Physician Payment Reform: Past and Future

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IN JANUARY 1992, AFTER PROLONGED DIALOGUE AND review, the Health Care Financing Administration (HCFA) implemented one of the most important pieces of health care legislation since the adoption of Medicare and Medicaid 25 years ago: the physician payment reform provisions of the Omnibus Budget Reconciliation Act (OBRA) of 1989.[1] These amendments to Title XVIII of the Social Security Act, which provides legislative authority for the Medicare program, change fundamentally the way Medicare compensates physicians for the services they provide to elderly Americans. The new framework for payment is likely to have profound effects not only on physician incomes, but also on the cost, quality, and availability of physician services to Americans of all ages. In this article, we describe the forces that led to physician payment reform, the major components of the legislation, and its likely effects.

The Forces Leading to Physician Payment Reform

The original approach to paying physicians under Medicare was fashioned in 1966 with one overriding goal in mind: assuring physician par-

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ticipation in a program whose passage had been vehemently opposed by the profession. At the national convention of the American Medical Association (AMA) in June 1965, shortly before Medicare's enactment, nine state delegations introduced proposals to boycott the new system (Blumenthal 1988). In an effort to placate physicians, Congress adopted a payment system that was based largely on physicians' charges and therefore likely to be broadly acceptable. This rather complex set of rules came to be known as the Customary, Prevailing, and Reasonable (CPR) methodology (Levy et al. 1991). Under CPR, the Medicare program paid physicians a "reasonable" fee, which consists of the lowest of three amounts:

1. the actual charge submitted
2. the fee customarily charged by a particular physician for the service in question
3. the prevailing charge of physicians in a given locality for that service (set at the 75th percentile of customary charges among area physicians)

Congressional political calculations proved accurate. No physician boycott materialized, and Medicare was smoothly implemented. In other respects, however, the CPR system has proved inadequate. Major flaws in the system have become evident, providing substantial motivation for recent reforms.

A first problem with the CPR system was its irrationality. Because CPR fees were based primarily on charges, they bore no meaningful relationship either to the value of the service provided or to the cost of producing it. Historically, charges for nonprocedural (so-called evaluation and management, or EM) services have been low relative to those for technical interventions (Hsiao et al. 1988a). The reasons for this are multifactorial, owing partly to distortions caused by insurance coverage (procedures covered, visits less well covered), and partly to patients' perceptions of value. Many have been concerned that underpayment of nonprocedural services, compared with technical interventions, has provided incentives for physicians to enter procedure-oriented disciplines in excessive numbers and to overuse technical services (Almy 1981; Epstein, Begg, and McNeil 1986; Schroeder 1979). At the same time, the system permitted extraordinary differentials between geographic locales in payments for similar services. For example, in 1984, the prevailing charge

for a total hip replacement in Washington, DC, was $1,547, compared with $4,126 in New York City (Ginsburg 1989).

A second important deficit in the CPR methodology was that it contributed to the uncontrolled growth in the cost of physician services. In its original formulation, the CPR system provided substantial incentives for physicians to raise their charges. Then in 1975 the government modified the original formula to limit the rate of increase in prevailing charges to the Medicare Economic Index, or MEI, a measure that parallels changes in practice costs. The result of this policy was to produce a de facto fee schedule, freezing the distortions of CPR into place. Moreover, annual spending on physician services per Medicare beneficiary has continued to increase. Although charge inflation is limited by the MEI, there have been almost no controls on the volume of services physicians deliver. During the 1980s, the volume of services per enrollee grew at more than 7 percent annually (Physician Payment Review Commission 1988; Ginsburg 1991). Part B expenditures (of which 73 percent are for physician services) grew more than three times faster than expenditures for Part A (Physician Payment Review Commission 1990).

A third problem with the Medicare payment system was its failure to eliminate certain barriers to access among Medicare beneficiaries. Access to medical services for the nation's elderly has improved since Medicare was initiated. For example, the percentage of elderly Americans with at least one physician visit annually went up by 20 percent between 1963 and 1980 (Gornick et al. 1985). At the same time, mean out-of-pocket expenditures for medical care have remained high for Medicare beneficiaries and large differences persist in use of services by race and income group (Davis and Rowland 1986; Long and Settle 1984).

