# **Practice Expense Component**

Beginning in January 1999, Medicare began a transition to resource-based practice expense (PE) relative values, which establish PE payment for each Current Procedural Terminology (CPT<sup>®</sup>) code that differs based on the site of service. Procedures that can be performed in a physician's office, as well as in a hospital have two PE relative values: facility and nonfacility PE relative values. The nonfacility setting includes physician offices, freestanding imaging centers, and independent pathology labs. Facility settings include all other settings, such as hospitals, ambulatory surgery centers, skilled nursing facilities, and partial hospitals. In 2002, PEs were fully transitioned and the practice-expense component of the resource-based relative value scale (RBRVS) is resource-based. In 2007, the Centers for Medicare & Medicaid Services (CMS) implemented a new PE methodology. This overview describes the method that CMS used to assign PE in the 1991 Final Rule, as well as the history and methodology used to develop the current resource-based PE relative values.

## Data Used to Assign Charge-Based Practice Expense RVUs

Most of the practice-expense data that CMS used to assign relative value units (RVUs) in the 1991 Final Rule were from the American Medical Association's (AMA's) Socioeconomic Monitoring System 1989 Core Survey, which reflects the responses of a nationally representative sample of 4000 physicians in 34 specialties. Because the Medicare payment schedule applies to several non-MD/DO practitioner groups, CMS also used data supplied by the American Association of Oral and Maxillofacial Surgeons, the American Optometric Association, the American Podiatric Medical Association, and the American Chiropractic Association. Data for clinics and other group practice arrangements were supplied by the Medical Group Management Association. When no other data was available, CMS used averages representing all physicians.

## **OBRA 89 Method**

The fundamental approach used in developing the Medicare RBRVS measured the average resource costs involved in providing each physician service. The basis for the work component RVUs, therefore, measured the average work involved in a service by surveying randomly selected samples of practicing physicians.

The Omnibus Budget Reconciliation Act (OBRA) of 1989 approach to determine the PE component is similar to the work component because it relies, in part, on data from the AMA's national survey of physicians' average practice costs. However, physicians generally measure practice costs as a total sum, not service by service. Surveys of practicing physicians regarding their costs of practice, therefore, provided data on the average total amount that they spend on office rents, wages of nonphysician personnel, supplies, and equipment. The data did not provide the average office-rent expense, for example, related to a particular service or the average nursing time required for that service.

These surveys also indicated that average practice costs vary by specialty overall and as a percentage of gross revenue. Practice costs accounted for a higher proportion of general and family physicians' revenues (52.2%) than for cardiologists' (36.1%) or neurosurgeons' (38.9%), as shown in Table 1 below.

### Table 1. Physician Practice Expense Ratios<sup>+</sup> for 1989

\*As a percentage of mean total revenue

Specialty	CMS Specialty	Mean Expenses Net PLI, %	Mean PLIAMA Expenses, %
All physicians		41.0	4.8
General/family practice	Family practice	52.2	3.9
	General practice	52.2	3.9
Internal medicine		46.4	2.8
General internal medicine	Internal medicine	46.4	2.8
Cardiovascular disease	Cardiovascular disease	36.1	2.7
Other	Allergy	40.5	2.6
	Gastroenterology	40.5	2.6
	Geriatrics	40.5	2.6
	Nephrology	40.5	2.6
	Pulmonary disease	40.5	2.6
Surgery		31.8	7.4
General surgery	General surgery	31.8	7.4
Otolaryngology	Otology, laryngology, rhinology	45.2	4.9
Orthopedic surgery	Orthopedic surgery	45.2	7.4
Ophthalmology	Ophthalmology	44.4	2.3
	Ophthalmology, otology, laryngology	44.4	2.3
Urological surgery	Urology	39.9	3.9

Specialty	CMS Specialty	Mean Expenses Net PLI, %	Mean PLIAMA Expenses, %
Other	Hand surgery	38.9	7.6
	Neurological surgery	38.9	7.6
	Peripheral vascular disease or surgery	38.9	7.6
	Plastic surgery	38.9	7.6
	Proctology	38.9	7.6
	Thoracic surgery	38.9	7.6
Pediatrics	Pediatrics	49.3	3.1
Obstetrics/gynecology	Gynecology	Num Expenses Net PLI, %38.9gery38.9ar disease or surgery38.938.938.938.938.938.938.949.338.8alogy38.8ology38.8(groups)150.5tiology specialties that follow37.2y (professional component)22.9ssional component)22.9adiology (professional component)22.9y (technical component)94.1adiology (technical component)94.126.436.4	8.8
	Obstetrics	38.8	8.8
	Obstetrics/gynecology	38.8	8.8
Radiology*	Diagnostic X ray (groups) <sup>1</sup>	50.5	3.3
	Global for the radiology specialties that follow	37.2	3.0
	CMS SpecialtyNet PL1, %Hand surgery38.9Neurological surgery38.9Peripheral vascular disease or surgery38.9Plastic surgery38.9Plastic surgery38.9Proctology38.9Thoracic surgery38.9Pediatrics49.3Gynecology38.8Obstetrics38.8Obstetrics38.8Obstetrics/gynecology38.8Diagnostic X ray (groups) <sup>1</sup> 50.5Global for the radiology specialties that follow37.2Radiation therapy (professional component)22.9Radiology (professional component)22.9Radiation therapy (technical component)94.1Radiation therapy (technical component)94.1Radiology (technical component)94.1Roentgenology, radiology (technical component)94.1Psychiatry26.4	3.3	
		3.3	
	Roentgenology, radiology (professional component)	22.9	3.3
	Radiation therapy (technical component)	94.1	5.9
	Radiology (technical component)	94.1	5.9
	Roentgenology, radiology (technical component)	94.1	5.9
Psychiatry	Psychiatry	26.4	3.7
	Psychiatry, neurology	26.4	3.7

Specialty	CMS Specialty	Mean Expenses Net PLI, %	Mean PLIAMA Expenses, %
Anesthesiology	Anesthesiology	23.2	7.3
Pathology	Diagnostic laboratory (groups) <sup>1</sup>	50.5	3.3
	Pathologic anatomy, clinical	28.5	1.9
	Pathology	28.5	1.9
Other specialty			
	Dermatology	40.3	3.0
	Occupational therapy (groups) <sup>1</sup>	50.5	3.3
	Other medical care (groups) <sup>1</sup>	50.5	3.3
	Neurology	40.3	3.0
	Nuclear medicine	40.3	3.0
	Physical medicine and rehabilitation	40.3	3.0
No AMA match	Clinic or other group practice (groups) <sup>1</sup>	50.5	3.0
No AMA match	Oral surgery <sup>2</sup>	54.7	4.4
No AMA match	Optometrist <sup>3</sup>	52.9	0.1
No AMA match	Podiatry <sup>4</sup>	47.8	4.2
No AMA match	Chiropractor, licensed <sup>5</sup>	58.4	1.8
No AMA match	Manipulative therapy <sup>6</sup>	41.0	4.8
	Miscellaneous <sup>6</sup>	41.0	4.8
	Physical therapy <sup>6</sup>	41.0	4.8
	Occupational therapist <sup>6</sup>	41.0	4.8

Physiotherapy <sup>6</sup>	41.0	4.8

Sources: 1991 Final Rule, p 59868. American Medical Association, 1988–1990 Socioeconomic Monitoring System Core surveys, except where indicated.

<sup>1</sup>Source: Medical Group Management Association, 1990 Cost and Survey Production Report.

<sup>2</sup>Source: American Association of Oral and Maxillofacial Surgeons.

<sup>3</sup>Source: American Optometry Association.

<sup>4</sup>Source: American Podiatric Medical Association.

<sup>5</sup>Source: American Chiropractic Association.

<sup>6</sup>Source: For these remaining specialties, CMS used the practice cost percent from the AMA for all physicians.

\*For radiology services, the professional component percentages were based on data for radiologists with equipment expenses of \$5000 or less. The technical component percentages were based on data for radiologist with equipment expenses of more than \$5000.

To distribute PE RVUs among the services each specialty provides, the OBRA 89 method applies the average practice cost percentage for each specialty to the 1991 average Medicare-approved amount for the service. (The average approved amount is initially expressed in dollars for this purpose and later put on the scale of RVUs, then converted back to dollars when the total RVUs for the service are multiplied by the monetary conversion factor [CF].) For example:

- For a service that only family practitioners provide and for which the average Medicare payment in 1991 was \$100, multiply the practice cost proportion (52.2%) by the \$100 average approved amount. The PE component of the service would be assigned 52.2 (initial dollar) RVUs.
- For a service that only neurosurgeons provide and for which the average Medicare payment in 1991 was \$1000, multiply the practice cost proportion (38.9%) by the \$1000 average approved amount. The PE component of the service would be assigned 389.0 (initial dollar) RVUs.

For services provided by physicians in more than one specialty, each specialty's practice cost proportion is multiplied by the proportion of claims for the service that the specialty submits:

■ For a service provided 70% of the time by family physicians and 30% of the time by internists and for which the average Medicare-approved amount in 1991 was \$100, the family physicians' practice cost proportion (52.2%) is multiplied by 70% and the internal medicine practice cost proportion (46.4%) is multiplied by 30%. The sum of these two products becomes the practice cost proportion for the service:

$$(52.2\% \times 0.70) + (46.4\% \times 0.30) = 50.5\%$$

■ This practice cost proportion is then multiplied by the \$100 average approved amount:

$$(50.5\% \times 100) = 50.5$$

- The practice cost component of the service would be assigned 50.5 (initial dollar) RVUs.
- For a service that is provided 70% of the time by neurosurgeons and 30% of the time by orthopedic -surgeons and for which the average Medicare-approved amount in 1991 was \$1000, the neurosurgeons' practice cost proportion (38.9%) is multiplied by 70% and the orthopedic surgeons' practice cost proportion (45.2%) is multiplied by 30%. The sum of these two products becomes the practice cost proportion for the service:

$$(38.9\% \times 0.70) + (45.2\% \times 0.30) = 40.8\%$$

■ This practice cost proportion is then multiplied by the \$1000 average approved amount:

$$(40.8\% \times 1000) = 408$$

■ The practice cost component of the service would be assigned 408 (initial dollar) RVUs.

