

Chapter 4

# **Modifications to Customary, Prevailing, and Reasonable Charge Payment**

What's past is prologue.

—*William Shakespeare, The Tempest*

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# Modification to Customary, Prevailing, and Reasonable Charge Payment

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## INTRODUCTION

This chapter examines possible changes to Medicare's customary, prevailing, and reasonable (CPR) charge method<sup>1</sup> of paying physicians that would continue the historical pattern under CPR of computing distinct charges for individual physicians. Most of the modifications are intended to constrain the rate of growth of expenditures for physician services.<sup>2</sup> Some of the changes identified could also reduce the substantial variation in Medicare payment rates for selected services. As noted in chapter 2, the variations in Medicare payment rates for some services suggest possible inequities in the distribution of benefits and inefficiencies in the program.

From the start, Medicare's CPR payment system has included several features intended to limit program expenditures for physician services. One such feature is a restriction on the amount that Medicare pays for physician services. Medicare's approved charge<sup>3</sup> for a physician's service is the lowest of the physician's billed (or actual) charge, the physician's customary charge, or the prevailing charge in a locality. Indeed, in fiscal year 1984, Medicare-determined approved charges were, on average, 24 percent lower than physicians' billed charges (69). A second feature of Medicare's original payment system intended to limit program expenditures is the requirement that beneficiaries assume responsibility for a portion of physicians' approved charges, namely, by paying a deductible and coinsurance. A third feature of Medicare's original payment system that has cost-containment attributes is assignment. Medicare expend-

itures are not directly affected by assignment, but by accepting assignment, physicians are in fact accepting a reduction in the payment for any service for which their billed charge exceeds Medicare's approved charge.

Medicare has made further attempts to constrain program expenditures by amending CPR in various ways. Past approaches have included temporarily freezing all fees, as mandated by the Deficit Reduction Act of 1984 (Public Law 98-369); lowering the percentile at which all prevailing charges are set; and applying the Medicare Economic Index (MEI) to limit annual increases in all prevailing charges. Although Part B expenditures have risen despite these measures, they might have increased more if controls had not been imposed.

Medicare has not in the past attempted to moderate the growth in program expenditures or to redress perceived imbalances in relative payments by reducing differentials in payment rates for selected services. As noted in chapter 2, Medicare payment rates tend to be higher for procedural and inpatient services than for nonprocedural and ambulatory services, reflecting the program's benefit package that emphasizes high-cost acute and inpatient care. The rates also tend to be higher for specialist and urban services than for generalist and rural services in order to reflect local differences in physicians' fees.

Another untried approach in reducing the rate of growth in program expenditures is for Medicare to give beneficiaries the option of receiving care from preferred provider organizations (PPOs). Medicare could take advantage of the increasingly competitive market and contract, either directly or through carriers or other entities, with only those physicians or groups of physicians who would agree to accept Medicare payments below the level of approved charges as payment in full.

<sup>1</sup>The CPR method, the principal method that Medicare uses to pay physicians, is described in app. C along with other facets of Medicare's physician payment process.

<sup>2</sup>The chapter considers controlling Medicare's expenditures for physician services by controlling Medicare's payment to physicians and does not consider other means, such as revising beneficiary payments.

<sup>3</sup>Under Medicare, reasonable charges, approved charges, and allowed charges are synonymous terms. Approved charges will be the term used in this chapter.

This chapter explores, in the context of today's conditions, variations of the CPR method previously or currently used by Medicare to restrain program expenditures for physician services. It also analyzes the potential for controlling program

expenditures and modifying perceived imbalances in Medicare payment rates for services that vary by type, site, specialty, and geographic location. Negotiated or discounted fees are also considered as a cost-containment approach.

## IMPLICATIONS OF ALTERNATIVE METHODS OF MODIFYING CPR

Under CPR, the rate of growth in Medicare expenditures for physician services could theoretically be restrained by controlling approved charges for all or selected services (see table 4-1). Approved charges could be controlled by changing the manner of updating prevailing or customary charges, for example, by freezing them.<sup>a</sup> Approved charges could also be controlled by lowering the percentile for calculating prevailing charges, which is now at the 75th percentile of customary charges.<sup>5</sup>

<sup>a</sup>A freeze on physician charges is but one way of changing the manner of updating charges. Other ways include changing the frequency of updating customary or prevailing charges and capping prevailing charges.

<sup>5</sup>Another method of controlling the rate of growth in Medicare expenditures would be to reform Medicare's coding system, which encourages physicians to bill separately for each activity undertaken in the care of the patient and may stimulate coding for more complex services. Coding problems are found in all fee-for-service meth-

Under both methods, assignment (physicians' acceptance of Medicare's approved charges as payment in full) could be voluntary or mandatory, and mandatory assignment could apply to some or all services.<sup>b</sup>

The implications of controlling Medicare approved charges for all services and for selected services are evaluated below with respect to dimensions indicative of the performance of the health care system: cost and efficiency, quality of care, access, technological change, and administrative feasibility.

ods, and the issue is discussed in ch. 6. In addition, the possibility of imposing an aggregate expenditure cap is discussed in connection with fee schedules in ch. 5.

<sup>b</sup>The analysis that follows assumes the retention of voluntary assignment unless otherwise mentioned.

**Table 4-1.—Methods for Modifying CPR Payment Intended To Control Medicare Expenditures or To Reduce Variations in Reimbursement for Services**

Scope of change	Change manner of updating prevailing and/or customary charges (e.g., by freezing)	Change percentile for calculating prevailing charges
All services <sup>a</sup> . . . . .	1. Freeze prevailing and/or customary charges for all services	1. Lower percentile for calculating prevailing charges for all services
Selected services . . . . .	2. Freeze prevailing and/or customary charges for selected services such as: <ul style="list-style-type: none"> <li>•procedural,</li> <li>•inpatient,</li> <li>•specialist, and</li> <li>•urban</li> </ul> 3. Freeze prevailing and/or customary charges for selected services such as: <ul style="list-style-type: none"> <li>•procedural,</li> <li>•inpatient,</li> <li>•specialist, and</li> <li>•urban</li> </ul> and increase <sup>b</sup> prevailing and/or customary charges for other services, such as: <ul style="list-style-type: none"> <li>•nonprocedural,</li> <li>•ambulatory,</li> <li>•generalist, and</li> <li>•rural</li> </ul>	2. Lower percentile for calculating prevailing charges for selected services, such as: <ul style="list-style-type: none"> <li>•procedural,</li> <li>•inpatient,</li> <li>•specialist, and</li> <li>•urban</li> </ul> 3. Lower percentile for calculating prevailing charges for selected services, such as: <ul style="list-style-type: none"> <li>•procedural,</li> <li>•inpatient,</li> <li>•specialist, and</li> <li>•urban</li> </ul> and raise the percentile for calculating the prevailing charge for other services, such as: <ul style="list-style-type: none"> <li>•nonprocedural,</li> <li>•ambulatory,</li> <li>•generalist, and</li> <li>•rural</li> </ul>

<sup>a</sup>Modifications that affect all charges for services will not reduce variations in charges between services.  
<sup>b</sup>selective increases can be accomplished by an add-on to frozen charge screens.

The implications of controlling approved charges for selected services are also examined with respect to redressing perceived payment imbalances by type of service, by site of treatment, by physician specialty, and by geographic location (see table 4-1). Controlling Medicare payments for selected services by reducing the variation in approved charges among them could also pertain to constructing a fee schedule (see ch. 5). Indeed, conversion to a fee schedule would afford an opportunity to make any corrections in relative approved charges.

None of the modifications to CPR payment discussed in this chapter would change the financial incentives that CPR gives physicians to provide additional services to generate income. In deciding whether or not to provide a service, physicians would be likely to respond to changes in payment level or in relative payment rates. Moreover, any decrease in the growth of Medicare expenditures would be of short duration. CPR payment per se and the modifications discussed in this chapter encourage physicians who respond to financial incentives to raise their billed charges to beneficiaries, since such increases are later reflected in Medicare's approved charges.

A confounding factor in examining the effects of controlling approved charges on costs and other dimensions is the uncertainty surrounding the relationship between lower payment rates and changes in the volume of services beneficiaries receive (see ch. 2). How physicians and beneficiaries would respond to lowered approved charges is uncertain. As suppliers of services, physicians would be expected to react to lower payment rates by providing fewer services. But physicians also exert control over services used and might seek to maintain their incomes by providing or billing for additional or more highly priced services.

Lowering approved charges would lower beneficiary coinsurance payments, and if out-of-pocket expenses fell as a result, beneficiaries would be expected to seek more care. But if assignment continued to be voluntary, increases in beneficiaries' out-of-pocket expenses for unassigned liability would most likely exceed reductions in coinsurance. The decrease in beneficiary coinsurance would apply to only 20 percent of the reduction

in approved charges. Thus, if Medicare reduced the approved charge for a service from \$100 to \$80, coinsurance would be reduced from \$20 to \$16 (i.e., 20 percent of the \$20 reduction). If a physician refused to take assignment with the lower approved charge, he or she might continue to bill the beneficiary \$100. Beneficiary unassigned liability would then be \$20. Despite the \$4 decrease in coinsurance, total out-of-pocket costs for the beneficiary would increase to \$36. Only if the physician billed between \$81 and \$85 would the decrease in cost-sharing be more than the increase in unassigned liability. Thus, beneficiary out-of-pocket expenses might well increase with lower approved charges.

