access in about one-half of the HD patients, with the remainder almost equally divided between arteriovenous fistulae and grafts. Vascular access revision was reported in 28% of HD patients, with about one-third of these revisions performed to create a more permanent access. Recombinant human erythropoietin therapy was used in 89% of PD and 94% of HD patients at six months. Recombinant human growth hormone therapy was used in 9% of PD and 5% of HD patients at six months. By six months, 36.9% of patients were on cadaver transplantation waiting lists, with transplant recipient workups underway in an additional 21.9% of patients. Of the 40.5% of patients reported not to be actively pursuing transplantation, 50% cited medical problems and 50% cited patient/family preference as reasons. Nine patients died and 44 changed from one dialysis modality to the other. Infection complications predominated among PD patients who changed to HD, while psychosocial issues were more frequently cited reasons for HD patients to change to PD. The present report is preliminary and intended to be primarily descriptive. Future reports will examine in depth those issues introduced by the data presented in this report.

Since 1987 the North American Pediatric Renal Transplant Cooperative Study (NAPRTCS) has collected data on children and adolescents who received renal transplants at one of 87 participating centers in the United States and Canada [1–3]. In May 1992, the NAPRTCS began to develop a pediatric Dialysis Patient Data Base by collecting data on pediatric end-stage renal disease (ESRD) patients who had received either hemodialysis (HD) or peritoneal dialysis (PD), or both, at a participating NAPRTCS center on or after January 1, 1992. This preliminary report details the observations recorded on 762 pediatric dialysis patients enrolled by 64 NAPRTCS centers between May 1, 1992 and September 15, 1992. Because it is so early in the development of the NAPRTCS Dialysis Patient Data Base, only descriptive data can be reported at this time.

Methods

Participation in the NAPRTCS is voluntary, with only a token honorarium paid to participating centers when patients are enrolled in either the dialysis or the transplant components of the Cooperative Study. Since 1987 the NAPRTCS has registered and followed patients who received renal transplants in participating centers before their eighteenth birthdays. By the end of January 1992, the NAPRTCS had registered and followed 2,037 children and adolescents who had received 2,197 renal transplants at participating NAPRTCS centers [3]. Early in 1992 funding was obtained to expand the NAPRTCS to include pediatric dialysis patients who received either HD or PD at participating NAPRTCS centers on or after January 1, 1992. At the same time the age criterion for eligibility was changed to include patients who were treated with either maintenance dialysis or renal transplantation prior to their 21st birthdays.

Using basically the same format for data collection that was developed by the NAPRTCS for pediatric transplant patients [1, 2], data were collected on pediatric dialysis patients who received treatment at a participating NAPRTCS center between January 1, 1992 and September 15, 1992. Dialysis patient data were collected on six different forms submitted at different times during the dialysis treatment of each registered child as follows: (1) Patient Registration Form; (2) Dialysis Modality Initiation Form; (3) Dialysis Status Form; (4) Access Revision Form; (5) Dialysis Modality Termination Form; and (6) Patient Death Form.

The Patient Registration Form was identical to that used to register transplant patients. In addition to patient identifiers (that is, name, date of birth, race/ethnic group, gender, Social Security or hospital identification number), the Registration Form asks for information on the patient's primary renal diagnosis, including whether that diagnosis was confirmed at biopsy or nephrectomy. Patients may not be registered unless they have received at least 30 consecutive days of dialysis which is the operational definition of "maintenance dialysis" used by the NAPRTCS.

The Dialysis Modality Initiation Form establishes whether the patient is currently being treated with HD or PD, the number of consecutive days of hospitalization following the initial treatment with this dialysis modality, the serum creatinine level prior to initiation of dialysis, and the type of access used for maintenance dialysis at time of registration.

The Dialysis Status Form is first submitted by the center at 30 days after registration. Every six months thereafter the NAPRTCS Data Coordinating Center (DCC) sends the registering center a Dialysis Status Form that has been pre-printed with the patient's name and identifying number. Thus, at six month intervals the Dialysis Status Form requests information on patient "dry" weight, height, head circumference (if <36 months of age), blood pressure, Tanner stage, mid-arm circumference, triceps skinfold thickness, hematocrit and serum parathyroid hormone level. Data are also requested on concomitant drug therapy, dialysis treatment regimen, dialysis complications, education status, and renal transplant status, including date listed for cadaver transplantation.

The Access Revision Form is submitted by the center at the time of dialysis access revision and includes detailed information on reasons for access failure and choice of new access. The Dialysis Modality Termination Form is completed by the center whenever a patient is transferred to another dialysis modality, receives a kidney transplant, experiences return of renal function, or dies. When the dialysis modality is changed, this form requests detailed information on the reason(s) for dialysis modality change. The Patient Death Form is identical to that used by the NAPRTCS Transplant Patient Data Base and requests detailed information on cause of death.

The forms used by the NAPRTCS Dialysis Patient Data Base were designed to engage the treating center and the NAPRTCS DCC in an ongoing, patient-specific *dialogue* that addresses important milestones in the dialysis treatment course and provides information on outcome correlates. Forms were also designed to facilitate smooth transition between dialysis modalities and between dialysis and transplantation. Registered dialysis patients who subsequently receive renal transplants at participating centers, as well as registered transplant patients who subsequently receive dialysis can now be continued in the Cooperative Study, thus allowing the NAPRTCS to become a more complete pediatric ESRD patient data system.

Results

A total of 762 pediatric dialysis patients were enrolled from 64 of 87 participating centers. These included 548 patients who were receiving dialysis on January 1, 1992 (PD 380; HD 168) and 262 patients (PD 154; HD 108) who began dialysis between January 1, 1992 and September 15, 1992, when the data were compiled for this report. Follow-up data were available at one month on 601 patients and at six months on 279 patients. Fifty-seven percent of registered dialysis patients were male, with White, Black, Hispanic and other racial/ethnic groups accounting for 56.7%, 24.4%, 13.5% and 5.4% of registered patients, respectively (Table 1). The age distribution of registered dialysis patients (according to age at time of dialysis modality initiation) is shown in Table 2. Patients were almost evenly divided between those younger than and those older than 13 years at time of registration.

Primary renal disease diagnoses of registered patients are listed in Table 3. The most frequently identified primary renal disease diagnoses were aplastic/hypoplastic/dysplastic kidneys (15.7%), focal segmental glomerulosclerosis (14.6%), obstructive uropathy (14.0%), systemic immunologic disease (7.6%), and hemolytic uremic syndrome (4.5%).

Among the 762 registered patients, a total of 810 independent courses of dialysis therapy were identified [PD 534 (65.9%); HD 276 (34.1%)]. To be considered an independent course of dialysis therapy a patient had to remain on a given modality for a minimum of 30 days. Fifty patients had at least two independent courses of dialysis therapy between January 1 and September 15, 1992; seven patients had three independent courses of treatment during this 8-1/2 month period.

Table 1. Dialysis patient characteristics

	N	Percent
Gender		
Male	428	57.0
Female	325	43.0
Race/ethnicity		
White	432	56.7
Black	186	24.4
Hispanic	103	13.5
Other	41	5.4

Table 2. Patient age at time of dialysis modality initiation

	N	Percent
Age at modality initiation		
0	45	5.9
1	41	5.0
2	29	3.8
3	27	3.5
4	17	2.1
5	27	3.5
6	16	2.0
7	36	4.4
8	23	2.8
9	30	3.7
10	48	5.9
11	47	5.7
12	43	5.3
13	45	5.5
14	63	7.7
15	75	9.2
16	61	7.4
17	50	6.1
18	44	5.4
19	33	4.0
20	19	2.3
Age groupings		
0–1	86	10.5
2–5	100	12.2
6–12	243	29.7
13–17	294	35.9
18–20	96	11.7

Peritoneal dialysis

A total of 534 PD patients were registered. Follow-up data were available on 400 patients at one month and 199 patients at six months post-registration. The distribution of known peritoneal dialysis therapies is shown in Table 4 for both follow-up time periods. Note that automated peritoneal dialysis (APD) is

Table 3. Primary renal disease diagnosis

Diagnosis	N	Percent
Aplastic/hypoplastic/dysplastic kidneys	119	15.7
Focal segmental glomerulosclerosis	111	14.6
Obstructive uropathy	106	14.0
Systemic immunologic disease	58	7.6
Hemolytic uremic syndrome	34	4.5
Chronic glomerulonephritis	31	4.1
Reflux nephropathy	26	3.4
Polycystic kidney disease	23	3.0
Syndrome of agenesis of abdominal musculature	19	2.5
Medullary cystic disease/juvenile nephronophthisis	18	2.4
Congenital nephrotic syndrome	17	2.2
Pyelonephritis/interstitual nephritis	15	2.0
Membranoproliferative glomerulonephritis Type I	14	1.8
Cystinosis	11	1.4
Familial nephritis	11	1.4
Idiopathic crescentic glomerulonephritis	11	1.4
Membranoproliferative glomerulonephritis Type II	10	1.3
Renal infarct	7	.9
Drasch syndrome	7	.9
Sickle cell nephropathy	4	.5
Wilms tumor	3	.4
Oxalosis	2	.3
Membranous nephropathy	1	.1
Other	67	8.8
Unknown	34	4.5

Table 4. Peritoneal dialysis therapies at one and six months after enrollment

	1 Month		6 Months	
	N	Percent	N	Percent
CAPD	81	23.5	36	20.9
APD	253	73.3	129	75.0
IPD	11	3.2	7	4.1
Total	400		199	

Abbreviations are: CAPD, continuous ambulatory peritoneal dialysis; APD, automated peritoneal dialysis, IPD, intermittent peritoneal dialysis.

used by about three-fourths of registered PD patients at each time period (Table 4).

Table 5 lists both PD and HD patients by age group. Age group distribution of PD patients was significantly different from that of the HD patient cohort, with a larger concentration of PD patients in the younger age groups ($P < 0.001$ by chi-square test).

Peritonitis and catheter exit site infection. Peritonitis was defined for the purposes of this study as the decision to treat an apparent peritoneal infection with antibiotics. At one month after enrollment a total of 89 episodes of peritonitis were identified in 400 patients. The 199 patients for whom six-month follow-up data were available experienced another 107 episodes of peritonitis, yielding a total of 196 peritonitis episodes reported to the DCC. The overall incidence of peritonitis was one episode per 7.1 patient-months. The causative organisms for reported cases of peritonitis are listed by category in Table 6. Gram's stain positive organisms accounted for the majority of peritonitis episodes, and about 16% of episodes were culture-

Table 5. Dialysis modality at patient registration by patient age group

Age group years	PD		HD	
	N	Percent	N	Percent
0–1	79	14.8	7	2.5
2–5	77	14.4	21	7.6
6–12	156	29.2	82	29.7
13–17	172	32.2	120	43.5
18–20	50	9.4	46	16.7

Abbreviations are: PD, peritoneal dialysis; HD, hemodialysis.

Table 6. Causative organisms in cases of peritonitis reported at one and six months after enrollment

	1 Month		6 Months	
Causative organism	Number of Cases	Percent	Number of Cases	Percent
Gram-positive	52	62.7	59	55.1
Gram-negative	13	15.7	23	21.5
Fungal	3	3.6	3	2.8
Mixed gram-positive and gram-negative	1	1.2	0	0
Other	2	2.4	1	0.9
Cultured, no growth	12	14.5	19	17.8
No culture	0	0	1	0.9

negative (Table 6). During the 8-1/2 month observation period covered by this study (January 1 to September 15, 1992), 109 patients had one episode of peritonitis, 22 patients had two episodes, seven patients had three episodes, three patients had four episodes, and two patients had five episodes of peritonitis.

No attempt was made to distinguish between catheter exit site and catheter tunnel infections. A total of 63 exit site/tunnel infections were reported in 400 patients followed for one month, and by six months the 199 patients followed for that period had added another 63 exit site/tunnel infections to the cohort total.

Peritoneal dialysis catheters. Information was obtained on peritoneal dialysis catheter configuration in 519 of 534 PD patients. Of these, 305 (58.8%) were curled Tenckhoff catheters, 180 (34.7%) were straight Tenckhoff catheters, eight (1.5%) were Toronto Western catheters and 26 (5.0%) were of "other" catheter configurations. Sixty-seven percent of catheters had a single cuff, and 16.8% had a Swan-Neck tunnel configuration. The catheter tunnel exit site pointed laterally in 44%, down in 28% and up in 15% of patients, with the direction of the exit site unreported for 13% of patients.

During the 8-1/2 months of the study 56 of 534 (10%) PD catheters were replaced, 25 (45%) for mechanical malfunction, 10 (18%) for peritonitis, seven (13%) for exit site/tunnel infection, five (9%) for dialysate leak and nine (16%) for other reasons. There were essentially no changes in catheter configuration among replacement catheters when compared to original study catheters. Mechanical malfunction forced replacement of 15 of 180 (8.3%) straight Tenckhoff catheters and 9 of 305 (3.0%) curled Tenckhoff catheters, a difference that was not statistically significant.

Table 7. Reasons cited for dialysis modality changes

Reason for Change	PD to HD (N = 23) Number	PD to HD (N = 23) Percent	HD to PD (N = 18) Number	HD to PD (N = 18) Percent
Excessive infection	7	30	0	0
Patient-family choice: inability to cope	1	4	9	50
Access failure	1	4	2	11
Inadequate ultrafiltration	2	9	0	0
Inadequate solute clearance	2	9	0	0
Other (medical)	8	35	5	28
Other (non-medical)	2	9	2	14

Abbreviations are: PD, peritoneal dialysis; HD, hemodialysis.

Hemodialysis

Among the 810 dialysis treatment courses reported, 276 (34.1%) courses of HD were identified. Follow-up data were available on 201 patients at one month and 80 patients at six months. At one month, 83% of patients were receiving three treatments per week, with 11%, 5% and 1% receiving two, four and five treatments per week, respectively.

Hemodialysis vascular access. Information on vascular access locations and devices used at the time of patient enrollment was available on all 276 registered HD patients. Of these, 150 (54.9%) received HD via external percutaneous catheters, 122 (81%) located in the subclavian, 19 (13%) in the jugular and seven (5%) in the femoral veins. Ninety-one percent of these percutaneous catheters were of the double-lumen design. Catheter exit site infections were reported in 7% of patients at one month and 18% of patients at six months of follow-up.

Internal arteriovenous fistulae were used at registration by 58 (21.2%) HD patients. Internal arteriovenous grafts were used by 65 (23.8%) patients. Eighty-eight percent of grafts were made of polytetrafluoroethylene (PTFE). Internal fistulae and grafts were located in the forearm in 62%, the upper arm in 27% and the thigh in 11% of patients.

Vascular access revision was reported in 78 (28.3%) HD patients. The reasons cited for access revision were: creation of more permanent vascular access, 34.6%; clotted access, 32.1%; infected access, 12.8%; access malfunction other than clotting, 12.8%; and other reasons, 7.7%. The distribution of revised access types and locations was similar to that of previous accesses, with external percutaneous catheters, internal arteriovenous fistulae and internal arteriovenous grafts accounting for 52.6%, 16.7% and 30.8% of revised accesses, respectively.

Modality termination

Termination of dialysis modality was reported in 154 patients. Of these, 88 (57%) received renal transplants, nine (6%) died, seven (5%) experienced return of native kidney function, six (4%) terminated dialysis for other reasons and 44 (29%) changed from one dialysis modality to the other. Of the 44 patients who changed dialysis modality, 23 went from PD to HD and 18 went from HD to PD. Data on modality change were incomplete in three patients. The primary reasons cited for modality change among surviving patients who were not transplanted are listed in Table 7. Note that infectious complications predominated among PD patients who changed to HD and that psychosocial [illegible] and family choice, inability to cope with the HD process) were more frequently cited reasons for HD patients to change to PD. Overall, 4.3% of PD patients changed to HD, and 6.5% of HD patients changed to PD during the 8-1/2 months of observation described in this report.

Miscellaneous complications

An indication of the prevalence of renal osteodystrophy among these pediatric dialysis patients was obtained by identifying patients who had serum parathyroid hormone (PTH) levels that were greater than twice the upper limit of normal according to the PTH assay in use at each participating center. At one month after enrollment, data on serum PTH levels were available for 472 patients, 262 (56%) of whom had PTH levels that were greater than twice the upper limit of normal.

Data on the incidence of seizures were available at one month after enrollment on 400 PD patients and 201 HD patients. Seizures occurred during the first month after study enrollment in 19 (4.9%) PD patients and 10 (5.2%) HD patients. Six-month follow-up data on complications were available on 199 PD patients and 80 HD patients. By six months after enrollment, seizures had occurred in an additional eight (4.0%) PD patients and eight (10.1%) HD patients.

Recombinant human erythropoietin (EPO) and recombinant human growth (GH) hormone therapy

EPO therapy was reported in 81% and 89% of PD patients at one and six months post-enrollment, respectively, and in 90% and 94% of HD patients at the same follow-up times. GH therapy was reported in 9% of PD patients and 5% of HD patients by the six-month follow-up period.

Transplant status

By six months after enrollment, 36.9% of these pediatric dialysis patients (31.5% of PD patients; 51.3% of HD patients) were on cadaver transplantation waiting lists. An additional 21.9% were also actively pursuing transplantation with transplant recipient work-ups in progress at the time of reporting. A surprising 40.5% of patients overall (45.2% of PD patients; 28.8% of HD patients) were reported not to be actively pursuing transplantation by six months after enrollment in this study. Of these, 50% cited medical reasons (PD 46.7%; HD 60.9%) and 50% cited patient/family preference (PD 53.3%; HD 39.1%) for not actively pursuing transplantation.

Discussion

As originally conceived, the NAPRTCS was to have been a complete pediatric ESRD patient data system incorporating both dialysis and renal transplant patients. However, by 1987 when the NAPRTCS was formally initiated, funding had been obtained only for the transplant patient component of the Cooperative Study. When funding became available early in 1992 to expand the NAPRTCS to include pediatric dialysis patients, the Cooperative Study had grown from 46 to 87 participating centers in the United States and Canada and had registered and followed 2,617 children and adolescents who had received 2,197 renal transplants at participating centers [3]. During the course of the study, these volunteer centers had established a sound working relationship with the NAPRTCS DCC, engaging in an ongoing dialogue about their registered

Table 8. Pediatric dialysis patient counts by age group in the NAPRTCS and USRDS registries

Age group years	Patient counts	
	NAPRTCS (11/92–9/15/92)	USRDS (on 12/31/89)
0–4	176	161
5–9	132	209
10–14	246	340
15–19	263	1,121
20	19	N/A

Abbreviations are: USRDS, United States Renal Data System; N/A, not available.

Data for the USRDS are from Ref 4, and data for the NAPRTCS are from the present report.

patients that for some had extended over a five-year period. When these centers were polled in 1992 about enrolling and following their pediatric dialysis patients, the response was overwhelmingly positive. Thus, the decision to limit dialysis patient enrollment to participating NAPRTCS pediatric transplant centers primarily reflects the successful interactions of existing centers with each other and with the DCC over the first five years of the Cooperative Study. In addition, the NAPRTCS is not intended to be an all-encompassing patient registry, such as the United States Renal Data System (USRDS) or the Canadian Renal Failure Register. Rather, the NAPRTCS proposes to be a large-scale, voluntary, focused cooperative study that examines ESRD treatment trends and outcomes among specialized, pediatric ESRD treatment centers in North America. Participating center principal investigators are all nephrologists specializing in the care of pediatric ESRD patients, and pediatric renal transplant surgeons play an important role in the operations of the Cooperative Study.

While such a focused study design has clear advantages for pediatric ESRD treatment teams, whose clinical questions drive the Cooperative Study, there are limitations inherent in such a design that are reflected in the composition of the NAPRTCS Dialysis Patient Data Base. Table 8 compares patient counts by age group in the NAPRTCS Dialysis Patient Data Base and the USRDS registry [4]. Although the time periods covered by the data contained in Table 8 are not the same and the methodology for patient counting differs, the general observation can be made that a large percentage of the younger dialysis patients eligible for the NAPRTCS study have been enrolled by the NAPRTCS, whereas eligible older adolescents may be substantially under-represented. This age group distribution may also reflect the specific patient mix found at those NAPRTCS centers that voluntarily enrolled dialysis patients during the first months of the study.

The present study represents a substantial addition to available information on pediatric dialysis patients in North America. For a period covering the first 8-1/2 months of 1992, the NAPRTCS enrolled 762 pediatric dialysis patients from 64 participating centers. The only similar North American study of comparable size was published in 1990 by the National CAPD Registry of the United States National Institutes of Health [5]. During a 5-1/2 year period from 1981 to 1986 the National CAPD Registry collected data on 658 pediatric PD patients enrolled by 170 participating centers. While there are numerous observations contained in the National CAPD Registry study that invite comparison to PD patient data contained in the present report, the two study cohorts are probably too disparate to allow more than historical comparisons. The cohorts are separated in time by as much as a decade, and it was during this decade that pediatric centers in North America were first gaining experience with peritoneal dialysis.

One comparison between the two studies is worth noting. The peritonitis rates observed in the National CAPD Registry study and the present NAPRTCS study are strikingly similar, one episode every eight patient-months and one episode every 7.1 patient-months, respectively. The National CAPD Registry defined peritonitis for all PD patients as turbid dialysate with a dialysate white blood cell count greater than 100 cells per cubic millimeter [6]. The definition of peritonitis in pediatric PD patients appears to be more controversial. For example, among four studies of peritonitis in children published since 1983, all used a different definition of peritonitis [7–10]. This lack of consensus led the NAPRTCS to adopt an "operational" definition of peritonitis: the decision to treat an apparent peritoneal infection with antibiotics. [A similar approach to the definition of acute renal allograft rejection (that is, the decision to treat acute graft dysfunction with additional immunosuppression) has been followed by the NAPRTCS since 1987].

The use of an operational definition of peritonitis by the NAPRTCS may have resulted in a higher observed peritonitis rate than if a more restrictive definition had been established, assuming such a definition could have been agreed upon. However, no approach to this issue is without problems. For example, peritoneal eosinophilia, a non-infectious and generally benign PD complication, would have been included as a peritonitis episode by the National CAPD Registry, but would be more appropriately excluded by the NAPRTCS.

It was surprising to find that over 40% of pediatric dialysis patients enrolled in the present study were not actively pursuing renal transplantation six months after enrollment. Reasons cited were equally divided between medical problems and patient/family preferences. Renal transplantation is widely considered the optimum renal replacement therapy modality for children. Additional information on this and other issues of particular importance to pediatric ESRD patients will be examined in future reports.

The present report is preliminary and is intended to be primarily descriptive in nature. Because it is so early in the development of the NAPRTCS Dialysis Patient Data Base, more extensive data analysis and interpretation would be both difficult and unwise. Subsequent reports will examine in depth those issues only introduced by the data presented in this report.

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Moving the Monthly Capitated Payment Under the RBRVS: Will the Equivalent Reflect the Work?

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This paper has been endorsed by the Board of Directors of the Renal Physicians Association (RPA).

As all Medicare physician payment moves toward a final resource-based relative value scale (RBRVS) in 1995, one physician service, the monthly capitation payment (MCP) for nephrologists, has been excluded. Although the monthly bundle of services provided by nephrologists for patients with end-stage renal disease (ESRD) and on dialysis support was reviewed by the Harvard/Hsaio study in 1989 during development of the RBRVS, problems identifying the actual physician service bundle, defining renal and non-renal related services, and struggles with practice variation, caused a wide difference in physician survey response to what was considered a poor survey tool.

At no time during the development or operative process of the Harvard study did researchers undertake the evaluation of such an extensive set of global services as what is provided by the nephrologist to the dialysis patient, and over such an extended period of time (in the case of the MCP, a monthly period). Since the original mandate for the RBRVS, as outlined in OBRA '89, was directed toward single procedures or single evaluation and management encounters, the MCP remained technically outside of the RBRVS reform process.