The financial burden for Medicare beneficiaries and related problems in access are largely attributable to the so-called balance bill: the difference between the amount physicians actually charge and the amount defined as the "reasonable" charge under CPR. In recent years Congress has developed legislation to limit the size of balance bills and to encourage physicians to forgo balance billing by accepting assignment. Although these policies have ameliorated access problems, the percentage of bills paid by assignment still varies across the country (U.S. Congress 1990), leading to substantial variation in the financial burden of the Medicare program, especially for low-income elderly who cannot afford supplementary insurance (Schlesinger and Drumheller 1988).

A fourth concern about the traditional physician payment system

under Medicare was that it has failed to check, and may even have contributed to, deficits in the quality of care provided to Medicare beneficiaries. The empirical basis for this accusation has been provided largely by research groups at Rand and Dartmouth. Wennberg and his colleagues have documented dramatic interregional variations in rates at which physicians employ certain procedures for similar population groups (Wennberg et al. 1989). In more recent studies, Chassin et al. (1989) have demonstrated that as many as one-sixth to one-third of Medicare patients undergo important diagnostic or therapeutic procedures for inappropriate indications. Analysts have questioned whether apparently irrational regional differences in compensation for procedures may be partly responsible for these problems.

In the early 1980s, Congress was preoccupied with hospital payment reform. After implementing prospective payment for hospitals, Congress began to focus on physician payment. Recognition of deficits in the CPR methodology and related problems prompted widespread congressional discussion of ways to reform the existing payment system. One popular proposal at that time was the promotion of prepaid managed care, or so-called capitation arrangements, for elderly Americans. By enrolling Medicare beneficiaries in health maintenance organizations (HMOs) and similar organizations, the government might realize the cost savings these organizations had apparently achieved in treating younger populations, and at the same time reduce the administrative burden associated with processing fee-for-service (FFS) claims by Medicare carriers and intermediaries (Schlesinger and Drumheller 1988).

Another prominent alternative considered during the 1980s was development of a payment system that would compensate physicians in one lump sum for all the care needed during an episode of illness. Under this proposal, Part B of Medicare would develop a prospective payment system (PPS) analogous to the diagnostic-related group (DRG) system under Part A. A so-called physician-DRG system might, for example, make a single payment for all the care needed to manage a myocardial infarction, an episode of asthma, or an upper respiratory infection. Such an approach would blunt incentives in the FFS–CPR system to provide additional, perhaps unneeded, care and more highly specialized services.

Despite some attractive aspects, both approaches to reform carried potential problems. The number of HMOs was insufficient to enroll 34-million elderly beneficiaries, many of whom had strong attachments to

FFS physicians. There were also concerns that HMOs might underserve beneficiaries in an effort to control costs, and attempt to exclude high-risk elderly patients. The provision of fixed payment for care of patients with specific medical conditions was considered problematic because of large variations in patient severity and evidence that individual physicians treat insufficient numbers of patients for gains and losses to cancel each other out (Mitchel 1985). Perhaps most important, either capitation or physician DRGs would have required Medicare to reduce its reliance on the FFS-based approach to compensation that had been the mainstay of physician payment throughout American history (Jencks and Dobson 1985). As a result, during the latter half of the decade a consensus developed to pursue at least one more attempt to reform the traditional Medicare payment system before discarding it.

Reform of Physician Payment

OBRA 1989 provides a blueprint for a series of changes to be adopted over a five-year period. The central features of the physician payment reform legislation are perhaps best understood in terms of the goals they are designed to achieve. The first such goal is the rationalization of the FFS payment system under Medicare: the elaboration of fees that bear some clear, rational, and empirically justified relationship to the value of the service provided (Ginsburg, Leroy, and Hammons 1990). Rationalization of the FFS system could have a number of salutary effects, one of the most important being the elimination of historic inequities in compensating different groups of physicians.

In theory, the value of physician services might be measured in a number of different ways, for example, in terms of the effect of the particular service on patient health status, or as gauged by patients' subjective valuations. Although appealing, neither of these approaches is currently practical because the necessary data are lacking and would be extremely difficult to develop.

The physician payment reform legislation relies, therefore, on a third approach to calculating value: the resources consumed in providing services. The basic methodology for determining the relative amount of resources used in producing different physician services was developed by Professor William Hsiao and his colleagues at Harvard University, and has been extensively described elsewhere (Dunn et al. 1988; Hsiao et al.

1988b; *Federal Register* 1990). The Physician Payment Review Commission (1991), HCFA, and physician groups have further refined the Hsiao approach (*Federal Register* 1991). For our purposes, it is sufficient to recall that compensation for any physician service will be the product of its relative value, a geographic adjustor, and a conversion factor (*Federal Register* 1990).