The OBRA 89 method of assigning PE RVUs clearly provides a much rougher approximation of physicians' average

resource-costs per service than does the method of assigning work component RVUs.

Because anesthesia services are not divided into work, PE, and professional liability insurance (PLI) cost RVUs, CMS computed the proportions of total -payments for anesthesia that were comparable to these three components for other services. The portion of the anesthesiology CF reflecting the work component was reduced by 42%. As for other services, to maintain a Medicare contribution comparable to the contribution under customary, prevailing, and reasonable (CPR), the portion of the CF reflecting practice was not reduced.

CMS based the 1992 practice cost on 1989 charge data "aged" to reflect 1991 payment rules because those were the most recent data available. For the 1992 payment schedule, actual 1991 charge data were used to recalculate the practice cost for some codes for which CMS had imputed values the previous year. For services with insufficient charge data and for new codes, CMS developed crosswalks to predecessor codes, where possible. Since 1993, CMS has used a similar process to establish values for such codes.

In the years immediately following the implementation of the Medicare RBRVS, many organizations, especially the Physician Payment Review Commission (PPRC) and primary care specialties, expressed concern about the OBRA 89 method of calculating PEs. These organizations were concerned that PE relative values based on historical Medicare-allowed charges failed to reflect the relative resource costs of providing a service. They were also concerned that statutorily designated "overvalued procedure" reductions in 1990 and 1991 lowered the practice-cost RVUs to levels less than they would otherwise have been when OBRA 89 was enacted.

### **OBRA 93 Revisions to the Practice Expense Component**

Congress adopted additional payment reductions to "overvalued" services under OBRA 93. The legislation called for reductions to the PE relative values for such "overvalued" procedure codes to be phased in over a three-year period, 1994–1996. The practice-expense RVUs of the affected services were reduced each year by 25% of the amount by which they exceeded the physician-work RVUs but could not fall below a floor of 128% of the work RVUs. Services performed at least 75% of the time in the physician office setting were exempt from the reductions, as were services without work RVUs (eg, diagnostic tests with only a technical component). In addition, practice-expense RVUs assigned to a global service were subject to the same reduction as its technical component.

### **Resource-Based Practice Expenses**

Congress' interest in developing resource-based PE relative values goes back several years to 1992, when the PPRC published a report on resource-based PEs. Section 121 of the Social Security Act amendments, enacted in late 1994, required development of "resource-based" PE relative values for implementation in 1998. It required that the new resource-based methodology consider the staff, equipment, and supplies used to provide medical and surgical services in various settings.

### Developing the Methodology

To respond to the Congressional mandate, CMS contracted with Abt Associates, Inc. for a national study of physicians' PEs. This study was designed to have three components: use of clinical practice expert panels (CPEPs) to estimate the direct costs associated with each CPT-coded service; use of a national mail survey of 5000 practices to obtain information on practice costs and service mix; and collection of data on the price of each input, such as equipment and disposable supplies. Because of delays in the Abt study at each step in the process and Congressional concern about the validity of CMS' methodology, Congress extended the implementation deadline by one year to January 1999.

CMS determined that the primary methodology for deriving resource-based PE values should incorporate microcosting, a cost accounting approach that identifies all direct costs associated with a particular service. This methodology was to produce a detailed database to support several analytical methods for estimating PE per service. Estimates for both direct and indirect PEs for all services under the RBRVS were to be included. Direct expenses are those for equipment, supplies, and clinical and administrative staff associated with -providing a particular service to an individual patient. Indirect expenses include office rent and equipment, utilities, and staff and other costs not directly allocable to an individual service. Estimates would vary according to the site of service.

CMS began constructing the new database in March 1995. Data were to be collected from two types of expert panels and from a detailed practicing physician survey for distribution to 5000 physician offices.

The following two types of expert panels were formed:

- *Clinical Practice Expert Panels (CPEPs)*. Fifteen CPEPs were formed, with membership based on nominations from medical associations. The role of the CPEPs was to produce data for Abt to use in constructing direct cost estimates. Each CPEP developed "resource profiles," a detailed list of direct cost elements associated with a service, for a selected group of reference procedures. The cost estimates were then extended to the rest of the codes in a family.
- Clinical Practice Expert Panel Technical Expert Group (TEG). The TEG's role was to monitor the data collection process to ensure that the data are usable by other researchers who might conduct further analyses for generating PE relative values. The TEG members include researchers in this area and representatives of organized medicine, including the AMA, American College of Physicians, American College of Surgeons, and American College of Radiologists. In addition, TEG meetings were attended by observers from the AMA/Specialty Society RVS Update Committee (RUC), American Hospital Association, and the PPRC.

The national mail survey was designed to collect detailed information on aggregate indirect and direct PEs and relate them to individual CPT codes. It also solicited information on the practice's case mix and general characteristics. The data compiled by the CPEPs and through the survey would be used by Abt to calculate indirect costs for individual services and validate direct cost estimates with review by the CPEPs. Two alternative CMS studies produced additional data to be used to allocate indirect costs across procedures. One study allocated indirect costs based on the physician time required for the service; the other set PE relative values so that they were the same proportion of relative value units as PEs are of total practice revenues within a specialty. Both studies relied on existing data, including that from the AMA's Socioeconomic Monitoring System (SMS), to determine the proportion of expenses that are direct and indirect.

The CPEPs and the national mail survey were designed to combine expert professional analysis and actual PE data, which could be used to develop relative values. The CPEPs were comprised of groups of physicians and other health care professionals who met to develop values for the direct cost component for each service. For each procedure on the RBRVS, the CPEPs developed lists of the practice resources required to provide the service, including the time of nonphysician clinical personnel, equipment, and supplies. The national mail survey would be used to validate the CPEP estimates, determine the proportions of PEs devoted to direct vs. indirect expenses, and indicate how indirect costs, which include rent, furnishings, computer equipment, office supplies, and other administrative overhead costs, could be appropriately allocated across procedures. However, in April 1996, CMS announced that, due to insufficient response rates to an initial survey, it could not use the results of the survey to develop the new relative values. In September 1996, CMS announced that it had cancelled all further work on the national mail survey. At the same time, however, CMS announced it would publish proposed PE RVUs in March 1997 to meet the implementation deadline of January 1, 1998.

CMS' decisions to cancel the mail survey and to proceed with plans for 1998 implementation heightened the level of concern about the process for developing resource-based PE relative values. In the absence of the mail survey, it was not clear where CMS would find data suitable for determining the split between indirect costs and direct costs; validating the results from the CPEP process; and allocating indirect costs among procedures. With estimates of the proportion of total costs that are direct costs ranging from 30% to 80% and the CPEP process relying on a very small number of physicians in each specialty, the lack of data on physicians' actual PEs made any assessment of the validity of the resource-based relative values extremely difficult.

### Opposition to the Medicare Proposed Methodology

The AMA urged the Clinton administration to defer action on a Proposed Rule and to request Congress to adopt legislation extending the deadline for implementing PE changes. Deferment was necessary for several major reasons:

- The proposed relative values did not account for many PEs, including physician office staff, equipment utilization, and differences in actual practice costs of various specialties.
- A transition period and refinement process would not solve major problems with the PE proposal; rather, agreement must be reached on the basic methodology and the database before designing a transition and refinement process.
- Additional time was needed to allow physicians the opportunity to validate data and assumptions.
- Adopting the flawed proposed values would extend beyond the Medicare program, as some private sector payers had indicated they would implement payment cuts based on the CMS data.

In June 1997, CMS issued its proposed regulation, which included a PE methodology heavily dependent on the CPEP data. Instead of using actual PE data to verify the CPEP data, CMS used a number of assumptions and adjustments designed to

improve data consistency among the expert panels. However, the AMA and some specialty societies were critical of the CMS methodology and called for a one-year delay in implementation. During the rule's public comment period, more than 8000 comments were submitted to CMS by individual physicians, professional societies, and others. Many groups, including the AMA, argued that CMS moved too quickly and without sufficient data to implement a resource-based methodology. The AMA submitted detailed comments for improving CMS' approach, including recommendations on the following issues:

- Direct cost data. (1) Per-procedure cost estimates the CPEPs developed should be reviewed and errors corrected. (2) CMS' assumptions regarding use of overhead and procedure-specific equipment greatly overstate its utilization, thus significantly undervaluing equipment costs. Data on actual equipment utilization rates should be collected and used in the relative values.
- Indirect costs. The methodology for assigning indirect cost RVUs should recognize all staff, equipment, supplies, and expenses, not just those that can be tied to specific procedures. CMS should evaluate the relationship between the proposed relative values and physicians' actual PEs and revise its methodology to account for specialty differences in the costs of operating a medical practice.
- *Multiple procedure reduction*. CMS should not apply the current multiple procedure rule for surgery to office procedures that are provided during the same encounter as a visit. Resource cost data are not available to demonstrate that physician work and PEs for office procedures are reduced by half when an office visit is also provided.

### Legislation Revises Medicare's Proposal

Profound dissatisfaction with CMS' methodology and the proposed relative values led many physician groups, including the AMA, to work vigorously with members of Congress to enact needed legislative changes. Due to these concerns, Congress delayed the implementation of the new PE relative values until January 1999, and directed the General Accounting Office (GAO) to evaluate CMS' proposed methodology and data. Congress also adopted several provisions directed to improve the accuracy of the resource-based methodology. The provisions were included in the Balanced Budget Act of 1997. For example, it specified the data that must be used in developing the new values and required implementation over a four-year transition period.

As a first step toward implementing a resource-based system, the law called for adjusting the PE values for certain services for 1998. Services whose PE values were proposed for reduction by CMS in the June 1997 *Proposed Rule*, and that were not performed at least 75% of the time in an office setting, were reduced to be equivalent to 110% of the work RVUs for the service. The reduction was used to increase the PE RVUs for office visits.