Updating the MCP

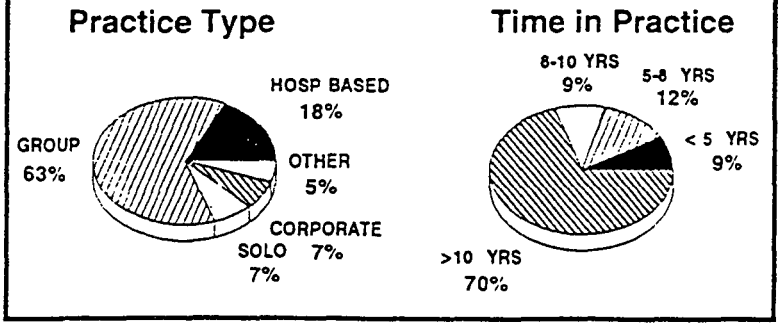
While this orphan status may have been perceived as a benefit to physician providers, it lacked any process for cost-of-living updates. Since 1983, there has been no increase in the MCP reimbursement level, and indeed, Gramm-Rudman-Hollings legislation in 1986 mandating an "across-the-board" reduction in Medicare payments was not counterbalanced by an administrative fix afforded to the majority of other physician services. HCFA policy seems to have assumed a steady supply of physicians willing to treat patients with ESRD, and the MCP was viewed as a "retainer" for modest physician services and thus not needing a cost-of-living adjustment.

Repeated and exhaustive requests for an update and meetings with HCFA seemed to continually end with a difference of opinion on the bundle of services included in the MCP, and a disagreement of payment policy based on "what physicians are doing" (HCFA) and "what physicians *should* be doing" (RPA). Should HCFA reimbursement policy drive the definition of practice, or should the definition of services drive payment? Has the long overdue MCP update driven physician service adjustment? Clearly, a distinct definition of physician services captured in the monthly bundle for dialysis patient care needed to be established.

The RPA developed and published a "draft" MCP service description in 1992, and disseminated this document to *all* physicians who were identified in the American Medical Associa-

FIGURE 1: MCP SURVEY DEMOGRAPHICS

RBRVS SURVEY RESPONDENTS



tion Physician Master File as practicing nephrology. This file contains all physicians (AMA members and non-members) who hold a valid license to practice medicine in the United States and who have self-designated their practice as being either primary or secondary nephrology.

Further mailings went to all RPA members, as well as all ASN members, both domestic and international. In all cases, a request for review, draft refinement, and return to RPA was made. Following the revision process, a final document was again distributed to all nephrologists in the U. S., as well as to HCFA officials. This document clearly delineated which physician services were included in the MCP bundle, and which were outside of that bundle.

No Response From HCFA

Despite this RPA undertaking, and several face-to-face meetings between HCFA policy and payment members and RPA representatives, no meaningful activity toward an MCP update was begun by HCFA. In fact, the flawed RBRVS value generated by the original Harvard/Hsaio study for the MCP was now being touted by HCFA as the "true" value for the services captured under the MCP. While nephrologists have been repeatedly asking for fair relative value assessment of the described bundle of services, HCFA continued to point to the flawed Hsaio data.

"In fact, the flawed RBRVS value generated by the original Harvard/Hsaio study for the MCP was now being touted by HCFA as the "true" value for the services captured under the MCP..."

Recently, both HCFA and the RPA have recognized the value of incorporating MCP services into a "relative value format." With HCFA finally accepting, albeit unofficially, the descriptive bundle of services, the forum for this conversion has been set as the "AMA/Specialty Society RVS Update Committee (RUC)" for next month. The RUC evaluates physician services following a fixed format and generates a relative value for the physician work involved, relative to other services across all specialty and sub-specialty work.

The relative value unit (RVU) is then submitted to HCFA where it is reviewed by their carrier medical directors (tentatively scheduled for June) and finally published in the *Federal Register* in September. Beginning with January 1995, physician reimbursement for MCP services would be calculated using the interim RVU assigned to the service(s), with a final refinement of the RVU after one year.

A Pilot Evaluation

Following receipt of a request from HCFA in mid-February to move to RBRVS, an initial assessment of the potential work value for the services performed in the MCP bundle was surveyed at the RPA annual meeting held in San Antonio, TX, in February. An audience interactive system was utilized so that the answers could be instantly evaluated and returned to the participants. This allowed for separate surveys to be undertaken immediately before and after the description of the bundle of services included in the MCP was disseminated. The demographics of the participants are shown in Figure 1 (page 12).

Most members of the audience (generally male) were in practice for greater than 10 years, the majority being in a group practice environment. But there was also representation of both solo and corporate practitioners.

For the evaluation, physicians were given a list of "other" services with both a description and the RVUs displayed. Services included both evaluation/ management and procedures so as to capture the relative value of both types of activities performed under the MCP. A series of case scenarios (Table 1, pg. 14) were presented and the participants were asked to value their work against the established values for similar work. These scenarios were valued *without* a description of the MCP bundle.

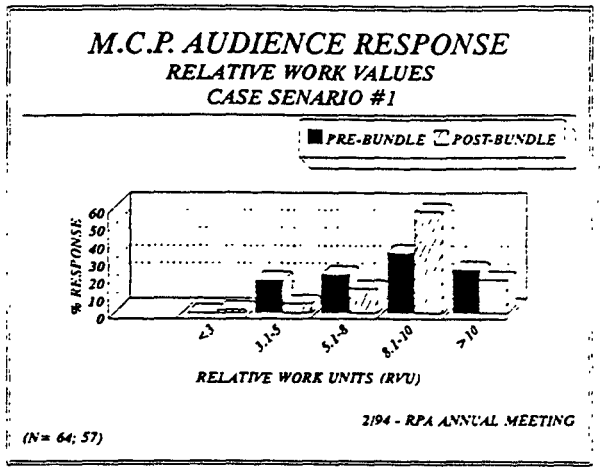
While there was a wide variety of answers for each individual scenario, the mean value seemed to follow the differing work output required by different cases. Thus, some

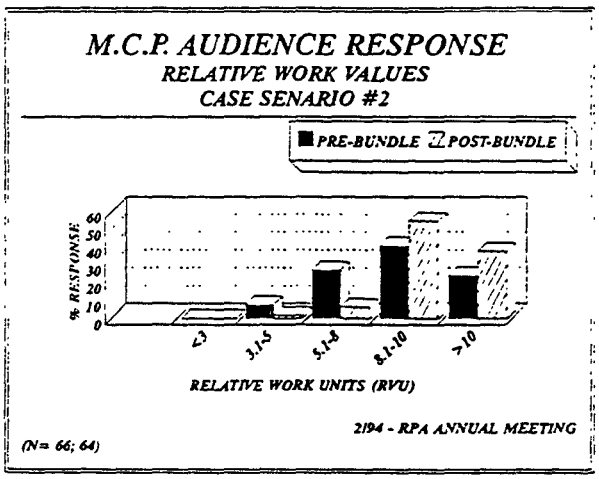
(continued on the next page)

TABLE 1

CASE SCENARIO #1

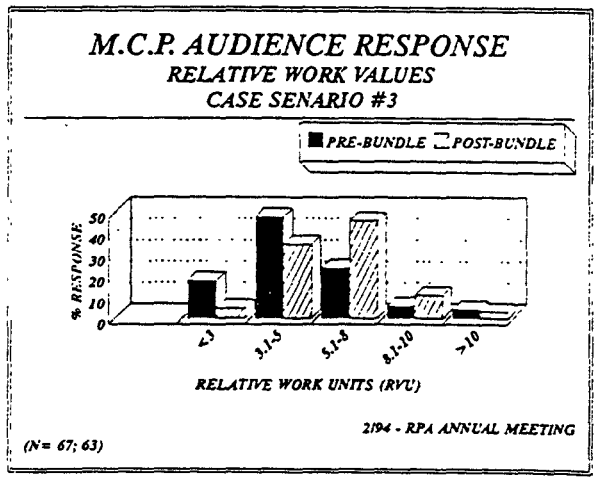
A 68-year-old white male, with coronary heart disease, peripheral vascular disease, hypertension, and diabetes on chronic hemodialysis therapy 3 times weekly. The patient has frequent blood pressure drops during dialysis.





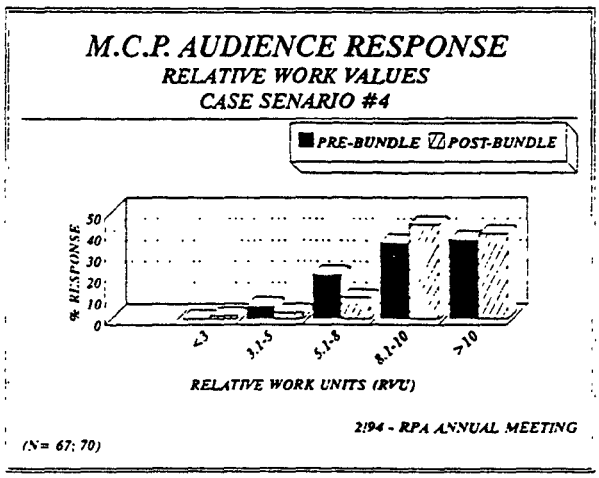
CASE SCENARIO #2

A 50-year-old male who has severe hypertension and ESRD on in-center hemodialysis. Fistula is problematic and compliance issues, especially with binder therapy and fluid, have created multiple ongoing unit staff concerns.



CASE SCENARIO #3

A 45-year-old female who has polycystic kidney disease and requires in-center hemodialysis 3 times weekly. She is a potential cadaveric transplant candidate.



CASE SCENARIO #4

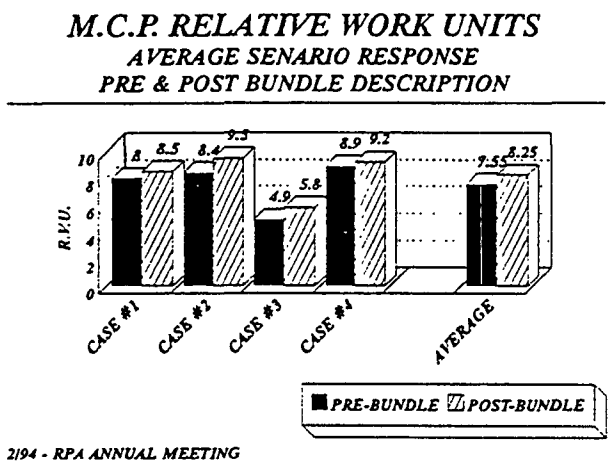
A 28-year-old brittle diabetic on CAPD. He is blind and relies on family members for therapy. Adjustment of dialysis prescription is required because of frequent excess fluid intake.

The MCP as Part of the RBRVS: Can It Work?

(*continued from page 13*)
cases were valued with lower work unit values than others.

The MCP service description was then distributed to the participants, and the case scenarios were repeated, assigning a work unit value to the month's activities. Once again there were differing values for the various cases presented, but the spread-of-work value units for each individual case scenario was significantly less. In each instance, the RVUs increased after the MCP description was reviewed: however, the cases with less work were still valued less than the cases with more activity (Figure 2).

FIGURE 2



Conclusions

Several important issues can be seen from this preliminary view of the RBRVS equivalent for the monthly MCP services. It is likely that the original survey respondents of the Harvard/Hsaio study did not consider the full bundle of services being provided under the MCP, and thus, the relative values assigned to the month's activities were low and inaccurate. Certainly there was no clear consensus on the various services that made up the MCP at the time of the original survey, and the tool was not able to capture the specific activities that may vary from patient to patient. Indeed, our survey has underlined the differing work output of a month's activities as opposed to the work required during a single encounter with a patient for a variety of issues.

More importantly, once the respondents reviewed the MCP bundle of services, they were able to better determine the appropriate work value. While there may have been an increase in the values assigned, the overall average value for all four case scenarios increased only slightly.

Also, the values assigned to the individual cases were much less varied, thus reflecting a more precise understanding of what is actually being done.

Given the current conversion values for total work to reimbursement, it is obvious that current remuneration for monthly physician services in the care of a dialysis patient is considerably undervalued.

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

HOSPITAL DISCHARGE SERVICES - TAB 27

The CPT Editorial Panel revised the codes for hospital discharge day management to specify that the current code 99238 is for discharge day management of 30 minutes or less and added a new code for discharge day management requiring more than 30 minutes. The instructions preceding the codes will indicate that the codes are to be used to report the total duration of time spent by a physician. The RUC adopted the specialties' recommended values of 1.06 RVUs for code 99238 [Hospital discharge day management; 30 minutes or less] and 1.75 RVUs for code 99239 [Hospital discharge day management; more than 30 minutes], which were based on surveys completed by 120 primary care physicians.

Discussion at the RUC meeting focused on the appropriateness of maintaining the current value of 1.06 for code 99238 and whether or not this revision involved "splitting" code 99238 into two codes. Data from the Harvard study provided to the RUC on the existing code indicated the current RVUs for the service are based on an assumption that the total time for the service is 35 minutes. Since the work per minute of time for this service has increased somewhat since the Harvard study due to shortened hospital stays, sicker hospitalized patients, more extensive discharge planning, and increasingly complex utilization review and post-hospital care management requirements, the RUC concluded the current value for the revised code should be retained. Also, HCFA assumes that any care provided after discharge and before the next face-to-face encounter is included in the work of this service. The new code for discharge day management requiring more than 30 minutes is a new service that has emerged for these same reasons, and involves new physician work effort that was not considered in the valuation of the old code.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
~~Final hospital discharge of a patient includes final examination of the patient, discussion of the hospital stay, instructions for continuing care, and preparation of discharge records.~~ The hospital discharge day management codes are to be used to report the total duration of time spent by a physician for final hospital discharge of a patient. The codes include, as appropriate, final examination of the patient, discussion of the hospital stay, even if the time spent by the physician on that date is not continuous. Instructions for continuing care to all relevant caregivers, and preparation of discharge records, prescriptions and referral forms.				
99238	AK1	Hospital discharge day management; 30 minutes or less	XXX	1.06
•99239	AK2	more than 30 minutes	XXX	1.75

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
(These ~~this~~ codes ~~is~~ are to be utilized by the physician to report all services provided to a patient on the date of discharge, if other than the initial date of inpatient status. To report services to a patient who is admitted as an inpatient, and discharged on the same date, use only the codes for Initial Hospital Inpatient Services, 99221-99233. To report concurrent care services provided by a physician(s) other than the attending physician, use subsequent hospital care codes (99231-99233) on the day of discharge.) (For Observation Care Discharge, use 99217)				

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AK1 Global Period: XXX **Recommended RVW:** 1.06

CPT Descriptor: Hospital discharge day management; 30 minutes or less

CLINICAL DESCRIPTION OF SERVICE:

Vignettes Used in Survey:

Final hospital day for 72 year old female with community acquired pneumonia who is otherwise well. She is improving and now on oral antibiotic. Discharge history and exam are problem focused, medical decision making straightforward, and patient requires a written prescription for antibiotic and simple instructions for medication, followup and complications to be alert to. Brief chart note and short written or dictated discharge summary is prepared. (Internal Medicine and Family Medicine)

Final hospital day for a two year old female with Hemophilus influenza meningitis. She is now afebrile and has finished her IV antibiotics. She has no neurological deficit nor hearing loss. Discharge history and exam are problem focused and medical decision making is straight forward. She requires no prescriptions but parents require instructions for medical follow-up and to be aware of possible complications. A brief chart note and short written or dictated discharge summary is prepared. (Pediatrics)

Final hospital day for 72 year old female with lymphoma admitted to hospital for neutropenia and fever following myelosuppressive chemotherapy. Culture negative now, white count recovered, clinically stable. Discharge history and exam problem focused, medical decision making straightforward. Patient requires simple instructions with respect to follow-up and possible complications. (Oncology)

Description of Pre-Service Work:

Pre-service work includes providing instructions for continuing care to all relevant caregivers and preparations of discharge records, prescriptions, and referral forms before the physician is present on the patient's hospital unit or floor. Pre-service work may also include obtaining and reviewing the results of diagnostic and other studies, and providing written and telephone reports before the physician is present on the patient's hospital unit or floor. (This description of pre-service work is based upon the CPT descriptor of this service and definition of the pre-service in Appendix A, which accompanies the RUC surveys).

Description of Intra-Service Work:

Intra-service work includes examining the patient and discussing the hospital stay with the patient. It also includes reviewing the patient's chart, writing notes, providing instructions for continuing care to all relevant caregivers and preparing discharge records, prescriptions, and referral forms while the physician is present on the patient's hospital unit or floor. (This description of intra-service work is based upon the CPT descriptor of this service and the definition of the pre-service period in Appendix A, which accompanies the surveys).

Description of Post-Service Work:

Post-service work includes instructions for continuing care to all relevant caregivers and preparation of discharge records, prescriptions, and referral forms after the physician has left the patient's hospital unit or floor. It amy also include obtaining and/or reviewing the results of diagnostic and other studies and providing written and telephone reports after the physician has left the patient's hospital unit or floor. (This description of post-service work is based upon the CPT descriptor of this service and the definition of the pre-service period in Appendix A, which accompanies the surveys).

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
99214	Office or other outpatient visit	0.94
99232	Subsequent hospital care	0.88

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 of code 99238 is similar to the intra-service work of codes 99214 and 99232 in terms of the need to perform a history and exam on the patient. The medical decision-making is also comparable. The higher work value recommended reflects the additional post-service work associated with code 99238 (e.g., instructions for continuing care to all relevant caregivers and preparation of discharge records).

The organizations that surveyed the new 99238 hospital discharge day CPT code agree that the median work relative value of 1.06 is an appropriate work value for this service. The recommended medians for each specialty were remarkably consistent (1.06 IM, 1.07 FP, 0.80 Ped, 1.02 Oncology).

We recognize that the median RVW in conjunction with the median intra-service time yields a slightly higher intra-service work to time intensity ratio (0.052 RVW/minute) than the "typical" evaluation and management (E/M) intra-service work to time intensity ratio of 0.036 RVW/minute. This higher intensity ratio may be a function of the nature of the service -- a hospital-based service at a time when the patient typically is anxious to be discharged -- or a function of the respondents possible misinterpretation of the definition of intra-service time. It is the opinion of the surveying organizations that many of the respondents thought of face-to-face time rather than the correct definition of intra-service time, which is time on the hospital unit or floor, when they responded with the amount of intra-service time for this service. Consistent with this theory, if one maintains the median total time for this service (40 minutes) and slightly re-distributes the percentage of pre, intra, and post service time to increase intra-service time accordingly, the intra-service work to time intensity ratio will be consistent with other E/M services.

As an example of how respondents could mistake intra-service work for pre- and post-service work, we note that "Instructions for continuing care to all relevant caregivers" is an important element of hospital discharge services. However, "Communicating further with other professionals and the patient's family" is listed under the pre-, intra-, and post-service periods in Appendix A, which accompanies the surveys. Thus, respondents may have included the time for this element of the service in the pre- or post-service periods even when they could have appropriately included it in the intra-service period.

FREQUENCY INFORMATION

How was this service previously reported? 99238

How often do physicians in your specialty perform this service? XXX Commonly __ Sometimes __ Rarely (commonly for all specialties surveyed).

Estimate the number of times this service might be provided nationally in a one-year period?
Over 4 Million.

Family Physicians	936,000	(18 x 52,000 FP)
Internists	2,250,000	(22.5 x 100,000 IM)
Pediatricians	675,000	(15 x 45,000 Ped)
Sub Total	3,861,000	

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

SURVEY DATA:

Specialty: Combined data (internal medicine, family medicine, pediatrics, and oncology)

Median Intra-Service Time: 15.00 Minutes Low: 10.00 Minutes High: 30.00 Minutes

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 22.50 in Past 5 years: 127.50

Other Data: _____

Sample Size: 120/362 Response Rate (%): 33.15% Median RVW: 1.06

25th Percentile RVW: 0.90 75th Percentile RVW: 1.20 Low: 0.098 High: 10.88

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Internal Medicine (ASIM and ACP)

Median Intra-Service Time: 15.00 Minutes Low: 10.00 Minutes High: 30.00 Minutes

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 22.50 in Past Five Years: 100.00

Other Data: _____

Sample Size: 24/95 Response Rate (%): 25.26% Median RVW: 1.06

25th Percentile RVW: 0.99 75th Percentile RVW: 1.13 Low: 0.74 High: 1.90

Specialty: Family Medicine (AAFP)

Median Intra-Service Time: 15.00 Minutes Low: 10.00 Minutes High: 25.00 Minutes

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 18.00 in Past Five Years: 90.00

Other Data: _____

Sample Size: 31/63 Response Rate (%): 49.21% Median RVW: 1.07

25th Percentile RVW: 1.03 75th Percentile RVW: 1.14 Low: 0.90 High: 1.50

Specialty: Pediatrics (AAP)

Median Intra-Service Time: 15.00 Minutes Low: 10.00 Minutes High: 30.00 Minutes

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 15.00 in Last Five Years: 75.00

Other Data: _____

Sample Size: 27/114 Response Rate (%): 23.68% Median RVW: 0.80

25th Percentile RVW: 0.68 75th Percentile RVW: 1.05 Low: 0.50 High: 3.00

Specialty: Oncology (ASCO)

Median Intra-Service Time: 15.00 Minutes Low: 10.00 Minutes High: 30.00 Minutes

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

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 60.00 in Last Five Years: 300.00

Other Data: _____

Sample Size: 38/90 Response Rate (%): 42.22% Median RVW: 1.02

25th Percentile RVW: 0.92 75th Percentile RVW: 1.25 Low: 0.098 High: 10.88

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AK2 Global Period: XXX **Recommended RVW:** 1.75

CPT Descriptor: Hospital discharge day management; more than 30 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

Final hospital day for 84 year old male who sustained a CVA with R hemiparesis, complicating diabetes not previously on insulin, hypertension and prior MI with tendency to CHF. Feeding gastrostomy was placed and insulin management initiated. Discharge day history and exam are extended to verify all systems are stable, and medical decision making is moderate. Home health agency and family will be involved in home care, with PT and OT visits and periodic nursing assessments. Multiple medications and insulin instructions are prescribed. Prescriptions must be phoned to local pharmacies and separate written prescriptions prepared for mail-away pharmacy. The HHA referral sheet, discharge note, lengthy discharge summary, instructions to floor nursing, complex verbal and written instructions to family are prepared. (Internal Medicine and Family Medicine)

Final hospital day for a six year old male who was involved in an auto pedestrian accident and sustained considerable neurological damage subsequent to intracranial bleeding. He required gastrostomy as well as a tracheostomy. The tracheostomy has been closed but he will continue to require a feeding gastrostomy at home. He requires considerable OT and PT. Discharge history and exam are extended to establish the current baseline functions of all systems. A home health agency has been contacted to arrange PT and OT visits as well as home health nurse visits to review gastrostomy feeding. Multiple prescriptions prepared for seizure medicines and antibiotics are telephoned to local pharmacies and separate written prescriptions prepared for mail away pharmacies. Paper work, including HHA referral sheet, written discharge note, lengthy dictated discharge summary, instructions to the hospital nursing staff and complex verbal and written instructions to the family are prepared. (Pediatrics)

Final hospital day for 84 year old male with refractory metastatic prostate cancer, severe bone pain requiring narcotics, and multiple other medical problems including COPD and hypertension. Discharge day history and exam are extended to verify all systems are stable, and medical decision making is moderate. Hospice agency and family will be involved in hospice care, with periodic nursing assessments. Multiple medications are prescribed. Prescriptions must be phoned to local pharmacies with separate written prescriptions for narcotics. Instructions for foley catheter care are given. Arrangements for hospital bed, air mattress, and bedside commode are made. The hospice referral sheet, discharge note, lengthy discharge summary, instructions to hospice nursing, and complex verbal and written instructions to family are prepared. (Oncology)

Description of Pre-Service Work:

Pre-service work includes providing instructions for continuing care to all relevant caregivers and preparations of discharge records, prescriptions, and referral forms before the physician is present on the patient's hospital unit or floor. Pre-service work may also include obtaining and reviewing the results of diagnostic and other studies, and providing written and telephone reports before the physician is present on the patient's hospital unit or floor. (This description of pre-service work is based upon the CPT descriptor of this service and definition of the pre-service in Appendix A, which accompanies the RUC surveys).

Description of Intra-Service Work:

Intra-service work includes examining the patient and discussing the hospital stay with the patient. It also includes reviewing the patient's chart, writing notes, providing instructions for continuing care to all relevant caregivers, and preparing discharge records, prescriptions, and referral forms while the physician

is present on the patient's hospital unit or floor. (This description of intra-service work is based upon the CPT descriptor of this service and the definition of the pre-service period in Appendix A, which accompanies the surveys).