The relative value of a service reflects the amount of physician work required to perform the service and the associated practice and malpractice costs. The geographic adjustor measures differences in the costs physicians experience in various localities. Separate geographic adjustors will be calculated for physician work, practice costs, and malpractice costs. The conversion factor will translate value units into dollars and cents. The law stipulates that for 1992, the year in which the fee schedule went into effect, the conversion factor should be set to result in aggregate physician expenditures for Medicare that are the same as they would have been under the CPR system (the so-called budget neutrality requirement). Each year, Congress must set the following year's conversion factor by applying an "update factor" that will take into account a number of considerations, including inflation, changes in the volume and intensity of services, access to services, and past experience with Medicare spending on physician services.

A second major goal of the physician payment reform provisions of OBRA 1989 is to reduce the rate of growth in physician expenditures under Medicare. The Medicare Volume Performance Standard (MVPS) is central to this purpose. The MVPS is a target rate of increase in physician expenditures that Congress must set each year for the following year. Congress can set the figure at any level it wants, but if it fails to act, a default formula written into the law will set the rate automatically. The law specifies that annual updates for physician fees in any given year should take into account whether the growth rate in physician expenditures two years previously was above or below the rate specified by that year's Volume Performance Standard (VPS). (The two-year gap is required because Congress in any given fiscal year is setting the following year's update, but has data only on the previous year's Medicare experience. For example, in 1994 federal authorities have to set the update for fiscal 1995, but will have complete data on spending only for 1993.)

To obtain some sense of how the MVPS might affect the update, it is useful to examine the default formula because it is not improbable, in

light of past congressional budgetary paralysis, that the formula will be invoked. The default mechanism specifies that the new update figure will be the expected rate of inflation in the practice expenses of physicians (as measured by the Medicare Economic Index, or MEI) minus the difference between the previous year's actual expenditures and the MVPS. For example, say that the MVPS for 1993 was 8 percent, but actual 1993 Medicare physician expenditures rose by 10 percent. If the projected MEI for 1995 was 4 percent, the default update for 1995 would be 4 percent minus (10 − 8), or 2 percent. The interaction of the MVPS and the update thus provides a feedback loop that corrects future physician fees for past Medicare spending experience, and sends a clear message to physicians about congressional intent to restrain expenditures. Congress is required to provide separate updates for surgical and nonsurgical services.

A third goal of the physician payment reform legislation is to protect Medicare enrollees' access to health care services. To achieve this, the law's most important provisions are designed to ensure that restrictions on Medicare payments to physicians do not result in higher financial barriers to physicians' services. Faced with lower fees, either because of the Resource-based Relative Value Scale (RBRVS) or because of small updates, physicians may be tempted to make up lost revenues by balance billing patients. After 1993, physicians will be unable to balance bill poor Medicare beneficiaries at all (those eligible for Medicaid), and will be forbidden to add more than 15 percent to the allowed Medicare fee for other beneficiaries.

Another access-related provision of the new system is intended to ameliorate chronic shortages of physicians in certain underserved areas. Physicians practicing in these localities would receive 10 percent more than their Medicare-approved fee for each service they provide to a Medicare beneficiary (*Federal Register* 1991).

An important fourth goal of the new payment law is to safeguard and even enhance the quality of care provided Medicare beneficiaries. Sensitive to the findings that some fraction of Medicare physician services may be unnecessary or inappropriate, the law creates the Agency for Health Care Policy and Research (AHCPR) for the purpose of increasing the availability and use of information on the utility of clinical practices. The new agency is to fund an expanded program of research investigating the effectiveness and outcomes of new and existing medical practices

and procedures, and to use that information to formulate guidelines for optimal clinical practice. AHCPR is also mandated to disseminate those guidelines widely to the physician community.

Will Physician Payment Reform Be Effective?

Providing a Rational Basis to Value Physician Services

The decision to base physician payments on the cost of producing the services in question appears theoretically defensible because it is consistent with how prices are set at equilibrium in well-functioning markets (Iglehart 1990). Despite this restructuring, however, a major flaw in the new payment system persists because it is only partially resource based. The relative unit (RVU) that defines the level of payment for each service is the sum of RVUs from three sources: physician work, practice expense, and malpractice expense. Physician work comprises approximately 54 percent of the total; malpractice and practice expense account for the remaining 46 percent. Although the RVU component related to physician work is based on extensive calculations of services inputs, the numbers of RVUs associated with malpractice and practice expense are based on historic charges rather than the cost of these items. Specifically, the legislation states that the number of RVUs assigned for malpractice and practice costs will be the product of the average percentage of gross revenues that these items consume in clinical practice overall and the average allowed charge for a given service in 1991. The new fee schedule therefore is 54 percent resource based and 46 percent charge based, a formulation that preserves some of the traditional inequities in payment for different services.

