JUNE 2000

REPORT TO THE CONGRESS:

Selected Medicare Issues

MEDPAC Medicare Payment Advisory Commission

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The Medicare Payment Advisory Commission (MedPAC) is an independent federal body established by the Balanced Budget Act of 1997 (P.L. 105–33) to advise the U.S. Congress on issues affecting the Medicare program. The Commission's statutory mandate is quite broad: In addition to advising the Congress on payments to health plans participating in the Medicare+Choice program and providers in Medicare's traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.

The Commission's 17 members bring diverse expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms (subject to renewal) by the Comptroller General and serve part time. Appointments are staggered; the terms of five or six Commissioners expire each year. The Commission is supported by an executive director and a staff of analysts, who typically have backgrounds in economics, health policy, public health, or medicine.

MedPAC meets publicly to discuss policy issues and formulate its recommendations to the Congress. In the course of these meetings, Commissioners consider the results of staff research, presentations by policy experts, and comments from interested parties. (Meeting transcripts are available at www.medpac.gov.) Commission members and staff also seek input on Medicare issues through frequent meetings with individuals interested in the program, including staff from congressional committees and the Health Care Financing Administration, health care researchers, health care providers, and beneficiary advocates.

Two reports—issued in March and June each year—are the primary outlet for Commission recommendations. Over the next two years, the Commission will also publish additional reports on a variety of subjects, including payment for care in rural areas, as required under the Balanced Budget Refinement Act of 1999. In addition to these reports, MedPAC advises the Congress through other avenues, including comments on reports to the Congress and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff. This volume fulfills MedPAC's requirement to submit an annual report to the Congress on issues affecting Medicare.

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Executive summary

The Medicare Payment Advisory Commission (MedPAC) is required by law to report to the Congress by June 1 on issues affecting Medicare. This report meets that requirement by analyzing a number of issues in which Medicare policies affect and are affected by other actors in the health care system. We examine prescription drug coverage for Medicare beneficiaries, the need to assess options to expand coverage and the impact of these options on other federal programs, private coverage, and pharmaceutical research and development. We also make recommendations to strengthen Medicare's quality assurance system, which would benefit not only Medicare beneficiaries, but all patients using Medicare-certified providers.

This report also addresses several aspects of Medicare payment policy—normally the focus of our March report. We recommend updates to payments for hospital inpatient services; we chose not to make these recommendations in March because we lacked data on payments by Medicare and other payers in the period following implementation of the Balanced Budget Act of 1997 (BBA). We recommend ways to improve the accuracy of payments for inpatient care and payments to teaching hospitals. The report also contains our recommendations on the new prospective payment system for hospital outpatient services, which the Health Care Financing Administration (HCFA) released in the spring. Finally, this report fulfills a requirement of the Balanced Budget Refinement Act of 1999 (BBRA) that we comment on HCFA's preliminary estimate of the payment update for physician services.

Medicare beneficiaries and prescription drug coverage

Costs of prescription drugs have grown rapidly in recent years, sparking a debate on the need for and type of policy response to address the impact of these cost increases. Almost one in three Medicare beneficiaries lack insurance coverage for prescription drugs, and many of those with coverage, whether through a former employer, a privately purchased Medigap plan, or a Medicare+Choice plan, are experiencing rising premiums or reduced coverage of other services. In assessing the need for a response, policymakers should consider the adequacy of existing sources of insurance coverage, beneficiaries' abilities to access needed drugs, and expected future growth in prescription drug spending.

This chapter seeks to assist policymakers in evaluating the need for a federal policy response and identifying potential policy approaches and the technical challenges inherent to each. Policymakers who believe that a public policy response is warranted have several options from which to choose. They may decide that adding a prescription drug benefit to Medicare coverage is appropriate. Alternatively, policymakers may opt for policies—such as targeting assistance to low-income beneficiaries through a Medicaid expansion or improving the drug coverage available through private plans—that serve as interim solutions before enactment of an enhanced Medicare benefit or as alternatives to adding a Medicare benefit.

Assessing the design and impact of the hospital outpatient prospective payment system

On July 1, 2000, HCFA will implement a new prospective payment system (PPS) for services provided in hospital outpatient departments. These services represent one of the last major types of care to be shifted from cost-based reimbursement to prospective payment.