The GAO issued its report in February 1998, and its recommendations were highly consistent with AMA policy. The GAO's review of CMS' methodology found that CMS' use of the CPEPs was reasonable but that many of CMS' adjustments to the data were questionable and may have biased the cost estimates. For example, the GAO reported that "CMS capped nonphysician clinical labor time at 1½ times the minutes used by a physician to perform a procedure. CMS has not, however, conducted tests or studies that validate these changes and thus cannot be assured that they are necessary or reasonable." The GAO recommended CMS collect additional data to validate its adjustments and assumptions and evaluate alternative methodologies for adjusting the CPEP data.

### The 1999 Resource-Based Methodology

On June 5, 1998, CMS issued a new proposal that contained two options for a PE methodology. The first option was referred to as the "bottom-up" approach and was basically the same as the previously proposed methodology without many of the adjustments to the CPEP data. The second option was referred to as the "top-down" approach because it uses actual practice cost data developed by the AMA SMS data, which is allocated down to individual procedures using the data collected in the CPEP process. This methodology was significantly different from previous proposals.

On November 2, 1998, CMS issued its final proposal on the PE relative value methodology. CMS selected the new "topdown" approach published in June 1998 with only minor changes. CMS began it methodology by dividing practice costs into six categories: clinical labor, medical supplies, medical equipment, office expense, administrative labor, and all other expenses.

The SMS data consist of the average annual PE per average hours worked by physicians in a given specialty. These expense data are then multiplied by the total time spent treating Medicare patients, as determined by the RUC/Harvard physician-time data and Medicare-claims data. Each specialty cost pool is then allocated to procedures performed by that specialty using the CPEP data. This process can be broken down into six steps:

**Step 1 Specialty Practice Expenses** The AMA's SMS data provide the aggregate PE per hour (PE/HR) according to each specialty and cost category. This is obtained by dividing total PEs, as determined by the SMS survey, by total physician hours worked, which is also determined by the SMS survey. For those specialties not included in the SMS data, CMS crosswalked these specialties to specialties that were included in the SMS data. These data constitute the total PEs, which are allocated to specific codes according to the methodology discussed in Steps 2 through 5.

**Step 2 Physician Time Spent Treating Medicare Patients** The frequency with which each service is performed on Medicare patients by each specialty is multiplied by the estimated physician time required to perform each service. This results in the total physician time spent treating Medicare patients according to procedure. The physician time data were taken either from RUC surveys of new and revised codes or, for those codes that RUC has not examined, from the original Harvard RBRVS survey. The physician time data consists of all time involved in a procedure including pre, intra, and post service time.

**Step 3 Specialty Practice Expense Cost Pools** A PE pool for each specialty and cost category is calculated by multiplying the results of Step 1 by the results of Step 2. The PEs per hour multiplied by the total hours spent treating Medicare patients results in the total PEs, which will be allocated to codes according to specialty. For codes without a work relative value, CMS created a separate technical services cost pool that is not specialty specific. The costs for this technical pool were taken from specialty pools that have codes without a work RVU and allocated according to 1998 charge-based relative value units; therefore, these codes were not yet resource-based.

**Step 4** Allocate Practice Expense Pools to Individual Codes As Figures 5-1 and 5-2 illustrate, each specialty's cost pool is divided into six categories: clinical labor, medical supplies, medical equipment, administrative labor, office expense, and all other expenses. These six categories are further separated into two groups, which can be considered direct and indirect costs. The first group of direct costs includes clinical labor, medical supplies, and medical equipment. The second group of indirect costs includes administrative labor, office expense, and all other expenses.

The PE cost pools are primarily allocated to individual codes using the CPEP cost per procedure data, which establishes the relativity among codes within each specialty. Unlike previous proposed methodologies, CMS used the original CPEP data without making any adjustments; however, CMS used a different allocation method for the direct and indirect categories.



### **Overall Allocation Approach**

### Cost Allocation Methodology



The direct cost group consisting of clinical labor, medical supplies, and medical equipment was allocated by first multiplying the CPEP costs by the Medicare frequency data for each procedure. This produces a cost per procedure and category. These CPEP cost pools are then scaled to the SMS data so that the total CPEP costs for each specialty equal the total SMS cost by specialty. Changes to the CPEP values can change the total CPEP pool and the scaling factor resulting in the same size scaled pool but with different values assigned to individual codes. If, for example, one family of codes has the CPEP inputs reduced, then the total CPEP pool is reduced, creating a larger scaling factor. Therefore, this has the effect of increasing the scaled values of the remaining codes so that the scaled pool remains the same. This results in redistribution among codes for a specialty.

The second cost group consists of administrative labor, office expenses, and all other expenses. These costs are allocated by a combination of the direct costs calculated above and the work relative values. This methodology assumes a direct relationship between the work relative values and indirect expenses so that codes with higher work values will be assigned more indirect costs.

**Step 5** Average the RVUs for Procedures Performed by More Than One Specialty For those codes performed by more than one specialty, CMS calculated a weighted average of the PEs based on Medicare frequency data. This weight averaging that occurs when services are provided by more than one specialty can sometimes have the effect of altering a specialty's payments when CPEP inputs are changed. When certain services have their CPEP inputs reduced, those expenses are then shifted to other services. As previously described, this only changes the allocation of costs but should not affect total payments for a specialty. However, when these inputs are weight averaged, a specialty can experience a decrease in costs if the specialty's costs for certain services are higher than costs in other specialties. The end result is sometimes a lower weighted average cost figure than the specialty's reported costs.

**Step 6 Budget-neutrality Adjustment** The final relative values are adjusted to match historical RVU totals to maintain budget neutrality.

During the transition period, PE relative value units were a combination of the 1998 charge-based value and the new resource value. In 1999, PE resource values were based on 75% of the 1998 charge-based relative value and 25% on the resource-based value. In 2000, the mix was equally weighted between the charge-based and resource-based values, and, in 2001, the PE relative values were 75% resource based and only 25% charged based. In 2002, the transition was completed with PE RVUs totally resource based.

### SMS Data Used in CMS Methodology

The AMA's SMS specialty practice costs data plays a critical role in CMS' methodology for establishing PE relative values. The PE/hour data are based on the AMA SMS survey. The AMA has stated that these data were never collected for the purpose of developing relative values and has identified three potential problems with the use of these data for this purpose:

The sample sizes for some specialties will be too small to permit separate calculation of expense data from SMS. Even among the larger specialties, the inherent variability of the expense data will mean that the average expense figures provided will be subject to significant sampling error.

- The response rates for the expense items tend to be low relative to other questions on the survey, leading to potential nonresponse bias.
- The SMS is a physician-level survey and physicians in group practices are asked for their share of expenses rather than the practice's expenses. Practice-level data may provide a better basis for constructing PE RVUs.

Although the SMS survey was not originally designed for the purpose of constructing PE RVUs, CMS made it clear that it intended to use the SMS and would look for improvements during the refinement process.

### Example of Practice Expense-per-Hour Calculation

The SMS expense-per-hour data were calculated according to a formula specified by CMS. This formula adjusted the SMS expense data to obtain average hourly expenses per physician in the practice. These adjustments were necessary because physicians in groups are asked for their share of expenses on SMS (rather than the total for the practice) and because only self-employed physicians are asked the SMS expense questions. The expense per hour formula is:

#### X × nown

#### (ownhrs × nown) + (emphrs × nemp)

in which:	X = the respondent's share of his or her practice's expenses for the previous year					
	<i>nown</i> = the number of owner physicians in the respondent's practice					
	<i>nemp</i> = the number of employee physicians in the respondent's practice					
	<i>ownhrs</i> = an estimate of total hours worked in direct patient care by the respondent for the previous year					
	<i>emphrs</i> = an estimate of average hours worked in direct patient care by employee physicians of the same specialty as the respondent for the previous year					

The variable *ownhrs* is calculated as the product of the number of weeks the respondent reported practicing the previous year (*week*) and the number of hours the respondent reported spending in direct patient care activities in a typical week (*hours*). The same calculation for annual hours worked was performed for employee physicians, and the (weighted) mean of this amount was calculated for physicians of the same specialty as the respondent to obtain *emphrs*.

For solo physicians *nown* = 1 and *nemp* = 0, and the formula becomes:

### Х

### ownhrs

or simply expenses divided by hours worked in direct patient care.

As an example of the expense per hour calculation for physicians in groups, suppose that a general surgeon reported that her share of the practice's office expenses was \$100,000 for the previous year. Suppose she also reported that there were two owner physicians in the practice (including her) and two employee physicians, and that she worked 50 weeks the previous year and 60 hours per week in direct patient care in a typical week. Average annual hours worked for employee physicians in general surgery were 2381.8. The necessary data for calculating office expenses per hour for this respondent are:

### X = \$100,000nown = 2

### nemp = 2 $ownhrs = 50 \times 60 = 3000$ emphrs = 2381.8

The numerator of the expense per hour formula will be \$200,000 for this physician for office expenses. This is an estimate of the *practice's* total office expenses for the previous year, assuming physician owners share expenses equally.

The denominator of the expense-per-hour formula will be 10,763.8 hours for this physician. This is an estimate of total hours worked the previous year by all physicians (owners and employees) in the practice. It assumes that the average annual-hours worked among all owner physicians in the practice is equal to the annual-hours worked by the respondent. It also assumes that average annual-hours worked among all employee physicians in the practice is equal to average annual-hours worked among all employee physicians in the practice is equal to average annual-hours worked among all employee physicians in the practice is equal to average annual-hours worked among all employee physicians in the practice is equal to average annual-hours worked among all employee physicians of that specialty.

Office expenses per hour for this respondent will be \$18.58 (\$200,000/10,763.8). This expense per hour amount were calculated for all self-employed physicians responding to the 1994–1998 SMS surveys subject to the edits specified by CMS. The weighted mean of this expense per hour amount was then calculated by specialty for each expense item to obtain the figures reported to CMS.