There is no theoretical or empirical evidence to indicate that physicians would increase their charges to non-Medicare patients if Medicare lowered approved charges for Medicare patients. Indeed, non-Medicare patients might not be willing to purchase physician services if fees to them were raised (188,357), particular in an era of increasing physician supply. But physicians might shift their time and provision of services to non-Medicare patients, thus increasing non-Medicare aggregate expenditures.

Lowering approved charges would lower beneficiaries' financial access to care. Reducing the ratio of approved to billed charges has reduced assignment rates (158,184,315,357,394). The additional costs associated with seeing physicians who do not take assignment would diminish access to care. Access could also decline if, as a result of lower Medicare approved charges, physicians chose not to treat Medicare patients for certain services.

A decrease in the assignment rate could also indirectly affect quality by curtailing access. If access to appropriately used services, e.g., extracorporeal shock wave lithotripsy (ESWL) for certain renal stones, was reduced, quality could be lowered. On the other hand, if access to inappropriately used services, e.g., routine skull X-rays for minor injuries, was reduced, quality could be improved. In addition, lower approved charges could directly affect quality by influencing the actions of some physicians who take assignment. Physicians might include financial considerations

in choosing and providing services where the medical and ethical decision is unclear (194). For example, some physicians might spend less time with Medicare beneficiaries and more time with patients for whom their time is more highly paid.

### Controlling Approved Charges for All Services

A freeze on fees for physician services could be designed and implemented in a variety of ways. Variables include charges to be updated (e.g., the prevailing or the customary and the prevailing), the frequency of updating, and the method of updating. For example, customary and prevailing charges could be frozen for 2 years, and the updates could allow increases only in billed charges for the first year. There would also be discretion about the concept of participating physicians (see ch. 2). Although the specifics of a particular freezing method would influence its effects, the discussion below for the most part is confined to the general implications of a fee freeze.

Lowering the percentile for calculating prevailing charges could also be accomplished in a number of ways. One strategy would be to lower the current prevailing percentile and retain the current MEI. Another strategy, to lower the current prevailing percentile and eliminate the current MEI, would decrease provider and beneficiary confusion and moderate the uneven effects of the index on approved charges (see ch. 2).

### Costs and Efficiency

As noted above, short-term savings to the Medicare program could theoretically be achieved by freezing charges for all services. But the empirical research on the U.S. and Quebec health care systems suggests that this approach has been ineffective in constraining the rate of growth in expenditures for physicians' services (158). These research findings are not conclusive, since an increase in the number and complexity of services billed may have masked the effects of constraining payment rates on expenditures. The mechanism driving these changes in service quantity and intensity is a matter of uncertainty and debate. Explanations put forward include physician-induced demand; patient-initiated demand; a shift

from non-Medicare to Medicare patients; changes in physician opportunity costs; and changes in billing practices, such as billing for a more complex procedure than actually provided or billing separately for items customarily included under one procedure (see ch. 2) (28,158,259).

Simulations have examined the effect of the MEI on controlling approved charges and program costs (see Paringer in box 4-A). The data have to be extrapolated with caution, since the MEI "caps" payment and is only partially analogous to a freeze. The MEI, a looser form of control than a freeze, allows for inflation in the general economy and in physician practice costs. The index has had a decided effect on lowering the annual increase in the prevailing charge for some procedures. Nonetheless, a large percentage of the increase in Medicare program costs—47 percent from 1980 to 1983—was due to higher prices for individual services (70).

The effect of the physician fee freeze enacted under the Deficit Reduction Act of 1984 on Medicare costs and other dimensions of beneficiaries' health care has yet to be measured and reported. Preliminary evidence shows a reduction in the rate of growth in expenditures per beneficiary for physician services for fiscal year 1984 (84). These data might reflect changes in the health field, such as changes in Medicare's payment methods for hospital services or an increasing competitive environment. Whether changes in market incentives resulting from an increased physician supply and from alternative organizational and delivery systems would favor decreases in approved charges and would be strong enough to overcome traditional Patterns of physician practice is conjectural.

Lowering the percentile at which prevailing charges are calculated could produce short-term reductions in the growth of Medicare expenditures. If the prevailing percentile is lowered from the 75th to, for example, the 50th, Medicare expenditures for physician services would be reduced to the extent that approved charges are currently higher than the 50th percentile, assuming that the volume and complexity of services are not increased. The magnitude of the decrease in the rate of growth cannot be determined. To the extent, if any, that the volume of services in-

**Box 4-A.—Cost Effects of the Medicare Economic Index**

The Medicare Economic Index (MEI) is intended to restrain the rate of increase in physician payments by capping prevailing charges (see app. C). The operation of the MEI provides some insight into the effects of freezing physician fees and is also discussed in conjunction with lowering the percentile for calculating prevailing charges.

Capping prevailing charges by means of the MEI has had a decided effect on lowering the annual increase in the prevailing charge for some procedures. Using a model based on fiscal year 1984 prevailing charges, the Congressional Budget Office estimated that about 60 percent of Medicare's approved charges for physician services were at the adjusted prevailing charge ceiling in July 1984 (401,469). A lower estimate of 43 percent was derived from 1983 South Carolina claims data (247). (The calendar time of these two estimates overlap by a quarter of a year.) The South Carolina data also show that 65 percent of office and hospital visits and 30 percent of surgery were at the adjusted prevailing charge.

One study comparing California claims data from 1978 and 1980 found that the effect of the MEI increased over time, since physicians' fees increase at a faster rate than the MEI, and an increasing number of claims became subject to the prevailing charge limitation (360).

Although the MEI has restrained the growth in prevailing charges for some services, research is limited with respect to its effect on reducing Medicare expenditures. Parlinger estimated the effect of the MEI on total Medicare expenditures in California for a short period—the first quarter of 1978 (358). The analysis assumed no changes in the output or the mix of services. The MEI slightly reduced Medicare expenditures; the reduction was higher for surgical procedures than for others. At the same time, there was an increase in overall beneficiary liability. The increase in beneficiary liability for both assigned and unassigned claims was higher than the savings to the Medicare program.

The MEI's ability to cap the prevailing charges for some procedures does not directly translate into a decrease in the increase in total program expenditures based on Medicare program expenditures from 1973 to 1983 (see table 2-3 in ch. 2). Although the index has been in place since 1976, the year to year total increase in recognized charges per aged enrollee has increased in every year between 1970 and 1983, with two exceptions (553). In 1974, the increase was 8.9 percent; in 1978, 13.3 percent; in 1980, 16.0 percent; and in 1983 charges increased by 20.6 percent. About 12 percent of the increase in 1983 was due to the increased number and age of the beneficiaries, 41 percent to the increased volume and complexity of services, and 47 percent to higher prices for individual services (70).

It is even more difficult to discern the effects of the MEI on total Medicare expenditures after 1983 because of new, deep-seated changes in the Medicare program. The increase in Part B payments declined to 13 percent from October 1983 to June 1984 and to only 5.5 percent from July 1984 to March 1985 (242). Some experts consider part of the decline in the rate of increase of Part B payments to be the effect of the implementation of Medicare's prospective payment system for hospitals' inpatient operating costs in October 1983. Under prospective payment there has been an acceleration of an ongoing trend to decrease length of stay, a decline in the absolute number of hospital admissions, and a consequent reduction in the number of the services physicians are providing in the hospital setting. Furthermore, the physician fee freeze mandated by the Deficit Reduction Act of 1984 (Public Law 98-369), which was implemented in June 1984 may have had some effect although undocumented on total physician expenditures.

creased, the decrease in the growth of Medicare expenditures would be lessened.

In some cases, the magnitude of Medicare savings would be influenced by the MEI. For those procedures with indexed prevailing charges (the prevailing charge adjusted by the MEI) now at or above the 50th percentile, the MEI would have no effect on the amount of short-term savings. For procedures with indexed prevailing that are lower than the 50th percentile, maintaining the MEI after reducing the prevailing percentile to the 50th would protect short-term savings. There would be no additional savings for services for which the indexed prevailing is now below the 50th percentile. If the MEI was eliminated, however, short-term program savings would be less because of an increase in payments for procedures that had been capped below the 50th percentile by the MEI.

Even in the short term, establishing the prevailing at the 50th percentile would not decrease the prevailing charge for those procedures that have a very small spread of customary charges between the 50th and 75th percentile. In effect, the 50th and 75th percentiles of customary charges are the same for such services. Anecdotal evidence indicates that a small spread is typical of procedures that are controlled by a physician specialty, e.g., cardiac nuclear procedures (347), and of specific localities (521a).

Long-term savings produced by lowering the prevailing percentile to the 50th percentile are unlikely. Over time, an increase in billed charges would lead to increased prevailing charges, which in time could be as high as the indexed prevailing would have been.