Despite Hsiao's considerable achievement in his work on the RBRVS, a number of methodological criticisms have been leveled by scholars, government agencies, and specialty societies (McMahon 1990). Questions remain about the accuracy of estimates by Hsiao's group of relative work values for major categories of services. The Physician Payment Review Commission (PPRC) has also questioned whether work values developed for the general population (the approach pursued by Hsiao

and his colleagues) can be applied to Medicare's more elderly and infirm beneficiaries (Physician Payment Review Commission 1991).

Even if the structural issues discussed above can be rectified, substantial technical difficulties will impede successful implementation of an RBRVS. The costs of providing more than 7,000 procedures have now been calculated. However, changes in technology and practice will require frequent updates and revisions to this fee schedule. The law specifies that such updates will occur no less frequently than every five years. (Geographic cost indices must also be reviewed at least every three years, another challenging assignment.) Recognizing that a five-year interval may be excessive, HCFA has proposed yearly reviews of the relative value scale to set RVUs for new services or to modify existing work values in response to changing practice or technology (Physician Payment Review Commission 1991).

The process of continued updates and refinement raises the possibility of ongoing contention between different specialty groups and the HCFA. In November 1991, the AMA, the American Osteopathic Association, and 22 specialty societies joined to sponsor an AMA/Specialty RVS Update Committee (RUC). The sponsoring societies intended the RUC to provide the primary input for HCFA's annual reviews and refinement. In July 1992 the RUC submitted recommendations for 253 new and revised codes. The majority of these were subsequently adopted by HCFA. Although not all specialty societies were initially represented, the RUC has sought to widen participation (Todd 1992). Clearly, the emerging partnership between HCFA and a broad coalition of provider groups is a healthy sign. It is too early to predict whether downstream the concerns of individual groups will jeopardize this collaborative effort as budgetary constraints become more severe.

Reducing Inequities in Physician Payment

Adoption of the new payment system will almost surely lead to important changes in physicians' Medicare revenues by specialty and geography. Published estimates of the magnitude of these revenue effects have varied considerably as original estimates of work values have been refined, and as private and public analysts have applied differing assumptions about how physicians will respond to the new fee schedule. However, the qualitative directions of predicted changes have been con-

sistent across all studies, and are well illustrated by HCFA's estimates, which were published in November 1991 (*Federal Register* 1991). HCFA predicts, for example, that although by 1996 annual payments to general practitioners will be 27 percent higher than CPR would have provided, they will be lower by 18 percent for cardiology and by 21 percent for ophthalmology (table 1). Similarly, geographic differences will diminish. Depending on specialty, allowed charges in rural areas may increase by as much as 30 to 40 percent, whereas in large urban areas they may decrease by as much as 25 percent (Physician Payment Review Commission 1989).

Although inequities in Medicare payment will be reduced, specialty-related differentials in compensation are unlikely to disappear completely. Physicians who provide technical services will still generally be more highly paid than those who do not because technical services require more work. Pediatricians, historically underpaid, will not be affected at all by the Medicare payment reform because, like obstetricians, they rarely see Medicare beneficiaries. Nationally, Medicare accounts for only 30 percent of physician income. Thus, the rationalizing

TABLE 1
Physician Fee Schedule: Impact by Specialty

	Percent change in payments for fee schedule relative to CPR			
	Year 1		Year 5	
Specialty	Per service	Overall	Per service	Overall
Family practice	13	14	15	17
General practice	14	15	14	16
Cardiology	−5	−2	−17	−18
Internal medicine	0	0	−3	−1
Gastroenterology	−7	−2	−25	−11
Urology	−4	−1	−15	−7
General surgery	−5	−2	−20	−9
Ophthalmology	−8	−3	−35	−16
Orthopedic surgery	−6	−2	−19	−9
Thoracic surgery	−7	−2	−31	−14

Source: Adapted from the *Federal Register* (June 5, 1991).
Abbreviation: CPR, customary, prevailing, and reasonable methodology.

effect of Medicare physician payment reform will depend heavily on whether non-Medicare payers adopt the RBRVS.