Table 2 contains the PE information that was provided to CMS for ongoing use in the Medicare Physician Payment Schedule (MFS). This table contains the information on the specialties that CMS had originally requested that use SMS data. In addition, through the rulemaking process, CMS establishes expense-per-hour (PE/HR) values for specialties without survey data from the SMS or the more recent Physician Practice Expense Information Survey by crosswalking them to other similar specialties to estimate a proxy PE/HR, as displayed in Table 5-3. All others are crosswalked to All Physician PE/HR, or they are not used in the development of PE RVUS. Note the data for the specialties that are crosswalked in Table 3 are de facto data based on the crosswalked specialty.

Table 2. Mean Practice Ex	penses per Hour S	pent in Patient Care	Activities (in 2006 Dollars)

Specialty	# of Cases	Non-physi cian Clin- ical Staff	Clerical Payroll per Hour	Office Expense per Hour	Supplies Expense per Hour	Equip Expense per Hour	Other Expense per Hour	Total Expense per Hour	Indirect Percentage
All Physicians	2,795	18.36	28.03	46.38	7.47	4.77	11.95	116.96	74%
Allergy and Immu- nology	100	50.56	53.17	91.56	21.51	6.33	17.95	241.08	67%
Anesthesiology	81	5.65	7.38	11.74	0.4	0.43	10.25	35.84	82%
Audiology	71	4.58	20.86	39.3	5.28	2.81	12.01	84.84	85%
Cardiology	55	31.07	30.09	47.83	5.63	10.82	10.12	135.56	65%
Cardiothoracic Sur- gery	84	8.98	22	33.15	3.09	1.51	12.68	81.4	83%
Chiropractor	120	5.02	15.7	40.38	1.64	4.04	9.25	76.03	86%
Clinical Psychology	56	0	1.65	14.64	0.07	1.38	3.78	21.52	93%
Clinical Social Work	127	0.21	2.26	10.82	0.19	0.13	4.72	18.33	97%
Colon and Rectal Surgery	93	13.38	23.66	55.27	6	2.66	11.92	112.88	80%
Dermatology	81	44.2	66.53	94.99	24.64	11.42	23.1	264.88	70%
Emergency Medicine	70	1.88	8.74	7.73	0.47	0.05	21.89	40.76	94%
Endocrinology	77	18.31	31.05	45.51	7.34	5.43	7.83	115.47	73%
Family Medicine	98	19.58	27.46	54.34	6.27	3.19	8.35	119.19	76%
Gastroenterology	57	17.11	35.18	50.68	9.04	5.42	10.92	128.34	75%
General Practice	30	16.43	25	47.47	16.24	3.39	6.12	114.65	69%
General Surgery	92	10.73	22.54	50.29	3.95	2.88	9.91	100.3	82%
Geriatrics	45	15.76	21.28	28.42	2.74	0.8	4.44	73.45	74%

Hand Surgery	73	26.23	54.47	73.08	8.42	9.65	21.23	193.08	77%
Hematopoietic Cell Transplantation and Cellular Therapy	245	69.97	45.46	45.09	22.13	9.75	55.26	247.66	59%
Hospitalist	CW	1.88	8.74	7.73	0.47	0.05	21.89	40.76	94%
Independent Diag- nostic Testing Fa- cilities <sup>1</sup>	90	114.69	159.85	124.58	56.5	310.94	194.78	961.34	50%
Independent Lab <sup>1</sup>	90	87.17	26.49	19.63	20.4	9.08	22.21	184.97	37%
Internal Medicine	89	15.8	25.66	52.37	7.46	3.34	6	110.62	76%
Interventional Pain Management	52	37.28	54.89	78.22	18.77	11.07	23.68	223.91	70%
Interventional Radi- ology	33	9.02	24.81	15.93	5.92	4.05	41.81	101.55	81%
Medical Oncology <sup>1</sup>	245	69.97	45.46	45.09	22.13	9.75	55.26	247.66	59%
Medical Toxicology	70	1.88	8.74	7.73	0.47	0.05	21.89	40.76	94%
Nephrology	39	8.24	20.07	36.98	7.4	1.35	8.95	82.99	80%
Neurology	73	10.98	35.95	64.68	3.1	2.74	9.76	127.21	87%
Neurosurgery	81	9.35	41.29	62.69	1.75	5.66	11.78	132.52	87%
Nuclear Medicine	16	4.23	7.28	20.89	2.76	5.23	11.63	52.01	77%
Obstetrics/Gynecology	72	33.14	33.59	52.62	8.96	7.6	13.11	149.02	67%
Ophthalmology	80	45.7	54.66	92.21	13.77	13.14	23.21	242.68	70%
Optometry	106	15.79	23.44	52.35	4.62	6.35	12.23	114.78	77%
Oral Surgery (Den- tists only)	70	40.34	50.65	102.78	35.4	16.81	19.76	265.74	65%
Orthopedic Surgery	66	21.35	46.13	69.45	5.27	4.92	15.82	162.94	81%
Osteopathic Manipu- lative Therapy	37	0.26	14.64	29.29	2.92	0.72	10	57.83	93%
Otolaryngology	72	30.38	50.71	76.96	7.82	9.95	13.86	189.69	75%
Pain Medicine	56	25.82	42.96	62.69	14.39	12.72	16.76	175.35	70%
Pathology	54	14.53	14.85	30.65	9.38	2.56	29.48	101.45	74%
Pediatrics	88	20.34	29.03	38.69	11.94	2.75	8.55	111.31	69%
Physical Medicine and Rehabilitation	69	8.11	46.65	52.82	5.7	7.05	10.66	130.98	84%
Physical Therapy	76	6.94	15.3	33.75	1.76	2.51	8.21	68.47	84%
Plastic Surgery	95	19.03	31.69	84.79	21.04	7.62	18.34	182.5	74%
Podiatry	99	7.07	20.9	45.68	6.69	2.51	8.18	91.03	82%
Psychiatry	86	1.54	8.88	16.11	0.13	0.34	5.1	32.1	94%
Pulmonary Disease	67	11.9	17.88	28.99	3.05	4.11	8.39	74.33	74%

Radiation Oncology (Hospital Based and Free Standing)	159	69.02	35.76	90.96	12.16	45.02	38.38	291.3	57%
Radiology	56	18.54	35.71	30.87	5.9	14.8	29.02	134.84	71%
Rheumatology	78	22.5	28.77	61.26	20.01	6.83	8.05	147.42	67%
Sleep Medicine	45	34.16	38.18	52.43	4.95	8.12	18.08	155.92	70%
Urology	80	16.75	30.81	51.2	11.69	7.69	15.01	133.14	73%
Vascular Surgery	74	15.95	28.11	43.31	6.55	8.22	12.56	114.69	73%

<sup>1</sup>Based on supplemental survey data.

### Table 3. Specialty and Specialty Crosswalk Indirect Practice Expense per Hour Data

Specialty	Crosswalk	Clinical Labor	Supplies Expense	Equip Expense	Direct PE/hr	Clerical Payroll	Office Expense	Other Expense	Indirect PE/hr	Total PE/hr
Addiction Medicine	Psychiatry	1.54	0.13	0.34	2.00	8.88	16.11	5.10	30.10	32.10
Advanced Heart Fail- ure and Transplant Cardiology	Cardiology	31.07	5.63	10.82	47.52	30.09	47.83	10.12	88.04	135.56
Allergy/ Immunology		50.56	21.51	6.33	78.40	53.17	91.56	17.95	162.68	241.08
Anesthesiologist As- sistants	Anesthesiology	5.65	0.40	0.43	6.47	7.38	11.74	10.25	29.36	35.84
Anesthesiology		5.65	0.40	0.43	6.47	7.38	11.74	10.25	29.36	35.84
Audiologist		4.58	5.28	2.81	12.67	20.86	39.30	12.01	72.17	84.84
Cardiac Electrophysi- ology	Cardiology	31.07	5.63	10.82	47.52	30.09	47.83	10.12	88.04	135.56
Cardiac Surgery		8.98	3.09	1.51	13.58	22.00	33.15	12.68	67.83	81.40
Cardiology		31.07	5.63	10.82	47.52	30.09	47.83	10.12	88.04	135.56
Certified Nurse Mid- wife	Obstetrics/ Gyne- cology	33.14	8.96	7.60	49.70	33.59	52.62	13.11	99.32	149.02
Chiropractic		5.02	1.64	4.04	10.70	15.70	40.38	9.25	65.33	76.03
Clinical Laboratory		87.17	20.40	9.08	116.65	26.49	19.63	22.21	68.32	184.97
Clinical Psychologist		0.00	0.07	1.38	1.45	1.65	14.64	3.78	20.07	21.52
Colorectal Surgery		13.38	6.00	2.66	22.04	23.66	55.27	11.92	90.84	112.88
Critical Care	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
CRNA	Anesthesiology	5.65	0.40	0.43	6.47	7.38	11.74	10.25	29.36	35.84
Dermatology		44.20	24.64	11.42	80.26	66.53	94.99	23.10	184.62	264.88
Diagnostic Radiology		18.54	5.90	14.80	39.24	35.71	30.87	29.02	95.60	134.84