### Access and Quality

A decrease in assignment rates in response to lowered Medicare payment rates for all physician services would decrease beneficiary financial access to care. Access would also be negatively affected if physicians choose to provide a service only to non-Medicare patients. For example, the use of magnetic resonance imaging (MRI) and ESWL for Medicare beneficiaries would depend on the level of Medicare's approved charge. If

physicians perceived the lower approved charge as providing insufficient net revenues, they could either refuse assignment or orient use to patients with private, higher paying insurance (234,431). An exception might be made in providing MRI for certain elderly patients with specific conditions that are the target of research protocols, but in that case, access would be sporadic. Decreasing access to ESWL could have cost implications for the Medicare program, because ESWL might be less costly than surgery for certain renal stone care (431).

There are effects on access and quality unique to the specifics of the freezing method. Physicians' reaction to a comprehensive freeze would depend both on the effect of the freeze on their real incomes and on the medical economic environment. The longer the freeze lasted, the greater the number of physicians who would be hurt financially and the greater the number of physicians who would be likely to refuse assignment.

A freeze on approved charges could also affect access and quality through the method of updating charges, the relationship of assignment to updating, and the extent of assignment. If physicians were required to accept assignment for all services during a freeze, fewer physicians would accept assignment during a freeze period than if assignment could also be accepted on a claim-by-claim basis.

If there was a participating physician component comparable to that of the freeze imposed by the Deficit Reduction Act of 1984 (see ch. 2), only nonparticipating physicians could refuse assignment during the freeze. However, future access could be decreased to the extent that participating physicians refused to renew their participation agreements. In a strongly competitive area, physicians might be more willing to accept assignment and renew participation agreements. The care provided by participating physicians might not change, because their charges will be updated at the end of the freeze. Unless the net revenues for discretionary services were generous at the onset of the freeze, the clinical decisions of nonparticipating physicians for such services taken on assignment might be affected.

## Controlling Approved Charges for Selected Services

The variation in approved charges for selected services could be reduced by lowering approved charges for procedural, inpatient, specialist, and urban services (higher priced services) either with or without raising the approved charges of non-procedural, ambulatory, generalist, and rural services (lower priced services). Both approaches could modify perceived imbalances in approved charges among such services.

### Reducing the Variation in Approved Charges by Type and Site of Service

The concept of reducing the perceived disparity in approved charges between procedural and nonprocedural services is initially attractive in considering Medicare expenditures. Some evidence indicates disproportionate differences in the cost and the price of certain procedural services (46,227). When new technologies, in particular equipment-intensive and surgical procedures, are introduced, they are often priced at a high level (403,424,588). Initially, a high fee maybe appropriate because the new procedure may require special skills and much professional time. Although experience and technological improvements over time often lower the level of expertise and amount of time needed to perform the procedure, initial payment levels are not reevaluated. In this regard, it would be informative to trace the evolution in prices over time for MRI and ESWL, which *were* both approved for Medicare coverage in 1985. The establishment and maintenance of high prices for services whose costs have declined over time is thought to have contributed to the wide differences in approved charges for procedural and non-procedural services.

Medicare has also continued to provide more generous payment for inpatient services than for services in other sites. This policy has not kept pace with recent Medicare initiatives, e.g., increased coverage for home health services, that encourage out-of-hospital care. The comparability of inpatient and ambulatory services, particularly visits, is still undecided. A rationale for paying more for visits in a hospital than in an office is that the visits differ. Patients in hospitals tend to be sicker than ambulatory patients and require

more physician attention. On the other hand, physicians do not pay overhead costs for treating patients in hospitals, although their time and transportation costs may be higher than when caring for patients in their offices.

Lowering approved charges for procedural services or inpatient services over which Medicare has market power could be an interim step in reducing the growth of Medicare expenditures or could be an independent modification of CPR. Medicare in 1983 had 74 percent or more of the market share for seven high-priced surgical procedures, including cataract surgery, and 40 percent or more of the market share for four high-volume diagnostic procedures (see table 2-12 in ch. 2) (69). Furthermore, the elderly accounted for anywhere between 26 and 37 percent of the performance of nine other surgical procedures and five other diagnostic and therapeutic procedures.

Costs and Efficiency.—The fact that approved charges for procedural services and inpatient services constitute a major part of Medicare's expenditures for physician services suggests that reducing such charges has the potential for restraining the overall rate of increase of Medicare expenditures. National data for 1981 indicate that considerably more than half of Medicare's approved charges for physician services nationwide are for procedural services and that almost 64 percent of these charges are for services provided in inpatient settings (see table 4-2).<sup>7</sup> If approved charges for inpatient medical care (primarily visits), which represent 20.6 percent of Medicare's approved charges for physician services (see table 4-3), and payment for all procedural services, which represent 48.2 percent of these charges (see table 4-2) were constrained, 68.8 percent of Medicare's approved charges would be affected.

How reducing approved charges for procedural and inpatient services would affect Medicare costs is not clear, in part because the effect of price on use of services is still a matter of debate.<sup>8</sup> If the

<sup>7</sup>South Carolina 1983 Part B claims data suggest that an even higher percentage (66 percent) of approved charges are for procedural services (247).

<sup>8</sup>However, the relation of use to expenditures is clear from Medicare Part B data from 1975-1983. Figures on the contribution of increased volume per enrollee to the growth in approved charges for surgical, clinical laboratory, diagnostic, and X-ray services ranged from 39 to 44 percent; the increase in volume of services per enrollee for medical care (primarily office visits) was 22 percent (248).

**Table 4-2.—Medicare Approved Charges and Assignment Rates for Physicians' Services, by Type and Place of Service, 1981**

Type Of Service	Approved charges (in \$000s)	Percent of approved charges	Assignment rate
<b>Nonprocedural services:</b>			
Medical care.....	\$4,517	40.2%	51.4%
Consultations <sup>a</sup> .....	381	3.4	59.7
Subtotal.....	4,898	43.6	
<b>Procedural services:</b>			
Surgery.....	\$3,635	32.3%	47.6%
Diagnostic radiology.....	865	7.7	57.5
Diagnostic laboratory.....	834	7.4	48.1
Radiation therapy.....	151	1.3	62.3
Anesthesia.....	535	4.8	44.7
Assistant-at-surgery.....	196	1.7	48.1
Subtotal.....	6,216	48.2	
<b>Other:</b>			
Other medical services.....	\$ 127	1.2%	61.9%
Total for all services.....	\$11,241	100.0%	50.5%
<b>Place of service:</b>			
Office.....	\$3,203	28.5%	37.1%
Inpatient hospital.....	7,144	63.6	53.7
Outpatient hospital.....	532	4.8	68.7
Home.....	71	0.6	57.0
independent laboratory.....	39	0.4	40.1
Skilled nursing facility <sup>b</sup> .....	150		83.2
Other.....	102	0.9	79.3
Total for all services.....	\$11,241	100.0%	50.5%

consultations involve nonprocedural services primarily. **medical services include** the rental of durable medical equipment, the purchase of durable medical equipment, the use of ambulance services, and the rental and sale of internal and external prostheses and supplies. This category also includes physicians' services rendered in non-skilled nursing homes.

NOTE: Columns may not add to 100.0 percent due to rounding.

SOURCE: I. Burney and G. Schieb—“Medicare Physicians' Services: The Composition of Spending and Assignment Rates” *Health Care Financing Review*, forthcoming. The original table listed service by type of service without categorization as nonprocedural and procedural.

volume of services increased, lowering approved charges for procedural and inpatient services—with or without raising approved charges for nonprocedural and ambulatory services—could increase Medicare costs. If the volume of services did not increase, lowering approved charges for procedural and inpatient services could decrease the rate of growth in total Medicare expenditures.

If approved charges for nonprocedural and ambulatory services were raised simultaneously, the growth in Medicare expenditures would increase or decrease depending on the magnitude of the change in approved charges and in the use of each type of service. However, the proportion of procedural to nonprocedural and inpatient to ambulatory services among physician services is unknown and might change with a change in approved charges.