Description of Post-Service Work:

Post-service work includes instructions for continuing care to all relevant caregivers and preparation of discharge records, prescriptions, and referral forms after the physician has left the patient's hospital unit or floor. It may also include obtaining and reviewing the results of diagnostic and other studies and providing written and telephone reports after the physician has left the patient's hospital unit or floor. (This description of post-service work is based upon the CPT descriptor of this service and the definition of the pre-service period in Appendix A, which accompanies the surveys).

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
99222	Initial Hospital Care	1.84
99233	Subsequent Hospital Care	1.25

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 of code 9923X is similar to the intra-service work of codes 99222 and 99233 in terms of the need to perform a history and exam on the patient. The medical decision-making is also comparable. The lower work value recommended as compared to 99222 reflects the subsequent versus initial nature of the services. That is, the physician is more likely to be familiar with the patient's situation when providing 9923X (thereby reducing the complexity of medical decision-making) than when providing 99222. The higher work value recommended as compared to code 99233 reflects the additional post-service work associated with code 9923X (e.g., instructions for continuing care to all relevant caregivers and preparation of discharge records).

The organizations that surveyed the new 9923X hospital discharge day CPT code agree that the median work relative value of 1.75 is an appropriate work value for this service. The recommended medians for each specialty were remarkably consistent (1.80 IM, 1.76 FP, 1.68 Ped, 1.62 Oncology).

We recognize that the median RVW in conjunction with the median intra-service time yields a slightly higher intra-service work to time intensity ratio (0.052 RVW/minute) than the "typical" evaluation and management (E/M) intra-service work to time intensity ratio of 0.036 RVW/minute. This higher intensity ratio may be a function of the nature of the service -- a hospital-based service at a time when the patient typically is anxious to be discharged -- or a function of the respondents possible misinterpretation of the definition of intra-service time. It is the opinion of the surveying organizations that many of the respondents thought of face-to-face time rather than the correct definition of intra-service time, which is time on the hospital unit or floor, when they responded with the amount of intra-service time for this service. Consistent with this theory, if one maintains the median total time for this service (57.5 minutes) and slightly re-distributes the percentage of pre, intra, and post service time to increase intra-service time accordingly, the intra-service work to time intensity ratio will be consistent with other E/M services.

As an example of how respondents could mistake intra-service work for pre- and post-service work, we note that "Instructions for continuing care to all relevant caregivers" is an important element of hospital discharge services. However, "Communicating further with other professionals and the patient's family" is listed under the pre-, intra-, and post-service periods in Appendix A, which accompanies the surveys. Thus, respondents may have included the time for this element of the service in the pre- or post-service periods even when they could have appropriately included it in the intra-service period.

FREQUENCY INFORMATION

How was this service previously reported? 99238

How often do physicians in your specialty perform this service? XXX Commonly ___ Sometimes ___ Rarely (Common performed by internists, family physicians, and oncologists, sometime performed by pediatricians).

Estimate the number of times this service might be provided nationally in a one-year period? Over 2 Million.

Internists	1,200,000	(12 x 100,000 IM)
Family Physicians	520,000	(10 x 52,000 FP)
Pediatricians	90,000	(2 x 45,000 Ped)
Sub Total	1,810,000	

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

SURVEY DATA:

Specialty: Combined data (Internal medicine, family medicine, pediatrics and oncology)

Median Intra-Service Time: 25.00 Minutes Low: 10.00 Minutes High: 70.00 Minutes

Median Pre-Service Time: 12.50 Minutes Median Post-Service Time: 20.00 Minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 12.00 in Past 5 years: 60.00

Other Data: _____

Sample Size: 120/362 Response Rate (%): 33.15% Median RVW: 1.75

25th Percentile RVW: 1.495 75th Percentile RVW: 2.20 Low: 0.75 High: 3.02

Please complete the following if more than one specialty society was involved in developing the recommendation:

Specialty: Internal Medicine (ASIM and ACP)

Median Intra-Service Time: 25.00 Minutes Low: 10.00 Minutes High: 67.50 Minutes

Median Pre-Service Time: 15.00 Minutes Median Post-Service Time: 27.50 Minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 12.00 in Last Five Years: 50.00

Other Data: _____

Sample Size: 24/95 Response Rate (%): 25.26% Median RVW: 1.80

25th Percentile RVW: 1.50 75th Percentile RVW: 2.22 Low: 1.10 High: 3.02

Specialty: Family Medicine (AAFP)

Median Intra-Service Time: 21.00 Minutes Low: 13.00 Minutes High: 45.00 Minutes

Median Pre-Service Time: 10.00 Minutes Median Post-Service Time: 20.00 Minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 10.00 in Last Five Years: 50.00

Other Data: _____

Sample Size: 31/63 Response Rate (%): 49.21% Median RVW: 1.76

25th Percentile RVW: 1.50 75th Percentile RVW: 2.00 Low: 1.10 High: 2.60

Specialty: Pediatrics (AAP)

Median Intra-Service Time: 30.00 Minutes Low: 10.00 Minutes High: 60.00 Minutes

Median Pre-Service Time: 15.00 Minutes Median Post-Service Time: 15.00 Minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A
Number of Times Provided in Past 12 months (Median): 2.00 in Last Five Years: 8.00

Other Data: _____

Sample Size: 26/114 Response Rate (%): 22.80% Median RVW: 1.68

25th Percentile RVW: 1.21 75th Percentile RVW: 1.98 Low: 0.75 High: 2.50

Specialty: Oncology (ASCO)

Median Intra-Service Time: 20.00 Minutes Low: 10.00 Minutes High: 70.00 Minutes

Median Pre-Service Time: 15.00 Minutes Median Post-Service Time: 20.00 Minutes

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 40.00 in Last Five Years: 215.00

Other Data: _____

Sample Size: 39/90 Response Rate (%): 43.33% Median RVW: 1.62

25th Percentile RVW: 1.45 75th Percentile RVW: 2.30 Low: 0.95 High: 3.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

NEWBORN DISCHARGE - TAB 28

The RUC recommendation for CPT code 99435 is based on a survey of 124 physicians. Code 99435 [History and Examination of a normal newborn infant, including the preparation of medical records (this code should only be used for newborns assessed and discharged form the hospital or birthing room on the same date)] has been added to reflect the current hospital practice of discharging newborns on the same date of delivery.

Previously, healthy newborns were evaluated by a physician within the first day of life. This initial evaluation included review of the prenatal, natal and post-natal records, a comprehensive examination, preparation of hospital records, and counseling of the parents which is described by CPT code 99431. Usually, the second hospital day for a well newborn was the discharge day. At this visit, the physician did another comprehensive examination, prepared the discharge records, and counseled parents concerning the care of the newborn as described by code 99238. Current hospital practice now dictates that in many instances a healthy newborn is discharged from the hospital on the date of birth. Therefore, only one examination is performed. There is considerably more work involved in this single visit to determine that the newborn is indeed healthy than is performed in a typical 99431 or 99238 visit, particularly since there is so little time to observe the baby.

The specialty society estimated that approximately 34% of services that are now reported as CPT codes 99431 and 99238 account for services that will now be reported as CPT code 99435. Code 99435 requires less physician work than the combination of codes 99431 and 99238 because there is usually only one examination, but requires more physician work than either of the two separate codes (99413 and 99238) because of the extended counseling and paperwork at a single visit. The RUC recommends 1.50 RVUs, which is also the survey median.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
The following codes are used to report the services provided to normal or high risk newborns in several different settings. For newborn hospital discharge services provided on a date subsequent to the admission date of the newborn, use 99238. For discharge services provided to newborn admitted and discharged on the same date, see 99435.				

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•99435	O1	History and examination of the normal newborn infant, including the preparation of medical records (this code should only be used for newborns assessed and discharged from the hospital or birthing room on the same date)	XXX	1.50

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: 01 Global Period: XXX **Recommended RVW:** 1.50

CPT Descriptor: History and examination of the normal newborn infant, including the preparation of medical records (this code should only be used for newborns assessed and discharged from the hospital or birthing room on the same date)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A full term newborn male is delivered to a 28 year old gravida two 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, jaundice, circumcision, cord care, sleep pattern, newborn behavior, peeling of skin, bowel movements, crying, response to tactile stimulation, safety issues, immunizations, parents' need for rest, early discharge, and utilization of the health care system. The infant and mother are discharged from the hospital later that same day. Hospitalization and discharge records are completed.

Description of Pre-Service Work: Obtaining and reviewing results of diagnostic and other studies before the physician is present on the patient's hospital unit or floor.

Description of Intra-Service Work: Review of the mother's and infant's charts. History from the parent(s) and examination of the infant. Discuss with the parents issues including feeding, jaundice, circumcision, cord care, sleep pattern, newborn behavior, peeling of skin, bowel movements, crying, response to tactile stimulation, safety issues, immunizations, parents' need for rest, early discharge, and utilization of the health care system. Documentation of medical records and instructions for continuing care to all relevant caregivers while the physician is present on the patient's hospital unit or floor.

Description of Post-Service Work: Instructions for continuing care to all relevant caregivers and preparation of medical records after the physician has left the patient's hospital unit or floor.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
99221	Initial hospital admission, Level 1	1.06
99233	Subsequent hospital visit, Level 3	1.25
99238	Hospital discharge day management	1.06
99431	Normal newborn history and physical	1.17
99433	Normal newborn subsequent hospital care	0.62

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

99431 and 99238 were the most commonly chosen reference services. The physician work of a history and examination of a newborn including preparation of hospital records all done on the same date requires less physician work than the combination of the two related codes (99431 and 99238) because there is only one examination, but requires more physician work than either of the two separate codes (99431 and 99238) because of the extended counselling and paperwork at a single visit.

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

FREQUENCY INFORMATION

How was this service previously reported? using codes 99431 and 99238

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? 1 million

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

SURVEY DATA:

Specialty: American Academy of Family Physicians and American Academy of Pediatrics

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

Median Pre-Service Time: 6.5 minutes Median Post-Service Time: 10 minutes

Length of Hospital Stay: NA Number of ICU Days: NA

Number & Level of Post-Hospital Visits: NA

Number of Times Provided in Past 12 months (Median): 15 in Past 5 years: 60

Other Data: NA

Sample Size: 132 Response Rate (%): 36% Median RVW: 1.50

25th Percentile RVW: 1.25 75th Percentile RVW: 1.88 Low: 0.80 High: 3.00

RUC HCPAC REVIEW BOARD
SUMMARY OF RECOMMENDATIONS
FEBRUARY 1995

PHYSICAL MEDICINE AND REHABILITATION

The American Physical Therapy Association (APTA) and the American Occupational Therapy Association (AOTA) presented relative value recommendations for four new physical medicine and rehabilitation codes. The RUC HCPAC Review Board submits a recommendation of .45 for each of these services.

APTA and AOTA had recommended relative values ranging from .44 - .50 for these services. The Review Board agreed that the work for these services is comparable to other therapeutic physical medicine codes [eg, 97110: Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility (RVW=0.45)], but did not feel that the survey data warranted different values for each service.

The Review Board noted that the survey results indicate that codes 97535 and 97537 may be reported for an average of 45-60 minutes, resulting in a total work RVU of 1.80 per hour. This work value appears reasonable when compared with 99404 [Preventive medicine counseling and/or risk factor reduction intervention(s) provided to an individual (separate procedure); approximately 60 minutes (work RVU = 1.95)]. The Review Board also noted that these services require direct one-on-one contact between patient and provider. The travel time to and from patient's home or workplace would not be reported.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
97116	N1	Therapeutic procedure, one or more areas, each 15 minutes; gait training (includes stair climbing)	XXX	0.40 (No Change)
97540	N2	~~Training in activities of daily living (self-care skills and/or daily life management skills); initial 30 minutes, each visit~~ (97540 has been deleted. To report, see 975XX, 975X2)	XXX	N/A
97541	N3	~~each additional 15 minutes~~ (97541 has been deleted. To report, see 975XX, 975X2)	XXX	N/A

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
●97535	N4	Self care/home management training (eg, activities of daily living (ADL) and compensatory training, meal preparation, safety procedures, and instructions in use of adaptive equipment) direct one on one contact by provider, each 15 minutes	XXX	0.45
●97537	N5	Community/work reintegration training (eg, shopping, transportation, money management, avocational activities and/or work environment/modification analysis, work task analysis), direct one on one contact by provider, each 15 minutes	XXX	0.45
●97542	N6	Wheelchair management/propulsion training, each 15 minutes	XXX	0.45
97700	N7	~~Office visits, including one of the following tests or measurements, with report a. Orthotic "check out" b. Prosthetic "check out" c. Activities of daily living "check out"; initial 30 minutes, each visit~~	XXX	N/A
97701	N8	~~each additional 15 minutes~~ (97000, 97701 have been deleted. To report use 977X4)	XXX	N/A
●97703	N9	Checkout for orthotic/prosthetic use, established patient, each 15 minutes	XXX	0.45

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: N4 Global Period: XXX **Recommended RVW:** 0.45

CPT Descriptor: Self care/home management training (eg, activities of daily living (ADL) and compensatory training, meal preparation, safety procedures, and instructions in use of adaptive equipment) direct one on one contact by provider, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: The patient is a 65 year old woman recently discharged from the hospital with a diagnosis of CVA resulting in a right hemiparesis. The patient lives alone and wants to be able to remain in her home. The initial evaluation has revealed performance deficits in bathroom activities and meal preparation. At the home site, the therapist recommends and sets up proper adaptive equipment in the bathroom, so that the patient can safely transfer to toilet and bathtub using compensatory techniques. In the kitchen, the therapists teaches and observes meal preparation using one-handed techniques and special adaptive equipment. Therapist must assure that patient's functional level is sufficient to perform necessary self care and home management activities within safe limits (e.g., picking items off floor, lifting pots from stove, reaching items in cupboards, opening drawers)

Description of Pre-Service Work:

Includes:

- chart review and analysis of patient history to ascertain if compensatory vs restorative skills are indicated
- set up, schedule/order/retrieve supplies
- select potential adaptive devices

Description of Intra-Service Work:

Direct patient time, may include:

- safety instruction
- compensatory technique/equipment training (sequencing, following directions, memory lists)
- instructing family/patient
- patient practice, return demonstration
- problem solving work (eg, adapting for unusual tasks)
- make environmental adaptations to facilitate accessibility in home

Description of Post-Service Work:

Includes:

- communication with spouse/family, potential funding sources for adaptive equipment
- documentation
- communicating with other team members, equipment providers, insurance carrier
- researching catalogs, ordering equipment if necessary

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
97530	Therapeutic activities, direct(one on one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes	0.44
97110	Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility	0.45

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

RVW is median value from APTA and AOTA respondents and corresponds to reference services RVWs. Range of typical patients include frail elderly and children with CP or autism where safety factors require intense practitioner work.

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

FREQUENCY INFORMATION

How was this service previously reported? 97540

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? 1000+

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

SURVEY DATA:

Specialty: The American Occupational Therapy Association

Median Intra-Service Time: 45 Low: 11 High: 60

Median Pre-Service Time: 11.50 Median Post-Service Time: 10

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 50 in Past 5 years: 500

Other Data: ___

Sample Size: 241 Response Rate (%): 12 Median RVW: 0.45

25th Percentile RVW: 0.44 75th Percentile RVW: 0.46 Low: 0.40 High: 0.90

Specialty: The American Physical Therapy Association

Median Intra-Service Time: 20 Low: 0 High: 120

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 2 in Past 5 years: 25

Other Data: ___

Sample Size: 160 Response Rate (%): 41 Median RVW: 0.45

25th Percentile RVW: 0.44 75th Percentile RVW: 0.55 Low: 0 High: 3.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: N5 Global Period: XXX **Recommended RVW:** 0.50

CPT Descriptor: Community/work reintegration training (eg, shopping, transportation, money management, avocational activities and/or work environment/modification analysis, work task analysis), direct one on one contact by provider, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 35 year old computer programmer with a diagnosis of Guillain-Barre syndrome is being treated in an outpatient department for residual weakness which is limiting his ability to return to community and work activities. After evaluation, the therapist identifies transportation and work environment as two barriers to his ability to return to former functional level. The therapist determines the type of driving adaptation needed, trains him in the use of the equipment (including on-road practice), and trains on car transfer techniques.

(Same patient) With the patient, the therapist analyzes the essential job functions. At the work site the therapist analyzes the work environment to identify any factors with potential negative impact on balance/stability, posture and safe extremity function. The therapist reports all findings to the patient and, if necessary, the employer, recommends necessary changes in routine (e.g. stretching periods) or assistive technology (e.g. ergonomic seating, computer access) and provides equipment purchasing information to the patient and/or employer.

Description of Pre-Service Work:
Includes:

discussing perceived demands of the job with other employer
chart review
calls to set up appointments off-site
pre-set up of activities
communicate with insurance carrier, employer, equipment dealers to schedule & obtain approval

Description of Intra-Service Work:
Direct patient time, may include:

skilled assessing of all components of job demands relevant to patient ability
observing and recording (written, taped &/or filmed) observations, research/adjust equipment, demonstrating/training new techniques, practice
adaptations to car, driving techniques
training in problem solving
instructing supervisor/employer

Description of Post-Service Work:
Includes:

discussing modification/equipment needs with employer/area supervisor
documenting results
follow-up phone calls to physician, other therapists, insurance carrier, equipment supplier, employee (patient)
reviewing/researching catalogs and ordering necessary equipment

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
97530	Therapeutic activities, direct(one on one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes	0.44
97110	Therapeutic procedure, one or more areas, each 15 minutes: therapeutic exercises to develop strength and endurance, range of motion and flexibility	0.45
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	0.44

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

Recommended RVW is median for APTA and AOTA. Service requires higher intensity than reference services because of stress and judgement needed to address greater risk to patient and others in a less controlled environment. Typical patients also include young adults with such conditions as CP or spina bifida.

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

FREQUENCY INFORMATION

How was this service previously reported? 97540

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? 1000+

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

SURVEY DATA:

Specialty: The American Occupational Therapy Association

Median Intra-Service Time: 50 Low: 8 High: 99

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 14 in Past 5 years: 55

Sample Size: 241 Response Rate (%): 11 Median RVW: 0.50

25th Percentile RVW: 0.45 75th Percentile RVW: 0.75 Low: 0.45 High: 1.10

Specialty: The American Physical Therapy Association

Median Intra-Service Time: 30 Low: 0 High: 180

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 8

Sample Size: 160 Response Rate (%): 41 Median RVW: 0.50

25th Percentile RVW: 0.45 75th Percentile RVW: 0.61 Low: 0 High: 3.00

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: N6 Global Period: XXX **Recommended RVW:** 0.44

CPT Descriptor: Wheelchair management/propulsion training, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 29 year old C4 quadriplegic with complete right shoulder disarticulation and left above knee amputation has been fitted with a powered wheelchair and custom seating system. After an assessment of the seating system in conjunction with his functional goals, the therapist determines that the system must provide stabilization, support and balance as well as pressure management. To achieve these goals, the therapist trains the patient in the safe operation and management of the wheelchair in order to achieve independent mobility in his home and community environment.

Description of Pre-Service Work:
Includes:
- communicating with other team members
- chart/history review
- research/design alternatives

Description of Intra-Service Work:
Direct patient time, may include:
- observing patients abilities, practicing maneuverability skills
- adjusting seating, other wheelchair components
- training in problem solving real life situations for work, home, recreation areas

Description of Post-Service Work:
Includes:
- documenting
- review/research catalogs and order necessary equipment

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
97116	Therapeutic procedure, one or more areas, each 15 minutes; gait training	0.40
97530	Therapeutic activities, direct(one on one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes	0.44
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	0.44

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

RVW is median value for APTA and AOTA. Typical patient also includes those with CP, ALS, or MS. Greater practitioner skill is required to address motivational and cognitive problems in addition to technical concerns of wheelchair management.

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

FREQUENCY INFORMATION

How was this service previously reported? 97540

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? 1000+

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

SURVEY DATA:

Specialty: The American Occupational Therapy Association

Median Intra-Service Time: 38 Low: 2 High: 99

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 1 in Past 5 years: 6

Other Data: ___

Sample Size: 241 Response Rate (%): 10 Median RVW: 0.44

25th Percentile RVW: 0.44 75th Percentile RVW: 0.45 Low: 0.35 High: 0.50

Specialty: The American Physical Therapy Association

Median Intra-Service Time: 15 Low: 0 High: 60

Median Pre-Service Time: 5 Median Post-Service Time: 7.5

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 0 in Past 5 years: 3

Other Data: ___

Sample Size: 160 Response Rate (%): 40 Median RVW: 0.44

25th Percentile RVW: 0.40 75th Percentile RVW: 0.50 Low: 0 High: 1.40

SUMMARY OF RECOMMENDATION

Tracking Number: N9 Global Period: XXX Recommended RVW: 0.46

CPT Descriptor: Checkout for orthotic/prosthetic use, established patient, each 15 minutes

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: Orthotic: A 56 year old female with a diagnosis of rheumatoid arthritis is seen for a follow-up checkout subsequent to a metacarpal phalangeal flexible implant arthroplasty. The therapist has previously fitted the patient with a dorsal dynamic orthosis that provides correction of residual deformity and permits metacarpal flexion and extension in desired plane and range. The patient's edema has decreased and she complains of pressure on the ulnar styloid. The therapist re-assesses the fit and makes adjustments to the orthosis.

Prosthetic: A forty year old man with a left below knee amputation is seen two months after being fitted for a prosthesis consisting of a conventional socket with supra condylar suspension and sach foot. The therapist reassesses the patient's need for additional modifications to the socket of the prosthesis following a stump revision. The therapist documents the fit of the prosthesis and checks the patient's comfort and safety during gait and standing activities.

Description of Pre-Service Work:

Includes:

- reviewing history/chart/last notes
- phone calls to physician, insurance carrier
- assembling supplies, tools, etc

Description of Intra-Service Work:

Direct patient time, may include:

- assessing hand/wrist problems, wound status, wound care, bandaging
- assessing splint for alignment, fit
- adjusting/repairing components of orthotic/prosthetic, adding/deleting padding
- reinstruct patient regarding wearing schedule, application and care of orthotic/prosthetic
- having patient practice proper technique

Description of Post-Service Work:

May include:

- writing note, documentation
- providing patient/family with home program
- communicating with other therapists, physician, insurance carrier
- cleaning up tools, splinting supplies, bandaging area

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
97530	Therapeutic activities, direct(one on one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes	0.44
97110	Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility	0.45

RATIONALE FOR RVW RECOMMENDATION (Include all applicable elements of work in rationale: time; technical skill & physical effort; mental effort and judgement; and stress):

RVW is consensus of the AAPM&R, APTA and AOTA. This service is a skilled, focused, assessment requiring high practitioner technical knowledge (eg, biomechanics and anatomy) and cognitive skill. Typical patients include pediatric where communications barriers increase mental effort and judgement.

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

FREQUENCY INFORMATION

How was this service previously reported? 97700

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? 1000+

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

SURVEY DATA:

Specialty: The American Occupational Therapy Association

Median Intra-Service Time: 21.5 Low: 12 High: 60

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 30 in Past 5 years: 175

Sample Size: 241 Response Rate (%): 14 Median RVW: 0.44

25th Percentile RVW: 0.34 75th Percentile RVW: 0.45 Low: 0.21 High: 1.01

Specialty: The American Physical Therapy Association

Median Intra-Service Time: 17.5 Low: 0 High: 60

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

Length of Hospital Stay: ___ Number of ICU Days: ___

Number & Level of Post-Hospital Visits: ___

Number of Times Provided in Past 12 months (Median): 3.5 in Past 5 years: 2.5

Sample Size: 160 Response Rate (%): 40 Median RVW: 0.47

25th Percentile RVW: 0.45 75th Percentile RVW: 0.54 Low: 0 High: 1.50

American Medical Association
Physicians dedicated to the health of America

Department of Payment Systems
515 North State Street Chicago, Illinois 60610
312 464-4736 312 464-5849 Fax

March 1, 1995

Bart McCann, MD
Health Care Financing Administration
Room 181 East High Rise
6325 Security Boulevard
Baltimore, Maryland 21207

Dear Doctor McCann:

Recommendations for maxillofacial prosthetic services (CPT codes 21079-21088) were developed by the American Academy of Maxillofacial Prosthetics and reviewed by Robert Florin, MD and Michael Maves, MD of the AMA/Specialty Society RVS Update Committee on November 21, 1994. These recommendations were also discussed with James Holloway, MD on February 9, 1995 and a consensus was formed that the recommendations represented appropriate relative work values for these services. Although members of the RUC assisted, at HCFA's request, in the development and review of the relative work values for these services, the recommendations should not be considered RUC recommendations as the RUC did not formally review the AAMP proposal.