Specialty	Crosswalk	Clinical Labor	Supplies Expense	Equip Expense	Direct PE/hr	Clerical Payroll	Office Expense	Other Expense	Indirect PE/hr	Total PE/hr
Emergency Medicine		1.88	0.47	0.05	2.40	8.74	7.73	21.89	38.36	40.76
Endocrinology		18.31	7.34	5.43	31.08	31.05	45.51	7.83	84.39	115.47
Family Practice		19.58	6.27	3.19	29.04	27.46	54.34	8.35	90.15	119.19
Gastroenterology		17.11	9.04	5.42	31.56	35.18	50.68	10.92	96.78	128.34
General Practice		16.43	16.24	3.39	36.06	25.00	47.47	6.12	78.59	114.65
General Surgery		10.73	3.95	2.88	17.56	22.54	50.29	9.91	82.73	100.30
Geriatric Medicine		15.76	2.74	0.80	19.31	21.28	28.42	4.44	54.14	73.45
Geriatric Psychiatry	Psychiatry	1.54	0.13	0.34	2.00	8.88	16.11	5.10	30.10	32.10
Gynecologist/Oncolo gist	Obstetrics /Gynecology	33.14	8.96	7.60	49.70	33.59	52.62	13.11	99.32	149.02
Hand Surgery		26.23	8.42	9.65	44.29	54.47	73.08	21.23	148.78	193.08
Hematology	Medical Oncology	69.97	22.13	9.75	101.85	45.46	45.09	55.26	145.81	247.66
Hematology /Oncology	Medical Oncology	69.97	22.13	9.75	101.85	45.46	45.09	55.26	145.81	247.66
Hematopoietic Cell Transplantation and Cellular Therapy	Medical Oncology	69.97	22.13	9.75	101.85	45.46	45.09	55.26	145.81	247.66
Hospice & Palliative Care	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
Hospitalist	Emergency Medicine	1.88	0.47	0.05	2.40	8.74	7.73	21.89	38.36	40.76
Independent Diagnostic Testing Facility		114.69	56.50	310.94	482.13	159.85	124.58	194.78	479.21	961.34
Infectious Disease	Internal Medicine	15.80	7.46	3.34	26.60	25.66	52.37	6.00	84.02	110.62
Intensive Cardiac Re- hab	Cardiology	31.07	5.63	10.82	47.52	30.09	47.83	10.12	88.04	135.56
Internal Medicine		15.80	7.46	3.34	26.60	25.66	52.37	6.00	84.02	110.62
Interventional Cardiology	Cardiology	31.07	5.63	10.82	47.52	30.09	47.83	10.12	88.04	135.56
Interventional Pain Management		37.28	18.77	11.07	67.12	54.89	78.22	23.68	156.79	223.91

Interventional Radiol- ogy		9.02	5.92	4.05	18.99	24.81	15.93	41.81	82.56	101.55
Licensed Clinical So- cial Worker		0.21	0.19	0.13	0.53	2.26	10.82	4.72	17.80	18.33
Mammography Screening Center	Independent Test Facility	114.69	56.50	310.94	482.13	159.85	124.58	194.78	479.21	961.34
Maxillofacial Surgery	Otolaryngology	30.38	7.82	9.95	48.15	50.71	76.96	13.86	141.54	189.69
Medical Oncology		69.97	22.13	9.75	101.85	45.46	45.09	55.26	145.81	247.66
Medical Toxicology	Emergency Medicine	1.88	0.47	0.05	2.40	8.74	7.73	21.89	38.36	40.76
Multispecialty Clinic or Group Practice	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
Nephrology		8.24	7.40	1.35	16.99	20.07	36.98	8.95	66.00	82.99
Neurology		10.98	3.10	2.74	16.82	35.95	64.68	9.76	110.39	127.21
Neuropsychiatry	Psychiatry	1.54	0.13	0.34	2.00	8.88	16.11	5.10	30.10	32.10
Neurosurgery		9.35	1.75	5.66	16.76	41.29	62.69	11.78	115.76	132.52
Nuclear Medicine		4.23	2.76	5.23	12.21	7.28	20.89	11.63	39.80	52.01
Obstetrics/		33.14	8.96	7.60	49.70	33.59	52.62	13.11	99.32	149.02
Gynecology										
Occupational Therapy	Physical Therapy	6.94	1.76	2.51	11.21	15.30	33.75	8.21	57.26	68.47
Ophthalmology		45.70	13.77	13.14	72.61	54.66	92.21	23.21	170.07	242.68
Optometry		15.79	4.62	6.35	26.76	23.44	52.35	12.23	88.02	114.78
Oral Surgery		40.34	35.40	16.81	92.55	50.65	102.78	19.76	173.19	265.74
Orthopedic Surgery		21.35	5.27	4.92	31.54	46.13	69.45	15.82	131.40	162.94
Osteopathic Manipula- tive Therapy		0.26	2.92	0.72	3.89	14.64	29.29	10.00	53.93	57.83
Otolaryngology		30.38	7.82	9.95	48.15	50.71	76.96	13.86	141.54	189.69
Pain Management		25.82	14.39	12.72	52.93	42.96	62.69	16.76	122.42	175.35
Pathology		14.53	9.38	2.56	26.47	14.85	30.65	29.48	74.98	101.45
Pediatric Medicine		20.34	11.94	2.75	35.04	29.03	38.69	8.55	76.27	111.31
Peripheral Vascular Disease	Vascular Surgery	15.95	6.55	8.22	30.72	28.11	43.31	12.56	83.98	114.69
Physical Medicine & Rehabilitation		8.11	5.70	7.05	20.85	46.65	52.82	10.66	110.13	130.98
Physical Therapist		6.94	1.76	2.51	11.21	15.30	33.75	8.21	57.26	68.47
Plastic & Reconstruc- tive Surgery		19.03	21.04	7.62	47.69	31.69	84.79	18.34	134.81	182.50

Specialty	Crosswalk	Clinical Labor	Supplies Expense	Equip Expense	Direct PE/hr	Clerical Payroll	Office Expense	Other Expense	Indirect PE/hr	Total PE/hr
Podiatry		7.07	6.69	2.51	16.27	20.90	45.68	8.18	74.76	91.03
Portable X-Ray Supplier	Independent Test Facility	114.69	56.50	310.94	482.13	159.85	124.58	194.78	479.21	961.34
Preventive Medicine	Internal Medicine	15.80	7.46	3.34	26.60	25.66	52.37	6.00	84.02	110.62
Psychiatry		1.54	0.13	0.34	2.00	8.88	16.11	5.10	30.10	32.10
Psychologist	Psychiatry	1.54	0.13	0.34	2.00	8.88	16.11	5.10	30.10	32.10
Pulmonary Disease		11.91	3.05	4.11	19.07	17.88	28.99	8.39	55.26	74.33
Radiation Oncology		69.02	12.16	45.02	126.20	35.76	90.96	38.38	165.10	291.30
Registered Dietician/Nutrition Professional	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
Rheumatology		22.50	20.01	6.83	49.34	28.77	61.26	8.05	98.08	147.42
Sleep Medicine	Sleep Medicine	34.16	4.95	8.12	47.23	38.18	52.43	18.08	108.69	155.92
Slide Preparation Fa- cilities	Independent Lab	87.17	20.40	9.08	116.65	26.49	19.63	22.21	68.32	184.97
Speech Language Pathology	Physical Therapy	6.94	1.76	2.51	11.21	15.30	33.75	8.21	57.26	68.47
Sports Medicine	Family Practice	19.58	6.27	3.19	29.04	27.46	54.34	8.35	90.15	119.19
Surgical Oncology	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
Thoracic Surgery		8.98	3.09	1.51	13.58	22.00	33.15	12.68	67.83	81.40
Unknown Physician	All Physicians	18.36	7.47	4.77	30.60	28.03	46.38	11.95	86.36	116.96
Specialty Urology		16.75	11.69	7.69	36.13	30.81	51.20	15.01	97.01	133.14
Vascular Surgery		15.95	6.55	8.22	30.72	28.11	43.31	12.56	83.98	114.69

## The Bottom-Up Practice Expense RVU Methodology

In the December 1, 2006, Final Rule, CMS revised the PE methodology to calculate direct PE RVUs from the existing top-down cost allocation methodology to a bottom-up methodology. Instead of using the top-down approach of calculating the direct PE RVUs, in which the aggregate PE input costs for each specialty are scaled to match the aggregate SMS costs, CMS has adopted a bottom-up method of determining the relative direct costs of each service. Under this method the direct costs would be determined by summing the costs of each of the resources typically required for the service. The clinical labor, medical supplies, and medical equipment costs would be summed from the refined PE inputs, reflected in the CMS direct PE input database. CMS has indicated that RUC-refined direct PE input data are "preferable to the SMS data for determining direct costs" and almost all of the comments received by CMS regarding this change in the PE methodology were supportive.

In the November 1, 2005, Final Rule, CMS made the following statement:

The bottom-up approach would be simple to understand—we merely sum the costs of the RUC/PEAC refined clinical staff, supply and equipment inputs that are assigned to each service. The bottom-up approach would be intuitive—any change in direct inputs would lead to a commensurate change in the direct PE RVUs. The bottom-up methodology should also be more stable—with no cost pools or scaling factors to complicate the computation, direct PE RVUs for a service would only change if there was a revision to the inputs assigned. It was the hard work put forth by the AMA, the PEAC, and RUC and specialty societies in refining the CPEP inputs that made it possible to propose using a -bottom-up methodology.

However, the CMS bottom-up proposal was not implemented for CY 2006 because of an error in the PE program that resulted in a miscalculation of the indirect costs. This miscalculation resulted in almost all of the PE RVUs published in the August 8, 2005, Proposed Rule to be incorrect. CMS became concerned that interested parties were not provided with sufficient notification of the actual effect of the proposed changes in the PE methodology. The medical community and others, therefore, could not submit meaningful comments on the proposal. For 2006, CMS used the 2005 PE RVUs for all services, accounting for only two refinements for the year. These refinements included the application of the PE per hour data from the urology supplemental survey for urology drug administration codes. CMS also applied the savings from the multiple procedure reductions for certain imaging services across all PE RVUs. However, in 2007, this savings was removed due to a provision in the Deficit Reduction Act.

As previously explained, CMS did implement the bottom-up methodology in determining direct PE inputs in 2007. This change in methodology for calculating PE RVUs was implemented over a four-year period. During the transition period, the PE RVUs were based on a blend of RVUs weighted for the new method by 25% during 2007, 50% during 2008, 75% during 2009, and 100% thereinafter. It should be noted that the PE RVUs for codes that were new during this period were calculated using only the current PE methodology and were paid at the fully transitioned rate. In addition, CMS implemented a few other modifications to the indirect PE methodology, including:

- Elimination of the nonphysician work pool (NPWP). This pool had previously been created to allocate PE RVUs for technical component codes and other codes that did not have physician work RVUs. This methodology did not use the resource-based methodology but instead used the 1998 PE RVUs to allocate costs from a separate cost pool created for codes with no physician work. Now CMS has created "proxy work" RVUs for these services (and for services with minimal work), utilizing clinical staff costs or the Medicare CF, and no longer applies this alternate methodology.
- An update of the utilization data used in the methodology.
- Acceptance of supplemental PE survey data for a number of specialties, including allergy, cardiology, dermatology, gastroenterology, radiology, radiation oncology, and urology. (Note: These data have now been replaced with the PPI survey data. For discussion of this, see Physician Practice Information Survey.)
- Starting in 2016, CMS began using an average of three years of the most recent available Medicare-claims data to determine specialty mix. This change resulted in less fluctuation from year to year, especially for low-volume and new services.

