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REPORT TO THE CONGRESS

Impact of Resource-Based Practice Expense Payments for Physician Services

MEDPAC Medicare Payment Advisory Commission

The Social Security Amendments of 1994 required CMS to develop a methodology for a resource-based system for determining practice expenses for each physician service, and the Balanced Budget Act of 1997 (BBA) required that the resource-based practice expense (PE) relative value units (RVUs) be phased in over a four-year period beginning in 1999. The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) required that MedPAC report on the impact of resource-based PE payments on payments for physician services, beneficiaries' access to care, and the willingness of physicians to furnish care to beneficiaries.

MedPAC's analysis shows that the transition to resource-based PE payments did, as expected, result in some redistribution of practice expense RVUs and payments across specialty types and types of services. Changes in the volume of services between 1998 and 2002 do not seem to be related to the magnitude of the changes in payment rates or PE RVUs. Physician assignment rates remained high and relatively unchanged, even for specialties experiencing the largest decline in PE RVUs and payments during the transition. Beneficiaries are not facing systematic problems in obtaining needed care, even for specialties experiencing the largest decline in PE RVUs and payments due to the transition.

We conclude with MedPAC's future plans for assessing the data and the methods used to derive practice expense RVUs. Our workplan includes analyzing the data that are used to establish practice expense payments and the methods used to derive these payments to see if they can be improved.

Paying for physician services

Physician services include office visits, surgical procedures, and a broad range of other diagnostic and therapeutic services. These services are furnished in all settings, including physicians' offices, hospitals, ambulatory surgical centers, skilled nursing facilities and other post-acute care settings, hospices, outpatient dialysis facilities, clinical laboratories, and beneficiaries' homes. All services—surgical and nonsurgical—are classified and reported to CMS according to the Healthcare Common Procedure Coding System.

In 1992, Medicare changed how physicians are reimbursed by adopting a fee schedule, which currently contains payment rates for more than 7,000 services. Its goal was to base physicians' payments on the relative resources used to provide a service rather than on the physicians' charges. A resource-based, relative-value payment system ranks services on a common scale, according to the resources used for the service. Each service has a weight—called a relative value unit—that measures the relative costliness of three types of resources used to provide physician services: physician work, practice expenses, and expenses for professional liability insurance (PLI). Payment rates for each service are calculated by adding the three relative weights and multiplying the sum by the conversion factor.

In the original fee schedule, the RVUs for physician work, which account for about 55 percent of payments per service, were developed using surveys of actual physician resource costs. By contrast,

the RVUs for practice expenses and professional liability insurance, which account for about 42 and 3 percent, respectively, of payments per service, were based on physicians' historical charges.

The Social Security Amendments of 1994 required CMS to develop a methodology for a resource-based system for determining practice expenses for each physician service. Before resource-based methods were implemented, however, the Congress mandated some refinements to the charge-based PE RVUs. For example, the Balanced Budget Act of 1997 (BBA) required CMS to reduce the 1998 PE RVUs for services to 110 percent of their work RVUs. These reductions were used to increase practice expense RVUs for office visits. CMS estimated that this change resulted in an increase in total payments of between 3 and 5 percent for office visits (HCFA 1997).

Resource-based PE RVUs were phased in over a four-year period, 1999 to 2002, as mandated by the BBA. Although the law required the transition to resource-based PE RVUs to be budget neutral, Medicare payments could increase for some services and decrease for others. The change thus had the effect, as expected, of reducing payments for certain specialties and increasing it for others. Specifically, in the agency's final rule, CMS projected that the implementation would result in larger increases in Medicare payments for those specialties that furnish more office-based services than specialties that provide fewer office-based services (HCFA 1998) (Table 1).

Table 1

CMS analysis of the impact of resource-based practice expense relative value units on total payments relative value units, by specialty

Specialty	Percent impact per year
Cardiology	–2%
Dermatology	5
Family/general practice	2
Gastroenterology	–4
General surgery	–2
Internal medicine	0
Ophthalmology	1
Orthopedic surgery	0
Pathology	–3
Radiology	–3
Thoracic surgery	–3
Urology	1

Source: Health Care Financing Administration, 1998.

Although practice expense payments were redistributed across specialties, aggregate payments for physician services increased from about $32.4 billion in 1998 to $45.0 billion in 2002. Specifically, Medicare updated physician payments by 2.0 percent in 1999, 5.3 percent in 2000, 4.8 percent in 2001, and –4.9 percent in 2002.

Deriving resource-based practice expense payments

CMS developed resource-based PE RVUs using two data sources—the American Medical Association's (AMA's) Socioeconomic Monitoring System (SMS) data and the Clinical Practice Expert Panel (CPEP) data. The basic methodology for developing resource-based payments for practice expenses has three steps:

- First, CMS estimated aggregate annual practice expenses—the total PE pool—for six different practice expense categories for each specialty.
- Second, CMS allocated each practice expense pool to the services provided by that specialty, based on estimates of the resources required to deliver each service. This step results in an estimate of the practice expense for each service provided by each specialty.
- Third, CMS averaged specialties' expenses for services provided by more than one specialty.

This methodology—also referred to as the "top-down" approach—assumes that aggregate specialty practice costs are reasonable estimates of the relative resource costs of physicians' services across specialties. (Appendix A provides a diagram of this methodology.)

As mentioned previously, CMS made a final adjustment to ensure that total physician payments were budget neutral—the same as they would have been under the previous payment system. On January 1, 1999, PE RVUs were a sum of 75 percent of the 1998 charge-based PE RVUs and 25 percent of the resource-based RVUs. In each subsequent year, an additional 25 percent of the total PE RVUs was resource-based until January 1, 2002, when 100 percent of the RVU became resource-based.

Deriving the practice expense pools

To establish the six practice expense pools, CMS uses 1995 through 1999 SMS survey data by specialty and by expense category. The six expense categories or pools include three types of direct expenses—nonphysician clinical labor (such as nurses and medical technicians), medical supplies, and medical equipment—and three types of indirect expenses—administrative labor (such as office managers or billing clerks), office supplies, and other expenses.

Each specialty's total practice expense pool by expense category is derived by:

- Estimating the average hourly expense per hour of physician time for each of the six expense categories from SMS survey data. The practice expense per hour for a specialty is derived by dividing aggregate practice expenses for the specialty by the total number of hours spent in patient care activities.

- Multiplying these hourly practice expense estimates by the total hours spent by all physicians in each specialty treating Medicare beneficiaries. The utilization data come from current Medicare claims; the time data come from the AMA Specialty Society Relative Value Update Committee (RUC) and from surveys conducted by Becker et al. (1988) during the development of the original fee schedule.

- Multiplying utilization data and physician time data for each service code to determine the total number of physician hours spent treating Medicare beneficiaries.

Allocating aggregate costs to specific services

CMS uses different approaches to allocate direct and indirect costs to specific services.

- For direct costs—clinical labor, medical supplies, and medical equipment—CMS uses the service-specific data derived by the CPEP. In the mid-1990s, CMS convened the CPEPs—15 expert panels organized by specialty and made up of physicians, nurses, and practice administrators—because no data source existed with the necessary information to allocate the aggregate pool of practice expenses to individual services. These panels estimated the direct resources used to deliver each service. Each panel's estimates are calibrated to the direct expense pools estimated with the SMS data.[1]

- For indirect costs—administrative labor, office expenses, and other expenses—CMS uses the CPEP direct expense data (i.e., PE RVUs) and the physician work RVUs associated with a service for allocating these expenses to individual services.

- Direct and indirect cost estimates are combined to determine total practice expense values per service for a specialty.

- For services performed by multiple physician specialties, the final allocation of PE costs for a given procedure is a weighted average of allocations for the specialists that perform the services. In this way, specialties that perform a given service frequently have more influence over the payment than specialties that rarely perform it.

Deriving PE values for nonphysician services—the alternative method

Some services involve little or no physician work and are performed by other clinical staff. In response to provider concerns that practice expense payments for these nonphysician services were too low, CMS developed an alternative method for deriving their PE values. The alternative methodology aggregates the costs of nonphysician services into what is called the "nonphysician work pool" for all specialties.

The methods used to derive PE payments for each nonphysician service are similar to the methods used to derive PE payments for physician services. Specifically, in the alternative method, CMS creates a separate "total PE pool" for nonphysician services for those specialties with services in the pool. Direct and indirect costs are then allocated across services using adjusted 1998 PE RVUs. Because only one payment is estimated for each nonphysician service, CMS does not average payments across specialties for these services. Finally, CMS removes services from the "nonphysician work pool" if the specialties performing these services make that request.