MedPAC believes that the new payment system could help to achieve a number of goals. First, paying hospitals a fixed amount known in advance will improve their incentives to control costs. Second, the PPS will simplify a complex area of policy and make payments

more predictable and equitable across hospitals. Finally, the new payment system carries out policies enacted in the BBA and the BBRA that will begin to reduce the disproportionate share of costs that beneficiaries bear for outpatient services. MedPAC supports the broad structure of the outpatient PPS, but has concerns about specific aspects of its design and implementation.

Payment rates for some services provided in hospital outpatient departments will differ from those in other ambulatory settings. On the one hand, these differences could appropriately represent underlying cost differences among settings. On the other hand, they could simply reflect the way in which payment rates were set historically, which might lead to shifting care among ambulatory settings for financial rather than clinical reasons. The Commission recommends monitoring practice patterns to avoid inappropriate shifts.

Over time, payment rates under the outpatient PPS will need to be updated to account for changes in the costs of care and new technologies, and case-mix complexity. Evaluating these changes is likely to be difficult, however, as the new payment system gives hospitals an incentive they previously lacked to code visits accurately. To distinguish changes in coding practice from actual changes in the Medicare case mix, the Commission recommends that the Secretary study coding patterns over time and undertake analyses similar to those done when the inpatient PPS was implemented.

The outpatient PPS carries out provisions of the BBA designed to reduce the financial liability of beneficiaries for outpatient services. These provisions will ultimately reduce beneficiaries' coinsurance to 20 percent from a current average of about 50 percent. However, because we expect this reduction to take many years, MedPAC recommends that the Congress enact legislation to accelerate it.

Finally, moving to prospective payment will change the payments hospitals receive for the services they deliver. Hospitals will experience changes in payments for particular services and in aggregate Medicare revenues; some hospitals will see payments rise, others will see payments fall. The BBRA included transition policies that will mitigate negative financial impacts during a phase-in period, but the administrative burden on hospitals of moving to the new system should not be underestimated. Other policies implemented with the new payment system, such as the reduction in beneficiary coinsurance, introduce significant changes for providers and beneficiaries. Accordingly, we recommend that the Secretary carefully monitor implementation of the PPS to ensure that beneficiaries' access to high-quality care is not compromised.

Improving Medicare's payments for inpatient care and for teaching hospitals

In August 1999, MedPAC recommended that policymakers reorient their thinking about the two payments Medicare now makes to teaching hospitals for graduate medical education. Because we view these two payments as compensation for patient care, not training, we recommended combining them into a single payment adjustment that would better account for the systematically higher costs of inpatient care in teaching hospitals. We also recommended refining certain elements of Medicare's case-pricing methods to make inpatient payments per case better match the expected costs of inpatient care in all types of hospitals.

To make these recommendations operational, we have evaluated two sets of policy options that might be adopted by the Congress and the Secretary of Health and Human Services. One set pertains to improving Medicare's case-pricing method of paying for inpatient care in all hospitals; the other set pertains to combining the payments now labeled as medical education into a single teaching hospital adjustment.

Improving Medicare's case-pricing methods would require action by the Secretary and the Congress. MedPAC recommends that the Secretary adopt refinements to the diagnosis related groups patient classification system that would more fully capture differences in severity of illness among patients and that she revise the methods now used to set relative weights for each category by using hospital-specific relative values. These steps would reduce discrepancies between payments and costs by more accurately reflecting patients' clinical differences and by eliminating distortions in payment rates that reflect systematic variation in hospitals' markups of charges over costs. We also recommend that the Congress amend the law to change how outlier payments for extraordinarily costly cases are financed. All of these changes should be implemented gradually, with consideration given to protective policies that would preserve access to care for vulnerable populations. Finally, to avoid inappropriate increases in payments to hospitals, we recommend that the Congress allow the Secretary to adjust the national base payment amounts to account for any coding improvements that occur in response to the refinements.

Combining Medicare's special payments to teaching hospitals into a revised teaching hospital adjustment would require Congressional action. MedPAC recommends that the Congress set the new adjustment at a level that would maintain the subsidy currently paid to teaching hospitals under long-run policy. These recommendations would not change aggregate payments to hospitals, but would change payments to individual hospitals. Accordingly, the Commission recommends that the changes be implemented with a reasonable transition to limit impacts on hospitals and ensure that beneficiaries have continued access to the services that teaching hospitals provide.