I have attached a summary of the workgroup discussions and a detailed document prepared by Thomas R. Cowper, DDS for your review. I hope that this information is helpful in developing final work relative values for these services. Please contact me if you have any further questions.

Sincerely,

Sherry L. Smith

Sherry L. Smith

cc: Thomas Cowper, DDS
Robert Florin, MD
Kay K. Hanley, MD
James Holloway, MD
Michael Maves, MD
Grant V. Rodkey, MD
Sandra L. Sherman

Encl.

Recommendations for Maxillofacial Prosthetics

On November 21, 1994 Robert Florin, MD (American Association of Neurological Surgeons), Michael Maves, MD (American Academy of Otolaryngology - Head and Neck Surgery, Inc.), Thomas R. Cowper, DDS and Jonathan Weins, DDS (American Academy of Maxillofacial Prosthetics) met to review the AAMP recommendations for CPT codes 21079 - 21088. The original AAMP recommendations were felt to be too high as they may have included services performed by technicians. Services provided by technicians should be included in the practice cost component. The meeting participants reviewed detailed time data collected by AAMP (see attached binder) and were able to differentiate DDS time from technician time. The DDS face-to-face time with the patient was assumed to be as intense as a level 4 or 5 office visit (2.00 per hour). The intensity factor of 2.00 per hour appears reasonable when compared with other surgical codes. The DDS lab time intensity factor was assumed to be about 75% of the face-to-face time (1.50 per hour). The final recommendations from this workgroup are listed in column 7 of the table below. The AAMP agreed that the rank order of the revised recommendations appeared appropriate.

On February 9, 1995 Doctors Maves and Cowper met with James Holloway, MD, representing the Health Care Financing Administration, to review the revised recommendations and address potential HCFA concerns. This workgroup confirmed that a global period of 090 would apply for all codes and that the global period begins with the initial consultation with the patient. If an unusual situation occurs (eg, patient does not return for surgery), the maxillofacial prosthodontist should report an appropriate evaluation and management code. Doctor Cowper also confirmed that the relative values assigned for these codes should include reimbursement for the actual prosthesis.

CPT Code	CPT Descriptor	DDS Face-to-Face Time (hours)	DDS Lab Time (hours)	Intensity Factor for Direct DDS Time	Intensity Factor For DDS Lab Time	Computed Value - Recommendation of 11/21/94 Meeting Participants	AAMP Original Recommendation
21079	Impression and custom preparation; interim obturator prosthesis	7.25	4.25	2	1.5	20.88	21.33
21080	definitive obturator prosthesis	7.92	5.08	2	1.5	23.46	31.26
21081	mandibular resection prosthesis	6.25	5.92	2	1.5	21.38	33.61
21082	palatal augmentation prosthesis	6.75	4.00	2	1.5	19.50	23.98
21083	palatal lift prosthesis	6.08	3.92	2	1.5	18.04	23.03
21084	speech aid prosthesis	6.83	4.92	2	1.5	21.04	27.98
21085	oral surgical splint	2.08	2.83	2	1.5	8.41	12.11

CPT Code	CPT Descriptor	DDS Face-to-Face Time (hours)	DDS Lab Time (hours)	Intensity Factor for Direct DDS Time	Intensity Factor For DDS Lab Time	Computed Value - Recommendation of 11/21/94 Meeting Participants	AAMP Original Recommendation
21086	auricular prosthesis	7.58	5.42	2	1.5	23.29	24.45
21087	nasal prosthesis	7.58	5.42	2	1.5	23.29	35.67
21088	facial prosthesis	May propose to Delete this code					
210X1	surgical obturator prosthesis	4.08	2.92	2	1.5	12.54	13.66
210X2	orbital prosthesis	10.58	6.92	2	1.5	31.54	51.47

Time Profiles

for

Maxillofacial Prosthetic Services

Insurance Committee
RVS Subcommittee
American Academy of Maxillofacial Prosthetics
January, 1995.

~

The author wishes to express his gratitude to the following individuals for their expertise, guidance, help, and patience throughout the writing of this monograph.

My wife, Candace L. Cowper
Dr. Steven Eckert
Dr. Terry Kelly
Dr. Jonathan Wiens

~

January 29, 1995
Thomas R. Cowper, D.D.S.

Table of Contents

Temporal Profiles for Maxillofacial Prosthetic Services

Background

In November and December of 1993, the American Academy of Maxillofacial Prosthetics (AAMP) conducted a survey of its active members for the purpose of establishing relative work values (RVUwork) for 10 coded and 2 proposed services.

In the process, three service times —Pre, Intra, and Post service— were additionally estimated by the respondents as part of the overall survey methodology. This format conforms with the established method of magnitude estimation used commonly in medicine to determine relative values, however, exhibits some problems when applied to maxillofacial prosthetic services.

Chief among these problems is the realization that while it is technically possible to divide these services into such time categories it is awkward and artificial at best.

Additionally, since providers frequently use extenders (technicians and medical artists) and are themselves involved in laboratory procedures that comprise real work, but of an indirect nature, the quantification of total work provided by the operator for such services is somewhat obscured.

These limitations were duly noted during the RVU Refinement Panel meeting conducted by HCFA in November of 1994. HCFA directed further study of the matter through the auspices of a specially appointed Facilitation subcommittee of the AMA's Relative Value Update Committee (RUC).

Since maxillofacial prosthetic services are extremely time intensive in nature, it was felt appropriate to more closely study the temporal profiles of these procedures.

More specifically, the committee was charged with delineating provider direct, indirect, and technician times for each service. In addition, procedural time, as cited in the literature on the subject, is a strong predictor of RVUwork.[1]

The following monograph, constructed by the RVU Subcommittee of the Insurance Committee of the AAMP, delineates the estimated times of nine coded maxillofacial services and two newly proposed codes.

Contents

The subsequent pages provide temporal profiles for the above described maxillofacial services. The reader will note that only nine of the ten coded services have been enumerated since code 21088— "Facial Prosthesis"— is proposed to be unbundled into the existing and proposed codes. Code 21088 will then be deleted or replaced with the proposed code—"Orbital Prosthesis."

Each service has been divided into three time categories— Provider, Provider Lab/Clerical, and Technician times. A description of these cate-

gories is offered below:

Provider time—

...estimates direct patient time (face to face).

Provider Lab/Clerical time—

...comprises laboratory or clerical time directly related to the service and performed by the provider solely. Such time is characterized as indirect time and reflects clerical and procedural work in which the provider is engaged and precludes any other unrelated activities (e.g. while performing a technical laboratory phase, the provider is expending time at a measurable intensity indirectly but exclusively on the "analog" of the patient.)

Technician Time—

... estimates of the time apportioned to strictly technical phases provided by a laboratory technician, medical artist, or other "extender." Such time is not considered part of the RVUw for the service. Rather, these resources are included as part of practice expense costs.

In addition, the typical average number of visits for each service is broken out and the three categories of time are allocated per visit.

Methods

A consensus panel was appointed by the Chairman of the RVS Subcommittee to determine the typical times for the services in question.

The panel consisted of four individuals actively engaged in the practice of maxillofacial prosthetics and from various parts of the country. Two panel members were in private practice, one was in a university setting, while the final member was in a hospital practice. The services were divided equally among the members and temporal profiles were constructed.

The members also had access to the temporal profile results of two previous open panel workshops conducted on the subject prior to the general survey. Panel agreement was established through open verbal exchange.

The resultant time profiles were then compared to time estimates obtained from the national survey conducted in November-December, 1993. This data was manipulated in the following manner. Frequency distributions for total times based on collected survey raw data were constructed fore each service. Median total times, based on the entire samples, were also calculated. Percentile distribution calculations for responses for each service were additionally constructed.

Data below the 10th percentile and above the 90th percentile were excluded in frequency histogram graphs. Polynomial curve fitting was applied to the histogram data in order to aid in evaluating the sample distributions since a number of these were polymodal in nature.

After reviewing the above data, it was apparent that the median total times in the national survey sample closely reflected the panel temporal profile estimates.

The detailed description of the temporal profiles for these services is presented below. Included after each service time profile, for reference, are national data statistical parameters and frequency histograms.

Time, Intensity, and Work in Maxillofacial Prosthetic Services

Overview

As noted previously, the conventional method of determining RVUwork for medical and surgical procedures, when applied to maxillofacial services, results in confusion and uncertainty as to what is included in the estimations. Pre, Intra, and Post service comparisons— the standard format for most of medicine— are difficult to apply since, unlike operations, maxillofacial procedures aren't readily divided into such categories and often blend into each other with little distinction.

Adding confusion to the situation is the fact that a large variation exists in the use of provider "extenders" (laboratory technicians or medical artists) among practitioners. In some instances such extenders provide a significant portion of the work toward the service while in other cases, the provider alone performs most of the work. While in most instances it is thought that an intermediate contribution is provided by such extenders, it is impossible to verify that the members correctly allocated or discounted, depending on the particular situation, these resources in their determination of work.

Furthermore, since work intensity differs during indirect (laboratory) procedures as compared to direct face-to-face work, the accuracy of the RVUwork estimates is further possibly obscured.

In order to clarify these ambiguities, a more detailed analysis of the time for these services was conducted by a consensus panel of the RVS subcommittee of the Insurance Committee.

The format for this analysis was similar to that used in the Open panel workshops conducted previously by the AAMP.[1] Direct, indirect, and technician/extender times were calculated for each service and these results, which are found appended below, were presented to the specially appointed facilitation subcommittee of the American Medical Association's Relative Value Update Committee (the Ruc) on November 21, 1994 in Alexandria, Virginia. This committee, comprised of an Otolaryngologist familiar with maxillofacial prosthetic services, a Neurosurgeon unfamiliar with maxillofacial services, and two representatives from the AAMP, constructed the subsequent relationship between time and work for maxillofacial prosthetic services and their subsequent valuation.

Traditional Magnitude Estimation and Maxillofacial Prosthetics

Magnitude Estimation, a well established comparative methodology, has been successfully applied to the evaluation of relative value of differing services in medicine and surgery.[2]

This process works best when comparing smaller, discrete procedures or services with established known references, but becomes unwieldy when applied to maxillofacial procedures which are comprised of large blocks of time in which intensity varies frequently.

In such cases it is difficult to arrive at a single estimate of work by comparing it to a established procedure as has been traditionally utilized since components comprising the service may have no counterpart in the referenced procedure or any combination of component reference procedures.

An additional stumbling block in maxillofacial services is the question of indirect (laboratory) time and how to compare it to other established services with known RVUwork values. Since almost all maxillofacial services have varying components of indirect time which comprise some portion of overall work for the service, it is necessary to include this work in the total provider work, but since there are no correlative established services against which to compare this work evaluating this portion of the overall work for the service is problematic.

An alternate approach to this problem is to assign *average* work intensities per unit hour of procedural time to the direct and indirect components of these services. While the work per unit time (intensity) admittedly varies over the course of the service, in large blocks of time as seen in maxillofacial services, average values for direct and indirect work/hour could approach reasonably accurate estimates of overall work and be the fairest means of assigning credible values for these procedures. This "average intensity" method has been applied in several difficult areas in medicine and surgery and therefore has precedent.

Since several medical proportionate work/time ratios are generally accepted as being accurate, it seemed plausible to try to apply these values to maxillofacial service times with

the hope of arriving at reasonable final work values. This relationship could then serve as the "key" linking translator between the maxillofacial relative value scale established in the survey to the rest of medical and surgical work values. The following discussion outlines this methodology.

Establishing the Proportionate RVUwork/Time Linkage

Several proportionate work/time ratios have been established in medicine. More specifically, there is general agreement that a General Practioner expends approximately, on average, 1.0 RVU of work per hour of time, while an Intensive Care Provider may expend as much as 3.68 RVUs of work in the first hour and overall average of 3.0 RVUs/hour.[3]

It seems reasonable to assume that the intensity of most maxillofacial services falls somewhere between these values. This observation is supported by an evaluation of the median work and total time estimates provided by the membership survey.[4]

More precisely, if we divide the median survey RVUwork estimate for each service by its respective median total procedural time we obtain a range of work/time ratios that reflect the respondents' estimation of work

$$GP\ Intensity = 1.0\ \frac{RVU_{work}}{Hour} \leq Maxillofacial\ Services \leq 3.6\ \frac{RVUs_{work}}{Hour} = ICU\ Intensity$$

Fig. 1
Proposed Limits of Work Intensities

intensity (by definition; work = time x intensity or Intensity = Work/Time). From these calculations (Table 1) we see that work/time ratios range from a low of 1.50 RVUs/hour (Interim Obturator) to a high of 2.05 RVUs/hour (Palatal Lift Prosthesis) with an overall average intensity of 1.86 RVUs/hour.

The task then remains to discover the appropriate ratio(s) between these limits that when applied to a well defined maxillofacial service will result in close agreement with the median survey estimate of that procedure's work. Since a majority of the facilitation committee members were confident that the time for the service "Surgical Obturator" was accurate (it's time components were carefully analyzed by the committee) and that this service was widely known among the respondents, trial ratios were applied to this maxillofacial service in the following manner.

We assume that although the intensity of this service varies significantly with time that on overall the direct (face-to-face) intensity of work averages 2.0 RVUs/hour. Since indirect work (Laboratory;Clerical) is intuitively less intense (although skill and technical effort may be greater than found in an hour of GP time), we assume that overall that this work averages 1.6 RVUs/hour.

By applying these ratios to the respective times for direct and indirect work we arrive at the total RVUwork value for the service Surgical Obturator as seen in Fig. 2 of the following page. We then repeat the process for the remaining services which gives us the range of work for the entire set of services.

A comparison of these values to the survey median values

Procedure	Median RVUwork Units	Median Total Time (Hours)	RVUwork Units/Hour
Interim Obturator	17.2	11.5	1.5
Definitive Obturator	24.75	13	1.9
Mand. Resection	24.3	12.09	2.01
Palatal Augment.	19	10.75	1.77
Palatal Lift Prosthesis	20.5	10	2.05
Speech Aid	23.25	11.75	1.98
Surgical Splint	10	5	2
Auricular Prosthesis	22	13	1.69
Nasal Prosthesis	23.7	13	1.82
Surgical Obturator	14.27	7	2.04
Orbital Prosthesis	30.25	17.5	1.73
		Average RVU/Hour	1.86

Table 1

demonstrates some individual discrepancies but, overall, offers a reasonable approximation to the range of work estimated in the survey.

Table 2 summarizes the values for RVUwork when calculated by this method and the corresponding survey medians estimated by the respondents in the November Survey. The difference between the new calculated values and the Survey medians is also presented. Note that the decrease in values in some services is for the most part offset by the increases in the others.

The advantages of using this method for RVUwork calculations are twofold:

One, it allows for the calculation of the work for indirect time procedures— that is, provider laboratory time which was impossible to calculate by the standard methods. It does so by applying a reasonable differential in work intensity against the median time for this portion of the service.

Two, it permits calculation of work over extremely long time blocks without the need for numerous complex comparisons to multiple smaller established reference procedures. While the actual intensity during a given phase of the service may be higher or lower than this estimate, the extremely long times characteristic of maxillofacial services serve to correct for these shorterm errors.

$$Work = (Time)(Intensity)$$

or

$$Work_{Surgical\ Obt.} = [(Time_{Direct})(Intensity_{Direct})] + [(Time_{Indirect})(Intensity_{Indirect})]$$

$$\therefore$$

$$Work_{Surgical\ Obt.} = (4.08\ hrs.)\left(\frac{2.0\ RVUs}{hr.}\right) + (2.92\ hrs.)\left(\frac{1.6\ RVUs}{hr.}\right)$$

$$\therefore$$

$$Work_{Surgical\ Obt.} = (8.16\ RVUs) + (4.672\ RVUs)$$

$$\therefore$$

$$Work_{Surgical\ Obt.} = 12.83\ RVUs$$

Fig 2.
Derivation of Work for Surgical Obturator

References

1. Braun P, Dernburg MA, Dunn, DL, Cohen W. Prdicting the work of evaluation and management services. Medical Care 1992; 30(11): 13-28.

2. Hsiao WC, Braun P, Dunn D, et. al. An Overview of the development and refinement of the resource-based relative value scale. Medical Care 1992; 30(11) Supplement: 1-12.

3. Federal Register. 59: 235, December 8, 1994.

4. Cowper, TR. Final Report— RBRVS recommendations and practice and malpractice expenses for maxillofacial prosthetic procedures. Monograph. February, 1994.

Service	CPT	Survey Median RVUs	Calculated RVUs	Difference
Interim Obturator	21079	17.20	21 30	4 10
Definitive Obturator	21080	24 75	23.97	-0.78
Mand. Resection	21081	24.30	21 97	-2.33
Palatal	21082	19 00	19.90	0.90
Palatal Lift	21083	20.50	18.43	-2.07
Speech Aid	21084	23.25	21.53	-1 72
Surgical Splint	21085	10.00	8.69	-1.31
Auricular Prosthesis	21086	22.00	23 83	1.83
Nasal Prosthesis	21087	23.70	23.83	0 13
Surgical Obturator	210xx-1**	14.27	12.83	-1.44
Orbital Prosthesis	210xx-2**	30.25	32 23	1 98
**Proposed Codes			Total Difference	-0 70

Table 2

Interim Obturator
21079

Interim Obturator

21079

Visit: 1

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Defect and Oral Debridement; Clinical Examination	20		
	Adjustment and Modification of Surgical Obturator Base	5	5	
	Remove and Replace Surg. Obt. Soft Liner	15	15	
	Preliminary Maxillary and Mandibular Impressions	10	5	
	Patient /Family Counselling	15		
	Coordination and Follow-up	10		
	Reports and Letters (Financial and Referral		45	
	Cast Production			20
	Cast Modification and Custom Tray Design		5	
	Custom Tray Preparation			30
	Visit Totals (Min.)	75	75	50
	Visit Totals (Hrs.)	1.25	1.25	0.83

Interim Obturator

21079

Visit: 2

Week: 2

Step	Description	Time		
		Clinical	Physician Lab. or Clerical	Technician
	Defect and Oral Debridement	5		
	Adjustment and Modification of Surg. Obt. Base	10	5	
	Remove and Replace Surg. Obt. Soft Liner	15	15	
	Adjust and Adapt Custom Tray to Defect	15	10	
	Final Defect Impression	10		
	Patient and Family Instruction	10		
	Coordination and Follow-up	5		
	Master Cast Production			20
	Baseplate Preparation			15
	Visit Totals (Min.)	70	30	35
	Visit Totals (Hrs.)	1.17	0.50	0.58

Interim Obturator

21079

Visit: 3

Week: 2

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Revise Obturator Base	10	5	
	Adjust Soft Liner	5	5	
	Obtain Maxillomandibular Relation	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Articulate Mastercast			15
	Arrange Artificial Dental Components			45
	Visit Totals (Min.)	35	15	60
	Visit Totals (Hrs.)	0.58	0.25	1.00

Interim Obturator

21079

Visit: 4

Week: 3

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Debride defect and Oral Structures	5		
	Modify Obturator Base of Surg. Obt.	10	5	
	Remove and Replace Soft Liner of Surg. Obt.	15	15	
	Try-in, Verify Occlusion and Dental Components- Int. Obt.	30	15	
	Coordinate and Follow-up	5		
	Patient/Family Instructions	5		
	Refine Occlusion and Contour Adjustments		25	
	Technical Processing and Retrieval			80
	Correction of Processing Distortions		15	
	Polish and Disinfection			30
	Visit Totals (Min.)	70	75	110
	Visit Totals (Hrs.)	1.17	1.25	1.83

Interim Obturator

21079

Visit: 5

Week: 4

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjust Surgical Obturator	10	5	
	Fit and Adjust Interim Base to Defect and Oral Structures	20	10	
	Remount Record	5		
	Articulate Remount			15
	Refine Occlusion		10	
	Repolish Prosthesis		5	
	Patient/Family Instructions and Counselling	10		
	Coordination and Follow-up	5		

	Clinical	Physician Lab. or Clerical	Technician
Visit Totals (Min.)	50	30	15
Visit Totals (Hrs.)	0.83	0.50	0.25

Interim Obturator

21079

Visit: 6

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment of Prosthesis Base	15	10	
	Refine Occlusion	10		
	Patient/Family Counselling	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	40	10	
	Visit Totals (Hrs.)	0.67	0.17	0.00

Interim Obturator

21079

Visit: 7

Week: 7

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment of Prosthesis Base	10	5	
	Refine Occlusion	10		
	Patient/Family Counselling	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	30	5	
	Visit Totals (Hrs.)	0.50	0.08	0.00

Interim Obturator

21079

	Time		
	Clinical	**Physician Lab. or Clerical**	**Technician**
Visit: 8			
Week: 9			
Step Description			
Adjustment to Prosthesis Base	10	5	
Refine Occlusion	5		
Patient/Family Instruction	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	25	5	
Visit Totals (Hrs.)	0.42	0.08	0.00

Interim Obturator

21079

Visit: 9

Week: 11

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment of Prosthesis Base and Liner	10	5	
	Patient/Family Counselling	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	20	5	
	Visit Totals (Hrs.)	0.33	0.08	0.00

Interim Obturator

21079

Visit: 10

Week: 13

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment to Prosthesis Base	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	20	5	
	Visit Totals (Hrs.)	0.33	0.08	0.00

Interim Obturator

21079

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	435.00	255.00	270.00
Procedure Totals (Hrs.)	7.25	4.25	4.50

Total Direct and Indirect Hours:	16.00
Total Direct Hours:	11.50
% of Direct time = Physician Laboratory:	0.37
% of Total Service Time = Technician:	0.28
Total Visits:	10

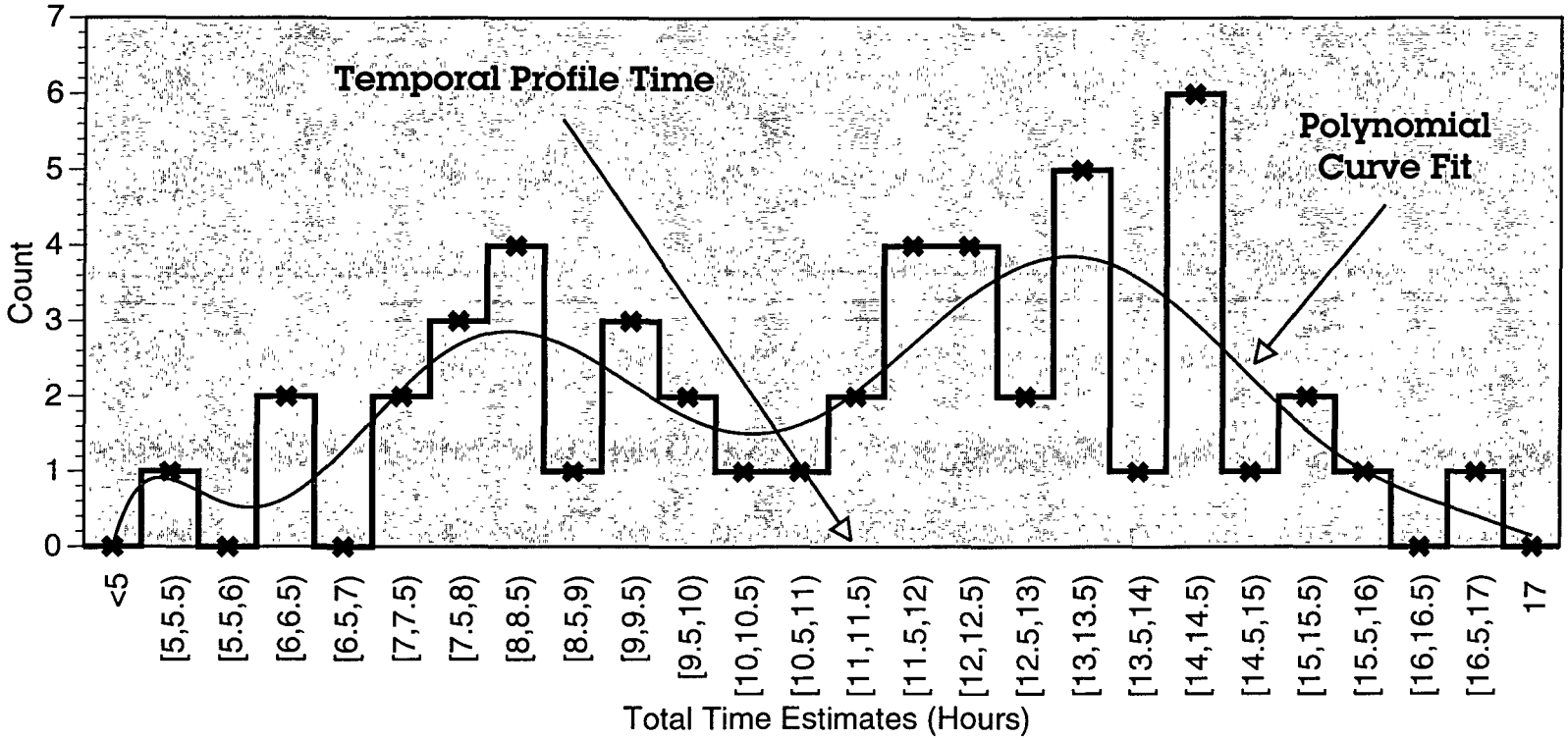
Interim Obturator
21079

Selected Survey Graphs and Tables

Frequency Distribution for Total Time

(<10th% and >90th% Excluded)