Impact of implementing resource-based practice expense payments

MedPAC's analysis shows that the transition to resource-based PE payments did, as expected, result in some redistribution of practice expense RVUs and payments across specialty types and types of services. We found that changes in the volume of services between 1998 and 2002 do not seem to be related to the magnitude of the changes in payment rates or PE RVUs. Physician assignment rates remained high and relatively unchanged, even for specialties experiencing the largest decline in PE RVUs and payments during the transition. Beneficiaries are not facing systematic problems in obtaining needed care, even for specialties experiencing the largest decline in PE RVUs and payments due to the transition.

Changes in RVUs and payment rates

We used 1998 and 2002 Medicare physician/supplier claims data to assess the move to resource-based RVUs on RVUs and payment rates. To measure changes in total, PE, work, and PLI RVUs, we constructed an index that weights the average of the ratios of current-year RVUs to base-year RVUs for each service. The box on page 11-12 provides a detailed description of the methods. We used the same index approach to compute changes in the payment rates. This analysis allowed us to identify the specific impact of changes in the practice expense RVUs, the specific impact of other RVU changes, and the source of the greatest RVU change. The Urban Institute conducted this analysis on behalf of MedPAC.

Implementation of the resource-based RVUs did, as expected, redistribute payments among specialties (Maxwell et al. 2004) (Table 2, p. 6–8). Dermatology and urology experienced the biggest gains in PE RVUs (13.8 and 10.1 percent per year, respectively) and payments per service (6.4 and 4.4 percent, respectively).

Table 2

Average annual change in physician payments and relative value units, by specialty and type of service, 1998–2002

			Average annual percent change				
		Percent distribution of payments, 2002	PE RVUs	Work and PLI RVUs	Total RVUs	Payment rate	Impact of resource-based PE RVUs on total payments
National		100.0%	1.9%	–0.3%	0.7%	1.9%	0.7%
Cardiology	Total	100.0	–3.7	–0.8	–2.3	–1.0	–1.8
	Eval/mgmt	38.0	5.1	0.0	1.7	3.3	1.7
	Imaging	35.5	–3.4	–2.3	–3.1	–2.1	–2.3
	Major procedures	14.6	–15.1	–1.0	–6.9	–6.0	–6.3
	Other procedures	0.4	–5.1	–0.8	–3.1	–3.1	–2.6
	Tests	11.6	–6.9	–0.3	–4.3	–3.4	–4.3
Dermatology	Total	100.0	13.8	–0.3	6.4	8.2	6.4
	Eval/mgmt	26.4	10.7	–0.3	4.7	6.6	4.7
	Imaging	0.0	–1.0	0.0	–0.5	–0.5	–0.5
	Major procedures	0.1	11.9	–2.3	3.3	2.6	4.7
	Other procedures	73.2	15.0	–0.3	7.0	8.8	7.0
	Tests	0.3	6.8	0.2	5.1	5.5	4.9
Family/general practice	Total	100.0	4.2	0.2	1.7	3.6	1.5
	Eval/mgmt	86.3	4.7	0.2	1.7	3.8	1.5
	Imaging	3.6	–1.3	–1.8	–1.3	0.0	–1.0
	Major procedures	1.1	–7.6	1.0	–2.1	–2.1	–2.9
	Other procedures	6.7	11.0	0.2	4.9	6.4	4.7
	Tests	2.4	–3.4	–1.0	–2.6	–1.0	–2.3
Gastroenterology	Total	100.0	–8.9	–0.3	–4.0	–2.9	–3.7
	Eval/mgmt	44.0	4.0	0.0	1.2	2.9	1.2
	Imaging	0.6	–0.8	–1.8	–1.0	–0.3	–0.5
	Major procedures	1.8	–3.1	2.4	0.5	0.5	–1.0
	Other procedures	53.1	–15.5	–0.8	–7.3	–6.6	–6.6
	Tests	0.4	–4.3	–1.3	–3.1	–1.8	–2.6
General surgery	Total	100.0	–2.1	0.7	–0.5	0.5	–0.8
	Eval/mgmt	28.0	4.7	0.0	1.7	3.6	1.7
	Imaging	5.6	–3.4	–1.0	–2.6	–1.8	–2.1
	Major procedures	45.0	–5.1	1.5	–1.0	–0.8	–2.1
	Other procedures	20.3	–2.1	0.5	–0.5	0.2	–0.8
	Tests	1.2	–5.1	–2.6	–4.3	–3.4	–3.4
Internal medicine	Total	100.0	3.6	0.0	1.5	3.1	1.5
	Eval/mgmt	82.4	5.9	0.0	1.9	4.0	1.9
	Imaging	5.5	–2.1	–2.3	–2.1	–0.8	–1.5
	Major procedures	0.8	–11.3	0.2	–4.6	–3.7	–4.6
	Other procedures	8.2	1.0	–0.5	0.2	1.0	0.5
	Tests	3.0	–4.8	–0.8	–3.4	–2.3	–3.1

Table 2 (continued)

Average annual change in physician payments and relative value units, by specialty and type of service, 1998–2002

			Average annual percent change				
		Percent distribution of payments, 2002	PE RVUs	Work and PLI RVUs	Total RVUs	Payment rate	Impact of resource-based PE RVUs on total payments
Ophthalmology	Total	100.0%	5.7%	–0.8%	2.4%	4.0%	2.6%
	Eval/mgmt	47.6	19.2	0.0	8.6	11.4	8.6
	Imaging	3.0	7.2	–1.8	4.2	4.9	4.9
	Major procedures	0.4	5.3	0.0	2.4	3.6	2.4
	Other procedures	49.0	–3.1	–1.3	–2.3	–1.5	–1.5
	Tests	0.0	0.7	–1.8	0.0	1.5	0.5
Orthopedic surgery	Total	100.0	2.6	–0.5	0.7	1.5	1.2
	Eval/mgmt	23.4	10.7	0.0	4.0	6.4	4.0
	Imaging	8.6	–0.5	–1.0	–0.8	–0.3	–0.5
	Major procedures	44.6	–4.3	–1.0	–2.6	–2.1	–1.8
	Other procedures	23.4	11.6	–0.3	5.1	5.1	5.3
	Tests	0.1	2.4	–1.0	1.0	0.0	1.5
Pathology	Total	100.0	2.6	–0.3	0.7	1.9	1.0
	Eval/mgmt	80.4	1.2	–0.5	0.2	1.2	0.5
	Imaging	0.4	–2.1	–1.0	–1.5	0.7	–1.0
	Major procedures	0.1	–11.6	–1.0	–5.7	–6.3	–5.1
	Other procedures	1.5	3.1	–0.3	1.0	1.2	1.0
	Tests	17.7	10.3	0.2	3.6	5.9	3.6
Radiology	Total	100.0	–2.3	–0.5	–1.5	–0.3	–1.0
	Eval/mgmt	2.0	1.9	0.0	0.7	4.0	0.7
	Imaging	75.1	–2.3	–0.5	–1.5	–0.3	–1.0
	Major procedures	5.7	–7.6	0.5	–2.6	–0.8	–2.9
	Other procedures	17.0	–1.0	–1.0	–1.0	–0.8	–0.8
	Tests	0.3	–7.3	–2.1	–5.1	–4.0	–4.3
Thoracic surgery	Total	100.0	–10.6	0.5	–4.0	–3.4	–4.3
	Eval/mgmt	11.1	2.6	0.0	1.0	2.9	1.0
	Imaging	2.6	–3.7	–1.3	–2.9	–2.1	–2.3
	Major procedures	81.6	–12.4	0.7	–4.6	–4.3	–5.1
	Other procedures	3.9	–2.3	–0.3	–1.3	–1.3	–1.0
	Tests	0.9	–5.4	–1.8	–4.3	–3.7	–3.4
Urology	Total	100.0	10.1	–0.3	4.4	6.2	4.4
	Eval/mgmt	35.5	9.9	0.0	3.8	6.4	3.8
	Imaging	4.7	0.0	–1.0	–0.3	0.5	0.0
	Major procedures	19.0	5.7	–0.8	2.4	3.6	2.6
	Other procedures	40.6	14.2	–0.3	6.6	8.2	6.6
	Tests	0.1	4.9	–0.8	2.9	2.6	3.1
Other medical	Total	100.0	1.9	–0.3	0.5	1.9	0.7
	Eval/mgmt	72.2	2.2	–0.3	0.5	1.9	0.7
	Imaging	1.5	–1.5	–1.5	–1.5	–0.5	–1.3
	Major procedures	1.2	–4.3	1.0	–1.0	0.7	–1.5
	Other procedures	17.0	2.2	–0.3	0.7	2.2	1.0
	Tests	8.0	1.5	–0.8	0.5	1.7	1.0