Improving quality assurance for institutional providers

MedPAC believes that Medicare's quality assurance (QA) system needs to be strengthened to meet its intended objectives. The current system is satisfying none of its stakeholders: providers view it as burdensome and ill focused, beneficiary advocates decry the lack of information about results, and policymakers are concerned that the system may not achieve its intended effects.

The Congress and the Secretary must take several steps to address critical problems with the system, including collecting the information needed to generate standardized, evidence-based measures of quality; updating standards more frequently; funding the system adequately; and strengthening sanctions. In addition, the Secretary must ensure that new tools for measuring the quality of care providers furnish are used appropriately and that quality improvement activities complement, rather than erode, Medicare's QA system.

Incorporating facility performance measures into QA requires that two conditions be satisfied. First, Medicare must identify appropriate measures of health care quality that are reliable at the individual facility level. Second, the program must obtain timely, reliable data by which to measure quality. Medicare is now implementing setting-specific systems for measuring health care quality for some types of providers, but has not yet established standardized systems for quality measurement and reporting for most providers, notably hospitals.

Conditions of participation (COPs), which consist primarily of structural requirements believed to ensure the capacity of providers to furnish high-quality health care safely, are the backbone of Medicare's QA process. Compliance is assessed through a survey and certification process conducted by state agencies or through a private accreditation process. A key limitation of the COPs is their timeliness; although most were established in the 1980s, some date to the 1970s and earlier. MedPAC recommends that the Congress mandate review and updating of the COPs by the Secretary on a periodic basis, require the use of negotiated rulemaking to do so, and require annual surveys of at least one-third

of each facility type. The Congress should also appropriate adequate funding for these activities.

Medicare's primary tool for enforcing compliance with the COPs is its sanctioning process. However, use of this tool is limited in two respects. First, federal sanctions have limited effectiveness because they do not match the scope and severity of cited deficiencies and they do not consider a provider's previous compliance. Second, certain procedures limit HCFA's ability to impose sanctions. To address these limitations, we recommend that the Congress authorize the Secretary to develop intermediate sanctions—penalties short of program termination—specific to each facility type that would match deficiencies with the level of sanction and promote long-term compliance with COPs.

Financial performance and payment update for hospitals covered by prospective payment

Hospitals' financial status has deteriorated significantly over the past two years. The aggregate total margin for general, acute care hospitals covered by Medicare's inpatient prospective payment system is estimated at 2.7 percent for 1999, less than half its 1997 level, and the percentage of hospitals with negative total margins rose from 25.8 percent in 1997 to 34.2 percent in 1998. Reduced Medicare payments played a role in this decline, but shrinking payments (relative to the cost of care) from private payers accounted for roughly three times the drop in total margin for 1998 as Medicare did.

MedPAC's new Medicare margin, which covers hospitals' five largest lines of Medicare services, dropped from 9.8 percent in 1997 to 6.5 percent in 1998, reflecting hospitals's first year of operation under the provisions of the BBA. Excluding graduate medical education, the margin for inpatient services fell the least, from 17.0 percent in 1997 to 14.4 percent in 1998; it remains high by historical standards. However, margins dropped substantially for the outpatient, inpatient rehabilitation and psychiatric, home health, and skilled nursing services that many acute care hospitals provide. For example, the margin on outpatient services fell from −7.4 percent in 1997 to −15.9 percent in 1998, primarily reflecting elimination of the formula-driven overpayment. The margin for home health care services provided by hospitals declined even more, from −4.6 percent in 1997 to −25.9 percent in 1998.

In the past, MedPAC has made recommendations each year for updates to operating and capital payments for PPS inpatient services. This year, recommend a combined operating and capital update for fiscal year 2001. (The change reflects a recommendation in our March 2000 report that these payments be combined.) Our recommendation is based on an update framework that considers anticipated changes in individual factors affecting costs or payments. We evaluate our update recommendation in light of its probable impact on beneficiary access to high-quality care and in light of the financial performance of the hospital industry. However, financial performance is never our primary consideration in setting the update.