Interim Obturator



Interim Obturator
Graphs and Tables

Interim Obturator Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
72.74	66.41	8.43	4410.39	91.3	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	360	360	4510	597100	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	129
# > 90th %:					
6					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
323.52	182.22	23.33	33203.62	56.32	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
30	840	810	19735	8376975	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
3	60	180	300	480	582
# > 90th %:					
6					

Interim Obturator Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
289.75	217.54	27.85	47322.86	75.08	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	900	900	17675	7960775	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
3	60	120	240	360	660
# > 90th %:					
3					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
11.27	4.65	.59	21.64	41.28	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.75	21.5	20.75	698.67	9193.13	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	5.02	8	11.5	14	18
# > 90th %:					
4					

Definitive Obturator
21080

Definitive Obturator

21080

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 1				
Week: 1				
	Review Med. History	10	10	
	Review Radiographs		5	
	Defect and Oral Debridement; Clinical Exam	20		
	Evaluate and Adjust Interim Prosthesis	10	5	
	Obtain Preliminary Impressions	10		
	Patient/Family Counselling	15		
	Coordination and Follow-Up	10		
	Telephone and Other Consults		15	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			20
	Treatment Plan, Survey, and Design		25	
	Custom Tray Fabrication			30
	Visit Totals (Min.)	75	105	50
	Visit Totals (Hrs.)	1.25	1.75	0.83

Definitive Obturator

21080

Visit: 2

Week: 2

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Tooth Preparation	20		
	Final Impression	10		
	Evaluate and Adjust Existing Interim Prosthesis	10	5	
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Mastercast Production			20
	Final Survey and Lab. Work Order RX		30	

	Clinical	Physician Lab. or Clerical	Technician
Visit Totals (Min.)	55	35	20
Visit Totals (Hrs.)	0.92	0.58	0.33

Definitive Obturator

21080

Visit: 3

Week: 4

Step Description	Time		
	Clinical	Physician Lab. or Clerical	Technician
Try-in and Adjust Metal Framework	20	10	
Add Acrylic Impression Base			20
Adjust and Bordermold Acrylic base	20	10	
Final Impression	10		
Adjust Existing Prosthesis	5	5	
Patient Instructions	5		
Coordination and Follow-up	5		
Production of Mastercast related to Frame			45
Prepare Trial Base			20
Visit Totals (Min.)	65	25	85
Visit Totals (Hrs.)	1.08	0.42	1.42

Definitive Obturator

21080

Visit: 4

Week: 5

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Obtain Maxillomandibular Relation	10	5	
Adjust Existing Prosthesis	5	5	
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Articulate Mastercast with Frame			15
Arrange Artificial Dental Components			45
Visit Totals (Min.)	25	10	60
Visit Totals (Hrs.)	0.42	0.17	1.00

Definitive Obturator

21080

Visit: 5

Week: 6

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in and Arrange Dental Components	30	15	
	Patient/Family Counselling	5		
	Coordination and Follow-up	5		
	Refine Occlusion and Contour Adjustment		20	
	Preparation and Retrieval (Processing Excluded)			80
	Correction of Processing Distortions		15	
	Polishing and Disinfection			30

Visit Totals (Min.)	40	50	110
Visit Totals (Hrs.)	0.67	0.83	1.83

Definitive Obturator

21080

Visit: 6

Week: 8

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Fitting and Initial Adustment of Base	25	15	
	Remount Record and Pick-up Impression	15	5	
	Articulate Remount			15
	Refine Occlusion		15	
	Repolish Prosthesis		5	
	Final Insertion and Adjustment	15		
	Patient/Family Instruction	15		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	75	40	15
	Visit Totals (Hrs.)	1.25	0.67	0.25

Definitive Obturator

21080

Visit: 7

Week: 9

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Adjust Obturator and Oral Base	25	15	
Refine Occlusion	10		
Repolish Prosthesis		5	
Patient/Family Instructions	15		
Coordination and Follow-up	5		
Visit Totals (Min.)	55	20	
Visit Totals (Hrs.)	0.92	0.33	0.00

Definitive Obturator

21080

Visit: 8

Week: 11

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjust Obturator and Oral Base	15	10	
	Refine Occlusion	15		
	Repolish Prosthesis	5		
	Patient/Family Instruction	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	45	10	
	Visit Totals (Hrs.)	0.75	0.17	0.00

Definitive Obturator

21080

	Time		
	Clinical	Physician Lab. or Clerical	Technician

Visit: 9

Week: 13

Step	Description			
	Adjust Obturator and Oral Base	15	10	
	Refine Occlusion	10		
	Repolish Base	5		
	Patient/Family Instruction	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	40	10	
	Visit Totals (Hrs.)	0.67	0.17	0.00

Definitive Obturator

21080

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	475.00	305.00	340.00
Procedure Totals (Hrs.)	7.92	5.08	5.67

Total Direct and Indirect Hours:	18.67
Total Direct Hours:	13.00
% of Direct time = Physician Laboratory:	0.39
% of Total Service Time = Technician:	0.30
Total Visits:	9

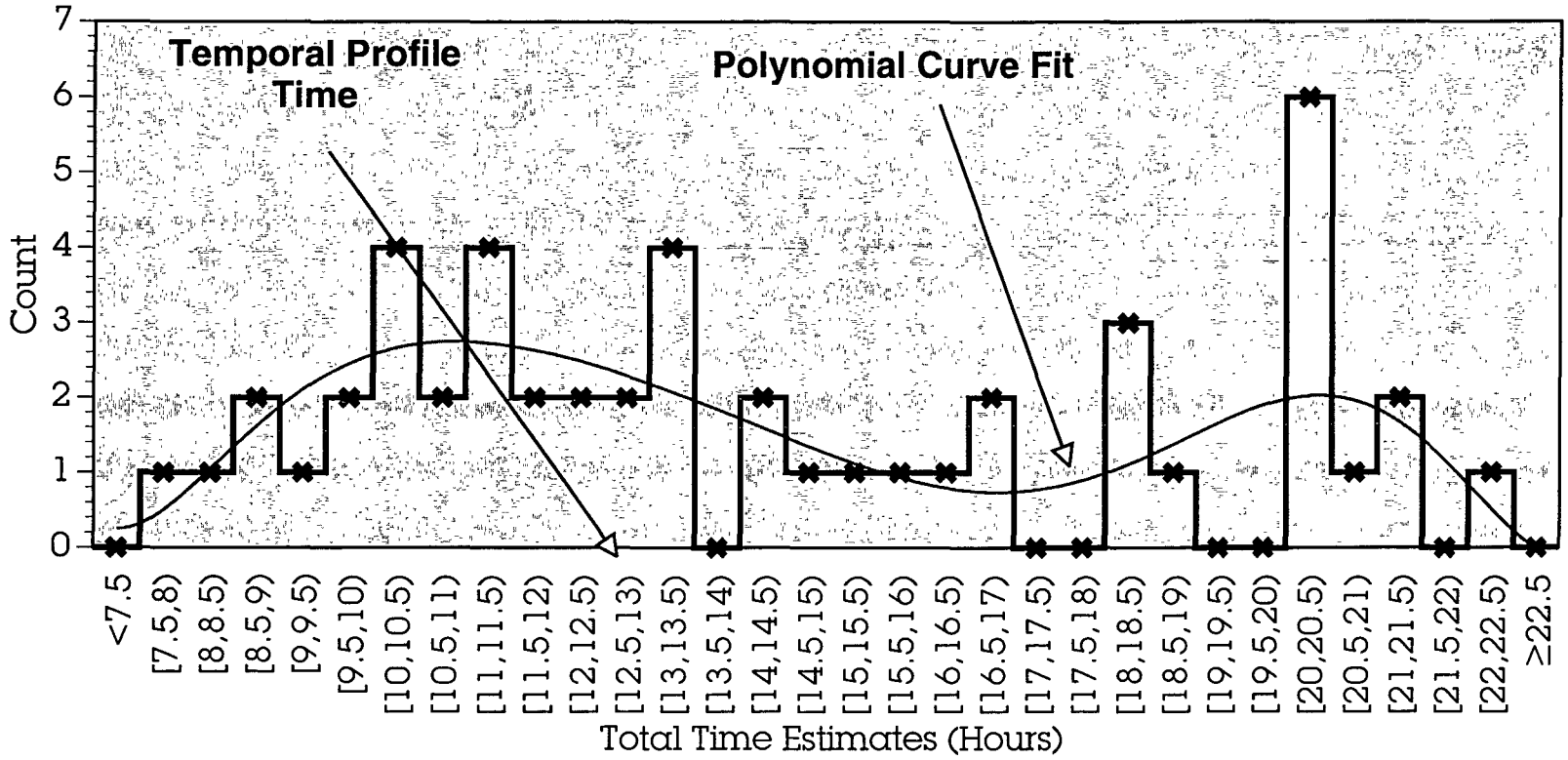
Definitive Obturator
21080

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time< 90th%)

Definitive Obturator



Median = 13 hrs.
Count = 49

Definitive Obturator
Graphs and Tables

Definitive Obturator Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
92.1	82.77	10.51	6851.27	89.88	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	5710	943800	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	50	60	120	180
# > 90th %:					
5					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
613.26	347.95	44.55	121071.4	56.74	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
120	1462	1342	37409	30205813	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	216	360	495	885	1122
# > 90th %:					
6					

Definitive Obturator Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
179.5	127.64	16.48	16291.27	71.11	60
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	660	660	10770	2894400	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
4	60	105	150	240	330
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
14.49	6.32	.8	39.95	43.63	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.83	30.37	29.54	898.16	15447.94	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	7.32	10	13	20	22.5
# > 90th %:					
4					

Mandibular Resection Prosthesis
21081

Mand. Resection Prosthesis

21081

Visit: 1

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Review History	10	10	
	Review Radiographs		5	
	Clinical Exam	10		
	Preliminary Impressions	10	5	
	Patient/Family Counselling	15		
	Coordination and Follow-up	10		
	Telephone Consultations		15	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			20
	Cast Modification, Survey, and Treatment Planning		25	
	Custom Tray Fabrication			30
	Visit Totals (Min.)	55	105	50
	Visit Totals (Hrs.)	0.92	1.75	0.83

Mand. Resection Prosthesis

21081

Visit: 2

Week: 2

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Tooth Preparation	20		
	Tray Modification and Final Impression	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Mastercast Production			20
	Final Survey and Lab Work Order Rx		30	
	Visit Totals (Min.)	40	35	20
	Visit Totals (Hrs.)	0.67	0.58	0.33

Mand. Resection Prosthesis

21081

Visit: 3

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Adjust Framework	20	10	
	Add Tray/Base to Frame			20
	Correct Base and Defect Impression	20	10	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Production of Mastercast Related to Frame			45
	Design Record Base		5	
	Fabricate Trial Record Base			20
	Visit Totals (Min.)	50	25	85
	Visit Totals (Hrs.)	0.83	0.42	1.42

Mand. Resection Prosthesis

21081

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 4				
Week: 6				
	Obtain Maxillomandibular Record, Select Dental	20	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Articulate Mastercast			15
	Arrange Occlusion and Oral Components		25	30
	Visit Totals (Min.)	30	30	45
	Visit Totals (Hrs.)	0.50	0.50	0.75

Mand. Resection Prosthesis

21081

Visit: 5

Week: 7

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Arrange Dental Components	25	15	
	Remount Record	10	5	
	Articulate Remount			15
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Refine Occlusion and Contour Adjustments		30	
	Preparation and Retrieval (not counting Processing			80
	Correction of Processing Distortions		15	
	Polish and Disinfection			30
	Visit Totals (Min.)	45	65	125
	Visit Totals (Hrs.)	0.75	1.08	2.08

Mand. Resection Prosthesis

21081

Visit: 6

Week: 8

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Fitting and Initial Adustment of Base	15	10	
	Remount Record	15	10	
	Articulate Remount			15
	Refine Occlusion		15	
	Final Insertion and Adjustment	10		
	Repolish Prosthesis		5	
	Patient/Family Instructions	15		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	60	40	15
	Visit Totals (Hrs.)	1.00	0.67	0.25

Mand. Resection Prosthesis

21081

Visit: 7

Week: 9

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjust Prosthesis Base	15	10	
	Remount Record and Pick-up Impression	15	5	
	Articulate Prosthesis for Occlusal Adjustments			15
	Refine Occlusion		15	
	Polish Prosthesis		5	
	Patient/Family Instructions	5		
	Coordinate and Follow-up	5		
	Visit Totals (Min.)	40	35	15
	Visit Totals (Hrs.)	0.67	0.58	0.25

Mand. Resection Prosthesis

21081

Visit: 8

Week: 10

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustments to Prosthesis Base	10	10	
	Refine Occlusion	10		
	Repolish Prosthesis	5		
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	35	10	
	Visit Totals (Hrs.)	0.58	0.17	0.00

Mand. Resection Prosthesis

21081

Visit: 9

Week: 12

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment to Prosthesis Base	5	5	
	Occlusal Evaluation and Adjustments	5		
	Repolish Prosthesis		5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	20	10	
	Visit Totals (Hrs.)	0.33	0.17	0.00

Mand. Resection Prosthesis

21081

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	375.00	355.00	355.00
Procedure Totals (Hrs.)	6.25	5.92	5.92

Total Direct and Indirect Hours:	18.08
Total Direct Hours:	12.17
% of Direct time = Physician Laboratory:	0.49
% of Total Service Time = Technician:	0.33
Total Visits:	9

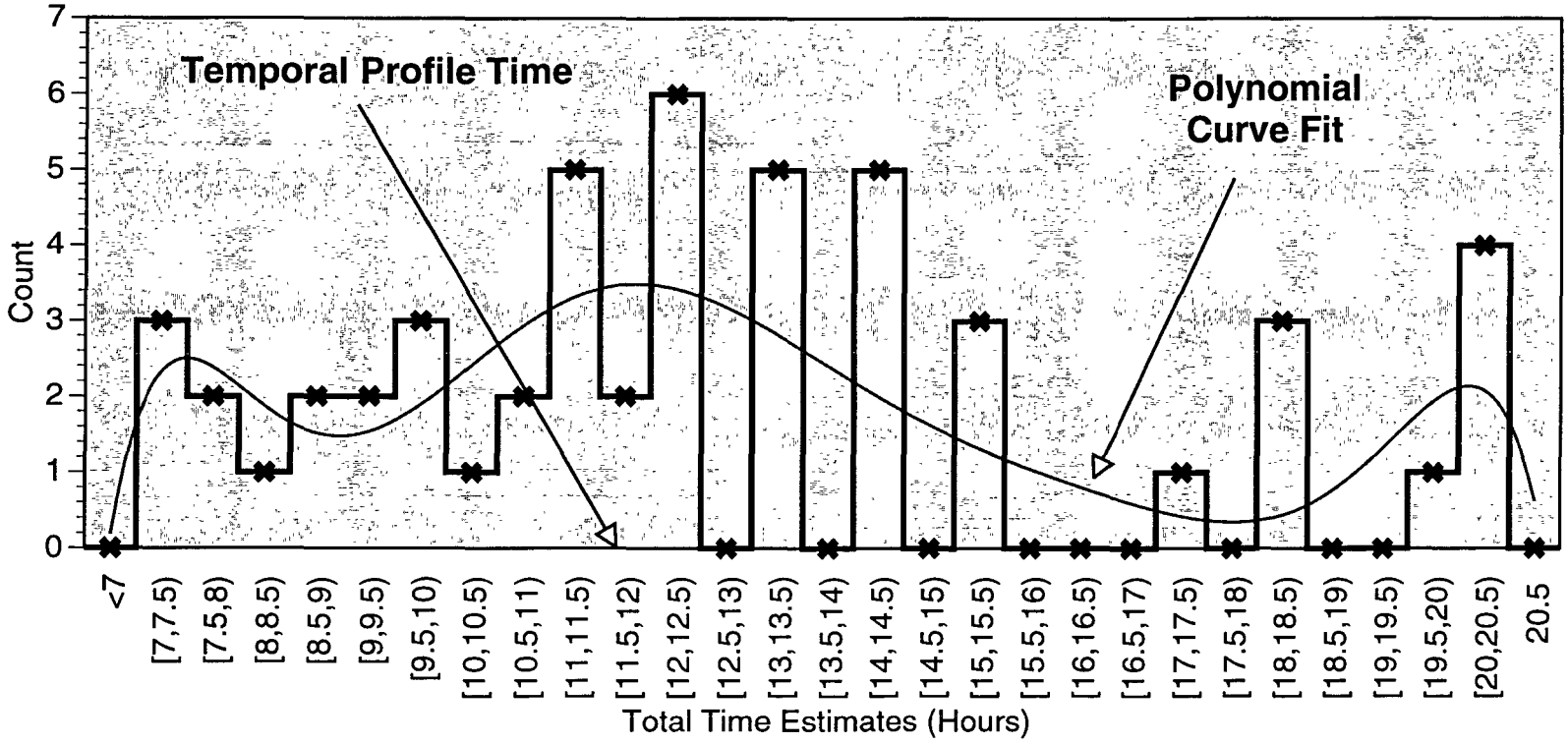
Mandibular Resection Prosthesis 21081

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time>90th%)

Mandibular Resection Prosthesis



Median = 12.09 hrs.
Count = 51

Mandibular Resection Prosthesis
Graphs and Tables

Mandibular Resection Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
87.74	83.58	10.61	6984.98	95.25	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	5440	903400	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	180
# > 90th %:					
4					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
520.9	283.89	36.05	80594.02	54.5	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
60	1200	1140	32296	21739326	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	210	300	480	615	1009.5
# > 90th %:					
6					

Mandibular Resection Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
176.23	119.39	15.29	14253.88	67.75	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	600	600	10750	2749700	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
4	60	112.5	150	217.5	324
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
13.03	5.02	.64	25.16	38.48	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
3.5	24	20.5	808.07	12066.53	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	7	9.5	12.09	17	20.4
# > 90th %:					
6					

Palatal Augmentation Prosthesis
21082

Palatal Aug. Prosthesis

21082

Visit: 1

Week: 1

Step Description	Time		
	Clinical	Physician Lab.	Technician
Review History	10	10	
Review Radiographs		5	
Clinical Exam	10		
Prelimary Impressions	10		
Patient/Family Counselling	15		
Coordination and Follow-up	10		
Telephone Consultations		15	
Reports and Letters (Financial and Referral)		45	
Cast Production			20
Custom Tray Fabrication			30
Visit Totals (Min.)	55	75	50
Visit Totals (Hrs.)	0.92	1.25	0.83

Palatal Aug. Prosthesis

21082

	Time		
	Clinical	Physician Lab.	Technician
Visit: 2			
Week: 2			
Step Description			
Tray Modifications and Final Impressions	50	15	
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Mastercast Production			20
Trial Base and Occlusion Rim Fabrication			35
Visit Totals (Min.)	60	15	55
Visit Totals (Hrs.)	1.00	0.25	0.92

Palatal Aug. Prosthesis

21082

Step Description	Time: Clinical	Time: Physician Lab.	Time: Technician
Visit: 3			
Week: 3			
Maxillomandibular Relations	20	10	
Dental Component Selection	5		
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Articulate Mastercasts			15
Arrange Dental Components			60
Prepare Trial Record Base			20
Visit Totals (Min.)	35	10	95
Visit Totals (Hrs.)	0.58	0.17	1.58

Palatal Aug. Prosthesis

21082

Visit: 4

Week: 4

Step Description	Time: Clinical	Time: Physician Lab.	Time: Technician
Try-in and Verify Occlusion	25	15	
Remount Record	5		
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Refine Occlusion and Contour Adjustments		20	
Processing Preparation and Retrieval			80
Correction of Processing Distortions		15	
Final Polish and Disinfection			30
Visit Totals (Min.)	40	50	110
Visit Totals (Hrs.)	0.67	0.83	1.83

Palatal Aug. Prosthesis

21082

Visit: 5

Week: 6

Step Description	Time: Clinical	Time: Physician Lab.	Time: Technician
Clinical Exam	5		
Fitting and Initial Adjustment of Bases	15	10	
Remount Record	5		
Articulate Remount			15
Refine Occlusion		10	
Functional Speech and Swallowing Impression	35	10	
Conversion of Palatal Impression to Acrylic			90
Final Insertion and Adjustments	10	10	
Patient/Family Instructions	15		
Coordination and Follow-up	5		
Visit Totals (Min.)	90	40	105
Visit Totals (Hrs.)	1.50	0.67	1.75

Palatal Aug. Prosthesis

21082

	Time		
	Clinical	Physician Lab.	Technician
Visit: 6			
Week: 7			
Step Description			
Adjustment to Prosthesis Base	15	10	
Refine Occlusion	10		
Additions/Subtractions to Palatal Contour	20	10	90
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	55	20	90
Visit Totals (Hrs.)	0.92	0.33	1.50

Palatal Aug. Prosthesis

21082

	Time		
	Clinical	Physician Lab.	Technician
Visit: 7			
Week: 9			
Step Description			
Adjustment to Prosthesis Base	10	10	
Refine Occlusion	5		
Additions/Subtractions to Palatal Contour	20	10	90
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	45	20	90
Visit Totals (Hrs.)	0.75	0.33	1.50

Palatal Aug. Prosthesis

21082

	Time		
	Clinical	Physician Lab.	Technician

Visit: 8

Week: 11

Step	Description			
	Adjust to Prosthesis Base	5	5	
	Minor Palatal Contour Changes	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	25	10	
	Visit Totals (Hrs.)	0.42	0.17	0.00

Palatal Aug. Prosthesis

21082

	Time		
	Clinical	Physician Lab.	Technician
Procedure Totals (Min.)	405.00	240.00	595.00
Procedure Totals (Hrs.)	6.75	4.00	9.92

Total Direct and Indirect Hours:	20.67
Total Direct Hours:	10.75
% of Direct time = Physician Laboratory:	0.37
% of Total Service Time = Technician:	0.48
Total Visits:	8