Table 2 (continued)

Average annual change in physician payments and relative value units, by specialty and type of service, 1998–2002

			Average annual percent change				
		Percent distribution of payments, 2002	PE RVUs	Work and PLI RVUs	Total RVUs	Payment rate	Impact of resource-based PE RVUs on total payments
Other surgical	Total	100.0%	3.6%	–0.3%	1.5%	2.6%	1.7%
	Eval/mgmt	38.2	10.7	0.0	4.2	6.8	4.2
	Imaging	2.6	0.2	–1.5	–0.3	–0.5	0.2
	Major procedures	26.5	–6.3	–0.3	–2.9	–2.9	–2.6
	Other procedures	28.4	7.0	–0.3	3.1	4.2	3.3
	Tests	4.3	1.7	–6.3	0.5	2.4	1.5
Other providers	Total	100.0	4.9	0.0	2.2	3.1	2.2
	Eval/mgmt	50.8	9.2	0.0	3.3	3.8	3.3
	Imaging	12.3	–0.8	–2.3	–1.0	–2.1	–0.5
	Major procedures	4.0	–4.8	0.0	–2.3	–3.4	–2.3
	Other procedures	28.2	5.1	0.5	2.4	4.9	2.2
	Tests	4.6	6.8	–0.8	4.2	4.9	4.4

Note: PE RVU (practice expense relative value units), PLI (malpractice insurance), Eval/mgmt (evaluation and management). To hold service use constant, we applied 1998 and 2002 payments and RVUs to the mix of services used in 2002. "Major procedures" include breast, colectomy, cholecystectomy, transurethral resection of the prostate, hysterectomy, cardiovascular, orthopedic, exploratory, and other. "Other procedures" include eye procedures; ambulatory and minor groupings of skin, musculoskeletal, hernia repair, lithotripsy and other procedures; oncology; endoscopy; and dialysis. "Other surgical" includes neurosurgery, ophthalmology, obstetrics/gynecology, otolaryngology, and plastic/reconstructive surgery. "Other medical" includes neurology, physical medicine/rehabilitation, psychiatry, pulmonary disease, nephrology, and allergy/immunology. "Other providers" includes several nonphysician services (e.g., therapy services, physician assistant services); physician group practices and other organizations (e.g., labs, imaging centers); seven other (low Medicare prevalence) physician specialties (e.g., maxillofacial surgery); and other/unknown care providers.

Source: Urban Institute analysis of 1998 and 2002 summaries of Medicare physician/supplier claims.

By contrast, thoracic surgery and gastroenterology experienced the largest declines in PE RVUs (–10.6 and –8.9 percent, respectively) and payments per service (–4.3 and –3.7 percent, respectively). Total payments for most of the other specialty groups—family/general practice, internal medicine, other medical, ophthalmology, orthopedic surgery, other surgical, pathology, and other providers—increased by 1 to 3 percent per year due to the transition. The move to resource-based PE RVUs reduced payments for only 3 other specialty groups—cardiology, general surgery, radiology—by no more than 2 percent per year.

Payments also changed by type of service as a result of the move to resource-based PE RVUs. The transition increased PE RVUs per service and payments for evaluation and management services and other procedures and decreased it for major procedures, imaging services, and tests (Maxwell et al. 2004) (Figure 1, p.10).

The effect of the transition on a given specialty is related to the relative importance of the types of services performed by the specialty and where the service is furnished. For example, total payments per service for thoracic surgery decreased on average by 4.3 percent per year because:

- the majority of services—81.6 percent—furnished by this specialty are major procedures, and

- nationally, payments for major procedures declined by 3.1 percent per year.

Consequently, thoracic surgery's payment for major procedures declined by 5.1 percent per year due of the transition. The PE RVUs and payment rates for surgical specialties also declined because CMS adjusted the CPEP allocation data. In 1999, the agency excluded from the CPEP allocation data the cost of physicians' clinical staff used in facility settings because these services are already paid for by Medicare through other payment systems (HCFA 1999).[2]

By contrast, total payments per service for dermatology increased on average by 6.4 percent per year because:

- About three-quarters of the services furnished by this specialty are other procedures and one-quarter are evaluation and management services, and

- Nationally, payments for other procedures and evaluation and management services increased by 1.0 and 2.4 percent per year, respectively.

Our analysis also shows that the move to resource-based PE RVUs affected the payments of certain services differently depending upon where the specialty furnished the service—in facility versus nonfacility settings.[3] For example, the transition increased PE RVUs and payments for other procedures performed by dermatologists (by 15.0 and 7.0 percent per year, respectively) and decreased them for gastroenterologists (by –15.5 and –6.6 percent per year, respectively). This differential impact is due to site of care differences between these two specialty groups. In terms of 2002 payments, dermatologists performed most other procedures in nonfacility settings whereas gastroenterologists performed them in facility settings.

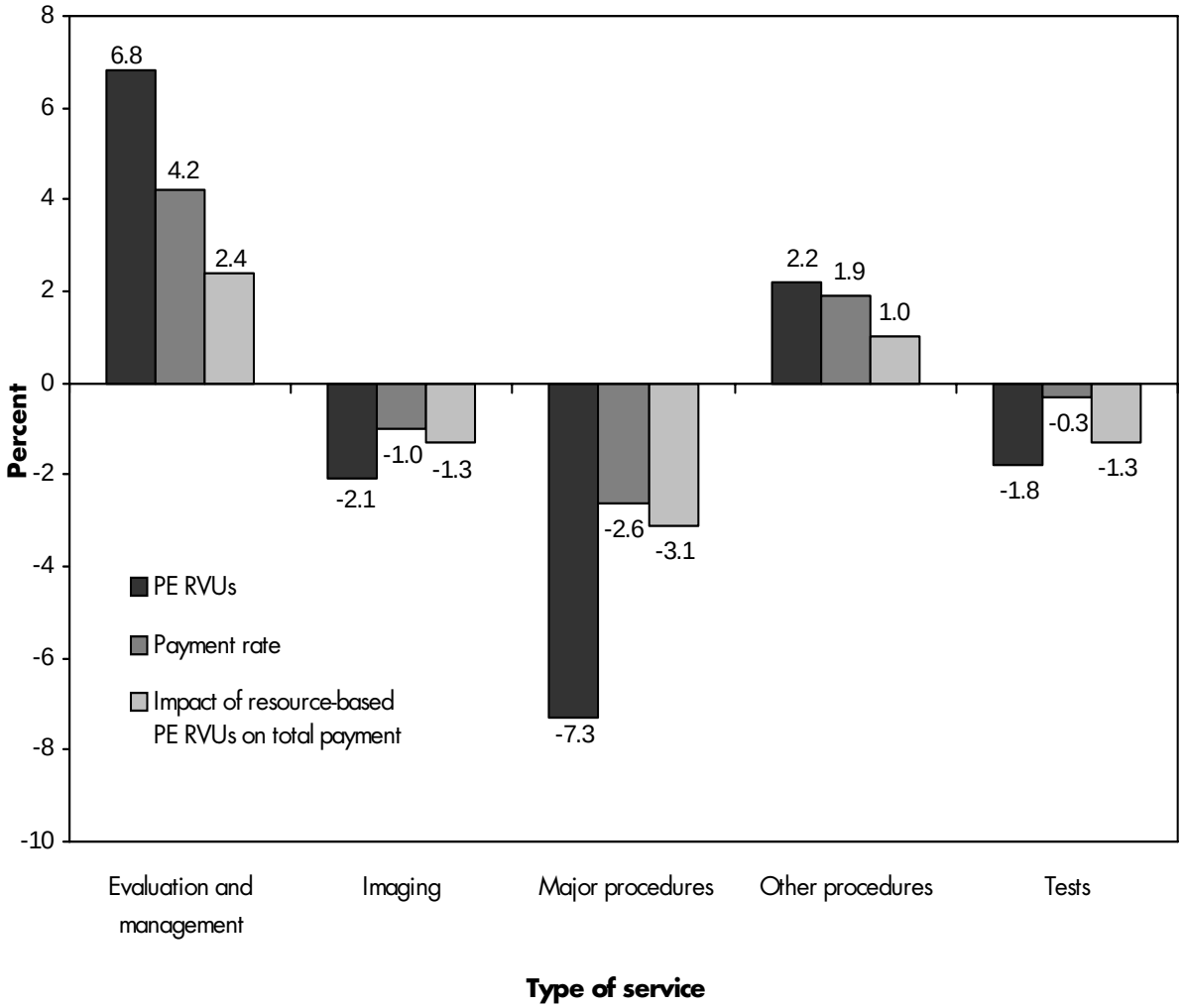
Across all specialties and types of services, the effect of the transition on payment is less than its effect on PE RVUs because practice expenses account for only about 42 percent of payment, on average. For evaluation and management services, for example, PE RVUs increased by 6.8 percent per year due to the transition, whereas payment increased by 2.4 percent per year.