The following is an example of how the PE RVUs for code 99213 will be calculated in 2024 using the 2007 ("bottom-up") PE methodology.

**Step 1** Sum the direct costs of the clinical labor, medical supplies, and medical equipment for each service. The clinical labor cost is the sum of the total cost of all the staff types associated with the service (each staff type's cost is the product of the time for each staff type and the wage rate for the staff type). The medical supplies cost is the sum of the supplies associated with the service (each supplies' cost is the product of the quantity of each supply and the cost of the supply). The medical equipment cost is the sum of the equipment associated with the service (the product of the number of minutes each piece of equipment is used in the service and the equipment cost per minute).

Direct	+	Direct	+	Direct	=	Direct
Labor Cost		Supply Cost		Equipment Cost		Costs
		\$17.93 + \$	5.54 +	+ \$0.34 = \$23.80		

**Step 2** Calculate the current aggregate pool of direct PE costs by multiplying the current aggregate pool of total direct and indirect PE costs (ie, the current aggregate PE RVUs multiplied by the CF) by the average direct PE percentage from the physician practice information survey and supplementary specialty survey data.

**Step 3** Calculate the aggregate pool of direct costs by summing the product of the direct costs for each service from Step 1 and the utilization data for that service.

Step 4 Using the results of Steps 2 and 3, calculate the direct adjustment and apply it to the direct costs from Step 1.

For 2024, CMS has computed this direct adjustment to be 0.4637.

Labor Cost × Direct Adjustment

 $17.93 \times 0.4637 = 8.31$ 

Supply Cost × Direct Adjustment

 $5.54 \times 0.4637 = 2.57$ 

Equipment Cost × Direct Adjustment

 $0.34 \times 0.4637 = 0.16$ 

**Step 5** Convert the products from Step 4 to an RVU by dividing them by the MFS CF and sum these RVUs to obtain the adjusted direct RVUs. **Note that the actual value of the CF used in this calculation does not influence the final direct cost PE RVUs, as long as the same CF amount is used in Step 4 and Step 5.** Different CFs would result in different direct PE scaling adjustments, but this has no effect on the final direct cost PE RVUs because changes in the CFs and changes in the associated direct scaling adjustments offset one another. Thus, CMS uses the finalized CF from 2023 (prior to legislative action) in its sample calculation of PE RVU methodology in the CY2024 Final Rule, noting that "the use of any particular CF to illustrate the PE Calculation has no effect on the resulting RVUs, because the same CF is used to calculate the direct and indirect scaling adjustments."

Labor RVU

\$8.31 ÷ \$33.0607 = 0.25 RVUs

Supply RVU

\$2.57 ÷ \$33.0607 = 0.08 RVUs

#### Equipment RVU

\$0.16 ÷ \$33.0607 = 0.00 RVUs

Labor + Supply + Equipment = Adjusted Direct RVU RVU RVU RVU RVUs 0.25 + 0.08 + 0.00 = 0.33

The computed direct PE RVU is 0.33. (Note PE RVUs may not match Addendum B due to rounding.)

**Step 6** Based on the physician practice information survey and supplementary specialty survey data, calculate direct and indirect PE percentage for each physician specialty.

**Step 7** Calculate the direct and indirect PE percentages at the service level by taking a weighted average of the results of Step 6 for the specialties that provide the service. It should be noted that for services with technical components and professional components, the direct and indirect PE percentages are calculated across the global component.

### In 2024, the direct percentage for CPT code 99213 is 25% and the indirect percentage is 75%.

**Step 8** Calculate the service level allocators for the indirect PEs based on the percentages calculated in Step 7. The indirect PEs are allocated based on three components: the direct PE RVU, the clinical PE RVU, and the work RVU.

For most services, the formula is:

Indirect Percentage × (Direct PE RVU ÷ Direct Percentage) + Work RVU = Indirect Allocator

#### In 2024, CPT code 99213 is computed as:

$$0.75 \times (0.33 \div 0.25) + 1.30 = 2.31$$

However, in two situations this formula would be altered. The first situation is when the service is a global service, and the indirect allocator is as follows:

Indirect Percentage × (Direct PE RVU ÷ Direct Percentage) + Clinical PE RVU + Work RVU

The second situation is when the clinical labor PE RVU exceeds the work RVU; then the indirect allocator is as follows:

Indirect Percentage × (Direct PE RVU ÷ Direct Percentage) + Clinical PE RVU

**Step 9** Calculate the current aggregate pool of indirect PE RVUs by multiplying the current aggregate pool of PE RVUs by the average indirect PE percentage from the physician specialty survey data.

**Step 10** Calculate the aggregate pool of proposed indirect PE RVUs for all MFS services by adding the product of the indirect PE allocators for a service from Step 8 and the utilization data for that service.

**Step 11** Using the results of Steps 9 and 10, calculate an indirect PE adjustment so that the aggregate indirect allocation does not exceed the available aggregate indirect PE RVUs, and apply it to indirect allocators calculated in Step 8.

#### For 2024, the indirect adjustment is 0.3918.

**Step 12** Using the results of Step 11, calculate aggregate pools of specialty-specific adjusted indirect PE allocators for all MFS services for a specialty by adding the product of the adjusted indirect PE allocator for each service and the utilization data for that service.

**Step 13** Using the specialty specific indirect PE/hour data, calculate specialty-specific aggregate pools of indirect PE for all MFS services for that specialty by adding the product of the indirect PE/hour for the specialty, the physician time for the service, and the specialty's utilization for the service.

**Step 14** Using the results of Step 12 and Step 13, calculate the specialty specific indirect PE scaling factors as under the current methodology.

**Step 15** Using the results of Step 14, calculate an indirect practice cost index at the specialty level by dividing each specialty-specific indirect scaling factor by the average indirect scaling factor for the entire MFS.

**Step 16** Calculate the indirect practice cost index at the service level to ensure all of the indirect costs have been captured. Calculate a weighted average of the practice cost index values for the specialties that furnish the service. Note that for services with technical components and physician components, calculate the indirect practice cost index across the global components.

### In 2024, the indirect practice cost index for code 99213 is 1.11.

**Step 17** Apply the service level indirect practice cost index calculated in Step 16 to the service level adjusted indirect allocators calculated in Step 11 to obtain the indirect PE RVUs.

$$1.11 \times 0.91 = 1.01$$

**Step 18** Add the direct PE RVUs from Step 5 to the indirect PE RVUs from Step 17 and apply the final PE budget-neutrality adjustment. The final PE budget-neutrality adjustment is calculated by comparing the aggregate work RVUs scaled by the ratio of current aggregate PE and work RVUs. This final PE budget-neutrality adjustment is required primarily because certain specialties are excluded from the PE RVU calculation for rate-setting purposes, but all specialties are included for purposes of calculating the final PE budget-neutrality adjustment.

0.33 (adjusted direct PE RVU) + 1.00 (adjusted indirect PE RVU) = 1.33

Note that CMS does not disclose how they handle rounding for each component for this step in the formula.

 $1.33 \times 0.9985$  (budget-neutrality adjustment) = 1.33

### Step 19 Apply the phase-in of significant RVU reductions and the associated adjustment.

This approach limits the year one reduction for the service to the maximum allowed amount (that is, 19%) and then phases in the remainder of the reduction. The PE RVUs are adjusted to ensure that the total RVUs for all services that are not new or revised codes decrease by no more than 19%, and then a relativity adjustment is applied to ensure that the total pool of aggregate PE RVUs remains relative to the pool of work and MP RVUs.

### In 2024, the final PE RVU with phase-in for code 99213 is 1.33.

### Adjustment to Allocation of Indirect PE for Some Office-Based Services

In the PE RVU calculation outlined above, CMS allocates indirect costs for each code based on the direct costs specifically associated with a code and the greater of either the clinical labor costs or the work RVUs. For MFS services priced in both the facility and nonfacility settings, the difference in indirect PE RVUs between the settings is driven by differences in direct PE inputs for those settings since the other allocator of indirect PE, the work RVU, does not differ between settings. Generally, the direct PE input costs are higher in the nonfacility setting than in the facility setting. As a result, indirect PE RVUs allocated to these services are higher in the nonfacility setting than in the facility setting. However, when direct PE inputs for a service are minimal, the allocation of indirect PE RVUs becomes almost entirely dependent on the work RVUs, causing the total PE RVUs in the facility and nonfacility settings to be almost the same. This allocation methodology does not allow for appropriate payment of the indirect costs involved in furnishing services in nonfacility setting. Among the services most affected by this anomaly are services for behavioral health.

Starting in 2018, CMS modified the existing methodology for allocating indirect PE RVUs to better reflect the relative indirect PE resources involved in furnishing behavioral health and other low direct PE inputs services in the nonfacility setting. CMS has used the following criteria to identify the services where an indirect PE adjustment will be applied: describe face-to-face services, have work RVUs greater than zero, and are priced in both the facility and nonfacility setting. From those codes CMS further narrowed the list by selecting those with the lowest ratio between nonfacility PE RVUs and work RVUs and selecting 0.4 as an appropriate threshold. There are fewer than 50 codes where the adjustment will be applied. CMS will address the anomaly by establishing a minimum nonfacility indirect PE RVU that would better reflect the resources involved in furnishing the identified services, using the indirect PE RVU to work RVU ratio for the most commonly furnished office-based, face-to-face service (CPT 99213). CMS has compared the ratio between indirect PE RVUs and work RVUs that result from the preliminary application of the standard methodology to the ratio for the marker code, CPT code 99213. This will increase the allocation of indirect PE RVUs to the anomalous codes to at least one quarter of the difference between the two ratios. Because the change in PE methodology has a significant impact on PE relativity across the MFS, CMS is phasing in the adjustment over four years, effectively implementing only one quarter of the minimum value for nonfacility indirect PE for the codes identified. The change in methodology will have an impact of approximately \$40 million, or approximately 0.04% of total MFS allowed charges for each year of the proposed four-year transition. CY 2021 was the final year of the phase-in.