Will the resource-based relative value approach be adopted by other payers? Despite its prominence there are impediments to its spread. Indemnity plans are concerned that adopting the fee schedule will merely result in greater balance billing of patients. Blue Shield and many managed-care groups, especially independent practice associations (IPAs), worry about physicians' willingness to participate in payer programs that adopt the RBRVS.

Nevertheless, it seems likely that some third-party payers will choose to experiment with the RBRVS for non-Medicare patients. In November 1992 the PPRC surveyed 13 commercial insurance companies to determine their methods for paying physicians. Although no commercial insurer has yet adopted the RVS as its primary payment system, eight companies have either incorporated features of the RVS (for example, applying RVS values as charge screens to determine "reasonable" levels of reimbursement) or used it as a tool in negotiating with provider groups. In 1992 the Blue Cross Blue Shield Association surveyed 37 plans. Twenty-nine of the plans that responded to the survey declared their intention to implement an RBRVS system. Three plans have already adopted the RVS methodology for one or more insurance packages, nine plans indicated they would do so for one or more product lines by 1993, and 17 plans said they intend to do so "sometime in the future" (Lauren B. LeRoy, PhD, Deputy Director, Physician Payment Review Commission, December 1992: personal communication).

Insurance companies that serve as Part B carriers are likely to be particularly well positioned to extend the Medicare system because the necessary infrastructure to administer the RBRVS is already in place. For other companies, the cost of training personnel and purchasing new computer software could entail a significant investment. Payers with greater market power may also be more willing to risk the potentially adverse physician reaction that may accompany modification of the current system.

Interestingly, managed-care systems may be especially reluctant to adopt the federal formula to compensate their physicians. Managed-care programs, especially HMOs, have attempted to decrease use of expensive specialty services, spending a greater proportion of premium dollars on primary care. A payment system that increased compensation to primary-care physicians may, therefore, have a disproportionately negative effect on the finances of such organizations.

Controlling Costs

The success of physician payment reform will be judged in large measure by whether it reduces the rate of growth in physician expenditures under Medicare. Predicting the new law's ability to accomplish this goal is a highly speculative exercise. The imposition of fee schedules in Canadian provinces has been associated with more temperate growth rates in physician payments (Hughes 1991), but the differing size and political culture of the United States and Canada make projections from the Canadian experience hazardous.

OBRA 1989 does create new opportunities to control the cost of physician services. These new opportunities derive in part from the greater fairness of the new payment system and in part from new mechanisms for cost control embodied in the law. The rationalization of physician payment under the new law may increase the willingness of federal authorities to reduce physicians' fees in order to control costs. Under the new legislation, controlling physicians' fees should be technically simpler than it was under the CPR approach. Price setting under the old system was increasingly complicated by the realization that certain specialties and geographic groups were underpaid, others overcompensated. In establishing annual fee increases for physicians, Congress and HCFA felt obligated to vary allowed increases by specialty and even by procedure. In the future, federal authorities will be able to set one annual update for all physician payments.

Architects of the new system are also hopeful that the effectiveness of fee controls will be increased by explicitly linking future physician fee raises to past spending on Medicare physician services. The hope is that this linkage will temper physicians' incentives to increase the volume of services provided in order to compensate for fee controls (a response predicted by the so-called target income hypothesis of physician behavior). HCFA's reliance on a "behavioral offset" in initially setting the conversion factor was meant to provide additional insurance against the cost effects of compensatory volume increases (*Federal Register* 1991).

Attempts to control costs through fee controls may be further assisted by reforms in the categorization of Medicare physician services. The new law mandates studies to rationalize and simplify the definitions of the various services for which Medicare pays. By reducing the number of such compensable services, and making their descriptions more sensible, lawmakers hope that Medicare will limit the ability of physicians to

game the payment system by billing for the most expensive of several applicable codes or by breaking a visit into multiple billable services (so-called unbundling) that together bring in more revenue (and cost Medicare more) than a single visit.

Less direct effects of OBRA 1989 may also facilitate cost control. Lower compensation for procedures may reduce both the attractiveness of the associated specialties, thus diminishing the number of specialists, and the pressure to utilize new and existing technologies.

Perhaps the most important indirect effect is the potential psychological influence of the new law. Some observers are hoping that the introduction of comprehensive payment reform will shock physicians into the realization that they must change their behavior, or face progressively more painful cost-control interventions (Glenn T. Hammonds, MD, 1991; personal interview). From this standpoint, the specifics of the legislation are less important than its enactment per se and the expressed seriousness of congressional intent.