Our findings are generally consistent with the direction of the CMS's regulatory impact analysis, which are reported in Table 1 (HCFA 1998). Pathology, however, was an exception: Whereas CMS projected the transition to reduce payments for pathology, it actually saw an increase in payments. Our results also differ from the agency's projections in the magnitude of the effect on payments for certain specialties. For example, we estimated an increase in urology payments by 4.4 percent per year, but the agency projected an increase of 1 percent per year.

In addition, our findings are generally consistent with the direction of an analysis conducted by the Government Accountability Office (GAO) with two exceptions: pathology and general surgery (GAO 2001). GAO projected the transition to reduce payments for these two specialties, whereas our analysis shows small increases in payments. Differences between the findings from MedPAC versus CMS and GAO probably stem from our use of more recent data (2002) on service mix and payments.

Figure 1

Average annual change in physician payment rates and practice expense relative value units, by type of service, 1998–2002



Note: PE RVUs (practice expense relative value units).

Source: Urban Institute analysis of 1998 and 2002 summaries of Medicare physician/supplier claims.

Data sources and analytical approach

Our approach in constructing the analytic files and in assessing changes in relative value units (RVUs), payment rates, and volume of services furnished to beneficiaries between 1998 and 2002 is described below.

Constructing analytic files

This study uses the 1998–2002 physician/supplier procedure summary (PSPS) files and relative value unit files. In this file, services are aggregated at the payment locality level and each record is a unique combination of eight items: procedure code, first and second modifier, type of service, place of service, physician specialty, carrier, and payment locality. The file also includes information about charges (submitted, allowed, denied); total payments; and service counts (denied, assigned, total). We merged the annual RVU files, obtained from the American Medical Association (AMA), to the PSPS files by each combination of procedure code, first modifier, and place of service.

We then merged the 2002 Berenson-Eggers Type of Service (BETOS) grouping algorithm to the data files.[4] Codes from prior years that did not group automatically were manually grouped into the 2002 BETOS scheme. For this analysis, we grouped types of services into five summary categories: evaluation and management; major procedures; other procedures; imaging; and tests. Small groups of durable medical equipment, other, and not-classified services were deleted.

We grouped specialties using the algorithm that MedPAC and PPRC used in prior analyses. Physician/supplier services reimbursed wholly under other fee schedules (e.g., anesthesia services) were excluded.

Analytic approach

To assess the impact between 1998 and 2002 of resource-based practice expense (PE) relative value units (RVUs) on physician payments, we used a price index approach in which the mix of physician services used by beneficiaries is held constant using the latest analysis year (2002). Using Medicare total payments per service as an example, we have

$$\text{Index} = \sum (P_c^i \, Q_c^i) \,/\, \sum (P_b^i \, Q_c^i),$$

where P denotes payments; Q denotes quantity or service mix; superscript I identifies individual services; and subscripts c and b denote current (2002) and base year (1998) periods, respectively. Thus, the price index reflects the 1998 and 2002 conversion factors of $36.69 and $36.20, respectively. We express the resulting index value in terms of average annual percent change,

$$\text{Percent change} = [\text{Index} \wedge (1 / (c–b))]–1,$$

where c minus b equals the number of years over which the change occurred.

(continued)

Data sources and analytical approach (continued)

Using this index approach, we calculated, by type of service, by specialty, and by specialty and type of service, changes from 1998 to 2002 in: 1) PE RVUs per service; 2) work and professional liability insurance (PLI) RVUs per service combined; 3) total RVUs per service; 4) total Medicare payments per service.

This index approach holds the mix of services constant based on the last year of the study period. By contrast, other price index approaches do not hold the mix of services constant. Accounting for the change in mix of services can be important in analyses over long time periods or over periods experiencing rapid change in practice patterns due to the use of new technologies or to the introduction of new Medicare-covered benefits. We tested the significance of holding the service mix constant by determining the extent to which the RVU and payment indexes differed when using the 2002 versus the 1998 service mix. Our analysis showed that the 1998 and 2002 indexes are similar, suggesting that at the national level, the mix of services furnished by specialty and by type of service between 1998 and 2002 did not change enough to necessitate using an approach that does not hold the mix of services constant.

The "impact" index is calculated as:

$$\text{Impact index} = \frac{\sum_{I} (\text{Work RVU}_b^i + \text{PE RVU}_c^i + \text{PLI RVU}_b^i)\, Q_c^i}{\sum_{I} (\text{Total RVU}_b^i)\, Q_c^I},$$

where Q denotes quantity or service mix; superscript I identifies individual services; and subscripts c and b denote current (2002) and base year (1998) periods, respectively.

Finally, we calculated indices using actual Medicare payments per service as well as indices using the Medicare fee schedule rate (i.e., allowed charges) per service. The results of the two were extremely similar. Our analysis reports changes in terms of Medicare payments per service.

Changes in the volume of services

To assess changes in volume between 1998 and 2002, we used the analytical files created for our analysis of RVU and payment changes and measured volume two ways. First, we calculated per capita use of services by beneficiaries in fee-for-service Medicare (referred to as "service volume"). Next, we weighted per capita use by each service's relative weight from the physician fee schedule (referred to as "RVU volume"). The latter measure is more precise because it accounts for both changes in the number of services and the complexity, or intensity, of those services (Maxwell et al. 2004).

Data on growth in the volume of physician services must be interpreted cautiously. If the overall volume of services provided to beneficiaries falls, it may mean that providers are offering fewer services because payments do not cover their costs. Conversely, large increases in volume growth may indicate that Medicare is overpaying for services. However, some evidence suggests that volume goes up when payment rates go down, the so-called volume offset (Codespote et al. 1998). Such a volume offset makes interpreting an increase in volume of physician services very difficult.

Both service and RVU volume increased in each of the major service categories, even though payments per service had increased for some categories and decreased for others (Maxwell et al. 2004) (Figure 2, p. 14). The biggest increase in RVU volume per beneficiary occurred within imaging services, a service category whose payments fell by 1.3 percent annually due to the introduction of the new PE RVUs. On the other hand, the smallest increase in volume per beneficiary took place in evaluation and management, whose payments increased the most.

Service and RVU volume per beneficiary increased for nearly all specialties, but the rates of increase varied considerably (Maxwell et al. 2004) (Table 3, p. 15). The largest increase in RVU volume occurred for cardiology, other providers, and pathology, while the largest decrease in RVU volume occurred for thoracic surgery, general surgery, and ophthalmology. The variation in volume growth does not seem to be related to the magnitude or direction of the changes in payments. The largest increase in RVU volume (8.2 percent annually) occurred for cardiology, whose payments per service fell by 1.8 percent annually due to the PE RVU changes. This relationship might suggest that some type of offset mechanism is at work, but data for other specialties fail to confirm this. For the other two specialties with the largest increases in RVU volume—other providers and pathology—the transition increased their total payments. Moreover, thoracic surgery, whose payments declined the most due to resource-based PE RVUs, had a 0.7 percent increase in RVU volume.

Only in a few instances did services or volume decline for any of the specialty/service category combinations (data not shown).[5] The RVU volume for major procedures performed by general surgery, thoracic surgery, and ophthalmology declined per year by 0.5, 0.3, and 1.0 percent, respectively. It is important to assess the decline within the context of technological changes that could be reducing the use of certain invasive procedures and increasing the use of less invasive procedures. Each of these specialties experienced increases in RVU volume for other procedures—by 1.7 percent for general surgery, 5.5 percent for thoracic surgery, and 1.5 percent for ophthalmology.