In addition, the practice of medicine is not always precise. There is general agreement about the need for some services for specific conditions (e.g., in vitro cultures for suspected urinary tract infections) and the need for providing services in certain sites (e.g., treatment for hip fractures in the hospital). Changes in approved charges would be unlikely to affect the provision of such services. For many presenting conditions, however, physicians must use their judgment in choosing among possible diagnostic and therapeutic services and sites. The finding that the cystoscopic rate for urologic conditions in one medical market area in Maine is more than double the rate for the State as a whole, while the cystoscopic rate in another medical market area is only about half the average, for example, indicates the discretionary nature of cystoscopy (568). A procedure that can be performed successfully either as an ambulatory

**Table 4-3.—Medicare Approved Charges, Percent Distribution of Approved Charges, and Assignment Rates for Physicians' Services, by Combinations of Place and Type of Service, 1981**

	All places	Office	Inpatient hospital	Home	Outpatient hospital	Independent	Skilled nursing facility	Other places
<b>Approved charges (in \$000s)</b>								
All types of services . . . . .	\$11,239.8	\$3,202.8	\$7,143.9	\$71.0	\$532.2	\$39.0	\$150.1	\$100.8
Medical care . . . . .	4,516.7	1,780.9	2,319.3	60.2	181.5	— <sup>a</sup>	127.4	47.4
Surgery . . . . .	3,643.4	365.1	3,125.8	2.0	137.9	— <sup>a</sup>	3.2	0.4
Consultation . . . . .	381.0	63.8	304.0	0.6	7.1	— <sup>a</sup>	5.3	0.2
Diagnostic radiology . . . . .	864.9	358.4	385.4	1.0	110.5	1.0	8.1	0.5
Diagnostic laboratory . . . . .	834.1	536.9	222.6	2.4	27.2	38.0	2.9	4.1
Radiation therapy . . . . .	150.9	47.2	53.9	— <sup>a</sup>	47.0	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>
Anesthesia . . . . .	535.0	2.1	529.6	0.1	3.1	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>
Assistant-at-surgery . . . . .	195.8	2.0	192.2	0.1	1.5	— <sup>a</sup>	— <sup>a</sup>	— <sup>a</sup>
Other medical services . . . . .	127.0	46.4	11.1	319.3	16.4	— <sup>a</sup>	3.2	45.3
<b>Percent distribution of approved charges</b>								
All types of services . . . . .	100.0% <sup>0</sup>	28.50/ <sup>o</sup>	63.6%	0.6%	4.7%	0.3%	1.3%	0.9%
Medical care . . . . .	40.1	15.8	20.6	0.5	1.6	— <sup>b</sup>	1.1	0.4
Surgery . . . . .	32.3	3.2	27.8	— <sup>b</sup>	1.2	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Consultation . . . . .	3.4	0.6	2.7	— <sup>b</sup>	0.1	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Diagnostic radiology . . . . .	7.7	3.2	3.4	— <sup>b</sup>	1.0	— <sup>b</sup>	0.1	— <sup>b</sup>
Diagnostic laboratory . . . . .	7.4	4.8	2.0	— <sup>b</sup>	0.2	0.3	— <sup>b</sup>	— <sup>b</sup>
Radiation therapy . . . . .	1.3	— <sup>b</sup>	0.5	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Anesthesia . . . . .	4.8	— <sup>b</sup>	4.7	— <sup>b</sup>	0.4	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Assistant-at-surgery . . . . .	1.7	— <sup>b</sup>	1.7	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Other medical services . . . . .	1.1	0.4	0.1	— <sup>b</sup>	0.1	— <sup>b</sup>	— <sup>b</sup>	0.4
<b>Assignment rates (percent)</b>								
All types of services . . . . .	510!0	37%	54%	570/0	69%	40%	830/o	79%
Medical care . . . . .	51	34	59	— <sup>b</sup>	81	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Surgery . . . . .	4a	42	48	— <sup>b</sup>	54	— <sup>b</sup>	8 1	8 5
Consultation . . . . .	60	41	63	— <sup>b</sup>	57	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Diagnostic radiology . . . . .	57	38	71	— <sup>b</sup>	67	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Diagnostic laboratory . . . . .	48	40	64	— <sup>b</sup>	66	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Radiation therapy . . . . .	62	— <sup>b</sup>	72	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Anesthesia . . . . .	45	— <sup>b</sup>	45	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Assistant-at-surgery . . . . .	48	— <sup>b</sup>	48	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>	— <sup>b</sup>
Other medical services . . . . .	62	44	39	— <sup>b</sup>	93	— <sup>b</sup>	— <sup>b</sup>	77

<sup>a</sup>—less than \$1 million.  
<sup>b</sup>—less than 0.05 *Prom*.

NOTE: Columns and rows may not add to 100 percent due to rounding.

SOURCE: 1. Burney and G. Schieber, "Medicare Physicians' Services: The Composition of Spending and Assignment Rates," *Health Care Financing Review*, forthcoming.

or as an inpatient service is cataract surgery (161). Increasing the approved charge for nonprocedural and ambulatory services might affect the choice of services and sites in cases where the choice is discretionary. The effect on total volume of services and expenditures cannot be estimated, because among other factors, the number of such discretionary services is unknown.

If approved charges for procedural and inpatient services were lowered, beneficiary costs would increase whether or not there was an increase in use, because beneficiaries' increase in nonassigned liability would almost always be greater than their decrease in coinsurance. If approved charges for procedural and inpatient services were lowered as approved charges for nonprocedural and ambulatory services were raised, the net effect on beneficiary costs would be uncertain. The change in beneficiary unassigned liability and coinsurance would depend on the extent to which assignment for procedural and inpatient services decreased and assignment for nonprocedural services increased and on the absolute changes in approved charges and the magnitude of any changes in use.

**Access.**—If approved charges for procedural and inpatient services were reduced, the ratio of approved to billed charges would decrease, assignment rates would fall, and access could decrease. On the other hand, competition among providers of many procedural services is likely, given the current and projected supply of most surgical specialties and some internal medicine specialties. Most national studies project a continued growth in the supply of these physicians and an oversupply by 1990 (176). Competition among physicians in the form of taking assignment could be financially rewarding, if beneficiaries considered the differences in their liability between assigned and unassigned claims when choosing physicians. Furthermore, one study found that surgical assignment rates were not significantly related to payment levels for surgical services (393).<sup>9</sup> Also, since

<sup>9</sup>The relationship of assignment and reimbursement rates for laboratory and X-rays services is unclear. The main finding of the Rice study is that there is a significant positive relationship between changes in reimbursement rates for medical services and changes in assignment rates (393). Although changes in the assignment rates for laboratory and radiological services appear to be significantly correlated with changes in the reimbursement rate for medical serv-

a reduction of 10 to 20 percent in payment rates for many procedures and inpatient hospital visits would still give physicians high Medicare net revenues, assignment rates might not decline substantially if approved charges for such services were lowered (166).

The relationship between Medicare approved charges and the price paid by other insurers also affects access to procedural services. If Medicare's lower approved charge for a service was much below the price allowed by other insurers, some physicians might choose not to provide the service to Medicare beneficiaries. For this situation to occur, however, there would have to be an adequate non-Medicare market for the service, such as there is in the case of MRI (234) and ESWL (431).

Access to hospital-based, procedure-oriented physicians—radiologists, pathologists, and anesthesiologists—might not be affected by controlling approved charges for their services. Pathologists and radiologists currently have very high assignment rates (68). Although anesthesiologists accept assignment less frequently than thoracic surgeons, anesthesiologists accept it as often as surgical specialists such as urologists and orthopedic surgeons (68). Competition might be a minor factor in assignment decisions for some radiologists and pathologists. The Graduate Medical Education National Advisory Committee projected that specialists in anesthesiology, pathology, and therapeutic radiology would be in near balance with supply in 1990; diagnostic radiology was projected to be a specialty in oversupply (57). Anesthesiologists were originally projected to be in undersupply, but during the last few years residency programs have grown to such an extent that anesthesiology may be in oversupply in the near future (350).

Raising approved charges for nonprocedural or ambulatory services would increase assignment rates and hence access to these services. The use

ices, the finding may be an aberration of the claims system. The Medicare program prohibits physicians from assigning only a portion of services that are delivered to a beneficiary at the same place and time. Thus, if laboratory and radiological services were provided at the same time and place as a medical service, which is likely, they would most likely be listed on the same claim, and accepting assignment for these services would be directly connected to accepting assignment for the medical service.

of pneumococcal vaccination might increase, although its low use seems related more to the lack of physician and beneficiary knowledge of its effectiveness than to a low payment level.

Quality.—Effects of reducing the variation in approved charges by type and site on quality of care would depend, in part, on the extent to which assignment rates were affected, and, in part, on the appropriateness of services.<sup>10</sup> Reviews of the literature have concluded that there is excessive use of hospitals, some surgical services, and inpatient laboratory services in teaching hospitals and to a lesser extent in nonteaching hospitals (108,109,110,581). However, there is a problem in determining the appropriate use of *specific* procedural and inpatient services, as illustrated by the great variation in the practice of medicine and the lack of scientific norms of medical care (568). For example, in Iowa, the chances that a male resident 85 years old will have had a prostatectomy range from 15 percent to 60 percent in different medical service markets (568). This large variation suggests that for some patients a prostatectomy may have been inappropriate treatment and may have constituted poor quality of care. Surgery and hospitalization are not without risk: the mortality rate attributable to a prostatectomy, for example, ranges from 1.2 percent to 4 percent (568).

If lowering approved charges reduced the inappropriate use of procedures and inpatient care, quality could be improved (184). However, there is the danger that cutting the payment level for all procedural and inpatient services might reduce the provision of necessary as well as unnecessary services (108,109,110,581). Patients with severe illnesses that require much specialized, procedural care might be harmed by such a change (194).

Quality related to the use of nonprocedural and ambulatory services could also be influenced by raising approved charges for nonprocedural and ambulatory services and increasing access to such services. Because the need for an increase in use has not been identified, the effect on quality of increasing access to such services is not clear.