### Computation of Medical Equipment Costs

In the November 1, 2012, Final Rule, CMS adopted a new approach to determine the interest rate used in the computation of medical equipment costs. The interest rate will vary based on a "sliding scale" determined by the equipment cost, useful life, and small business administration (SBA) maximum interest rates for different categories of loan size and maturity.

The equipment cost per minute is calculated as:

 $(1 \div \text{minutes per year} \times \text{usage}) \times \text{price} \times [\text{Interest rate} \div (1 - \{1 \div [1 + \text{Interest rate}]^a\})]$ 

+ maintenance

Minutes per year = maximum minutes per year if usage were continuous (that is, usage = 1); 150,000 minutes

Usage = equipment utilization assumption;  $0.5^*$ 

Price = price of the particular piece of equipment

Interest rate = sliding scale (See table below)

<sup>a</sup> = life of equipment, ie, useful life of the particular piece of equipment

Maintenance = factor for maintenance; 0.05

Medical Equipment Costs						
		≤ \$25,000	\$25,000 - \$50,000	≥\$50,000		
	< 7 years	7.5%	6.5%	5.5%		
Useful Life		(PR + 4.25)	(PR + 3.25)	(PR + 2.25)		
	$\geq$ 7 years	8.0%	7.0%	6.0%		
		(PR + 4.75)	(PR + 3.75)	(PR + 2.75)		

Abbreviation: PR indicates prime rate.

\*Beginning in 2014, Section 1848(b)(4)(C) of the American Taxpayer Relief Act of 2012 (ATRA), as modified by section 635, indicates that expensive diagnostic imaging equipment, for example, MRI, CT, CTA and MRA services, the equipment utilization rate assumption of 0.90.

### Equipment Utilization Rate

As part of the PE methodology associated with the allocation of equipment costs for calculating PE RVUs, a 50% utilization assumption is currently used. In 2009, following MedPAC discussion, CMS announced that it would increase the equipment utilization rate to 90% for all CT and MRI services (ie, diagnostic equipment that cost in excess of \$1 million). This new equipment-utilization rate assumption was to be transitioned into the new PE RVUs over four years beginning in 2010. However, from 2011–2013, CMS applied a 75% utilization rate for all diagnostic equipment in excess of \$1 million assumption as mandated by the Affordable Care Act of 2010. In 2014 CMS applied a 90% utilization rate assumption to all the services to which the 75% equipment-utilization rate assumption applied in 2013. The equipment-utilization rate assumption for advanced imaging services furnished on or after January 1, 2014, is 90%. The equipment-utilization rate for services utilizing a linear accelerator on or after January 1, 2018, is 60%.

## Refinement of Resource-Based Practice Expenses

The AMA closely monitored all phases in the development of the new relative values and advocated that they be based on valid physician PE data. Because there is not a single universally accepted cost allocation methodology, it is especially important that CMS continues to base its methodology on actual PE data. CMS' decisions not only affect Medicare payments, but because many other payment systems use the Medicare RBRVS, the change to resource-based PE relative values has broad implications for the entire health care system. Due to the significance of this issue, RUC established an advisory committee to assist in refining a portion of the data used to calculate PE relative values.

The transition period for PE relative value units reflected a combination of the 1998 charge-based value and the new resource value. The transition began in 1999 when PE resource values were based on 75% of the 1998 charge-based relative value and 25% on the resource-based value. In 2000, the mix was equally weighted between the charge-based and resource-based values, and in 2001, the PE relative values are 75% resource-based and only 25% charged-based. In 2002, the transition was completed with PE RVUs totally resource-based. In 2007, CMS implemented a new PE methodology.

The AMA advocated that the PE relative values remain interim during the refinement process and CMS has agreed to keep the values interim during the four-year transition to resource-based PE relative values. This interim period was necessary due to the amount of refinement work that needed to occur and so physicians would have had an opportunity to provide CMS with new data to be used in updating the PE relative values. In the November 1, 2001, Final Rule, CMS went further in offering to leave the PE values interim until refinement is complete.

The numerous issues that have been or will be addressed in refinement can be divided into the following six categories:

- Review and refine PE/hour data
- Obtain and review PE/hour data for specialties and practitioners not included in the SMS survey
- Address anomalies, if any, in code-specific Harvard/RUC physician time data
- Address anomalies, if any, in code-specific CPEP data on clinical staff types and times, quantity and cost of medical supplies, and quantity and cost of medical equipment
- Refine, as needed, the CMS process of developing PE RVUs for codes that were not addressed by the CPEP process, for example, codes that were new in 1996, 1997, 1998, and 1999
- Develop PE RVUs for codes that will be new in 2000 and beyond

### RUC's Role in Refinement

RUC has played a key role in the refinement of PE relative values since first implemented in 1999. RUC is committed to providing CMS with recommendations that accurately reflect the resources required to perform the service. RUC has also agreed that as RUC reviews new or revised codes for the work component, the committee will also consider the direct PE inputs for these services.

When CMS published the details of its current PE methodology in June 1998, CMS stated:

# There is much needed improvement in the CPEP data, and the identification and correction of any CPEP errors whether in staff times, supplies, equipment, or pricing will be a major focus of our refinement process.

In response to the need to update this set of data, RUC created a special advisory committee, the Practice Expense Advisory Committee (PEAC) to assist RUC in refining the direct input data CMS uses to calculate PE relative values. PEAC was charged to review direct expense inputs (ie, clinical time, supplies, and equipment) for individual CPT codes. PEAC held several meetings to develop a process for reviewing the direct inputs associated with CPT codes, and is working with CMS to develop clear definitions. In September 1999, RUC approved the first set of direct inputs reviewed by PEAC. These recommendations were forwarded to CMS, which then accepted a majority of the recommendations and incorporated these changes into the Medicare payment schedule for 2000. PEAC met several times in 2000, whereby it continued to review the direct input data and refine its methodology for code selection and analysis.

In May 2000, RUC submitted recommendations to CMS on direct PE inputs for new and revised CPT codes. PEAC and RUC also reviewed the Evaluation and Management codes and recommended new data be utilized to reflect clinical staff, medical supplies, and medical equipment. CMS accepted these recommendations and implemented the data on January 1, 2001. In addition, RUC recommended, and CMS has implemented, standardized medical supply packages for nearly 600 CPT codes.

These revisions to medical supplies were based on recommendations from ophthalmology, neurosurgery, and obstetrics/gynecology.

The development of standardized medical supply packages and benchmarks of typical direct inputs contributed greatly to the refinement efforts, and 2001 was particularly successful with PEAC refining the inputs for over 1100 codes. Standardized medical supply packages and benchmarking allowed a few specialties including dermatology, orthopedic surgery, urology, pathology, ophthalmology, and physical medicine to refine large numbers of codes that were of importance to these specialties. CMS accepted virtually all recommendations with only minor revisions in that year.

In 2002, PEAC concentrated on each specialty's top 10 codes (per Medicare utilization), and refined the direct inputs for each. CMS accepted 100% of PEAC's recommendations on 1200 codes that year, and updated its clinical labor staff salary listing to reflect current wage data.

In 2003, PEAC reviewed and submitted standardized inputs for global surgical codes, as well as nearly 1000 individual codes. This submission included the remaining evaluation and management services. CMS also completed a major refinement of medical supply pricing.

In 2004, PEAC reviewed the direct PE inputs for most of the remaining CPT codes yet to be refined. PEAC made recommendations for these remaining 2200 codes and CMS accepted nearly all of them. In addition, CMS completed a major refinement of its medical equipment pricing in that year.

CMS has implemented PE refinements to all CPT codes, representing nearly all the MFS spending. PEAC concluded its work as a committee in March 2004, after CMS had implemented PE refinements to nearly all CPT codes, representing nearly all the MFS spending. At that time, RUC created an ad hoc committee, the Practice Expense Review Committee (PERC), to assist RUC in refining the remaining few CPT codes not yet reviewed, and to offer advice on new/revised codes and other general refinement issues.

Throughout the PEAC/RUC process, PE standards and benchmarks were established which were not used when the data was originally collected. As a result, specialty societies have been able to refine their data using standards that apply to all specialties in a uniform manner. In addition, RUC has examined and made recommendations on other refinement issues involving the general methodology utilized to calculate PE RVUs.

In response to the 2012 Proposed Rule, RUC recommended that rather than applying the same interest rate across all equipment, CMS should consider a "sliding scale" approach to determine the interest rate utilized in computing equipment costs. Previously, CMS was using an interest rate of 11% and applied it across all equipment. RUC recommended a "sliding scale" approach that will account for changes in the prime rate or the SBA's formula for maximum allowed interest rates. In 2014, CMS adopted RUCs recommendation and implemented the "sliding scale" approach based on the current Small Business Administration (SBA) maximum interest rates for different categories of loan size (price of the equipment) and maturity (useful life of the equipment). In addition, CMS is updating this assumption through annual MFS rulemaking to account for fluctuations in the prime rate and/or changes to the SBA's formula to determine maximum allowed interest rates.

The maximum interest rates for SBA loans are as follows:

- Fixed rate loans of \$50,000 or more must not exceed 5.50% if the maturity is less than 7 years, and 6.00% if the maturity is 7 years or more.
- For loans between \$25,000 and \$50,000, maximum rates must not exceed 6.50% if the maturity is less than 7 years, and 7.00% if the maturity is 7 years or more.
- For loans of \$25,000 or less, the maximum interest rate must not exceed 7.50% if the maturity is less than 7 years, and 8.00%, if the maturity is 7 years or more.