Finally, volume also declined for the following specialty/service category combinations:

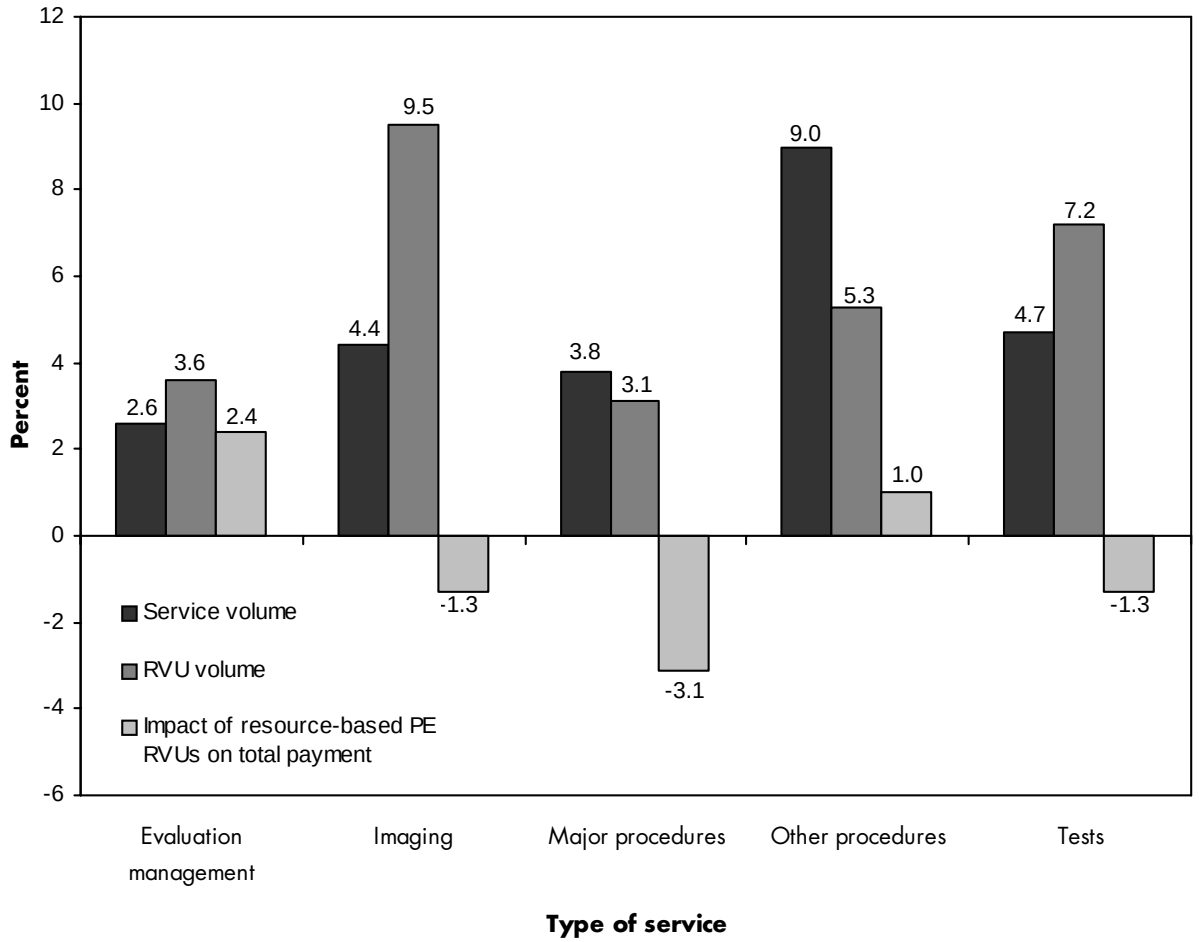
- Imaging services furnished by ophthalmologists and pathologists declined by 1.3 and 3.4 percent per year, respectively.

- Tests furnished by ophthalmologists, orthopedic surgeons, and thoracic surgeons declined by 5.7, 2.9, and 3.4 percent per year, respectively.

These decreases might be due to other providers furnishing imaging services and tests. Nationally, imaging services and tests increased by 9.5 and 7.2 percent per year, respectively.

Figure 2

Average annual change in per beneficiary use of services and impact of resource-based practice expense relative value units on total payments



Note: PE RVUs (practice expense relative value units).

Source: Urban Institute analysis of 1998 and 2002 summaries of Medicare physician/supplier claims.

Table 3

Average annual change in per beneficiary use of services, by specialty, 1998–2002

Specialty	Service volume	RVU volume
All	4.2%	4.7%
Cardiology	5.9	8.2
Dermatology	5.9	5.9
Family/general practice	2.6	4.2
Gastroenterology	2.6	5.1
General surgery	1.5	1.0
Internal medicine	3.6	4.2
Ophthalmology	1.2	1.5
Orthopedic surgery	4.2	4.2
Pathology	6.4	6.6
Radiology	3.6	6.4
Thoracic surgery	0.0	0.2
Urology	0.7	2.2
Other medical	2.4	3.1
Other providers	8.6	8.0
Other surgical	2.2	3.6

Note: RVU (relative value unit). Service volume is per capita use of services by beneficiaries in fee-for-service Medicare. RVU volume is per capita use weighted by each service's relative weight from the physician fee schedule. The latter measure is more precise because it accounts for both changes in the number of services and the complexity, or intensity, of those services. To hold RVU valuation constant in calculating service volume, we applied 2002 RVU values to the 1998 and 2002 data. Results are similar using 1998 RVUs. See Table 2 for the specialties included in the following groups: "Other surgical," "Other medical," and "Other providers."

Source: Urban Institute analysis of 1998 and 2002 summaries of Medicare physician/supplier claims.

Physician participation with Medicare

The Congress asked MedPAC to examine changes in physician participation with Medicare in our analysis of the PE transition and its effects. To measure changes in physician participation with Medicare we examined two measures: growth in the share of physicians signing Medicare participation agreements and growth in the share of allowed charges paid on assignment. Physicians who sign participation agreements agree to accept the assigned fee schedule amount as the full

charge for all their allowed Medicare claims. The box below provides more detailed descriptions of the important benefits associated with being a participating provider and accepting assignment. These benefits, which existed prior to the implementation of the resource-based methods, likely contribute to high rates of physician participation with Medicare.

Physician participation rates and assignment rates increased during the transition to the resource-based RVUs. Specifically, between 1998 and 2002, the share of physicians signing Medicare participation agreements grew from 83 to 90 percent (MedPAC 2003). Medicare claims analysis shows that the share of allowed charges paid on assignment were quite high in 1998 and 2002; they were 98 and 99 percent respectively (Maxwell et al. 2004) (Table 4). When analyzed by specialty, the assignment rates of all specialities either stayed the same or increased slightly during the study period. However, because the 1998 rates are so high, there is little opportunity for large increases in these rates. A further breakdown by type of service within specialities shows that assignment rates stayed constant or increased for most types of services, within most specialities (not shown in table).

Medicare participation agreements and accepting assignment

Physicians who sign Medicare participation contracts agree to accept assignment on all their allowed Medicare claims. When physicians accept assignment for a service, they accept the Medicare fee schedule amount as the full charge for the service, and may not charge the beneficiary more than the applicable deductible and coinsurance amounts. When physicians do not accept assignment for a service, they may charge up to 115 percent of the fee schedule amount. The difference between the fee schedule amount and the physician's actual charge is often called the balanced bill amount.

Accepting assignment and being a participating physician confer certain benefits. For example, when physicians accept assignment for a service, they may collect Medicare's payment directly from Medicare, which physicians report to be a key convenience, and thus a strong incentive for accepting assignment and participating with Medicare. Participating physicians are also granted a higher fee schedule payment. Specifically, Medicare pays participating physicians based on the full fee schedule amount, but pays nonparticipating physicians based on 95 percent of the fee schedule amount.

Table 4

Percent of allowed charges paid on assignment, by specialty, 1998 and 2002

Speciality	1998	2002	Percentage point change, 1998–2002
All	98%	99%	1
Cardiology	99	99	0
Dermatology	96	98	2
Family/general practice	97	98	1
Gastroenterology	99	99	0
General surgery	99	99	0
Internal medicine	97	98	1
Ophthalmology	98	99	1
Orthopedic surgery	99	99	0
Pathology	99	99	0
Radiology	99	99	0
Thoracic surgery	99	99	0
Urology	98	99	1
Other medical	98	99	1
Other providers	97	98	1
Other surgical	97	98	1

Notes: To hold a given service's allowed charge constant over the two years, 2002 allowed charge rates were applied in calculating both the 1998 and the 2002 assignment rates. (Results were similar when charge rates were not held constant, or were held constant using 1998 rates.) To hold the mix of services constant over the two years, we examined 1998 and 2002 assignment rates on the mix of services utilized in 2002. (Results were similar when service mix was held constant using the 1998 service mix.) See Table 2 for the specialities included in the following groups: "Other medical," "Other providers," and "Other surgical."

Source: Urban Institute analysis of 1998 and 2002 summaries of physician/supplier claims.