<sup>10</sup>In most of the studies, inappropriate services are defined as services that "provide no significant benefit or . . . could be rendered in a less costly lower level institution or outpatient setting" (163).

### Reducing the Variation in Approved Charges by Specialty and Location"

In the 1970s, a major concern of Congress was rationalizing the distribution of physicians by specialty and by location (492) by reducing the variation in approved charges for similar services provided by generalists and specialists and provided in different geographic localities, particularly within States. Recently, policy interest has been focused on reducing such variations as a cost-containment mechanism.<sup>12</sup>

For the most part, differences in approved charges are relevant for services that are provided by physicians of many disciplines: the greatest overlap in services provided by generalists and specialties lies in the visit category, which nationwide accounts for 41 percent of Medicare approved charges (69). In 1982, the prevailing charges nationwide for different types of visits, the five most common procedures, averaged 24 to 73 percent higher for specialists than for generalists (see table 4-4).<sup>13</sup>

Almost all the empirical evidence indicates that physicians practicing in urban and suburban areas usually receive higher Medicare approved charges for similar services than physicians practicing in

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The focus of this discussion is on reducing the variation in prices within States, since this geographic division best reflects urban/rural price disparities, which are a policy issue of interest.

It is also possible that differences in provider characteristics could be a reason for attempting to modify the wide differentials in payment levels between generalists and specialists and among geographic localities. Opinions on Medicare's responsibility in this regard differ. The opinions are based on both a philosophical stance and practical considerations of access and costs. If equity among providers were one of the Medicare program's concerns, the program's ability to act as a prudent buyer, i.e., to provide its beneficiaries with the most appropriate services available at the lowest possible cost to the program, could be constrained by the need to assure equitable revenues to providers. On the other hand, Medicare would be concerned if disparate charges among providers and among areas decreased beneficiaries' access to appropriate health services.

There are many problems in analyzing national Medicare data based on carrier data, because of the variety of ways in which carriers classify specialists. A specific problem is that the specialty standing of family physicians varies among carriers. In calculating prevailing charges, Medicare carriers usually categorize general practitioners as generalists and internists as specialists, but nationwide information on carrier practices about the categorization of family physicians on the carrier level for reimbursement purposes is not available. Conversations with staff of the Inspector General's Office of the Department of Health and Human Services suggest that carriers could categorize family physicians as a specialty, but not all carriers do so (542).

**Table 4-4.—Medicare Weighted Mean Prevailing Charges for the Five Most Common Services, Specialist/Nonspecialist, Calendar Year 1982**

Service	Nonspecialist	Specialist	Percentage specialist differential
Brief F/U <sup>a</sup> hospital visit . . . . .	\$16.63	\$23.90	43.7% <sup>0</sup>
Limited F/U hospital visit . . . . .	19.63	25.88	31.8
Limited F/U office visit . . . . .	16.99	21.05	23.9
Brief F/U office visit . . . . .	13.58	17.67	30.1
Minimal F/U office visit . . . . .	16.11	27.92	73.3

<sup>a</sup>F/U = Followup.

SOURCES: U.S. Department of Health and Human Services, Health Care Financing Administration, Bureau of Program Operating, unpublished computer tabulations from the *Directory of Medicare Prevailing Charges*, W. Merashoff, personal communication, June 19, 1985

rural and inner city areas (71). As an example, in 1975 Medicare approved charges for specialists averaged 23 percent higher in metropolitan than in nonmetropolitan areas. When adjusted for cost-of-living differences, the payment level difference was reduced to 8 percent (71). More recent data found that fees for first office visits were 52 percent higher in urban areas than in rural areas and median fees for revisits were 7 percent higher in urban areas than in rural areas (354). A study by Pennsylvania Blue Shield on physician pricing patterns under Medicare in Pennsylvania had less definitive findings. Interarea price variations by specialty varied with the procedure, and, although prices tended to be highest in the Philadelphia urban area, prices in rural areas were not always the lowest (372).

**Costs and Efficiency.**—If there was an increase in volume, lowering approved charges for specialist and urban services with or without raising approved charges for generalist and rural services could increase Medicare costs. But, available data suggest that if there were no increase in volume, lowering charges for specialist and urban services could constrain the rate in growth of Medicare expenditures for physician services. If approved charges for generalist and rural services were raised at the same time, the effect on Medicare expenditures would be uncertain. Medicare expenditures could increase if the costs saved by the program due to a decrease in approved charges for specialist and urban services were less than the costs added to the program by the increase in approved charges for generalist and rural services. On the other hand, Medicare expenditures could decrease if the costs saved by the program

due to a decrease in approved charges for specialist and urban services were more than the costs added to the program by the increase in approved charges for generalist and rural services.

One approach to lower approved charges for specialist services and to raise approved charges for generalist services would be to calculate a single prevailing charge for all physicians in a locality. If a single prevailing charge were calculated for generalist and specialist services in a locality, the effect on Medicare expenditures would depend on the proportion of generalist and specialist services in the locality and the distribution of customary charges for generalists and specialists. If the distribution of customary charges for generalist and specialist services was narrow calculating a single 75th percentile for both generalists and specialists would be about the same as calculating a separate 75th percentile for each and averaging them. In this case, calculating a single 75th percentile for specialists and generalists would not affect Medicare expenditures.

Or a single prevailing charge could be calculated for all physicians in a State as a way of lowering approved charges for specialist services and raising approved charges for generalist services. This approach would also lower approved charges for urban services and raise approval for rural services.

Research on the cost effects of reducing variations by specialty is sparse and has not considered the effect of changes in prevailing charges on volume of services. One study found no significant differences in Medicare costs when prevailing charges were computed separately for each

specialty as compared with computing them for physicians grouped into three broad categories (331). Program outlays were reduced about 2 percent in a simulation that eliminated specialty differentials by computing a prevailing charge for all physicians in a county (330). If assignment continued on a claim-by-claim basis, approximately half of the beneficiaries would have had an increase (averaging 17 percent) in out-of-pocket expenses (330).

Evidence on the effect of reducing variations in prevailing charges by locality is equally scanty. Unfortunately, the results of the few available studies are mixed and inconclusive, leaving unanswered the question of how reducing variations within a State would affect Medicare program costs and beneficiary liability. The major issue of volume response also remains unresolved.

When prevailing charges were calculated on a statewide basis rather than by localities within a State, prevailing charges for physicians in the major urban areas decreased and the prevailing charges for physicians in small urban and nonurban areas of the State increased as expected (394). However, total Medicare expenditures were not reduced: physicians billed for a greater number of services and more complex services.

A nationwide study performed for the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) examined the cost effects of reducing variations in prevailing charges by specialty and by location (504). Although the findings cannot be generalized to the Medicare program for reasons such as wide differences in patient population and program administration between the two programs, the findings are of interest. An increase in CHAMPUS program expenditures was estimated if separate prevailing charge screens for specialists, and, where applicable, separate charge localities in a State were eliminated and statewide prevailing charge screens for all physicians were established. The new method of calculating prevailing charges was adopted in 1980. The increase has been, as projected, approximately 5 percent annually over any increase in CHAMPUS expenditures in the absence of the policy change (241). A corresponding increase in beneficiary cost-sharing occurred. Although increased physician participation had

been anticipated when charges were increased, there has been no increase in assignment rates (241).

Access.—A major policy issue has been improving access to primary care services provided by physicians of appropriate training. "Reducing variations in approved charges by specialty and within States would affect access to general practitioners, family physicians, and internists differently, because carriers classify general practitioners as generalists and internists as specialists. Carriers can classify family physicians as specialists, but not all carriers do so.

If there were no increase in volume, assignment rates and access to primary care provided by general practitioners could increase if approved charges for the primary care services of general practitioners were increased at the same time as approved charges for such services provided by specialists were lowered. In localities where family physicians are classified as generalists, increasing approved charges for the primary care services of generalists could increase the assignment rates of family physicians and access to their primary care services.

If specialists' approved charges were lowered, for example, by calculating a single prevailing charge for generalists and specialists, and there was no increase in volume, there is a strong possibility that assignment and beneficiary access to primary care provided by family physicians (if they were in the specialist prevailing charge screen) and internists could decrease.

The effect of reducing specialty differentials on physicians' decisions to train in the primary care specialties is problematic.<sup>15</sup> If approved charges

<sup>15</sup>Although the term "appropriate" training is difficult to define, Federal policy, mainly through the channel of training grants for primary care residencies, has explicitly accepted that primary care services are to be provided by physicians trained in primary care and has defined primary care physicians as general and family physicians, general internists, and general pediatricians. The first three medical disciplines are of import for the elderly Medicare population.