Unfortunately, the success of the new system in controlling physician expenditures depends more on such psychological effects than federal authorities might wish, for there are a number of inherent weaknesses in the law's cost-control provisions. Perhaps its most severe deficiency is the creation of what Hiatt has called a "commons problem" (Hiatt 1975). The term refers to situations in which individuals (like colonial New England cowherds), by responding rationally to personal economic incentives (the availability of free grazing on town commons), find themselves overutilizing a scarce resource (overgrazing the commons), with detrimental consequences for all (the ruin of the commons).

The commons problem associated with the new law is inherent in the working of the MVPS. Although physicians may suffer collectively in future years if they respond to fee limitations by increasing service volume, they may still benefit individually in the short term from doing more procedures. In fact, they continue to benefit until the resulting price controls become so onerous that the marginal return from an extra procedure is not worth the work involved. Because it will take two years for the law to provide negative feedback in response to excessive physician spending, the effectiveness of the VPS as a cost control device will be attenuated further.

Equally discouraging is the fact that OBRA 1989 does not address many of the fundamental forces underlying the surge in physician expenditures. The law does not change the incentives of the FFS com-

pensation system, which encourages physicians to do more rather than fewer procedures, especially if incomes are being reduced through lower prices. It will not affect, at least in the short term, the rate of introduction of new medical technologies, nor the discovery of new uses for old technologies. The number of physicians, increasingly viewed as a critical determinant of the rate of growth of physician expenditures, will continue to increase (Hughes 1991; Grumback and Lee 1991). Any relief that would be provided by redistributing new graduates from high-cost to low-cost specialties is likely to be some time in coming, and will be tempered by the fact that many specialized, procedure-oriented physicians will still earn considerably more than primary-care physicians under RBRVS.

Because of these deficiencies in the cost-control provisions of the current legislation, it seems likely that the volume of services provided by physicians will continue to rise, at least in the short term, at rates considered unacceptable. We envision at least four potential federal responses.

The first is fee reduction. For 1993 the Secretary of Health and Human Services recommended that fees for surgical services be increased by 2.6 percent and nonsurgical services by 0.3 percent. Both updates reflect a reduction in fee levels after correcting for inflation. The secretary's recommendation was said to reflect the extent to which growth rates in physician services in 1991 were greater than VPS projections. Spending on surgical services grew at 2.9 percent, 0.4 percent below the 1991 target, whereas expenditures for nonsurgical services increased by 10.5 percent, nearly 2 percent more than the 8.6 percent target.

Will physicians continue to exceed the VPS targets and, if so, will Congress continue to respond with increasingly draconian price controls? Obviously no one can be sure, although the commons problem, increases in the physician work force, and the other factors we have discussed do not encourage us to believe that recent patterns of service increase will change substantially. On the congressional side, the pressure to reduce the national deficit is tremendous. Over the period 1975–87, Quebec had one of the most successful programs of physician cost containment of any province in Canada (Hughes 1991). This record was achieved by reducing real physician fees by nearly 24 percent over this period. Drastic fee control is also the cost-control approach adopted by many state Medicaid programs and its deleterious effect on physician participation in the Medicaid program has reduced access to care for Medicaid recipients (Physician Payment Review Commission 1991;

Freun, Hadley, and Korper 1980). Its potential effects on access to care for Medicare patients are discussed below.

As a second addition to current cost controls, legislators may try to penalize selectively physicians who are responsible for volume increases that lead to increased expenditures. One way to do this would be to develop VPS's and updates for smaller groups of physicians, identified by geography, specialty, or even institutional affiliation. Federal authorities might, for example, develop VPS's for ophthalmologists in Boston or cardiac surgeons in Los Angeles. In theory, these smaller groups would be better able to identify and pressure high-volume practitioners to cease behaviors that are resulting in lesser price increases for their particular specialty and area. Even if such peer pressure did not work, at least physicians acting more in concert with the purposes of the law would not be penalized because of the behavior of physicians in distant locales and unrelated specialties. The difficulty, of course, is that individual physicians or small groups of doctors may, in fact, have sicker patients requiring more intense care, and available information will not allow the federal government or local colleagues to take case mix into account.

A third possible approach would involve more aggressive utilization review by Medicare or its agents for the purpose of eliminating unnecessary services. Presumably, these reviews would rely on practice guidelines and standards developed by AHCPR, and would focus on the most costly procedures and practices. Although theoretically attractive, there are technical limitations, as noted below, that make this approach difficult to implement broadly.