Beneficiaries' access to care

To analyze changes in beneficiary access to physician services during the PE transition, we examined beneficiary and physician survey information from three sources: the Medicare Current Beneficiary Survey (MCBS) of beneficiaries, the National Ambulatory Care Survey (NAMCS) of physicians, and a MedPAC-sponsored survey of physicians. Findings from these surveys show that access to physician care remained generally good during the PE transition period. Many factors can affect beneficiary access to physician services, making it difficult to determine the effect that the resource-

based PE RVUs had on access to physician care. Indeed, no clear relationship emerged between the introduction of the resource-based PE RVUs and trends in access to physician care.

Analysis of the MCBS shows that in both 1998 and 2002, most Medicare beneficiaries reported having adequate access to physicians. Specifically, a steady 95 percent of beneficiaries who had a doctor's appointment during the year reported that the doctor they saw was their first choice. Further, beneficiary satisfaction with access to specialists remained high during this time frame. Most beneficiaries (at least 95 percent) were either "satisfied" or "very satisfied" with the availability of care by specialists (Table 5).

Table 5

Satisfaction of beneficiaries with availability of specialists, 1998 and 2002

	1998	2002	Percentage point change 1998–2002
Very satisfied	20.9%	22.2%	1.2
Satisfied	75.5	73.4	–2.2
Dissatisfied	2.9	3.6	0.7
Very dissatisfied	0.6	0.8	0.2

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Access to Care files, 1998–2002.

To track physician willingness to serve Medicare patients and patients with other types of insurance, we analyzed results from NAMCS and a previous MedPAC-sponsored survey.[6] Averaged across all specialities, the NAMCS survey found small declines in the acceptance of both Medicare patients and privately insured patients, between 1999 and 2002 (Table 6). The MedPAC-sponsored survey found a decline in the acceptance of Medicare and HMO (private and Medicaid) patients, but not of private fee-for-service and preferred provider organization patients (Schoenman and Feldman 2002) (Table 7, p. 20).

Both of these physician surveys found that surgeons and physicians who conduct relatively high numbers of procedures were more likely to accept new Medicare patients than physicians who focus more on primary care and conduct relatively few procedures. Between 1999 and 2002, the share of primary care physicians who accepted new patients dropped at the same rate for both Medicare and privately insured patient (Table 6). Also, the share of specialists accepting new privately insured patients dropped from 92 to 79 percent (12 percentage points); the share dropped less for Medicare patients—from 88 to 84 percent (4 percentage points).

Table 6

Percent of physicians accepting new patients, by type of insurance, 1999–2002

Type of insurance	1999	2002	Percentage point change 1999–2002
		All specialties	
Any patients	95.5%	94.9%	–0.6
Self-pay	92.4	90.9	–1.5
Private insurance	91.8	85.8	–6.0
Medicare	90.0	87.0	–3.0
Medicaid	72.5	70.4	–2.1
No charge/charity	51.9	53.5	1.6
		Primary care	
Any patients	92.6	93.0	0.4
Self-pay	88.6	89.1	0.5
Private insurance	89.6	85.3	–4.3
Medicare	88.1	83.1	–5.0
Medicaid	71.0	66.0	–5.0
No charge/charity	47.4	49.6	2.2
		Surgical specialties	
Any patients	98.8	98.6	–0.2
Self–pay	95.6	96.2	0.6
Private insurance	95.4	92.3	–3.1
Medicare	94.8	96.4	1.6
Medicaid	83.1	79.8	–3.3
No charge/charity	58.9	60.7	1.8
		Medical specialties	
Any patients	97.2	94.3	–2.9
Self-pay	96.1	88.5	–7.6
Private insurance	91.7	79.3	–12.4
Medicare	88.2	83.7	–4.5
Medicaid	62.6	67.9	5.3
Nocharge/charity	52.2	52.5	0.3

Note: Survey excludes pediatric specialities, nonoffice-based specialities, and federally-employed physicians.

Source: National Ambulatory Medical Care Survey, physician screen, 1999–2002.

Table 7

Change in acceptance of new patients, by patient insurance and physician type, 1999–2002

	Percent of physicians in open practices accepting new patients, by insurance type[a]				
Type of physician	**Private FFS/PPO**	**Medicare FFS**	**Medicaid**	**HMO**	**Other[a]**
1999					
All physicians	97.9%	96.8%	73.7%	87.6%	90.5%
Proceduralists[b]	98.4	98.4	79.7	87.6	90.4
Surgeons	98.8	97.9	79.6	89.5	92.9
Nonproceduralists	97.2	95.5	67.9	86.4	89.1
2002					
All physicians	99.3%	95.9%	69.5%	86.3%	92.8%
Proceduralists	98.7	100.0*	77.0	93.2*	96.0
Surgeons	98.8	98.1*	74.5	89.8*	92.5
Nonproceduralists	99.7*	93.4	64.0	81.9	92.3
Percentage point change, 1999–2002[c]					
All physicians	1.4*	–0.9	–4.2	–1.3	2.3
Proceduralists	0.3	1.6	–2.7	5.6	5.6
Surgeons	0.0	0.2	–5.1	0.3	–0.4
Nonproceduralists	2.5*	–2.1	–3.9	–4.5	3.2

Note: FFS (fee-for-service), PPO(preferred provider organization). Analysis excludes physicians who were not accepting any new patients (regardless of type) in the year.

[a] "Other" coverage includes uninsured, self-pay, and charity.

[b] "Proceduralists" include physicians specializing in cardiology, dermatology, gastroenterology, and radiation oncology. "Nonprodeduralists" include all other eligible medical specialties.

[c] Comparisons over time by type of patient may not reflect changes due to patient classification differences.

*Change since 1999 is significantly different from zero at the 95 percent confidence level.

Source: 2002 Survey of Physicians about the Medicare Program, conducted by the Project HOPE Center for Health Affairs for MedPAC.

Future MedPAC issues

CMS used the best available data sources at the time—the SMS and CPEP data—to derive resource-based practice expense RVUs. CMS, with the assistance of the AMA, engaged in a substantial effort to refine the allocation data during and after the transition.[7] With each passing year, however, the ability of these data to accurately reflect current delivery patterns and practice expense costs becomes more of an issue.

Medicare will need current and accurate practice expense data and refined service-specific expense estimates to ensure appropriate payments across all services. The Secretary is required to review the relative values for all physician fee schedule procedures at least once every five years. Since the practice expense RVUs became final in 2002, CMS will need to review them by 2007.

MedPAC plans to continue to analyze the data that are used to establish practice expense payments and the methods used to derive these payments to see if they can be improved. It will be important to examine the effect of future refinements on payments for individual services. Like all transitions to resource-based payments, refinements to the data and methods would be expected to affect payments across all specialties and services. This broad effect stems from how physicians are paid. The fee schedule ranks services on a common scale based on the relative amount of resources needed to provide each service, and then makes payments for each service proportional to those resources.

The SMS data

Obtaining current and accurate practice expense data is a critical issue facing Medicare. The SMS data used to derive practice expense RVUs reflect practice patterns from the mid-1990s (1994 through 1998). Although the SMS is a longstanding survey that was originally developed by the AMA in 1981, the AMA does not plan to conduct this survey at this time. Therefore, CMS needs to consider how to obtain current practice expense data; i.e., the agency could administer an SMS-like survey or it might opt for alternate methods.

Currently, Medicare relies on supplemental data submitted by specialty groups as the primary method for updating practice expense data. The Balanced Budget Refinement Act of 1999 (BBRA) mandated that the agency establish a process and consider supplemental data when updating the physician fee schedule.[8] To ensure the validity and comparability to existing SMS data, CMS issued criteria that groups must follow in collecting supplemental data. For example, physician groups must use SMS survey instruments and protocols in collecting supplemental data.[9] CMS has used the supplemental data submitted by several groups to update their practice expense per hour.

However, supplemental data do not provide a regular source of broad-based practice expense current data. Although the BBRA gave specialities the option to submit supplemental data, they are not mandated to do so on a regular basis. Since the BBRA, few groups have submitted supplemental data. Physician groups informed MedPAC that collecting practice expense data is a costly and time-consuming process, and that they do so only when it is likely to improve their payment rates.

MedPAC will explore the feasibility of different approaches to updating the aggregate data on physicians' practice expenses. The issues that we will explore include:

- Choosing a sponsor. An effort sponsored by Medicare would ensure that information would be collected for developing practice expense RVUs and for all specialty groups recognized by Medicare—thereby overcoming two limitations of the SMS survey. Efforts sponsored by private groups would need to be evaluated to assess whether the data could be used to derive practice expense RVUs.