<sup>16</sup>The number of primary care physicians (general practice, family practice, general internal medicine, and general pediatrics) increased at about the same rate as total physicians and grew from 56 physicians per 100,000 population in 1970 to 70 physicians per 100,000 population in 1981 (544). The Graduate Medical Education National Advisory Committee has stressed training primary care physicians to improve the balance of physicians across specialties.

for specialist services were decreased and there were no increase in the volume, there would be a decrease in Medicare expenditures for services provided by internists and family physicians, in those areas where family physicians are classified as specialists. If approved charges for generalist services were increased as well, there would be an increase in Medicare expenditures for services provided by general practitioners.<sup>16</sup> If there were an increase in the volume of services, the effect on Medicare revenues for each specialty would be uncertain. Furthermore, the effect of financial incentives on specialty choice in today's economic environment has not been investigated. The early literature indicates that financial incentives played only a minor role in specialty choice (334). However, those studies were performed when debts for medical education and malpractice insurance rates were much lower.

Access to primary care services provided by primary care physicians is also affected by the geographic distribution of these medical disciplines. However, the ability of or need for statewide prevailing charges to attract more primary care physicians into poorly served areas is not clear. Numerous factors affect location decisions. Although a series of studies in the 1960s and 1970s suggested that economic factors were a minor factor (334), later analyses of Canadian physicians reported a positive, although small, relationship between income level and location choice (36,184). Berry found that if gross earnings increased 1 percent in medical service areas in Quebec, net immigration increased by 3.4 percent (36). Comparable results were found by Hadley in Canadian provinces; a 1 percent increase in net income could expect to attract 3.3 percent more new physicians (184).

More recent research showed that more physicians in the United States have located in non-metropolitan areas (427). Some researchers have concluded that the economic forces of an increase in the total supply of physicians and the overall growth rate of each specialty determines the geographic dispersion of the specialty (344).

<sup>16</sup>The increase in approved charges for general practitioner services is a moot point in the long term, since few if any general practitioners are now being trained.

Although between 1970 and 1979, the number of general practitioners and family physicians in the smaller towns declined, in 1979 nearly every town with a population of 5,000 had a general practitioner or family physician, and 85 percent of towns with a population of 2,500 to 5,000 had a general practitioner or family physician present (344). In 1982, there were still 131 counties housing 3.5 million people (approximately 2 percent of the population) without an active physician (124). The Newhouse study showed that very few rural residents lived far from a physician and predicted an increase in the diffusion of family physicians into the smallest towns as their numbers grew (344). The Bureau of Health Professions has predicted that the diffusion of primary care physicians is expected to reduce overall shortage area needs in the coming years, although needs will persist in many currently designated shortage areas (546).

As noted earlier, the evidence suggests that approved charges in rural areas, for the most part, are lower than in urban areas. Higher practice costs in urban areas could explain the differences, however, the data on the costs of operating physicians' practices in different locations are conflicting (50,334,355,512). Indeed, the latest data indicate that practice costs are higher in rural than in urban areas (355). To the extent that urban/rural differences in approved charges exceed differences in urban/rural practice costs, physicians might be discouraged from practicing in rural areas.

If one believes that more family physicians are required in sparsely populated areas, reducing the variation in approved charges within States and thereby increasing payment rates in rural areas might be sufficiently effective on the margin to increase the interest of family physicians in settling in such localities. The number of family physicians increased 22 percent from 1977 to 1985 (344), and graduates of family practice residency programs are more likely to settle in smaller and nonmetropolitan areas than are other specialties. Since established physicians are not likely to move, the location choices of young physicians are most apt to be influenced by financial considerations.

A much lower percentage of communities with 2,500 to 5,000 people had a practicing internist than had a general practitioners or a family physician in 1979, although the percentage of communities with an internist had increased 35 percent from 1970 to 1979. If one considered it necessary to further increase the expected rate of movement of internists into rural areas, narrowing the difference in internists' prevailing charges between metropolitan and nonmetropolitan areas might influence the location decisions of new internists. Medicare is an important source of revenue for internists. Other than thoracic surgeons, internists derive the largest percentage of gross income (29 percent) from Medicare of any specialty (see table 2-8).

Based on precedent, internists in urban areas might further decrease their assignment rate if modifying geographic differentials meant a decrease in approved charges in urban areas. Therefore, at the same time that reducing geographic differentials might interest new internists to locate in less populous areas, such a change might decrease internists' assignment rates and beneficiary access in urban areas.

It should be noted that reducing the variation in approved charges by specialty might also affect access to primary-care services provided by nonprimary-care specialists (1). Most nonprimary-care physicians have higher assignment rates than primary care physicians. If these data indicate that nonprimary-care physicians are more satisfied with Medicare payment under assignment than primary care physicians, access to primary care services provided by nonprimary-care physicians may not be unduly affected by a decrease in payment. If, on the other hand, these data are more reflective of the nonprimary-care services of nonprimary-care physicians, the assignment rate for, and access to, nonprocedural services provided by nonprimary-care specialists might decrease if approved charges for such services were decreased.

Quality.—Anticipating the effects on quality of reducing the variations in prices for services by specialty is confounded by the unresolved issue of whether generalists and specialists deliver "similar services," or whether specialists provide

higher quality care than generalists. If specialists provide the same services as generalists, both groups of physicians should be paid at the same level. However, the degree of similarity between services cannot easily be distinguished from the coding system, the basis of payment under any fee-for-service system. Even though the code for a service provided by both general practitioners and specialists is the same, the service provided under the code may be different. For example, almost all visit codes do not differentiate by diagnosis or the content of the service provided.

One school of thought is that services provided by generalists and specialists are similar for payment purposes (336,420). Medicare's coverage policy is consistent with this view, since Medicare does not limit coverage for most services according to specific training, but usually permits all physicians to provide all services (414). Another view is held by those Medicare's carriers that use different fee screens for specialists and general practitioners on the grounds that services delivered by specialists are different, more intensive, or of higher quality than those provided by generalists and that the more extensive training of the specialist warrants a higher level of payment.

The issue of "similar services" for payment purposes has not been resolved by court action. The Michigan Academy of Family Physicians successfully sued for the elimination of specialty screens by their Medicare carrier. The District Court found that if and when services are found to be similar, prevailing charge payment should be the same regardless of who provides the service, thus implicitly rejecting the argument that differences in charging patterns among specialties are indicative of different services' being performed under the same procedure code (309). Although the U.S. Court of Appeals, Sixth Circuit, partially affirmed the District Court's ruling, the decision is currently being submitted to the Supreme Court for the second time for reconsideration (534).<sup>17</sup>

<sup>17</sup>Another pertinent court action took place in Florida where the Medicare carrier does not employ any specialty reimbursement differentials. The Dade County Society of Internal Medicine sued to force the carrier to use specialty screens for internists, and by implication, for other medical disciplines. The plaintiffs argued that Medicare beneficiaries in Florida receive lower allowances than in other areas of the country when beneficiaries use the services of

Studies of care given by different specialists provide some but inconclusive support for the position that specialty training is associated with better quality of both ambulatory care and hospital care when specialized physicians are practicing within the domain of their training (369,370,392,398). The evidence that physician performance is improved by specialization per se is weaker (194) and contradictory (416). An analysis of visits found that nearly all specialists have significantly longer visits than general practitioners and family physicians (322). However, there is no evidence to support that differences in time result in differences in quality. Indeed, time, per se may not be an important measure of quality.

In addition to the lack of definitive evidence on whether specialists provide better care than generalists, there are other unknown and confounding factors that stand in the way of determining how reducing the variation between generalists' and specialists' approved charges would affect quality. These factors include the extent to which specialists provide care for conditions outside of their own specialty, the inability to determine specialists' care because of the variation in the number of prevailing charge screens among carriers, and the relationship between quality and financial incentives. Quality may depend not only on the kind of physician, but also on the interaction among the kind of physician, the kind of patient, and the kind of service.

The quality issue is further complicated by the lack of a standard definition of a specialist by Medicare for payment purposes. A General Accounting Office survey of three carriers found that roughly 50 percent of physicians who classify themselves as specialists are not board certified in their declared specialty. About one-fourth of the physicians that classified themselves in one subspecialty of internal medicine were not board certified in either internal medicine or the board specialty (475). However, there are no data on the relationship of quality to board certification as compared with quality and board eligibility or quality and self-declared specialization.

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specialists, and, therefore, beneficiaries allegedly suffer both direct economic loss and possible injury when they are discouraged from consulting a specialist. After 5 years of litigation, the Dade County Society of Internal Medicine withdrew the case in the spring of 1985 (534).

## Negotiated or Discounted Fees

Some private sector payers and Medi-Cal (California's Medicaid program) have recently adopted selective contracting with providers, primarily as a cost-containment measure. Under selective contracting, payers contract with selected providers, usually hospitals, who agree to accept either a negotiated fee or a flat discount from their charges as payment in full. The experiences of private sector organizations and Medi-Cal with selective contracting may provide insight into the potential of using this method as an option in the Medicare program, while CPR continues as Medicare's major way of paying physicians. The discussion that follows considers two questions. Does the evidence show that the method is worthy of consideration for Medicare? Furthermore, does Medicare have the authority and capability to implement a discounting system?

### Preferred Provider Organizations

Negotiated or discounted fees in the private sector have been utilized as a financial component of PPOs and not as a payment method used by traditional indemnity plans. A PPO "may be an organization, a delivery system, or an arrangement between providers and third-party payers" (156). PPOs are characterized more by their diversity than by their similarity (see app. D).