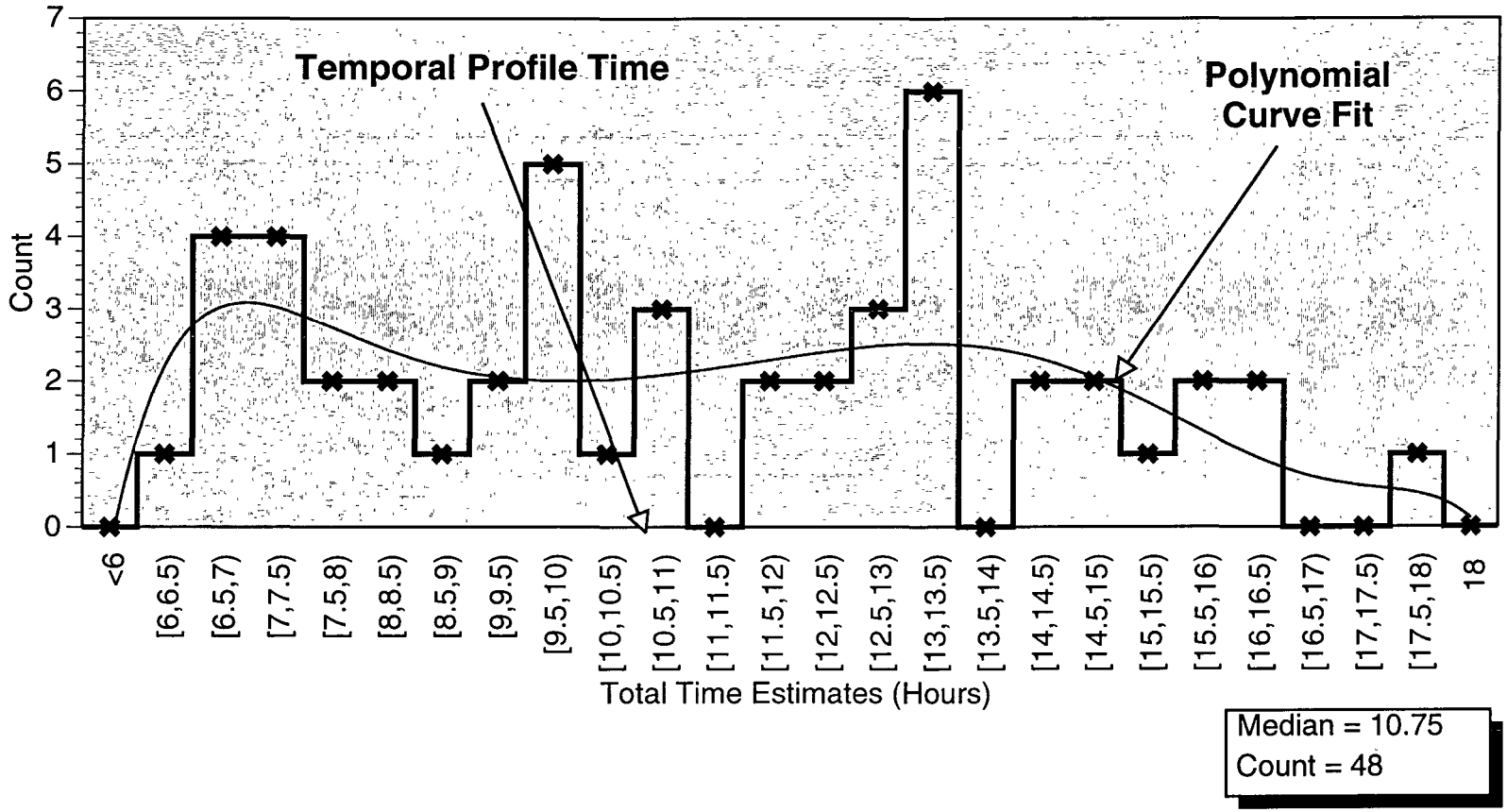
Palatal Augmentation Prosthesis 21082

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Palatal Augmentation Prosthesis



Palatal Augmentation Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
79.92	81.17	10.39	6588.74	101.57	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	4875	784925	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	180
# > 90th %:					
4					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
425.25	228.14	29.45	52048.67	53.65	60
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
60	960	900	25515	13921125	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	150	240	370	540	780
# > 90th %:					
4					

Palatal Augmentation Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
181.03	240.52	31.31	57852.21	132.86	59
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	1801	1801	10681	5289051	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
4	60	63.75	135	180	280
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
11.22	5.64	.72	31.79	50.25	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
1	35.35	34.35	684.51	9588.85	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	4	7.19	10.75	14	18.3
# > 90th %:					
6					

Palatal Lift prosthesis
21083

Palatal Lift Prosthesis

21083

Visit: 1

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Review History	15	10	
	Review Radiographs		5	
	Clinical Exam	10		
	Preliminary Impressions	10		
	Patient/Family Counselling	20		
	Coordination and Follow-up	10		
	Telephone Consultations		15	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			20
	Cast Modification, Survey, and Treatment Planning		25	
	Custom Tray Fabrication			30
	Visit Totals (Min.)	65	100	50
	Visit Totals (Hrs.)	1.08	1.67	0.83

Palatal Lift Prosthesis

21083

Visit: 2

Week: 2

Step	Description	Time		
		Clinical	Physician Lab. or Clerical	Technician
	Tooth Preparation	20		
	Tray Modification and Final Impression	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Mastercast Production			20
	Final Survey, Lab Work Order Rx		30	
	Visit Totals (Min.)	40	35	20
	Visit Totals (Hrs.)	0.67	0.58	0.33

Palatal Lift Prosthesis

21083

Visit: 3

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Adjust Framework	20	10	
	Add Tray/Base to Frame			25
	Maxillomandibular Relation	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Articulate Mastercast			15
	Arrange Dental Components			30
	Visit Totals (Min.)	40	15	70
	Visit Totals (Hrs.)	0.67	0.25	1.17

Palatal Lift Prosthesis

21083

Visit: 4

Week: 6

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Adjust Dental components	25	10	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Refine Occlusion and Contour Adjustments		15	
	Preparation and Retrieval (not including Processing)			80
	Correct Processing Distortions		15	
	Polish and Disinfection			30
	Visit Totals (Min.)	35	40	110
	Visit Totals (Hrs.)	0.58	0.67	1.83

Palatal Lift Prosthesis

21083

Visit: 5

Week: 7

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Fitting and Initial Adjustment of Base	10	5	
Remount Record	5		
Articulate Remount			15
Refine Occlusion		10	
First Functional Palatal Impression	20		
Convert Functional Impression to Acrylic			60
Final Insertion and Adjustments	5	5	
Patient/Family Instructions	15		
Coordination and Follow-up	5		

Visit Totals (Min.)	60	20	75
Visit Totals (Hrs.)	1.00	0.33	1.25

Palatal Lift Prosthesis

21083

Visit: 6

Week: 8

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Adjustment of Base/Frame/ Lift	10	10	
	Second Functional Impression of Soft Palate	25		
	Conversion to Acyrlic			60
	Re-insertion and Adjustment	5		
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	55	10	60
	Visit Totals (Hrs.)	0.92	0.17	1.00

Palatal Lift Prosthesis

21083

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 7			
Week: 9			
Adjustment to Base and Lift	5	5	
Third Functional Impression of Soft Palate	20		
Conversion to Acylic			60
Reinsertion Adjustments	5	5	
Patient/Family Instructions	5		
Coordinate and Follow-up	5		
Visit Totals (Min.)	40	10	60
Visit Totals (Hrs.)	0.67	0.17	1.00

Palatal Lift Prosthesis

21083

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 8			
Week: 12			
Adjustments to Prosthesis Base and Lift	10	5	
Patient/Family Instructions	15		
Coordination and Follow-up	5		
Visit Totals (Min.)	30	5	
Visit Totals (Hrs.)	0.50	0.08	0.00

Palatal Lift Prosthesis

21083

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	365.00	235.00	445.00
Procedure Totals (Hrs.)	6.08	3.92	7.42

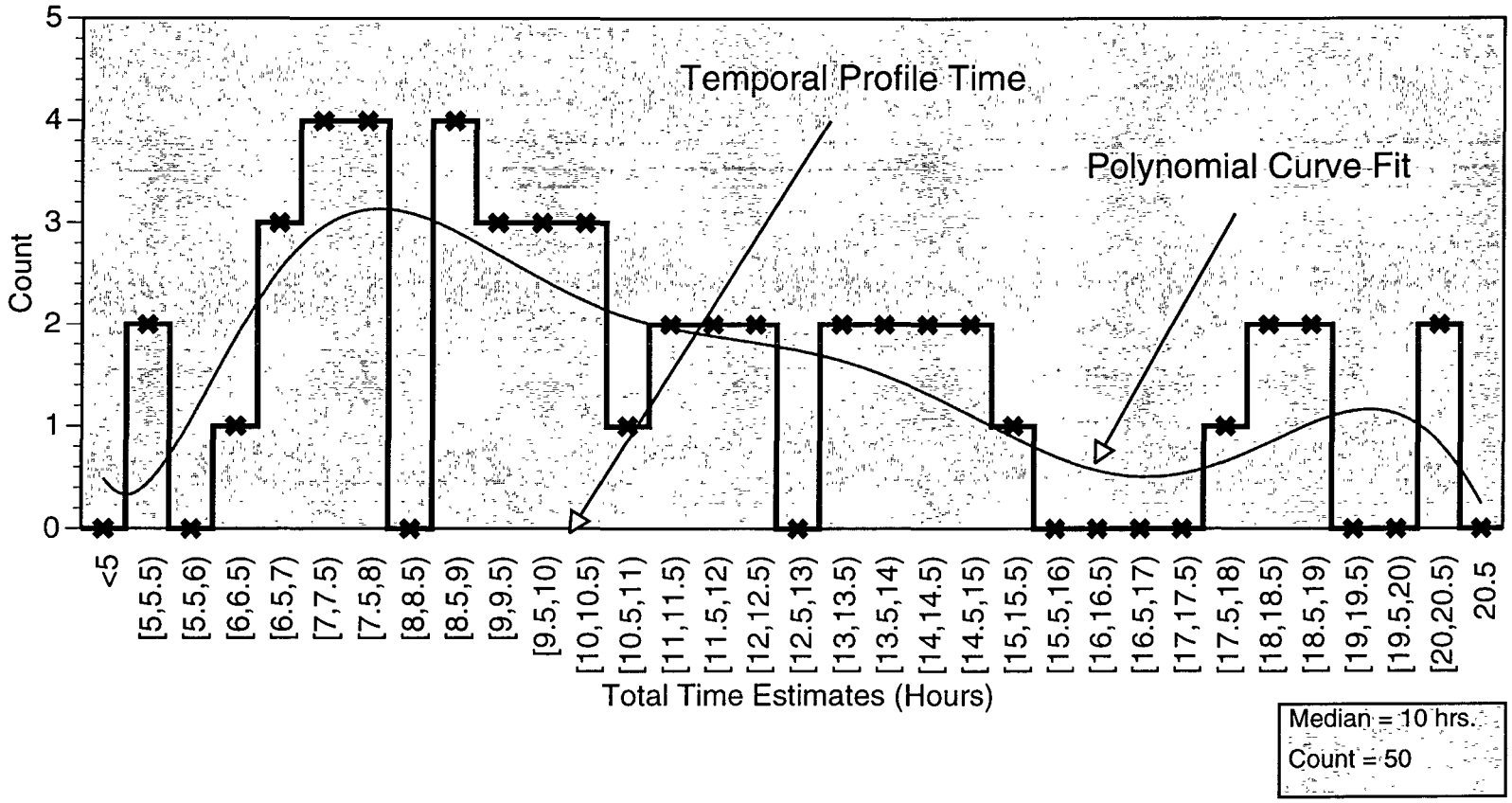
Total Direct and Indirect Hours:	17.42
Total Direct Hours:	10.00
% of Direct time = Physician Laboratory:	0.39
% of Total Service Time = Technician:	0.43
Total Visits:	8

Palatal Lift prosthesis
21083

Selected Survey Graphs and Tables

Frequency Distribution for Total Time
(10th%<Total Time<90th%)

Palatal Lift Prosthesis



Palatal Lift Prosthesis
Graphs and Tables

Palatal Lift Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
75	65.5	8.46	4289.83	87.33	60
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	360	360	4500	590600	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	165
# > 90th %:					
6					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
444.32	266.75	34.73	71155.57	60.04	59
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
45	1290	1245	26215	15774925	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
3	180	270	375	562.5	780
# > 90th %:					
5					

Palatal Lift Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
179.31	141.39	18.57	19991.62	78.85	58
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	600	600	10400	3004350	3
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
4	60	90	120	240	381
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
11.42	5.8	.75	33.64	50.78	60
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
1	27.5	26.5	685.26	9811.08	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	5	7.38	10	14.25	20.25
# > 90th %:					
5					

Speech Aid Prosthesis
21084

Speech Aid Prosthesis

21084

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 1			
Week: 1			
Review History	10	10	
Review Radiographs		5	
Clinical Exam	10		
Preliminary Impressions	10		
Patient/Family Counselling	20		
Coordination and Follow-up	10		
Telephone Consultations		15	
Reports and Letters (Financial and Referral)		45	
Cast Production			20
Cast Modification, Survey, and Treatment Planning		25	
Custom Tray Fabrication			30
Visit Totals (Min.)	60	100	50
Visit Totals (Hrs.)	1.00	1.67	0.83

Speech Aid Prosthesis

21084

	Time		
	Clinical	Physician Lab. or Clerical	Technician

Visit: 2

Week: 2

Step	Description	Clinical	Physician Lab. or Clerical	Technician
	Tooth Preparation	20		
	Tray Modification and Final Impression	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Mastercast Production			20
	Final Survey and Lab Work Order Rx		30	
	Visit Totals (Min.)	40	35	20
	Visit Totals (Hrs.)	0.67	0.58	0.33

Speech Aid Prosthesis

21084

Visit: 3

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Adjust Framework	20	10	
	Add Tray/Base to Frame			25
	Maxillomandibular Relation	10	5	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Articulate Mastercast			15
	Arrange Dental Components			30
	Visit Totals (Min.)	40	15	70
	Visit Totals (Hrs.)	0.67	0.25	1.17

Speech Aid Prosthesis

21084

Visit: 4

Week: 6

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-in, Adjust Dental components	25	10	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Refine Occlusion and Contour Adjustments		15	
	Preparation and Retrieval (not including Processing time)			80
	Correction of Processing Distortions		15	
	Polish and Disinfection			30
	Visit Totals (Min.)	35	40	110
	Visit Totals (Hrs.)	0.58	0.67	1.83

Speech Aid Prosthesis

21084

Visit: 5

Week: 7

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Fitting and Initial Adjustment of Base	10	5	
	Remount Record	10		
	Articulate Remount			15
	Refine Occlusion		10	
	Locate and Add Soft Palatal/Pharyngeal Bar	15	10	30
	Try-in Bar and First Pharngeal Functional Impression	20	15	
	Convert Speech Bulb to Acrylic			60
	Final Insertion and Adjustment of Prosthesis	15	5	
	Patient/Family Instruction	15		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	90	45	105
	Visit Totals (Hrs.)	1.50	0.75	1.75

Speech Aid Prosthesis

21084

Visit: 6

Week: 8

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Adjustment to Prosthesis Base	10	10	
Second Functional Impression of Speech Bulb	20	10	
Conversion of Speech Bulb to Acyrlic			60
Reinsertion and Adjustment	5	5	
Patient/Family Instructions	10		
Coordination and Follow-up	5		
Visit Totals (Min.)	50	25	60
Visit Totals (Hrs.)	0.83	0.42	1.00

Speech Aid Prosthesis

21084

Visit: 7

Week: 9

Step Description	Time		
	Clinical	Physician Lab. or Clerical	Technician
Adjustment to Prosthesis Base	5	5	
Final Functional Impression of Soft Palate	20	10	
Conversion of Speech Bulb to Acylic			60
Reinsertion Adjustments	5	5	
Patient/Family Instructions	5		
Coordinate and Follow-up	5		
Visit Totals (Min.)	40	20	60
Visit Totals (Hrs.)	0.67	0.33	1.00

Speech Aid Prosthesis

21084

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 8			
Week: 11			
Adjustment to Prosthesis Base	5		
Final Adjustments to Speech Bulb	10	5	
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	25	5	
Visit Totals (Hrs.)	0.42	0.08	0.00

Speech Aid Prosthesis

21084

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 9			
Week: 13			
Adjustment to Prosthesis Base	5	5	
Final Evaluation and Adjustments	10	5	
Patient/Family Instructions	10		
Coordination and Follow-up	5		
Visit Totals (Min.)	30	10	
Visit Totals (Hrs.)	0.50	0.17	0.00

Speech Aid Prosthesis

21084

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	410.00	295.00	475.00
Procedure Totals (Hrs.)	6.83	4.92	7.92

Total Direct and Indirect Hours:	19.67
Total Direct Hours:	11.75
% of Direct time = Physician Laboratory:	0.42
% of Total Service Time = Technician:	0.40
Total Visits:	9

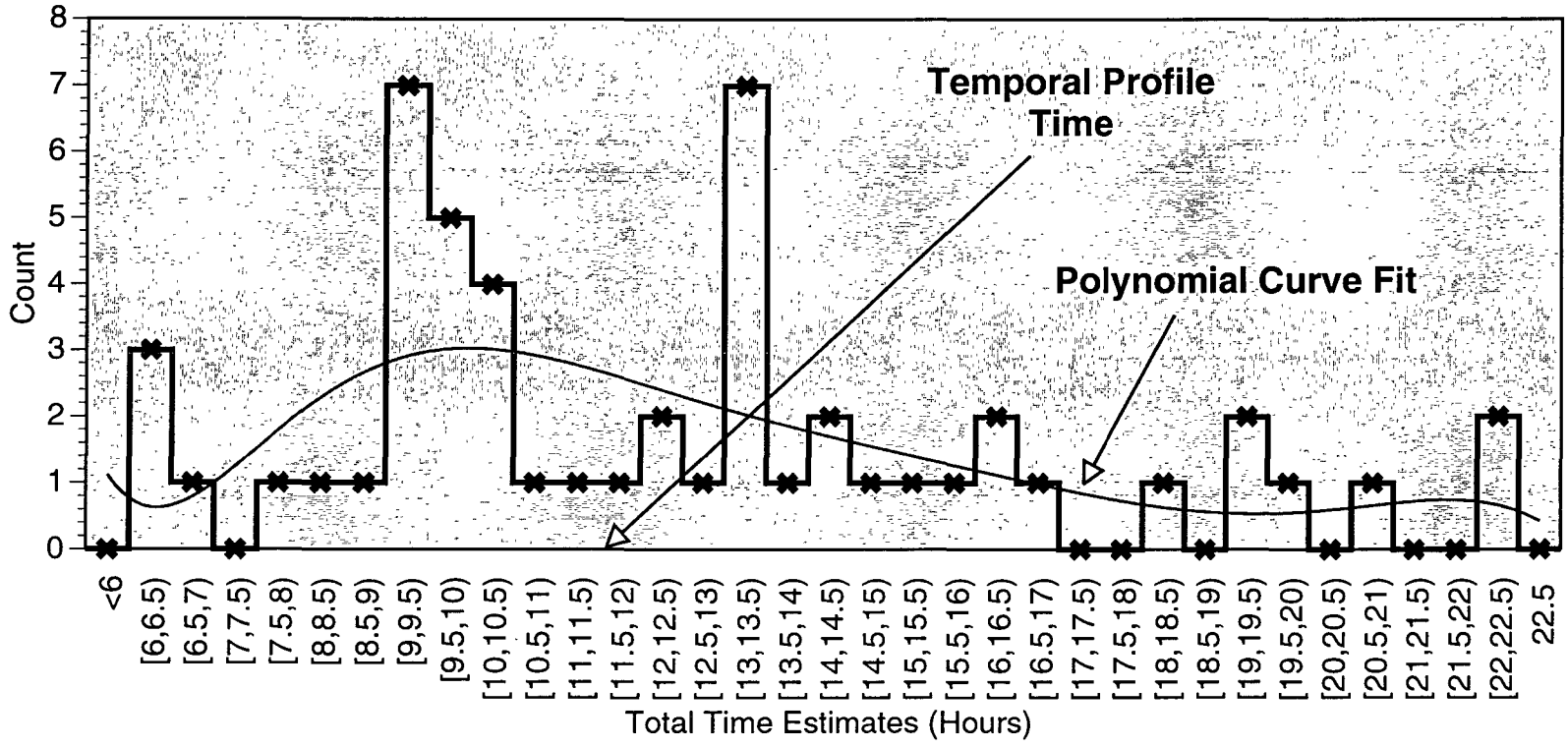
Speech Aid Prosthesis
21084

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Speech Aid Prosthesis



Median = 11.75
Count = 52

Speech Aid Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
87.1	79.17	10.06	6268.48	90.9	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	5400	852700	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	180
# > 90th %:					
3					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
494.51	277.44	35.52	76970.59	56.1	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
120	1290	1170	30165	19535075	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
2	180	300	420	600	948
# > 90th %:					
6					

Speech Aid Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
185.25	159.2	20.55	25344.43	85.94	60
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
30	900	870	11115	3554375	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	67.5	105	127.5	210	360
# > 90th %:					
3					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
12.55	5.73	.73	32.78	45.62	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
1.17	26.5	25.33	777.99	11761.71	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	6	9	11.75	15.5	22
# > 90th %:					
5					

Surgical Splint
21085

Surgical Splint

21085

Visit: 1

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Review History	10	10	
	Review Radiographs		15	
	Clinical Exam	10		
	Preliminary Impression(s)	10		
	Patient/Family Counselling	10		
	Coordination and Follow-up	10		
	Telephone Consultations		15	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			20
	Cast Modification and Tray Outline		10	
	Custom Tray Fabrication			30
	Visit Totals (Min.)	50	95	50
	Visit Totals (Hrs.)	0.83	1.58	0.83

Surgical Splint

21085

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit: 2			
Week: 1			
Step Description			
Final Impression	15	5	
Mastercast Production			20
Base and Occlusion Rim Production			20
Maxillomandibular Record	10	5	
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Articulate Casts			15
Model Surgery/Arch Form Reestablishment		35	
Archbar/Retention Mechanism Attachments		15	
Preparation and Retrieval (not including processing time)			80
Final Contour Adjustments		15	
Polish and Disinfection			30
Visit Totals (Min.)	35	75	165
Visit Totals (Hrs.)	0.58	1.25	2.75

Surgical Splint

21085

	Time		
	Clinical	Physician Lab. or Clerical	Technician

Visit: 3

Week: 1

Step	Description			
	Clinical Exam	5		
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		

Week: 2

Step	Description			
	Clinical Exam	5		
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		

Visit Totals (Min.)	40		
Visit Totals (Hrs.)	0.67	0.00	0.00

Surgical Splint

21085

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Total Procedure Minutes	125.00	170.00	215.00
Total Procedure Hours	2.08	2.83	3.58

Total Service (Direct and Indirect) Time:	8.500
Total Direct Physician Hours:	4.917
% of Direct time = Physician Laboratory:	0.58
% of Total Service Time = Technician:	0.42
Total Visits:	3

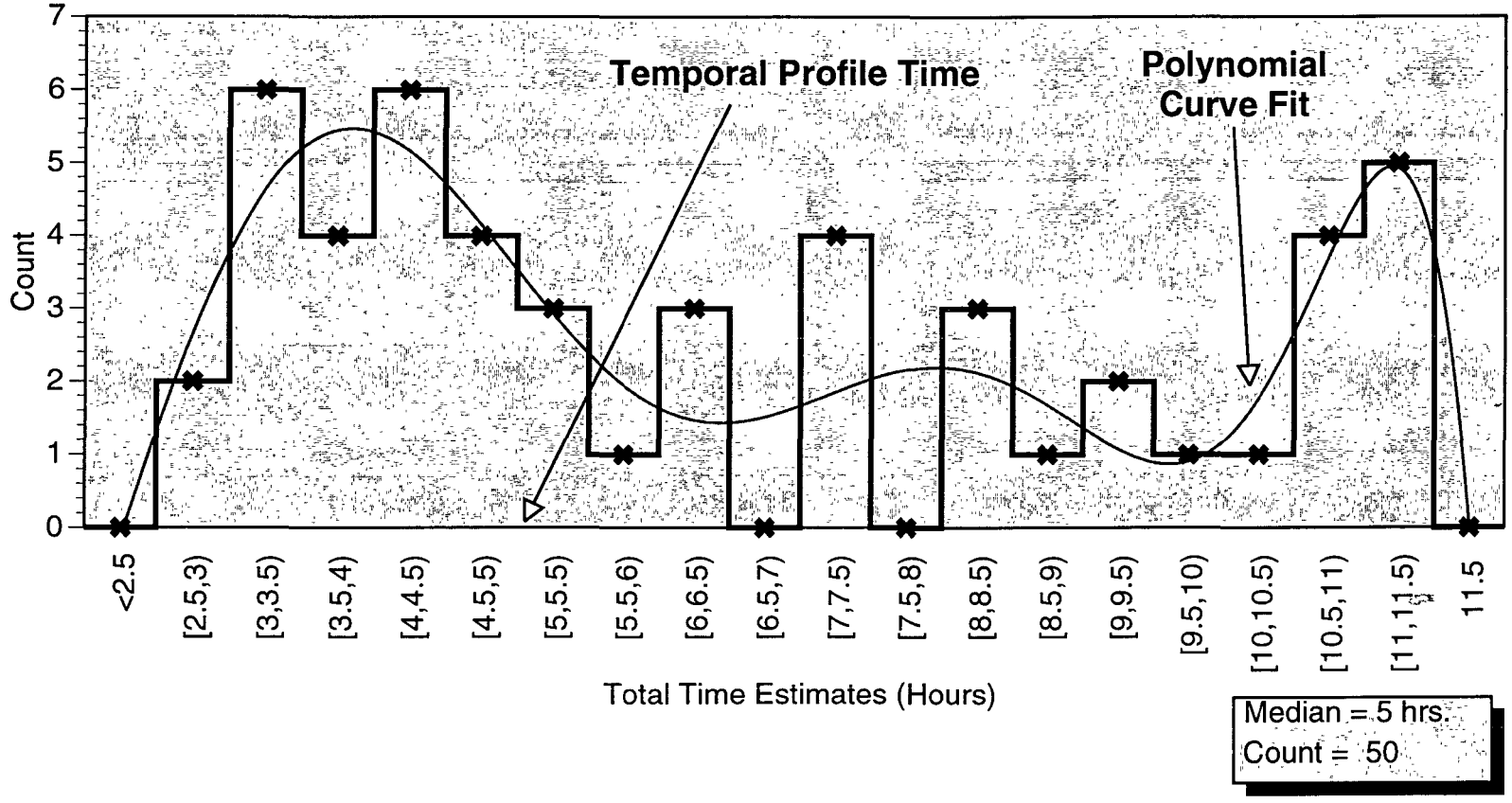
Surgical Splint
21085

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(1oth%<Total Time<90th%)