The Commission recommends a range for the update to inpatient payments in fiscal year 2001 of 0.6 to 1.1 percentage points greater than the increase in a combined operating and capital market basket. This increase is about 2 percentage points higher than the update provided in law. Our recommendation reflects the cost-increasing effects of new drugs and other technological advances, as well as a documented decline in hospitals' overcoding of diagnosis related groups. We believe that payments in future years should still be reduced by up to 4 percentage points to account for unbundling—shifts of care from the latter days of inpatient stays to post-acute settings. However, to avoid exacerbating the current level of financial stress in the industry, we are recommending a one-year hiatus in phasing in this reduction. We anticipate continuing to phase in the remaining portion of the unbundling adjustment for the 2002 and later updates.

Financial performance and payment update for hospitals exempt from prospective payment

The Medicare operating margins of inpatient facilities exempt from prospective payment dropped sharply in 1998 in response to the Balanced Budget Act of 1997. For the largest groups of these facilities (long-term, psychiatric, and rehabilitation providers), declines ranged from 4 to 7 percentage points. In contrast, before implementation of the BBA, substantial drops in length of stay, along with payment rules that were less restrictive for new facilities than for older facilities, produced large increases in exempt facilities' margins from 1990 through 1997. The BBA not only recouped some of the financial gain resulting from falling lengths of stay, but also narrowed the gap in margins between new and old facilities. MedPAC recommends a range for the payment update for exempt facilities that extends modestly beyond the expected rate of inflation in hospital input prices, reflecting an increment for the costs of newly introduced drugs and other technological advances.

Reviewing the estimated payment update for physician services

Medicare payments for physician services are updated annually based on a formula designed to control overall spending while accounting for factors that affect the cost of providing care. As required by the BBRA, HCFA recently released a preliminary estimate of the update for payments to physicians in 2001. MedPAC has reviewed the preliminary update and believes it is based on an underestimate of growth in enrollment in the traditional Medicare program. If HCFA continues to underestimate growth in traditional Medicare enrollment in this way, the final update, to be implemented in January 2001, will be lower than is warranted. We urge HCFA to review the data and methods used to make the estimate and to explain how this and other estimates are prepared as part of the release of future updates.

CHAPTER 1

Medicare beneficiaries and prescription drug coverage

CHAPTER 1

Medicare beneficiaries and prescription drug coverage

In this chapter

- Pressures for new public policy to encourage coverage
- Adding prescription drugs as an integrated Medicare benefit
- Alternative policies to expand access to drug coverage

A debate is evolving about how to address the growing prescription drug costs faced by Medicare beneficiaries, many of whom lack insurance coverage for prescription drugs. In assessing the need for a public policy response, policymakers should consider beneficiaries' abilities to access needed drugs, growth in prescription drug spending, and the adequacy of existing sources of coverage. If policymakers believe that a public policy response is warranted, they have several options. They may decide that adding a prescription drug benefit to Medicare coverage is the appropriate solution. Alternatively, policymakers may opt for policies that either serve as interim solutions before enactment of an enhanced Medicare benefit or serve as alternatives to adding a Medicare benefit. Some of these options would target assistance to low-income beneficiaries through a Medicaid expansion, a new program similar to the State Children's Health Insurance Program, or tax credits. Other options would aim to improve the drug coverage available through Medigap plans. This chapter seeks to assist policymakers in evaluating the need for a federal policy response and identifying potential policy approaches and the technical challenges inherent to each.

At the inception of Medicare, outpatient prescription drugs represented a relatively small portion of beneficiary health care spending and were excluded from the Medicare benefit package. Over time, prescription drugs have become an increasingly important part of treatment and have grown as a percent of beneficiaries' health care spending. Medicare has expanded coverage to a few outpatient drugs under specific and limited circumstances, and supplementary coverage has evolved to the point that most beneficiaries have some coverage for prescription drugs.[1] However, growing drug costs are increasing out-of-pocket costs for beneficiaries, and the future of supplementary coverage is uncertain. Consequently, there have been calls for federal policy solutions to assist beneficiaries in affording and accessing drug coverage.

This chapter begins by describing the current pressures for new public policy to expand coverage. It presents data on current and projected beneficiary spending on prescription drugs, sources of drug coverage and trends in availability, the importance of coverage to patient compliance, and the potential for prescription drugs to substitute for other health care services and improve quality of life. The second part of the chapter identifies key design decisions for policymakers to consider if they opt to add prescription drug coverage to the Medicare benefit package. These decisions concern benefit design, management and administration, and how Medicare payment should be determined. Lastly, the chapter identifies other policy options that could provide either interim solutions before an enhanced Medicare benefit is enacted or alternatives to adding a benefit. These options include expanding coverage through state insurance programs, reforming the Medigap market, and tax credits.