The third party pays the PPO plan, which in turn makes arrangements to pay the providers. One of the ways in which PPOs vary is how they pay providers. Payment mechanisms for hospitals range from negotiated per diem reimbursement (244) to cavitation (52) and discounted charges (156). Currently, most PPOs reimburse physicians either by negotiating a discount from an established fee schedule or by discounting from usual, customary, and reasonable charges<sup>18</sup> (53, 156), with discounts ranging from 5 to 30 percent (156). Two payment methods that are gaining in use are relative value scales constructed specifically for a PPO and cavitation (144). Indeed, some experts consider discounting a transitory payment

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<sup>18</sup>The usual, customary and reasonable charge method is basically the same as Medicare's CPR method of paying physicians, but uses different nomenclature (see app. C). For clarity of discussion, this chapter substitutes Medicare terms for those used by the private sector

methodology and expect that many PPOs will evolve into health maintenance organizations (HMOs), as risk is increasingly shared with providers (53).

#### Relation of PPO Payment Methods to the CPR Method

PPOs that discount from fees that are determined by usual, customary, and reasonable methods use payment methods that are very similar to those used by Medicare to constrain prices. If there is no available claims history, the PPO may reduce physician charges based on their billed charges. This method is used by a few PPOs that have been established by organizations other than insurers, but its use appears to be declining for a number of reasons, including potential antitrust considerations (177). The method is similar to taking assignment under Medicare—both methods reduce payment from an individual physician's actual charges for a service when the actual charge is greater than the approved charge—and to Medicare's method of paying physicians who choose to become participating physicians under the arrangements mandated by the Deficit Reduction Act of 1984. Like Medicare, PPOs that discount from fees reduce charges for all services provided by participating physicians when their actual charges are greater than the program's approved charges. Furthermore, Medicare's participating physicians have signed an agreement for a year's participation, an acceptance of assignment on all claims, which is similar to physicians' contracting with a PPO.

PPOs that have a claims history of physician payment usually evaluate physician charges in an area and declare some reduction on an areawide basis. Again, the methods used are similar to those used or those that could be used by Medicare. Some PPOs lower the percentile at which the prevailing charge is calculated (462a); some offer a percentage of an area's prevailing charge (29); and some establish payment at the mean of the prevailing charge (7). A very few have lowered the percentile at which the prevailing charge is calculated for medical services less than they lower the percentile at which the prevailing charge is calculated for surgical services (244).

Both PPOs and Medicare use utilization review to control the volume of inpatient services, and many PPOs go beyond Medicare controls to include prior authorization before hospitalization. In a survey of members of the American Association of Preferred Providers, almost half of the 143 operational members reported that they had a utilization program in place for cost-containment purposes (7). Relatively few PPOs have developed "adequate protocols to review clinical efficiency or appropriateness of care" (51). It is unlikely that PPOs utilization review programs have been extended to cover office-based physicians' services. Although under Medicare utilization review for office-based physicians is required, the implementation of the review varies considerably among carriers and is often ineffective in containing costs (475).<sup>19</sup>

The major way that PPOs differ from Medicare in physician payment is not in pricing method, but in the negotiation of contracts with selected providers. Under Medicare, almost any physician who chooses can participate in the program, but in a PPO arrangement, the PPO chooses the providers with whom it wishes to contract. The methods for selecting participating physicians vary. Some, but far from all, PPOs limit physician enrollment on the basis of performance standards (53). Future PPOs may attempt to restrict members to practitioners with cost-effective practice patterns (51). Very few PPOs have the standards or the technology capable of systematically evaluating the cost-effectiveness of physicians.

#### Dimensions of Evaluation

Evidence of the effect of discounting by PPOs in the private sector on quality, access, and costs is primarily limited to information supplied by sponsors of PPOs and other interested parties. The number of PPOs and their rate of growth are indicators of private sector interest in PPOs, and

<sup>19</sup>Sections 7500-7535 of the Medicare Carriers Manual, Part C. Claims Process provides instructions for utilization review by carriers. The General Accounting Office concluded that the Health Care Financing Administration's policies and practices have tended to provide disincentives to carriers for performing effective utilization review (475).

since the emphasis in the private sector is on controlling costs through price competition, an oblique expression of the private sector's evaluation of the cost-containment potential of PPOs. Despite wide variations in estimates (see app. D), it is evident that PPOs have increased considerably since the acronym was first established in 1981 (7) and will increase in the future.

To the extent that PPOs employ discounting as a payment methodology, physicians' acceptance of PPO discounting is indicated by their enrollment in PPOs. One study estimates that overall 5 percent of the Nation's doctors had a contractual arrangement with a PPO in 1983 (156). A much higher percentage of physicians was involved in California, which is the State where the largest number of PPOs are located.<sup>20</sup> The level of physician participation would appear to be linked with the degree of competition in an area.

Information on patient acceptance of PPOs is just developing, and available numbers are too small to be statistically significant. In 1983, only 14.6 percent of the physicians in California who had signed contracts with PPOs had seen PPO-linked patients (374). Of all physicians, obstetrician/gynecologists and orthopedists were most likely to have seen a PPO patient. The likelihood of patient participation was also higher among the larger metropolitan areas than in the semi-urban and rural areas, and varied among metropolitan areas (374).

Objective analysis of the cost-effectiveness of PPOs is sparse. A study of Stouffer Corporation's PPOs found significant cost savings the first year. In addition to discounting, the PPOs had a rigorous monitoring system of utilization review in participating facilities, which had lower charges than the community norm before the PPOs were functioning (53).

Selective contracting by Medi-Cal with hospitals on a negotiated rate basis yielded substantial savings to the State from reduced payments, with

<sup>20</sup>Zeroth of physicians contacted in California to join PPOs have signed a contract with one or more organizations. If physicians not yet contacted signed up at the same rate as those that were contacted, 35.5 percent of physicians in California would have signed PPO contracts (374).

little evidence of reduction of quality of care (245). The Medi-Cal program does not contract with physicians, although there is legislation authorizing it to do so. Although private payers have signed contracts with physicians, by early 1985 the practice was still not sufficiently widespread to have affected office practice patterns. Assessment of the effects of private sector contracting on access to physicians and quality of care remains to be done.

Selective contracting with negotiated or discounted fees would allow Medicare to use its leverage in the market place to bargain with physicians about the price of services and assignment (242). Furthermore, Medicare could technically implement a discounting method based on selective contracting (see following section on administrative feasibility). One problem, however, is that although PPOs in the private sector are often designed to reward patients for using member physicians, Medicare might have problems in implementing a reward system. Reducing deductibles and coinsurance of those beneficiaries who use less costly physicians might not be effective because of the extensive use by Medicare beneficiaries of Medigap insurance that covers their cost-sharing liability. On the other hand, Medicare beneficiaries might choose not to purchase Medigap insurance if they were able to obtain the coverage they want from Medicare. Reducing premiums for some beneficiaries and not others might be politically troublesome.

## Technological Change

An important condition affecting the development of technologies is the potential market, which is determined in large part by third-party reimbursement (487). CPR reimbursement provides physicians with financial incentives to provide technology, particularly equipment-intensive and surgical technology, to the extent that their net revenues are higher with greater use. Although the CPR payment method has been instrumental in the development of cost-increasing technology, it has provided little incentive for physicians to choose cost-saving technology.

By reducing Medicare's approved charges, the modifications to CPR described in this chapter

could change physicians' financial incentives to adopt and use medical technology and, in turn, affect the market for medical technology.<sup>21</sup> The effect on the market for medical technology cannot be ascertained, however, because the effect of lowering approved charges on the volume of services provided is uncertain.

If the volume of services provided to Medicare beneficiaries in response to lowered approved charges were to increase, the effect on the market would depend on the extent to which increased Medicare revenues to physicians from the increased volume compensated for the decrease in Medicare revenues to physicians from decreased approved charges.

If the volume of services did not increase, constraining approved charges would decrease physicians' demand for services that they use in their practice. Generally, to the extent that physicians' Medicare net revenue for a technology decreased, physicians' financial incentives to refer patients for services to other facilities would increase. Beneficiaries receiving highly sophisticated, expensive and new technology, such as MRI, would probably be referred to a regional facility. Beneficiaries receiving more established technologies that physicians might have in their offices but need replacement, such as mammographic, electrocardiographic, and X-ray equipment, could be referred locally, for example, to an office that only performs mammography located in the same building as their physician. Manufacturers could respond by developing cost-saving office-based equipment as well as continuing to develop technology for larger ambulatory facilities. Office-based laboratory testing equipment, for example, is already being developed in response to financial incentives, such as Medicare's prospective payment for inpatient services, to move care to less financially constrained ambulatory sites (332).

A number of factors could work against a shrinking market if Medicare's approved charges

were lowered. First, the modifications to CPR might restrain approved charges for only a relatively short period, and, hence, might not affect physicians' adoption and use of technology. Second, the competitive nature of today's health care system and the fear of malpractice claims would undoubtedly affect physician behavior and might soften the decrease in physicians' demand for technology. Lastly, the non-Medicare market might be sufficiently large to override any changes in the diffusion of the technology.