Surgical Splint



Surgical Splint Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
88.73	88.84	11.57	7892.75	100.13	59
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	5235	922275	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	180
# > 90th %:					
4					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
227.23	138.26	18.48	19116.29	60.85	56
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	510	510	12725	3942925	3
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
2	60	120	180	360	466.5
# > 90th %:					
6					

Surgical Splint Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
84.91	83.35	11.04	6947.76	98.16	57
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	400	400	4840	800050	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	37.5	60	120	174
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
6.44	3.77	.49	14.25	58.6	59
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.67	22	21.33	380.01	3273.9	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	2.75	3.69	5	9.38	11
# > 90th %:					
4					

Auricular Prosthesis
21086

Auricular Prosthesis

21086

Visit: 1

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Review History	10	10	
	Clinical Exam	5		
	Defect Preparation, Master and Contralateral Impressions	40	15	
	Patient/Family Counselling	15		
	Coordination and Follow-up	10		
	Telephone and Other Consultations		30	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			30
	Visit Totals (Min.)	80	100	30
	Visit Totals (Hrs.)	1.33	1.67	0.50

Auricular Prosthesis

21086

Visit: 2

Week: 2

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Defect Preparation	5		
	Mastercast Adjustments, Sculpting and Try-on	60	15	
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	80	15	
	Visit Totals (Hrs.)	1.33	0.25	0.00

Auricular Prosthesis

21086

Visit: 3

Week: 3

Step	Description	Time (Clinical)	Time (Physician Lab. or Clerical)	Time (Technician)
	Sculpting and Try-on	30	10	
	Prepare Base Color	30	15	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Final Margination and Sculpting		45	
	Preparation of Mold			60
	Visit Totals (Min.)	70	70	60
	Visit Totals (Hrs.)	1.17	1.17	1.00

Auricular Prosthesis

21086

Visit: 4

Week: 4

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Layer Coloring of Mold	30	30	
	Correct, Catalyze, and Add Base Color	10	10	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Process and Retrieval			50
	Margination and Processing Error Correction		30	

Visit Totals (Min.)	50	70	50
Visit Totals (Hrs.)	0.83	1.17	0.83

Auricular Prosthesis

21086

Visit: 5

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-on and Establishment of Final Prosthesis Margins	20	15	
	Surface Tinting and Color Correction	30	20	
	Patient/Family Instructions	20		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	75	35	
	Visit Totals (Hrs.)	1.25	0.58	0.00

Auricular Prosthesis

21086

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 6				
Week: 7				
	Prosthesis Evaluation and Clinical Exam	15		
	Color and Contour Adjustments	30	20	
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	60	20	
	Visit Totals (Hrs.)	1.00	0.33	0.00

Auricular Prosthesis

21086

Visit: 7

Week: 11

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Prosthesis Evaluation and Clinical Exam	10		
	Minor Color and Contour Adjustments	15	15	
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	40	15	
	Visit Totals (Hrs.)	0.67	0.25	0.00

Auricular Prosthesis

21086

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Total Procedure Minutes	455.00	325.00	140.00
Total Procedure Hours	7.58	5.42	2.33

Total Service (Direct and Indirect) Time:	15.333
Total Direct Physician Hours:	13.000
% of Direct time = Physician Laboratory:	0.42
% of Total Service Time = Technician:	0.15
Total Visits:	7

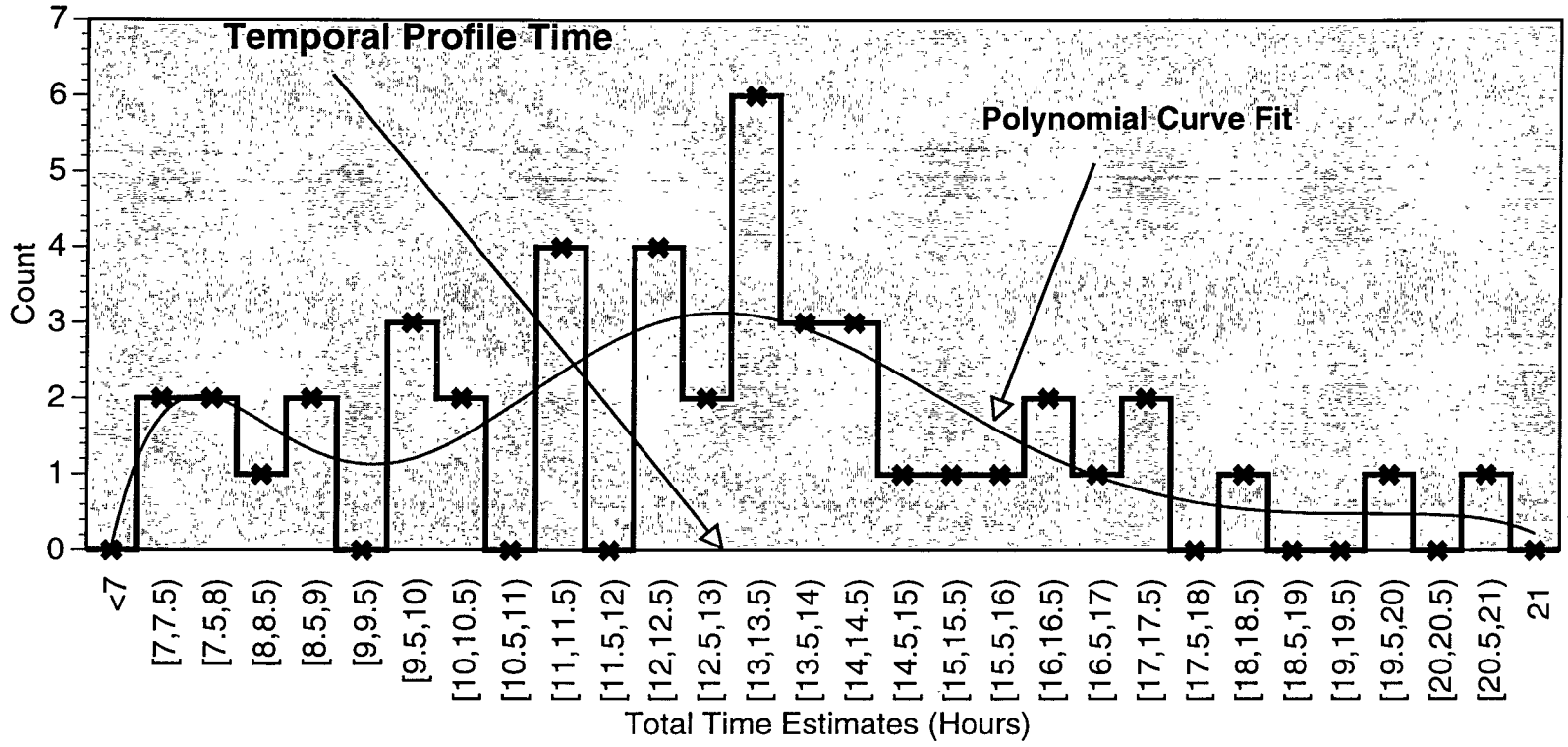
Auricular Prosthesis
21086

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Auricular Prosthesis



Median = 13 hrs.
Count = 45

Auricular Prosthesis Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
66.58	56.55	7.49	3198.36	84.94	57
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	240	240	3795	431775	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	28.75	60	90	150
# > 90th %:					
5					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
622.07	320.92	42.88	102987.45	51.59	56
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
150	1800	1650	34836	27334790	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	300	388.5	600	780	1002.6
# > 90th %:					
6					

Auricular Prosthesis Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
113.04	102.57	13.71	10521.53	90.75	56
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	600	600	6330	1294200	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
2	30	60	75	120	240
# > 90th %:					
5					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
13.15	6.06	.8	36.67	46.06	57
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.5	37	36.5	749.35	11905	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	6.66	9.5	13	15.62	21.04
# > 90th %:					
6					

Nasal Prosthesis
21087

Nasal Prosthesis

21087

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 1				
Week: 1				
	Review History	10	10	
	Clinical Exam	5		
	Defect Preparation and Master Impression	30	15	
	Patient/Family Counselling	15		
	Coordination and Follow-up	10		
	Telephone and Other Consultations		30	
	Reports and Letters (Financial and Referral)		45	
	Cast Production			30
	Visit Totals (Min.)	70	100	30
	Visit Totals (Hrs.)	1.17	1.67	0.50

Nasal Prosthesis

21087

Visit: 2

Week: 2

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Defect Preparation	5		
	Mastercast Adjustments, Sculpting and Try-on	60	15	
	Patient/Family Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	80	15	
	Visit Totals (Hrs.)	1.33	0.25	0.00

Nasal Prosthesis

21087

Visit: 3

Week: 3

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Final Sculpting and Try-on	30	10	
	Prepare Base Color	30	15	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Final Margination and Sculpting		45	
	Preparation of Mold			60
	Visit Totals (Min.)	70	70	60
	Visit Totals (Hrs.)	1.17	1.17	1.00

Nasal Prosthesis

21087

Visit: 4

Week: 4

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Layer Coloring of Mold	30	30	
	Correct, Catalyze, and Add Base Color	10	10	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Process and Retieval			50
	Margination and Processing Error Correction		30	

Visit Totals (Min.)	50	70	50
Visit Totals (Hrs.)	0.83	1.17	0.83

Nasal Prosthesis

21087

Visit: 5

Week: 5

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Try-on and Establishment of Final Prosthesis Margins	25	15	
	Surface Tinting and Color Corrections	30	20	
	Patient/Family Instructions	20		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	80	35	
	Visit Totals (Hrs.)	1.33	0.58	0.00

Nasal Prosthesis

21087

Visit	Week	Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
6	7		Prosthesis Evaluation and Clinical Exam	15		
			Color and Contour Adjustments	30	20	
			Patient/Family Instructions	10		
			Coordination and Follow-up	5		
			Visit Totals (Min.)	60	20	
			Visit Totals (Hrs.)	1.00	0.33	0.00

Nasal Prosthesis

21087

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit: 7			
Week: 11			
Step Description			
Prosthesis Evaluation and Clinical Exam	15		
Color and Contour Adjustments	15	15	
Patient/family Instructions	10		
Coordination and Follow-up	5		
Visit Totals (Min.)	45	15	
Visit Totals (Hrs.)	0.75	0.25	0.00

Nasal Prosthesis

21087

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Total Procedure Minutes	455.00	325.00	140.00
Total Procedure Hours	7.58	5.42	2.33

Total Service (Direct and Indirect) Time:	15.333
Total Direct Physician Hours:	13.000
% of Direct time = Physician Laboratory:	0.42
% of Total Service Time = Technician:	0.15
Total Visits:	7

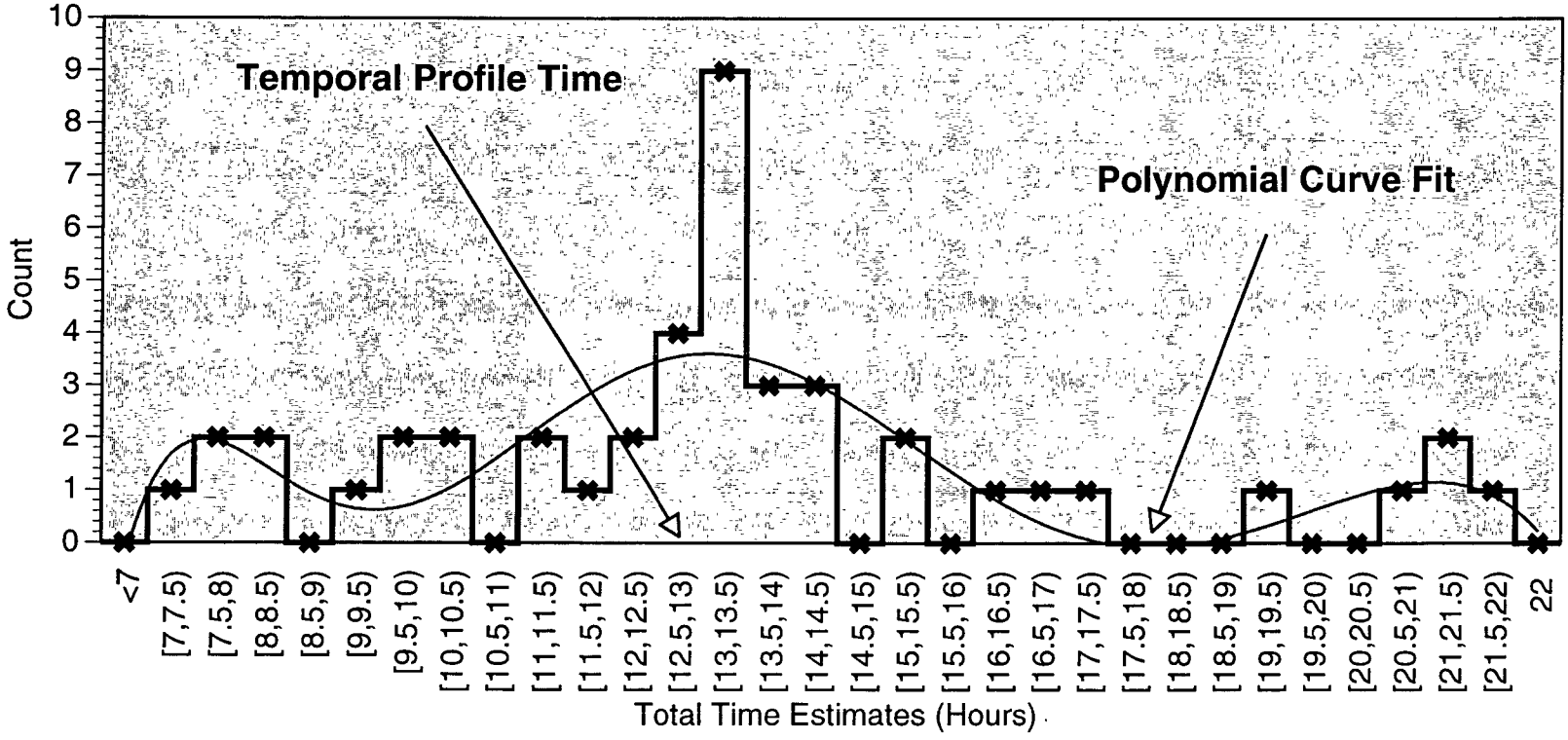
Nasal Prosthesis
21087

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Nasal Prosthesis



Median = 13 hrs.
Count = 44

Nasal Prosthesis
Graphs and Tables

Nasal Prosthesis Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
61.52	51.44	6.87	2646.29	83.62	56
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	190	190	3445	357475	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	25	60	90	120
# > 90th %:					
5					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
649.82	337.81	45.55	114118.41	51.99	55
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
150	1800	1650	35740	29386896	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	300	413.75	600	780	1140
# > 90th %:					
5					

Nasal Prosthesis Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
117.18	104.93	14.15	11010.89	89.55	55
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	600	600	6445	1349825	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
2	30	60	80	120	240
# > 90th %:					
5					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
13.58	6.09	.81	37.06	44.83	56
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.42	35	34.58	760.5	12366.07	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	7.05	9.75	13	15.5	21.95
# > 90th %:					
6					

Surgical Obturator
210XX-1

Surgical Obturator

210xx-1

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 1			
Week: 1			
Review Med History	10	10	
Review Radiographs		5	
Clinical Exam	10		
Tray Selection and Impressions	10		
Maxillomandibular Relation	10		
Family/Patient Counselling	15		
Coordination and Planning	10		
Telephone and Other Consults		15	
Reports and Letters		45	
Cast Production			20
Cast Preparation (Articulate and Modify)		15	15
Design, Wax-up and Contour Establishment		20	
Flask, Process, and Retrieval			80
Final Preparation (Trim, Retaining Brackets, Holes, etc.)		15	20

Surgical Obturator

210xx-1

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit Totals (Min.)	65	125	135
Visit Totals (Hrs.)	1.08	2.08	2.25

Surgical Obturator

210xx-1

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit: 2			
Week: 1			
Step Description			
OR- Scrub	10		
OR- Modification and Placement	45		
Visit Totals (Min.)	55		
Visit Totals (Hrs.)	0.92	0.00	0.00

Surgical Obturator

210xx-1

Visit: 3

Week: 1

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Clinical Exam	5		
	Remove Packing or Retentive Sutures	15		
	Debride Defect	5		
	Adjustments and Modification of Acrylic Base	15	10	
	Soft Liner Placement and Modification	15	15	
	Patient and Family Counselling	15		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	75	25	
	Visit Totals (Hrs.)	1.25	0.42	0.00

Surgical Obturator

210xx-1

	Time		
	Clinical	Physician Lab. or Clerical	Technician

Visit: 4

Week:

Step	Description			
	Defect and Oral Debridement	10		
	Adjustments and Modification of Base	15	10	
	Remove and Replace Soft Liner	15	15	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		

Visit Totals (Min.)	50	25	
Visit Totals (Hrs.)	0.83	0.42	0.00

Surgical Obturator

210xx-1

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Procedure Totals (Min.)	245.00	175.00	135.00
Procedure Totals (Hrs.)	4.08	2.92	2.25

Total Direct and Indirect Hours:	9.25
Total Direct Hours:	7.00
% of Direct time = Physician Laboratory:	0.42
% of Total Service Time = Technician:	0.24
Total Visits:	4

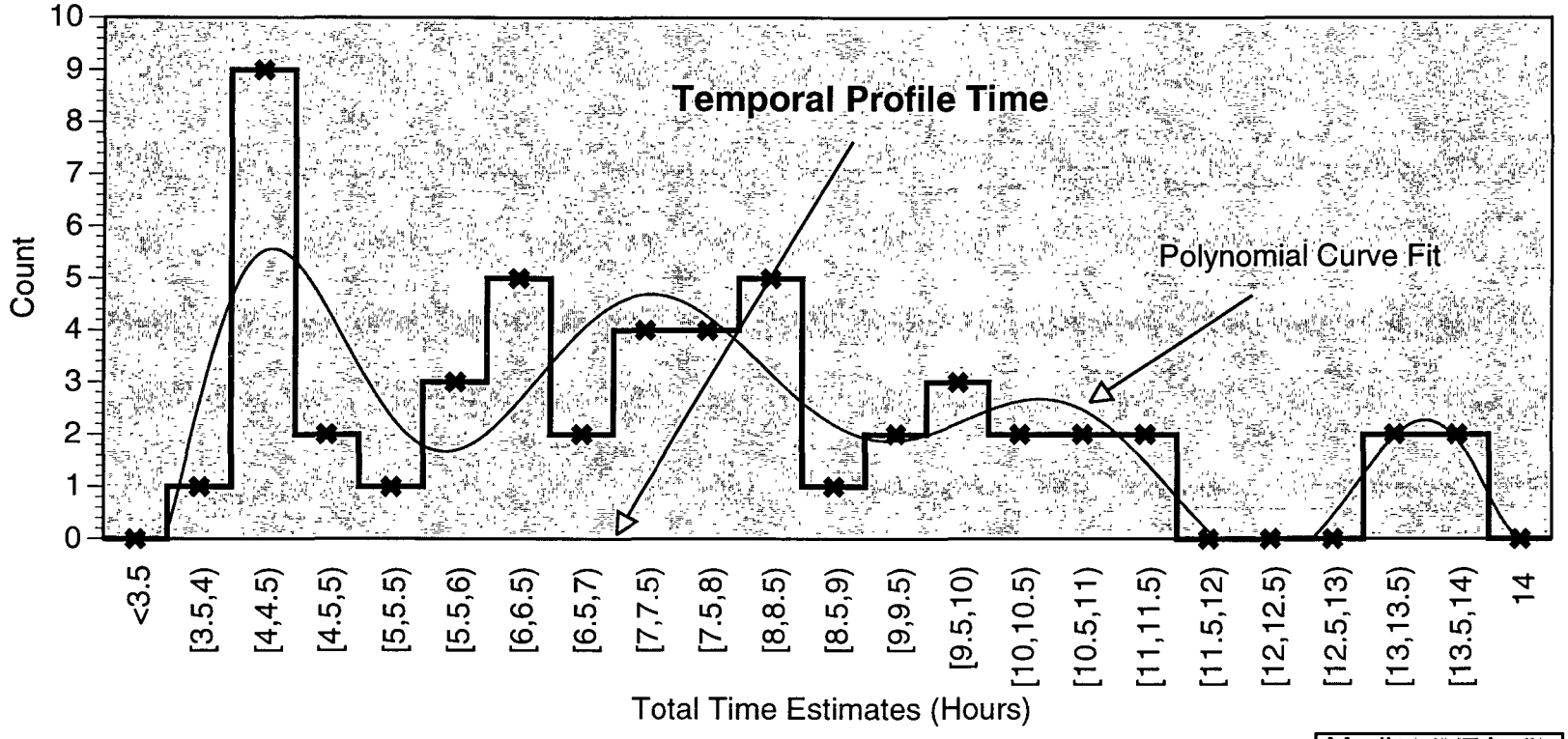
Surgical Obturator
210XX-1

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Surgical Obturator



Surgical Obturator Time Statitistcs

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
109.45	90.09	11.26	8116.76	82.31	64
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	480	480	7005	1278075	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	30	45	60	165	240
# > 90th %:					
4					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
242.05	196.88	25.21	38761.15	81.34	61
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
30	960	930	14765	5899525	3
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	60	120	180	300	480
# > 90th %:					
5					

Surgical Obturator Time Statitistcs

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
170.48	162.39	20.62	26370.25	95.25	62
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	780	780	10570	3410600	2
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	60	60	120	240	387
# > 90th %:					
6					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
8.42	5.79	.72	33.53	68.76	64
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.42	27	26.58	539.01	6652.18	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
6	3.47	4.38	7	9.96	14.12
# > 90th %:					
6					

Orbital Prosthesis
210XX-2

Orbital Prosthesis

210xx-2

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 1			
Week: 1			
Review History	10	10	
Clinical Exam	5		
Defect Preparation and Master Impression	30	15	
Patient/Family Counselling	20		
Coordination and Follow-up	10		
Telephone and Other Consultations		30	
Reports and Letters (Financial and Referral)		45	
Cast Production			30
Visit Totals (Min.)	75	100	30
Visit Totals (Hrs.)	1.25	1.67	0.50

Orbital Prosthesis

210xx-2

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 2			
Week: 2			
Defect Preparation	10		
Select Stock Ocular Prosthesis, Try on Base, Verify Margins	30	25	
Patient/Family Instructions	15		
Coordination and Follow-up	5		
Flask Ocular for Color Modification			45
Visit Totals (Min.)	60	25	45
Visit Totals (Hrs.)	1.00	0.42	0.75

Orbital Prosthesis

210xx-2

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit: 3			
Week: 3			
Step Description			
Defect Preparation	5		
Adjust Color of Ocular Prosthesis	40	15	30
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	55	15	30
Visit Totals (Hrs.)	0.92	0.25	0.50