- Collecting and verifying the data. A new effort could collect data from a nationally representative sample of physicians or from all physicians. For example, CMS could select a representative sample of physicians and obtain practice expense data from them over several years. Physicians could be compensated for their expenses in return for participating in the panel and permitting independent audits of their practice expense data. Whether data are collected from a sample or from all physicians, processes (e.g., audits) need to be implemented to ensure the accuracy of the data.

- Designing the data collection instrument. A new data collection effort would offer opportunities to overcome some of the shortcomings of the SMS data. To compensate for these shortcomings, CMS had to make several adjustments to the data. The box on page 24 provides an overview of the limitations of the SMS data.

- Improving the response rate. If a voluntary survey is conducted, steps need to be considered to ensure that a new data collection effort would have an adequate response rate. Historically, efforts to survey physicians about their practice expenses have had low response rates. Response rates to the practice expense questions on the SMS survey were lower than the overall survey response rate (40 versus 60 percent, respectively). Problems with sample size and response rate have also plagued previous attempts by CMS to gather reliable data on practice expenses.

- Integrating new data with existing data. At issue is whether and how the new data on practice expenses would be integrated with existing SMS data and supplemental survey data. Currently, when integrating supplemental data, CMS weight-averages the supplemental data with the existing SMS data to increase the sample size. Using older data to increase the sample size needs to be balanced with its ability to reflect current delivery patterns.

- Funding an effort. Collecting and validating practice expense data is costly. If CMS were to sponsor the effort, the agency would most likely need additional resources.

Another option is for Medicare to work with existing data (including data furnished by specialties) and rely on a consensus group representing specialties to review the practice expense data and recommend refinements to the agency. Such a process might be similar to the process for deriving new work RVUs and refining the data on practice expense allocation.

The CPEP data

Beginning in 1998, the American Medical Association's Relative Value Update Committee (RUC) began reviewing the direct practice expense inputs. The RUC created a subcommittee, the Practice Expense Advisory Committee (PEAC), a panel of physicians with representatives from all of the major physician specialty societies, that met regularly and made recommendations to CMS on the resources required to perform services. The PEAC's effort was fairly comprehensive—it has reviewed more than 6,500 codes since 1999. Providers interviewed by MedPAC indicated that they were generally pleased with the work of the PEAC and the process for making refinements.[10] CMS has accepted most of the PEAC's recommendations with only minor changes. In addition, CMS has made other updates to the CPEP data, such as repricing clinical staff wages.[11]

At issue is how to ensure the availability of current and reliable allocation data. In the future, MedPAC may explore various approaches. CMS could continue to receive input from the RUC and its subcommittees. Alternatively, new expert panels could be convened to derive new estimates.

Addressing methodological issues

Some policymakers and providers have raised concerns about how indirect expenses are allocated to individual services. Additional work is needed in developing and comparing new methods for allocating indirect expenses to current methods.

As mentioned earlier, indirect expenses, or overhead administrative labor, office expenses, and other expenses are allocated to specific services in proportion to the direct expenses and physician work involved in providing each service. Some providers contend that because nonphysician services have no physician work associated with them, they are allocated a lower share of indirect expenses compared with most services performed by physicians.

To address the perceived low payments for nonphysician services, CMS established the alternative method to calculate PE payments for these services. However, this method does not address the more fundamental problem affecting payment for nonphysician services—the allocation of indirect expenses. It deviates from the basic approach in deriving and allocating PE RVUs by, for example, averaging practice expenses for specialty groups with services in the pool, instead of using specialty-specific data, and allocating costs based on charges rather than resource requirements.

Some limitations of the Socioeconomic Monitoring System data

Policymakers and providers have repeatedly discussed the shortcomings of the Socioeconomic Monitoring System (SMS) data. Most stakeholders agree that the SMS was the best data source available at the time to estimate hourly physician expenses. This survey, however, was not initially intended to be used to derive practice expense relative value units. Some concerns about the SMS data raised by policymakers and providers include:

- Certain specialties were not represented in the SMS survey. The SMS reports practice expense estimates for 26 specialties, while Medicare uses over 65 categories. Consequently, CMS crosswalked these specialties to a specialty included in the survey. In addition, the SMS survey was not representative of the mixes of practices for some specialties.

- The response rate for the practice expense questions on the SMS survey was lower than the overall survey. This reduced the sample size for some specialty groups and raised concerns about nonrespondent bias.

- SMS data represent a physician's portion of a group's practice expenses. But CMS's methodology calculates practice expenses per hour for each physician respondent's practice. CMS assumed that all physicians in a group practice had the same practice expenses as the respondent. This assumption may be problematic for multispecialty practices.

- The SMS data overestimated physician practice costs in some cases by including the cost of services paid separately by Part B. For example, the SMS cost per hour includes the cost of nonphysician practitioners even though the fee schedule pays separately for the services provided by selected nonphysician practitioners—nurse practitioners, certified nurse specialists, and physician assistants.

- Actual costs may not be adequately measured. SMS data may not appropriately reflect certain expenses incurred by providers, such as providing uncompensated care. The hourly rate estimated by SMS reflects expenses across all patients, not only Medicare beneficiaries. Some stakeholders contend that the rate may not reflect the actual cost of treating Medicare patients, who, for certain practices, may be older and more complex than non-Medicare patients.

- Some primary care groups contend that specialties whose procedures may have been overvalued under the charge-based system continue to benefit under the resource-based method because of the use of the SMS data (GAO 1999). At issue is the extent to which the SMS data accurately reflects a specialty's practice expense costs or whether the data more closely reflects the charge-based system.

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Endnotes

1. Specifically, the SMS pool is divided by the CPEP pool for each specialty to produce a scaling factor which is applied to the CPEP direct cost inputs. This process was intended to match costs counted as practice expenses in the SMS survey with items counted as a practice expense in the CPEP data.

2. The MMA required MedPAC to conduct a separate study about the PE relative values for the specialties of thoracic and cardiac surgery. This study is due to the Congress in January 2005.

3. Facility settings include hospitals, skilled nursing facilities, and ambulatory surgical centers. Nonfacility settings include physicians' offices, patients' homes, outpatient dialysis facilities, and clinical laboratories.

4. The BETOS service classification system divides physician/supplier services into seven main categories and additional subcategories. The first main category is evaluation and management services. It includes office visits, hospital visits, emergency room services, home and nursing home visits, consultations, and specialist visits. The second main category is procedures. It includes major procedures (subdivided into cardiovascular, orthopedic, and other); and ambulatory procedures (subdivided into eye, other ambulatory, minor procedures, and endoscopy and oncology procedures). The third main category is imaging. It is subdivided into standard imaging (routine X-rays and nuclear medicine), advanced imaging (CT scans and magnetic resonance imaging), sonographic imaging, and imaging/procedures (largely cardiac catheterization). The fourth main category is tests, divided into laboratory and other tests. Other tests is dominated by a wide range of cardiovascular tests. The three remaining categories are durable medical equipment; other (a broad category including ambulance, chiropractic, and vision/hearing/speech services; enteral/parenteral drugs or nutrition; chemotherapy and other drugs); and a final category of not-classified services (including local codes).

5. See Urban Institute (2004) on www.medpac.gov.

6. Both of these physician surveys provide data for 1999 and 2002. The MedPAC-sponsored survey excluded physicians who were not taking any new patients (closed practices), regardless of insurance type. The NAMCS survey, however, included physicians with open and closed practices.

7. The BBA required CMS to develop a refinement process for each of the four years of the transition period. Refinement steps included:

- establishing a mechanism to receive independent advice for dealing with broad PE RVU technical and methodological issues,

- evaluating any additional recommendations from GAO, MedPAC, and the Practicing Physicians Advisory Council, and

- consulting with physician groups and other groups affected.

8. In the August 2004 proposed rule, CMS extended until 2005 the period for accepting supplemental data that meet the specific criteria set forth in the November 2000 final rule. After that point, CMS will no longer accept supplemental practice expense data. The deadline for submitting supplemental data to be considered in calendar year 2006 is March 1, 2005.

9. The specific criteria developed by CMS for considering supplemental data include:

- Physician groups must draw their sample from the AMA physician masterfile.

- Physician groups must arrange for the AMA to send the sample directly to their contractor to ensure confidentiality of the sample.

- 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.

- A group must use a contractor that has experience with the SMS or a survey firm with experience successfully conducting national multispecialty surveys of physicians using a nationally representative random sample.

10. As noted by GAO (1999), some providers initially criticized the CPEP allocation data for: 1) being "best guesses" of panel members, 2) not being representative of the different practice settings or types of physicians who provide particular procedures, and 3) differences in the resources identified by different panels for the same procedures.