A fourth alternative would be to cease compensating physicians on a FFS basis, relying instead on various schemes for "bundling services" like the physician-DRG system discussed above. The ultimate form of bundling services is the HMO, and failure of the OBRA 1989 legislation would likely result in more aggressive efforts to enroll Medicare recipients in these organizations as well.

Access to Care

OBRA 1989 limits on balance billing are likely to reduce the financial liability of Medicare beneficiaries. Projections developed by PPRC suggest that if there are no changes in the volume or mix of services delivered or in the percentage of cases in which physicians take assignment,

out-of-pocket expenditures for Medicare beneficiaries will decrease by approximately 25 percent (table 2) (Physician Payment Review Commission 1990). Because they are currently more likely to be balance billed, wealthier patients stand to benefit more from these restrictions on balance billing than low-income beneficiaries. Patients in geographic areas where physician participation has been common will benefit less than those in areas with relatively low participation rates (table 3) (U.S. Congress 1990).

Physician responses to fee alterations will be critical to Medicare beneficiaries' access to physician services in the aftermath of payment reform. Large projected changes in fees by geographic area suggest the possibility of regional problems in access. Previous studies have shown that physician location decisions are responsive to differentials in payment (Freun, Hadley, and Korper 1980). Levy et al. (1991) have estimated that more than 40 percent of doctors currently practicing in New York City will experience a reduction in their Medicare income of more than 10 percent; 12 percent will see reductions of more than 30 percent. Such hard-hit areas may experience substantial outmigrations of physicians.

Medicare's new method of payment could result in broader problems of access for Medicare beneficiaries if physician fees fall substantially below the standards set by other payers. Physicians would be tempted to substitute higher-paying patients. We believe that differential styles of

TABLE 2
Reduction in Out-of-pocket Expenditures for Physician Services in Relation to Beneficiary Income

Beneficiary income (% poverty)	Change in liability (%)
<100	−25
100–149	−28
150–199	−29
200–299	−29
>300	−33

Source: Physician Payment Review Commission (1990, 38).

TABLE 3
States with the Highest and Lowest
Physician Assignment Rates as
Percent of Covered Charges in 1989

State	Rate (%)
Highest rate	
Massachusetts	99.3
Rhode Island	97.1
Nevada	94.4
Michigan	93.6
Maryland	91.6
Lowest rate	
Idaho	33.7
South Dakota	38.7
Wyoming	40.2
Minnesoata	46.1
North Dakota	50.3

Source: U.S. Congress (1990).

care based on payer source may be more likely than outmigration if Medicare fees are substantially reduced over time.

These geographic and specialty effects of payment reform may well affect access by non-Medicare patients as well. A group of particular concern is the uninsured. If their incomes are reduced, physicians may be less willing to provide services to patients who are covered by Medicaid or who cannot pay their fees at all (Freun, Hadley, and Korper 1980; Blumenthal 1986).

Barriers to financial access will not be eliminated by the restrictions on balance billing under OBRA 1989. Patients who are unable to afford supplementary medical insurance (so-called Medigap), but who are not eligible for Medicaid—approximately one-fifth of the Medicare population—will still have to pay the 20 percent coinsurance out of pocket, and, in some instances, the additional 15 percent physicians are still permitted to balance bill (Schlesinger and Drumheller 1988).

Because of concerns over residual barriers to economic access, as well as the potential geographic and specialty effects of the legislation, Congress has required that the Department of Health and Human Services

monitor the impact of physician payment reform on access to care, and report annually on its findings. It seems likely that interest groups like the Association for the Advancement of Retired Persons will provide additional information.

It is difficult to predict reliably how Congress will respond to the development of problems with access. At the conciliatory end of the spectrum, Congress could extend the phase-in period, moderate fee reductions, or even provide certain geographic areas with exemptions. Alternatively, Congress may employ more coercive approaches, including mandating that physicians see Medicare patients.

Quality of Care

The enactment of the physician payment reform legislation should positively affect quality of patient care in several ways. First, the new fee schedule will sharply reduce the economic incentives under the CPR that encouraged the provision of some services, while discouraging the provision of others. Theoretically, this change toward economic neutrality should reduce the amount of inappropriate care delivered to Medicare patients, and perhaps encourage the delivery of certain appropriate services (such as preventive and counseling services) that have been poorly rewarded and may have been underprovided under the CPR system.

Second, the work of AHCPR should contribute to quality of care by increasing knowledge about the effectiveness and outcomes of common but understudied medical practices and procedures. AHCPR may also facilitate the development of valid, clinically meaningful outcome measures that will permit both providers and purchasers to measure accurately and fairly their performance in treating patients. The emphasis on disseminating new knowledge in readily consumable form (through guidelines) is new and potentially beneficial. The total budget for AHCPR in fiscal 1993 is $130 million; more than half of this amount will be expended on effectiveness and outcomes-related projects.