Moreover, the effects that lowering Medicare's approved charges would have on technologies for which Medicare has market power and that provide a large part of physicians' incomes might be somewhat different from the effects for other technology. For example, about 80 percent of the cataract surgeries performed in the United States are covered by the Medicare program, and decreasing prices for such surgery would have a dramatic effect on the incomes, as well as the Medicare revenues, of ophthalmologists who perform the surgery (161). For cataract surgery, unlike MRI and ESWL, there does not appear to be another large population who could be provided with the procedure if physicians perceived a lower level of remuneration as unsatisfactory. Although some ophthalmologists might reduce the amount of cataract surgery in response to lower approved charges, others might increase the number of such procedures. In any case, the growing supply of ophthalmologists would probably increase the aggregate supply of ophthalmologic surgery, so that reducing Medicare prices is unlikely by itself to decrease the use of the procedure and the use of implantable lenses (161). Because of the potential for volume increase, the financial incentives for the development of lower priced lens implants are not clear.

### Administrative Feasibility

The administration of the Medicare program's physician payment system is complex, cumbersome, and characterized by extreme variation among carriers along a series of parameters and by confusion among beneficiaries and physicians (see app. C and ch. 2). Although any of the above modifications of the current CPR method are administratively feasible with current computer tech-

<sup>21</sup>With financial constraints on the use of technology imposed by Medicare's prospective payment system for hospitals has had an effect on the market for technology, and has played a role in shifting some technology into ambulatory sites (489). Changes in physicians' Medicare revenues would also be expected to affect the market, since physicians influence the use of technology both in inpatient and ambulatory sites.

nology, changes with the greatest promise of simplifying administration are those that would reduce the number of factors for discriminating among physicians in determining their level of payment. The disapproval rate for physician claims is much higher under Medicare than in the private sector partly because private sector payers make fewer distinctions among physicians, making payment more consistent, uniform, and understandable (488). Competitive pressures among insurers to pay subscribers' bills is also instrumental in the lower disapproval rate. Perhaps of greater import is the fact that Medicare's prevailing charges are calculated at the 75th percentile of customary charges, whereas the corresponding private sector prevailing charges are calculated at the 80th to 90th percentile.

Both freezing customary or prevailing charges and lowering the percentile at which prevailing charges are calculated could be easily and inexpensively implemented, because they require no new data or basic changes in Medicare's physician payment system or in claims processing. Nonetheless, these methods retain all the features that make the system so difficult to administer. Furthermore, if such modifications resulted in prevailing charges that were appreciably lower than now, carriers could have increased administrative expenses due to an increase in telephone calls, letters, and appeals from physicians.

Reducing the variation in approved charges for services by type and site of service might make the CPR payment method even more complex than at present. Lowering approved charges for some services but not others, or lowering approved charges for some services and raising approved charges for others would require the identification of specific services and would generally increase the number of factors used to determine physicians' charges. The Health Care Financing Administration (HCFA), with expert advice, could identify those services whose approved charges would be lowered and those services whose approved charges would not be changed or would be raised. The carriers would then have to implement HCFA's decisions. Although not outwardly obvious, lowering approved charges

for inpatient services would also complicate the administration of CPR, because in practice carriers construct one prevailing charge for surgical services irrespective of where performed (347). Thus, additional prevailing charges would have to be developed for surgical services performed on an ambulatory basis. Again, physicians who were adversely affected by the modifications might require carriers to spend time and effort in answering their complaints.

Reducing the variation in approved charges by specialty and within States could simplify administration. Either change would increase the uniformity of payment among physicians, although changes in payment level might initially cause a negative reaction from physicians whose approved charges were lowered.

The concept of selective contracting by negotiating fees or discounting from charges is very new to Medicare. Medicare might have some of the technical capability to implement a discounting method for physicians' services based on selective contracting. Claims administration for PPOs in the private sector has proven to be more complex and costly than many insurers had anticipated (246). Although Medicare might have the ability to identify lower cost physicians from historical data, the possibility of establishing a utilization review system for ambulatory services, a system necessary for cost saving, is less certain in the short run.

Although HCFA appears to have the jurisdiction to negotiate directly with physicians (174), such direct negotiations run counter to precedent. Since carriers have traditionally been HCFA's contact with physicians, the most likely approach is for carriers to undertake selective contracting with providers or provider groups who would lower their allowed charges (preferred providers). Establishing a category of preferred providers would require supplying physicians with copies of their customary and prevailing profiles. It would also require establishing two pricing systems for claims processing—one for physicians who would be paid by the traditional method and another for physicians who would be paid on a contract basis (347).

## CONCLUSION

The effects on Medicare expenditures of lowering approved charges for all or selected services—whether by freezing customary and/or prevailing charges or by lowering the percentile at which prevailing charges are calculated—are uncertain. The relation of payment rates to volume of services has not been established in the theoretical or the empirical literature. If the volume of services does not increase in response to a reduction in approved charges, lowering approved charges would decrease the rate of growth in Medicare expenditures. If the volume of services does increase when approved charges are lowered, however, the effect on Medicare expenditures would depend on the magnitude of the costs saved by the program due to a decrease in approved charges compared with the magnitude of program costs incurred due to an increase in the use.

Lowering approved charges for all or selected services by freezing charges or lowering prevailing percentiles would have only a temporary effect at best in terms of reducing Medicare expenditures. Under CPR, increases in physicians' billed charges are later reflected in Medicare's approved charges, thereby encouraging physicians to raise their billed charges to beneficiaries. None of the identified modifications would change this feature of CPR.

Freezing charges or lowering prevailing percentiles would be likely to increase beneficiary costs regardless of whether the volume of services provided to beneficiaries changed. Since lowering Medicare payment decreases assignment rates, beneficiary unassigned liability would be likely to increase. Although beneficiary coinsurance would decrease with lower approved charges, the increase in beneficiary unassigned liability would most likely exceed the decrease in coinsurance.

An increase in beneficiaries' out-of-pocket expenses would decrease their financial access to services. Quality of care would be decreased to the extent that access to an appropriate level of services fell. If the volume of services provided to Medicare beneficiaries did not increase in response to lowered charges, physicians might increase their time spent and volume of services pro-

vided to non-Medicare patients to maintain total revenues.

Reducing the variation in approved charges for selected services would address the problem of perceived inequities in payment rates between certain services. Lowering approved charges for services over which Medicare has market power could be undertaken as an interim step or as an independent modification.

The effects on cost, access to care, and quality of reducing the variation in payment rates among services by lowering the approved charges for procedural services, inpatient services, specialist, and urban services would be similar to the effects of lowering approved charges for all services. Access to nonprocedural services, ambulatory services, generalist, and rural services, however, might not be affected.

If the variation in approved charges among services was reduced by lowering approved charges for procedural services, inpatient services, specialist, and urban services and raising the approved charges of nonprocedural services, ambulatory services, generalist, and rural services, the cost and access effects would be different. The effect on Medicare program expenditures would be unpredictable and would depend on whether the cost saved by the program due to a decrease in approved charges was equal to, greater than, or less than the costs added to the program by the increase in approved charges.

Beneficiary liability would increase for services with lower approved charges and would decrease for services with higher approved charges. The effect on net beneficiary liability is uncertain and would depend on whether the increase in beneficiary liability as a result of lowering approved charges for some services was equal to, greater than, *or* less than the decrease in beneficiary liability as a result of raising approved charges for other services.

During the process of reducing the variation in approved charges between procedural and nonprocedural services, Medicare could adjust approved charges for technologies whose initial pay-

ment level has been maintained although the physician time, skills, and resources required to perform the procedure have declined. Medicare could also periodically review and adjust approved charges for such technologies whether or not variations in approved charges between procedural and nonprocedural services were reduced.

Reducing the variation in approved charges by specialty and location has aspects that differ from reducing the variation in approved charges by type of service and site of service. One way of reducing the variation by specialty would be to calculate a single prevailing charge for all physicians in a locality. This approach would simultaneously lower the approved charges for specialist services and raise the approved charges for generalist services. The change in total Medicare expenditures would depend on the relative numbers of generalist and specialist services in the locality and the distribution of customary charges for generalists and specialists in the locality. Similarly, the change in Medicare expenditures from reducing locality differentials by calculating a statewide prevailing charge for all physicians

would depend on the relative number of services in the different localities and the distribution of customary charges by locality.

Reducing the variation by specialty does not appear to be an effective way to stimulate physicians to train as primary care physicians; however, the effect of payment rates on specialty choice in today's economic environment has not been investigated. Reducing the variation within States might marginally influence family physicians and internists to locate in small towns. Determining the quality effects of reducing the variation in approved charges by specialty is confounded by the unresolved issue of whether specialists provide better quality care than generalists.

Controlling the approved charges of all services by providing beneficiaries with the option of receiving care from preferred providers appears to have the potential for constraining expenditures. The effects on quality of, and access to care, however, are unassessed as yet. Medicare could adopt this new method as an optional payment method for Medicare beneficiaries.