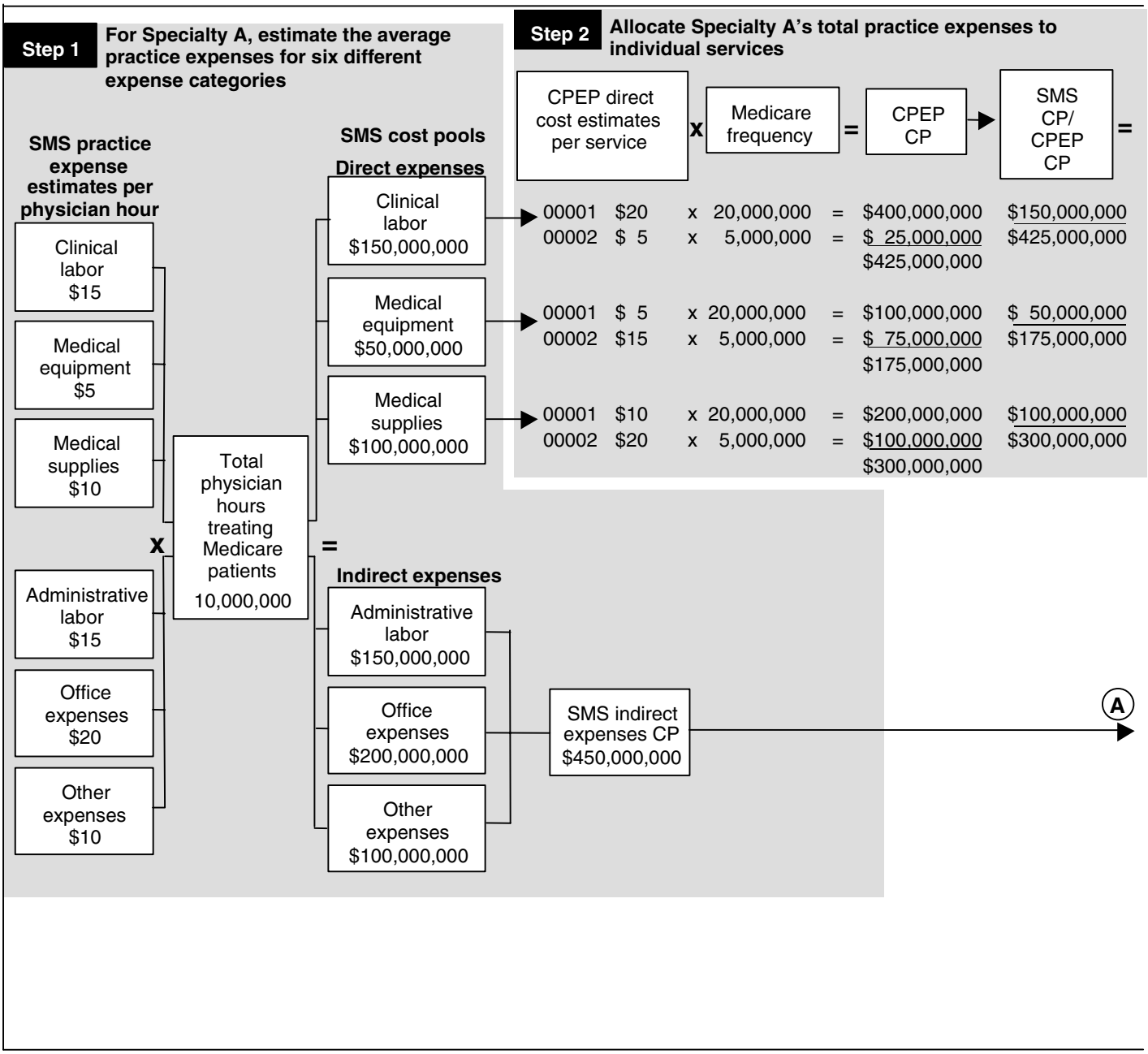
11. The PEAC held its last meeting in March 2004. The AMA has formed a new smaller subgroup of the PEAC. This group will finish the review of about 150 codes remaining from the PEAC's effort and make recommendations to CMS on new and revised codes.

APPENDIX A

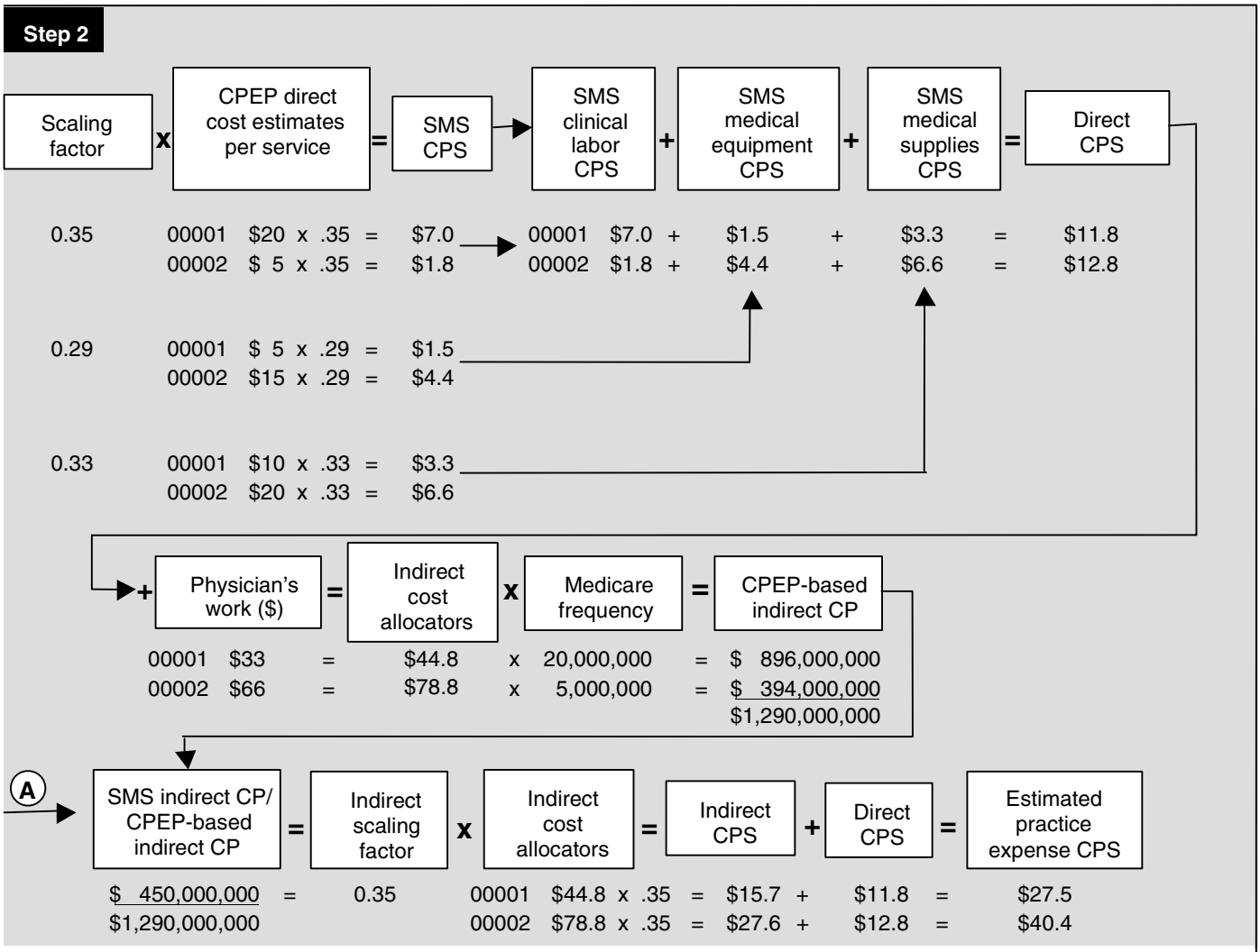
Calculating the practice expense method for physician services

Figure A-1

Calculating the practice expense method for physician services



Calculating the practice expense method for physician services (continued)



Step 3 **Compute a weighted average of the expenses for services performed by multiple specialties**

Specialty A			Specialty B			
	Est. practice expense CPS	Medicare frequency		Est. practice expense CPS	Medicare frequency	Weighted avg. per service
00001	$27.5	20,000,000	00001	N/A	0	$27.5
00002	$40.4	5,000,000	00002	$20	50,000,000	$21.9

Note: CP (cost pool), CPEP (clinical practice expert panel), CPS (cost per service), SMS (socioeconomic monitoring system).

Source: GAO 2001.

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