The provisions of OBRA 1989 could, however, also have certain adverse effects on quality. Perhaps most worrisome is the implicit threat that failure to achieve relatively prompt moderation in physician cost increases could result in increasing federal involvement in physicians' clinical decisions regarding Medicare patients. As a vehicle for conveying information in a succinct and practical form, guidelines for practices and procedures may offer substantial benefits. However, the use of such

guidelines by federal authorities to judge the appropriateness of clinical decisions involving individual patients—either prospectively or retrospectively—is more problematic (Epstein 1990). Whether the application of clinical rules to payment decisions can reduce the frequency of inappropriate care or save Medicare any money is presently unclear (Packer 1991).

The use of a fee schedule and the ceiling on balance billing, adopted to preserve access to care, unfortunately also have potential drawbacks for quality of care. Physicians with superlative skills will receive the same compensation for each service as those of borderline capability. Moreover, physician services of similar costs but very different efficacy will be compensated at similar rates. One might argue that providing high quality of care will still be rewarded by volume, if not by price, in areas of physician excess. Nevertheless, the new system sharply reduces the direct financial incentives to augment quality of service.

Other Considerations

The physician payment reform is likely to have important effects on matters other than cost, quality, and access to services, and some of these deserve at least passing mention.

One important outcome of the OBRA 1989 legislation is likely to be reduction in physicians' income. Even if the implementation of the law honors its original intent to achieve budget neutrality, the total amount of money physicians actually receive will be reduced because of new restraints on balance billing. This is likely to mean that even physicians who are treated favorably under the resource-based relative value scale could suffer erosion in their revenues if they did not previously accept assignment.

Another unpredicted consequence of physician payment reform that bears close scrutiny is its potential effect on the capacity of academic medical centers to pursue their research and teaching missions. In the last few years, as the prospective payment system for hospitals has restrained growth in hospital revenues, physician collections have come to play an important role in subsidizing research and teaching in many faculty practice groups. The ability of physician groups to provide these subsidies has depended heavily on the procedure-intensive orientation of faculty practices. Departments of medicine, for example, tend to pro-

duce large volumes of very lucrative invasive cardiologic and gastroenterologic interventions.

To the extent that academic practices are skewed toward such procedures, they will suffer disproportionately under a resource-based relative value system. A December 1990 survey by the Association of American Medical Colleges (AAMC) of 39 faculty practice plans among departments of medicine was relatively reassuring on this score. It showed that 18 plans would lose an average of $191,186, wheras 21 plans showed an average gain of $230,646 (Packer 1991). However, urban faculty groups, which subsidize research and teaching in many of the nation's premier teaching institutions, will tend to suffer most because geographic adjustment factors exacerbate reductions in fees in typically high-priced urban locations like New York, Boston, and Los Angeles.

Substantial changes in work values adopted since December, 1990 make the AAMC predictions preliminary at best. Federal officials may therefore need to devote considerably more effort to understanding the potential consequences of the proposed new Medicare fee schedule on academic medical centers, biomedical research, and medical education.

Conclusion

OBRA 1989 heralds a new era in the relationship between American physicians and the Medicare program. To understand the revolutionary nature of this change, it is useful to recall an original provision that introduced the 1965 Medicare legislation:

> Nothing in this title shall be construed to authorize any Federal officer or employee to exercise any supervision or control over the practice of medicine or the manner in which medical services are provided, or over the selection, tenure or compensation of any officer or employee of any institution, agency or person providing health services.[2]

Congress has clearly signaled that, over the next few years, it will not be bound by these historic restraints in its effort to control physician expenditures under Medicare.

[2] 42 U.S.C. 1395.§ 1801, Title XVIII. Health Insurance for the Aged and Disabled, Social Security amendments.

Over the next few years we expect an important dialogue to develop. If OBRA 1989 fails to constrain costs, American physicians can likely anticipate substantial fee reductions and much more aggressive attempts to control utilization. Physicians will have an opportunity to respond, both as individual clinicians and as a group, in negotiations on a national level between professional representatives, HCFA, and the Congress. The ability of these parties to reach accommodation will determine whether the provisions of OBRA 1989 have established a satisfactory framework to determine physician payment or whether we can expect a series of further reforms that are likely to be far more onerous for the practicing physician.

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