Orbital Prosthesis

210xx-2

Visit: 4

Week: 4

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Defect Preparation	5		
	Locate Ocular Prosthesis	30		
	Initial Lid and Suface Contours	30	15	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	75	15	
	Visit Totals (Hrs.)	1.25	0.25	0.00

Orbital Prosthesis

210xx-2

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Visit: 5			
Week: 5			
Step Description			
Defect Preparation	5		
Try-on, Surface and Positional Corrections	45	20	
Patient/Family Instructions	5		
Coordination and Follow-up	5		
Visit Totals (Min.)	60	20	
Visit Totals (Hrs.)	1.00	0.33	0.00

Orbital Prosthesis

210xx-2

Visit: 6

Week: 6

Step	Description	Time		
		Clinical	Physician Lab. or Clerical	Technician
	Defect Preparation	5		
	Final Sculpted Try-on and Corrections	30	20	
	Patient/Family Instructions	5		
	Coordination and Follow-up	5		
	Final Contouring and Adjustments		60	
	Mold Preparation			75

Visit Totals (Min.)	45	80	75
Visit Totals (Hrs.)	0.75	1.33	1.25

Orbital Prosthesis

210xx-2

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 7			
Week: 7			
Base Shade Preparation	30	15	
Layer Coloring of Mold	30	30	
Coordination and Follow-up	5		
Processing and Retrieval			60
Margination and Processing Error Corrections		45	

Visit Totals (Min.)	65	90	60
Visit Totals (Hrs.)	1.08	1.50	1.00

Orbital Prosthesis

210xx-2

Step Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
Visit: 8			
Week: 8			
Fit Prosthesis to Defect	30	15	
Coloring, Eyelash, and Contouring Changes	30	15	
Patient/Family Instructions	25		
Coordination and Follow-up	5		
Visit Totals (Min.)	90	30	
Visit Totals (Hrs.)	1.50	0.50	0.00

Orbital Prosthesis

210xx-2

Visit: 9

Week: 9

Step	Description	Time: Clinical	Time: Physician Lab. or Clerical	Time: Technician
	Clinical Exam	5		
	Adjustments to Prosthesis Base and Surface	30	20	
	Patient/Family Instructions	20		
	Coordination and Follow-up	5		

Visit Totals (Min.)	60	20	
Visit Totals (Hrs.)	1.00	0.33	0.00

Orbital Prosthesis

210xx-2

Visit: 10

Week: 12

Step	Description	Time		
		Clinical	Physician Lab. or Clerical	Technician
	Clinical Exam	5		
	Adjustments to Prosthesis Base and Surface	30	20	
	Patient/Familly Instructions	10		
	Coordination and Follow-up	5		
	Visit Totals (Min.)	50	20	
	Visit Totals (Hrs.)	0.83	0.33	0.00

Orbital Prosthesis

210xx-2

	Time		
	Clinical	Physician Lab. or Clerical	Technician
Total Procedure Minutes	635.00	415.00	240.00
Total Procedure Hours	10.58	6.92	4.00

Total Service (Direct and Indirect) Time:	21.500
Total Direct Physician Hours:	17.500
% of Direct time = Physician Laboratory:	0.40
% of Total Service Time = Technician:	0.19
Total Visits:	10

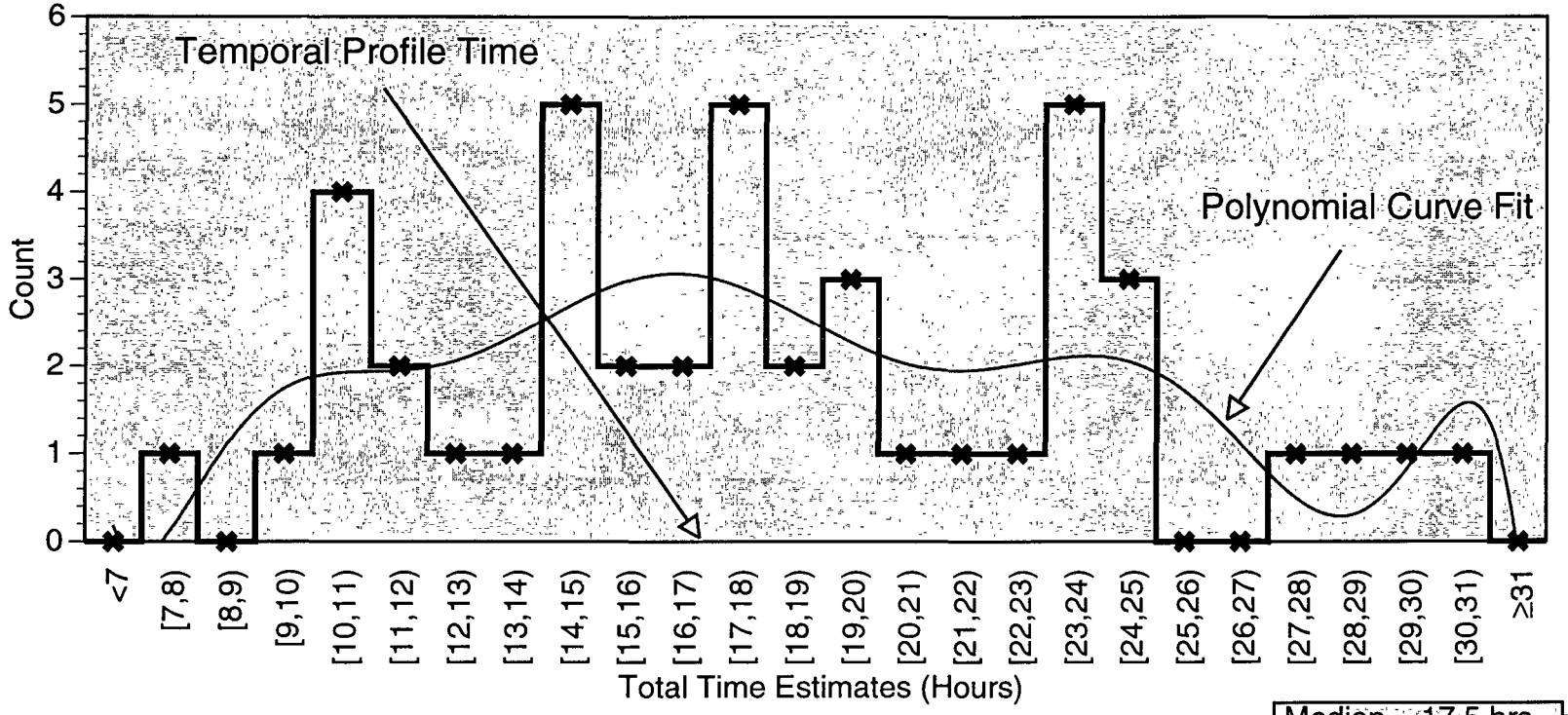
Orbital Prosthesis
210XX-2

Selected Survey Graphs and Tables

Frequency Distribution for Total Times

(10th%<Total Time<90th%)

Orbital Prosthesis



Orbital Prosthesis Time Statistics

X_1: Pre-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
70.19	55.3	7.53	3058.46	78.8	54
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	180	180	3790	428100	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
0	0	30	60	120	150
# > 90th %:					
4					

X_2: Intra-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
930.72	546	75	298120.48	58.66	53
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
180	2880	2700	49328	61412672	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	354	511.25	834	1200	1730.8
# > 90th %:					
5					

Orbital Prosthesis Time Statistics

X_1: Post-Service Time

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
143.68	149.16	20.49	22249.18	103.82	53
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
0	900	900	7615	2251075	1
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	57	60	120	180	312
# > 90th %:					
5					

X_2: Total Time (Hours)

Mean:	Std. Dev.:	Std. Error:	Variance:	Coef. Var.:	Count:
18.74	9.82	1.34	96.53	52.41	54
Minimum:	**Maximum:**	**Range:**	**Sum:**	**Sum of Sqr.:**	**# Missing:**
.83	59	58.17	1012.21	24089.56	0
# < 10th %:	**10th %:**	**25th %:**	**50th %:**	**75th %:**	**90th %:**
5	7.45	12	17.5	23.5	30.36
# > 90th %:					
5					

Summary
of
Procedural Time Values

Procedure	CPT	Direct DDS Time	Indirect DDS Time	Technican Time	Percent DDS Lab/Clerical Time	Total Direct and Indirect DDS Time	Total Procedure Time
Interim Obturator	21079	7.25	4.25	4.50	37.0	11.50	16.00
Definitive Obturator	21080	7.92	5.08	5.67	39.1	13.00	18.67
Mand. Resection	21081	6.25	5.92	5.92	48.6	12.17	18.09
Palatal Augment.	21082	6.75	4.00	9.92	37.2	10.75	20.67
Palatal Lift Prosthesis	21083	6.08	3.92	7.42	39.2	10.00	17.42
Speech Aid	21084	6.83	4.92	7.92	41.9	11.75	19.67
Surgical Splint	21085	2.08	2.83	3.58	57.6	4.91	8.49
Auricular Prosthesis	21086	7.58	5.42	2.33	41.7	13.00	15.33
Nasal Prosthesis	21087	7.58	5.42	2.33	41.7	13.00	15.33
Surgical Obturator	210XX-1	4.08	2.92	2.25	41.7	7.00	9.25
Orbital Prosthesis	210XX-2	10.58	6.92	4.00	39.5	17.50	21.50

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
APRIL 1995

SYSTEMIC-TO-PULMONARY ARTERY SHUNT - TAB 17

Code 33924 [Ligation and takedown of a systemic-to-pulmonary artery shunt performed in conjunction with a congenital heart procedure (list separately in addition to code for primary procedure)] is a new add-on code that is performed in conjunction with several congenital heart procedures. The placement of a systemic-to-pulmonary shunt is commonly performed on "blue babies" and other newborns because their physiology will not tolerate a complete repair. When the patient is able to tolerate a more definitive procedure the shunt is taken down. This procedure is performed rarely, and is considered extremely risky. Among the most common risks are potential damage to the phrenic nerve which controls the diaphragm. The margin for physician error in this procedure is small. If the physician is unable to control the shunt inside the pulmonary artery, the operation will not be successful, resulting in death to the patient.

Code 33924 is currently reported as part of codes 33696 [Complete repair of tetralogy of Fallot without pulmonary atresia; with closure of previous shunt] and 33698 [Complete repair of tetralogy of Fallot with pulmonary atresia including construction of conduit from right ventricle to pulmonary artery and closure of ventricular septal defect; with closure of previous shunt]. 33924 is performed with several other types of congenital heart procedures and reported using a -22 modifier. In particular, this type of shunt is often found in patients undergoing Fontan procedures (33615 and 33617), operations for transposition of the great arteries with ventricular septal defect and pulmonary stenosis (37770 and 33771), and bidirectional cavopulmonary shunts (33767), in addition to the tetralogy of Fallot repair procedures.

The RUC reduced the specialty society recommendation by 0.75 RVUs and recommends 5.5 RVUs for code 33924.

CPT Code (• New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
•33924	AC1	Ligation and takedown of a systemic-to-pulmonary artery shunt, performed in conjunction with a congenital heart procedure (List separately in addition to code for primary procedure) (Use 3392X only with 33470-33475, 33600-33619, 33684-33688, 33692-33697, 33735-33767, 33770-33781, 33786, 33918-33922)	ZZZ	5.50

CPT Code (● New)	Tracking Number	CPT Descriptor	Global Period	RVW Recommendation
33692		Complete repair tetralogy of Fallot without pulmonary atresia;	090	29.28 (No Change)
33696		~~with closure of previous shunt~~ (33696 has been deleted. To report, see 3392X)	090	N/A
33697		Complete repair tetralogy of Fallot with pulmonary atresia including construction of conduit from right ventricle to pulmonary artery and closure of ventricular septal defect;	090	32.21 (No Change)
33698		~~with closure of previous shunt~~ (33698 has been deleted. To report, see 3392X)	090	N/A

SUMMARY OF RECOMMENDATION

Tracking Number: AC1 Global Period: ZZZ **Recommended RVW:** 6.25

CPT Descriptor: Ligation and takedown of a systemic-to-pulmonary artery shunt performed in conjunction with a congenital heart procedure (List separately in addition to code for primary procedure)

(Use 3392X only with 33470-33475, 33600-33619, 33684-33688, 33692-33697, 33735-33767, 33770-33781, 33786, 33918-33922)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 3 year old child with single ventricle and pulmonary atresia underwent a Blalock-Taussig shunt (right subclavian artery to right pulmonary artery) as a neonate to provide pulmonary blood flow and allow survival. The shunt has provided satisfactory palliation, but there has been increasing cyanosis. The child is now referred for a reparative (Fontan) operation in order establish normal oxygenation and to relieve the volume load on the single ventricle which is imposed by the systemic-to-pulmonary artery shunt. The heart and great vessels are exposed through a midline sternotomy incision, and the shunt, which lies outside the pericardium posteriorly, is located by palpation of the thrill in the posterior mediastinum. The posterior pericardium is incised, and the shunt is then carefully dissected out from the surrounding scar tissue and is surrounded with a heavy ligature. Care is taken to avoid the areas of proximal and distal anastomoses to the pulmonary artery and the systemic artery in order to prevent exsanguinating hemorrhage. Then pursestring sutures and cannulas are placed in preparation for the initiation of cardiopulmonary bypass. Immediately after bypass is started, the ligature on the shunt is tied to prevent runoff from the systemic circulation into the pulmonary artery and systemic hypoperfusion. Once the ligature is tied, then the shunt is further mobilized, and it is then divided and a portion of the shunt is excised in order to prevent pulmonary artery distortion. The two ends of the shunt are oversewn. Then the remainder of the reparative (Fontan) operation is carried out.

Description of Pre-Service Work: None required

Description of Intra-Service Work: The heart and great vessels are exposed through a midline sternotomy incision, and the shunt, which lies outside the pericardium posteriorly, is located by palpation of the thrill in the posterior mediastinum. The posterior pericardium is incised, and the shunt is then carefully dissected out from the surrounding scar tissue and is surrounded with a heavy ligature. Care is taken to avoid the areas of proximal and distal anastomoses to the pulmonary artery and the systemic artery in order to prevent exsanguinating hemorrhage. Then pursestring sutures and cannulas are placed in preparation for the initiation of cardiopulmonary bypass. Immediately after bypass is started, the ligature on the shunt is tied to prevent runoff from the systemic circulation into the pulmonary artery and systemic hypoperfusion. Once the ligature is tied, then the shunt is further mobilized, and it is then divided and a portion of the shunt is excised in order to prevent pulmonary artery distortion. The two ends of the shunt are oversewn

Description of Post-Service Work: None required

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
38746	Thoracic lymphadenectomy, regional, including mediastinal and peritracheal nodes (list separately in addition to primary procedure)	4.39
33572	Coronary endarterectomy, open, any method (list separately in addition to primary procedure)	4.45
33530	Reoperation, coronary artery bypass procedure or valve procedure (list separately in addition to primary procedure)	5.86
33820	Repair of patent ductus arteriosus; by ligation	15.62

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 this new code will be an add-on code, as are the others listed in the reference procedures, we believe it is more difficult and involves more time and work intensity than the other add-ons. Therefore, we also compared it to the patent ductus ligation, which is one of the least complex of the congenital heart procedures and comes the closest in work to the shunt takedown and ligation. After review of the data, the Consensus Committee felt that the median recommended RVW was slightly high, and chose to recommend the 25th percentile RVW of 6.25 to the RUC.

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

FREQUENCY INFORMATION

How was this service previously reported? It was part of 33696 and 33698 (which have now been deleted) and was reported with a modifier -22 on several other procedures (i.e., 33470-33475; 33600-33619; 33684-33688; 33692-33697; 33735-33767; 33770-33781; 33786; 33918-33922)

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? This is very difficult to do, since we can't sort out when the services listed above had a shunt takedown and when they didn't. We believe there are less than 200 of these procedures per year.

1993 NCH Medicare data showed no procedures for 33696, 33698, and a total of 19 procedures for all the other codes listed above, inclusively.

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

SURVEY DATA:

Specialty: Society of Thoracic Surgeons/American Association for Thoracic Surgery

Median Intra-Service Time: 30 min Low: 20 min High: 60 min

Median Pre-Service Time: n/a Median Post-Service Time: n/a

Length of Hospital Stay: n/a Number of ICU Days: n/a

Number & Level of Post-Hospital Visits: n/a

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 45

Other Data: _____

Sample Size: 50 Response Rate (%): 60%(30) Median RVW: 8.00

25th Percentile RVW: 6.25 75th Percentile RVW: 13.00 Low: 3.00 High: 15.00

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

ELECTROENCEPHALOGRAM (EEG) EXTENDED MONITORING - TAB 17

CPT code 95813 [Electroencephalogram (EEG) monitoring; greater than one hour] is standard EEG monitoring for greater than one hour to review seizure activity and is primarily performed in tertiary care centers with neurophysiologists on staff. This EEG allows the physician to track clinical indications of seizure and is particularly useful for partial complex seizure activity that is not associated with spikes. Physicians are currently reporting this service with the standard EEG CPT code 95816 with a -22 modifier or using the unlisted procedure code 95999. The physician work of 95813 is the interpretation of the study and the recording is done by a technician. Although many EEG labs are using digital recording of EEG, physicians must review all reports that are generated. It is also unlikely that advanced computer technology would ever allow EEG's to be accurately captured and interpreted without physician input. Pre-planning (eg, lead placement decisions) and consultation with the referring physician is very extensive.

The RUC determined that the relative value recommendation of 2.47 is appropriate for code 95813 within the family of codes for EEG. The average monitoring time for 95813 is 2.5 hours and the physician spends approximately 30 minutes reviewing and interpreting the information. A physician spends approximately 10 minutes interpreting a standard EEG (RVW = 1.08) and 20 minutes interpreting 95812 [EEG extended monitoring; up to one hour].

Tracking Number	**CPT Code (• New)**	**CPT Descriptor**	**Global Period**	**RVW Recommendation (Adjusted by 1.1% for 1995 MFS Budget Neutrality**
AY11	•95812	Electroencephalogram (EEG) extended monitoring; up to one hour	XXX	1.73 (Approved at May 1994 RUC meeting and submitted to HCFA)
AY12	•95813	greater than one hour	XXX	**2.47**

AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

Tracking Number: AY12 Global Period: XXX **Recommended RVW:** 2.50

CPT Descriptor: Electroencephalogram (EEG) monitoring; greater than one hour

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CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey: A 6 year old boy suffers from episodic events in which he stares, mumbles, fumbles with objects, and seems dazed and confused. The episodes last for 30 seconds - 2 minutes, occurring several times a day, more often when under stress, has not has sufficient sleep, or has skipped meals. Previous routine EEG tests were normal, even with sleep deprivation, fasting and hyperventilation. Outpatient EEG was arranged with extended monitoring. After 3 hours of extended monitoring, the patient showed one of his typical episodes. EEG demonstrated that this was a brief left temporal ictal discharge, rather than a 3 per second spike and wave event. The patient was diagnosed as having partial complex seizure disorder rather than a primary generalized seizure disorder. Specific medication and prognosis could be offered based on the specific diagnosis.

Description of Pre-Service Work: Discussion with attending physician regarding the needs for the test as well as any other testing requirements. Review of any prior EEG tests preformed. Instruction of the technician regarding any special techniques or montages required.

Description of Intra-Service Work: Review of a significantly large number of recording pages and interpretation of the information.

Description of Post-Service Work: Generation of a report based on the findings and discussion with the attending physician if appropriate.

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	RVW
95816 & 95817	Electroencephalogram (EEG) including recording awake and drowsy, with hyperventilation and/or photic stimulation; standard or portable, same facility (95817 - alternate facility)	1.09
95819 & 95821	Electroencephalogram (EEG) including recording awake and asleep, with hyperventilation and/or photic stimulation; standard or portable, same facility (95821 - alternate facility)	1.09
95823	Electroencephalogram (EEG); physical or pharmacological activation only	2.92
95954	Pharmacological activation during prolonged monitoring for localization of cerebral seizure focus	2.48

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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 reference services listed above are related services. This new code considers only the physician work and does not include the work performed by technicians or other professionals. The code does not include distinct evaluation and management services which may be provided in addition to the procedure.

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

FREQUENCY INFORMATION

How was this service previously reported? No previous CPT code - used codes listed under key reference services

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? 1% of total EEGs

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

SURVEY DATA:

Specialty: American Academy of Neurology

Median Intra-Service Time: 30 min. Low: 10 min. High: 90 min.

Median Pre-Service Time: 15 min. Median Post-Service Time: 15 min.

Length of Hospital Stay: N/A Number of ICU Days: N/A

Number & Level of Post-Hospital Visits: N/A

Number of Times Provided in Past 12 months (Median): 25 in Past 5 years: 100

Other Data:

Sample Size: 50 Response Rate : 60% - 30 respondents Median RVW: 2.50

25th Percentile RVW: 1.80 75th Percentile RVW: 3.00 Low: 0.90 High: 3.50

AMA SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATIONS
SEPTEMBER 1994

DOPPLER FLOW TESTING - TAB 16

93990 [Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow] represents new technology used to determine if a patient is developing a stenosis or thrombosis in the arterial inflow or venous outflow. Problems may be quickly identified and treated with angioplasty or thrombolytic therapy before the shunt totally occludes. There is no other CPT code that represents the work involved in evaluating both venous and arterial outflow. This procedure is most similar to 93925 [Duplex scan of lower extremity arteries or arterial bypass grafts; complete bilateral study (RVW 0.58)], although 93990 is not a bilateral study, the services are comparable because 93990 requires review of different types of accesses used. The physician work of this procedure averages about twenty minutes and involves reviewing patient history, examination records, reviewing and interpreting the results of the duplex scan, preparing a report, and contacting and discussing results with the referring physician.

CPT Code (● New)	**CPT Descriptor**	**Global Period**	**RVW Recommendation (Adjusted by 1.1% for 1995 MFS Budget Neutrality**
●93990	Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow)	XXX	.54

AMERICAN COLLEGE OF RADIOLOGY
AMA/SPECIALTY SOCIETY RVS UPDATE PROCESS
SUMMARY OF RECOMMENDATION

CPT Code Number: 93990 Global Period: XXX **Recommended RVW:** 0.55

CPT Descriptor: Duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow)

CLINICAL DESCRIPTION OF SERVICE:

Vignette Used in Survey:

A 52 year old man was referred to the Ultrasound Department following his last hemodialysis visit because of a long recirculation time. The request for the procedure indicated relative urgency since this was a new clinical finding and suggests impending thrombosis of the graft.

Description of Pre-Service Work: (See Attached)

Description of Intra-Service Work: (See Attached)

Description of Post-Service Work: (See Attached)

KEY REFERENCE SERVICE(S):

CPT Code	CPT Descriptor	1994 RVW
93925	Duplex scan of lower extremity arteries or arterial bypass grafts; complete bilateral study	0.61
93880	Duplex scan of extracranial arteries; complete bilateral study	0.61
76700	Echography, abdominal, B-scan and/or real time with image documentation; complete	0.82
76770	Echography, retroperitoneal (eg, renal, aorta, nodes), B-scan and/or real time with image documentation; complete	0.75

RELATIONSHIP OF NEW OR REVISED CODE TO KEY REFERENCE SERVICE(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):

Code 93990 was considered to require slightly less physician work than code 93925 (RVW=0.61). For this reason, the recommended RVW was reduced from the survey median RVW (0.72).

Although the two procedures are roughly comparable, there are some differences that have a bearing on code 93990's RVW. First, because of the different types of accesses used, imaging a hemodialysis access is a highly individualized procedure. This variability adds to the procedure's complexity. Second, even though code 93990 includes images of arterial inflow, venous outflow, in addition to the access itself, the physician time necessary to perform and interpret the procedure is less than that for code 93925 which requires the performance and interpretation of a complete bilateral arterial study.

FREQUENCY INFORMATION

How was this service previously reported? 76999 Unlisted ultrasound procedure

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? 5-10% of people on hemodialysis would require this procedure.

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

SURVEY DATA:

Specialty: American College of Radiology

Median Total Service Time: 20 minutes Low: 10 minutes High: 52 minutes

Number of Times Provided in Past 12 months (Median): 10 in Past 5 years: 40

Other Data:

Sample Size: 76 Response Rate (%): 34 (N=26) Median RVW: .72

25th Percentile RVW: .60 75th Percentile RVW: .90 Low: .30 High: 1.2