### Migration from Film to Digital Practice Expense Inputs

After two years of effort, the Practice Expense Subcommittee Migration from Film to Digital Imaging Workgroup completed their work and recommendations were submitted to CMS by RUC following the April 2013 RUC meeting. RUC recommended that for existing codes, CMS remove 21 supply items and nine equipment inputs from 604 imaging CPT codes and replace the film supplies and equipment with the recommended picture archiving and communication system (PACS) equipment. RUC recommended that there be no modifications to clinical labor activities for existing codes. RUC also recommended revised clinical labor activities and times for the new codes and codes that are being reviewed by RUC moving

forward. CMS accepted the RUC recommendation to remove the identified supplies and equipment, however, they removed the supplies and equipment from the CMS direct PE input database entirely, including from 50 additional codes purposefully excluded from the RUC recommendation because digital technology is not yet typical or because the code describes a service that is not imaging, but does require one piece of equipment that is used to view past imaging studies. As a proxy for the PACS equipment recommended by RUC, CMS finalized its recommendation to allocate equipment minutes for a desktop computer (ED021). For 2016, as a proxy for the PACS equipment recommended by RUC and based on submitted invoices, CMS finalized its recommendation to allocate equipment. In addition to the RUC recommendations that CMS approved regarding the migration from film to digital, CMS also agreed with RUC's recommendation to revise clinical labor time resulting from changes in film technology as CPT codes are reviewed and to make no modifications to clinical labor activities for existing codes. For 2016, CMS reported that the migration from film to digital technology accounts for \$240 million in annual redistribution within the MFS.

For 2017, CMS finalized its recommendation to create a new equipment input for a professional PACS workstation (ED053), priced more than two and a half times higher than the less accurate proxy equipment input. The new input was incorporated into 513 CPT codes for 2017. CMS divided these 513 codes into diagnostic and therapeutic categories. For diagnostic codes, they assigned equipment minutes equal to half the preservice physician work time and the full intraservice physician work time. For the relatively smaller group of diagnostic codes with no service period time breakdown, CMS assigned equipment time equal to half of the total physician work time. For therapeutic codes, they allocated equipment minutes equal to half the preservice physician work time for the second group.

### CMS' Efforts on Refinement

Since 1997, when CMS first proposed a resource-based PE methodology, CMS has had three major goals for this payment system and has encouraged input from the medical community regarding PE data and methodology. These three goals are:

- To ensure that the PE payments reflect, to the greatest extent possible, the actual relative resources required for each of the services on the MFS. This could only be accomplished by using the best available data to calculate the PE RVUs.
- To develop a payment system for PE that is understandable and at least somewhat intuitive, so that specialties could generally predict the impacts of changes in the PE data.
- To stabilize the PE payments so that there are not large fluctuations in the payment for given procedures from year-to-year.

Over the refinement period, CMS has made several broad-based changes in the PE data used to calculate resource-based PE relative value units. These are primarily "egregious errors and anomalies" that have been highlighted by specialties since the introduction of the new CMS methodology. In addition, CMS made a number of changes in CPEP data based on specific RUC recommendations. For example, a contractor examined criteria under which CMS would use survey (supplemental) data to improve specialty representation in CMS' calculation of the specialty specific PE/HR.

In 2001, CMS issued strict criteria that specialties would need to follow to submit supplemental PE data. CMS announced new criteria for supplemental survey data in the December 31, 2001, Final Rule. The criteria are as follows:

- Physician groups must draw their sample from the AMA Physician Masterfile to ensure a nationally representative sample that includes both members and nonmembers of a physician specialty group.
- Nonphysician specialties not included in the AMA's SMS must develop a method to draw a nationally representative sample of members and nonmembers.
- A group (or its contractors) must conduct the survey based on the SMS survey instruments and protocols. Physician groups must use a contractor that has experience with the SMS or a survey firm with experience successfully conducting national multispecialty surveys of physicians using nationally representative random samples.
- Physician groups or their contractors must submit raw survey data to CMS, including all complete and incomplete survey responses as well as any cover letters and instructions that accompanied the survey.
- Supplemental survey data must include data in the six PE categories: clinical labor, medical supplies, medical equipment, administrative labor, office overhead, and other.
- CMS requires a 90% confidence interval with a range of plus or minus 10% of the mean (ie, 1.645 times the standard error of

the mean divided by the mean should be equal to or less than 10% of the mean).

■ CMS has accepted supplemental data that meets the established criteria that they received by March 1, 2006, to determine calendar year (CY) 2006 PE relative values. CMS has stopped accepting supplemental survey data and has welcomed "comments on the most appropriate way to proceed to ensure the indirect PEs per hour are accurate and consistent across specialties."

### **Physician Practice Information Survey**

As discussed earlier, CMS implemented a change in its methodology for PE payments. As part of this change, both CMS and the Medicare Payment Advisory Commission (MedPAC) expressed interest in a multi-specialty PE survey to determine the current practice costs of physicians because the data they had been using was collected from 1995 through 1999. The AMA responded to this interest in March 2006, when more than 70 specialty societies and other health care professional organizations joined the AMA in a letter urging CMS to work with the entire physician community in a new multispecialty data collection effort.

The Physician Practice Information (PPI) Survey was conducted throughout 2007 and 2008 to collect data for the 2010 MFS including specialty-specific PE/hour data. CMS accepted and used the data collected from this survey effort to develop, starting in 2010, PE RVUs for those specialties that participated in the survey, excluding oncology in which CMS used the American Society of Clinical Oncology's supplemental survey data as mandated by the Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003. This new specialty PE/hour data was incorporated into the new PE RVUs over a four-year transition period. However, PE relative values for new codes created during this four-year period were calculated using only the current PE method and were paid at the full transitioned rate. CY 2013 was the fourth and final year of the transition to new specialty PE data, collected in the PPI Survey.

One hundred percent of the PE relative values are now based on the PPI Survey data. The AMA and RUC continue to work with, and closely monitor, CMS' progress to ensure that the direct PE inputs assigned to each service are correct and that the overall methodology is appropriate. RUC also works to ensure that future data collection on physician's overall PE data is fair to all specialties.

### Updates to Practice Expense (PE) Data Collection and Methodology

Beginning with a pilot study in 2020, the AMA is engaged in an extensive effort to collect practice cost data from physician practices. Supported by over 170 health care organizations, the AMA is conducting a new national study to collect representative data on physician practice expenses. The aim of the AMA's new Physician Practice Information (PPI) survey is to better understand the costs faced by today's physician practices to support physician payment advocacy. The study will serve as an opportunity to communicate accurate financial information to policymakers, including members of Congress and CMS. The AMA has contracted with Mathematica, an independent research company with extensive experience in survey methods as well as health care delivery and finance reform, to conduct the study. The MFS re-lies on 2006 cost information to develop practice expense relative values, the Medicare Economic Index (MEI), and resulting physician payments. As the U.S. economy and health care system have undergone substantial changes since that time, including inflation and the widespread adoption of electronic health records and other information technology systems, practice expense payments no longer accurately reflect the relative resources that are typically required to provide physician services.

Beginning in July 2023 and throughout October, 10,000 physician practices were randomly invited via email and mail. The PPI survey provides the opportunity for these practices to share their practice cost data and the number of direct patient care hours provided by both physicians and qualified health care professionals. The survey will be completed through spring 2024. Data will be shared with CMS in early 2025 for the 2026 Medicare MFS rulemaking process. A coalition of other non-MD/DO organizations is also working with Mathematica to administer a similar study of their professions.

In response to the AMA's national PPI survey, the CY 2024 final rule postponed the implementation of updated MEI weights which were finalized for CY 2023. These updates would change the proportion of Medicare physician payments based on physician work, practice expenses, and liability insurance costs with potentially significant payment redistributions across specialties. CMS delayed the implementation of MEI changes to allow for continued public comment. The re-weighting would have led to payment reductions for certain specialties and geographic localities in 2024.

### Supply, Equipment, and Clinical Labor Pricing Updates

The first comprehensive review of supply and equipment prices since 2004–2005 occurred with the Proposed Rule for CY 2019 when CMS used its authority under Section 220(a) of the Protecting Access to Medicare Act (PAMA) of 2014 to initiate a market research contract with a consulting firm, StrategyGen, to update the direct PE inputs for supply and equipment pricing. Based on the report from StrategyGen, CMS updated pricing for 2017 supply and equipment items used as direct PE inputs. Market research resources and methodologies included field surveys, aggregate databases, vendor resources, market scans, market analysis, physician substantiation, and statistical analysis. CMS transitioned the supply and equipment pricing update over a four-year phase-in. The RUC encouraged CMS to continue to consider all pricing data including invoices and other supporting evidence that they received from the specialty societies throughout the entirety of the four-year transition period. CY 2022 marks the final year of the four-year market-based transition for supply and equipment pricing.

Recognizing that the clinical labor pricing had not been updated since 2002, CMS began an update to the clinical labor pricing for CY 2022, in conjunction with the final year of its supply and equipment pricing update. The median Bureau of Labor Statistics (BLS) wage data will be used to calculate the clinical labor pricing updates because the BLS wage data continues to be the most accurate source to use as a basis for clinical labor pricing. The majority of the RBRVS data inputs are based on the median; therefore, using the median BLS data will appropriately reflect changes in clinical labor resource inputs for purposes of establishing PE relative values. In addition, CMS is updating the fringe benefit multiplier from 2002 to 1.296. There will be a four-year transition to the updated labor pricing, much like the transition used in updating the supply and equipment pricing. This transition will help account for the impact of the clinical labor rate update, thus recognizing that services with substantial direct costs attributable to clinical labor will experience increases while services with proportionally more supplies and equipment direct costs will experience declines. CY 2024 is the third year of the four-year transition for the clinical staff wage-rate increases which will be fully effective in 2025.

The AMA understands that the update in clinical labor costs may result in a significant budget-neutrality adjustment to PE RVUs and will continue to advocate for Congress to provide a positive update to the Medicare CF in all future years.