Pressures for new public policy to encourage coverage

Are beneficiaries' current spending patterns and trends sustainable or acceptable? Are the growing expenditures for drugs the primary problem, or is the problem one of inadequate sources of insurance coverage? Are all beneficiaries experiencing problems, or is a subset of beneficiaries most in need? To answer these questions, it is important to understand prescription drug spending growth and patterns, the availability and adequacy of insurance coverage for drugs, the relationship of coverage and beneficiary access to drugs, and substitutions between drugs and other health care services. In addition, a review of previous legislative experience with adding a Medicare drug benefit may provide some lessons for the future.

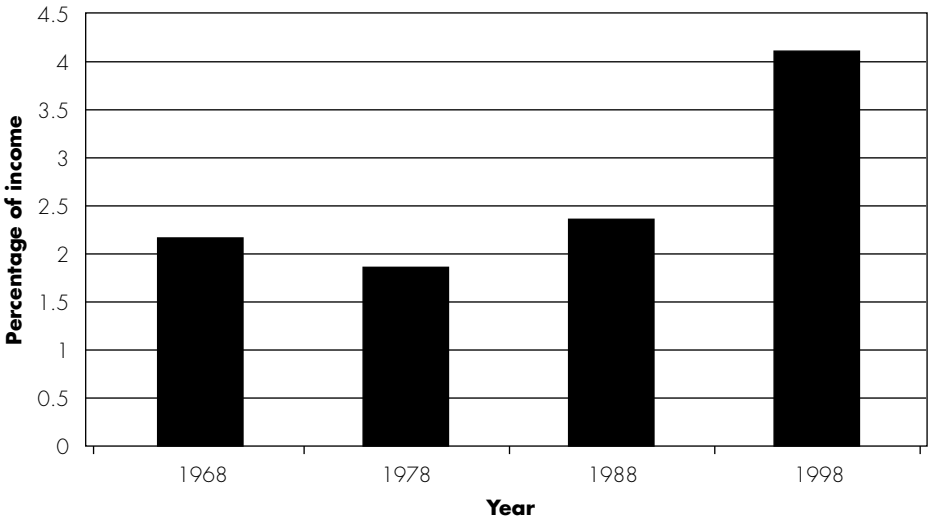
Prescription drug spending

Since the inception of the Medicare program, prescription drugs have come to play an increasingly important role in the treatment of conditions for all people. However, the strides in pharmaceutical technology have had particularly significant implications for the elderly. Seniors are far more likely to suffer from chronic conditions for which drug treatments are an important part of care, such as arthritis, diabetes, high blood pressure, heart disease, Parkinson's disease, and depression. Seniors spend more than three times as much on prescription drugs than do those under 65; seniors make up 13 percent of the U.S. population, but account for more than one-third of drug spending (HHS 2000).

Expenditures on prescription drugs for the Medicare population have grown dramatically. In 1968, seniors spent an average of $64 on prescription drugs.

FIGURE 1-1

Prescription drug expenses not paid by Medicare as percentage of income for beneficiaries ages 65 and older



Source: Estimates by Watson Wyatt Worldwide.

1 Medicare covers the following outpatient drugs: immunosuppressive drugs following a covered organ transplant, oral anticancer drugs identical to drugs that would be covered if not self-administered, erythropoietin for the treatment of anemia in persons on dialysis suffering from chronic renal failure, hemophilia clotting factors, and vaccines for pneumococcal pneumonia, hepatitis B, and influenza.

Previous legislative experience with a Medicare drug benefit

Policymakers previously approached the issue of adding Medicare prescription drug coverage: in 1988, with the Medicare Catastrophic Coverage Act (MCCA) of 1988, and in 1994, with the Health Security Act. Both efforts failed, but for different reasons and under different circumstances.

Medicare Catastrophic Coverage Act of 1988

In 1988, Congress added a catastrophic benefit to Medicare that would have provided comprehensive coverage for outpatient drug expenses greater than $600 in 1991 with a 50 percent coinsurance, and those greater than $652 in 1992 with a 40 percent coinsurance.[2] The coinsurance was to be lowered to 20 percent in 1993. The intent was to revise the deductible annually, providing 16.8 percent of beneficiaries with benefits each year. The new coverage was to be entirely financed by Medicare beneficiaries through an increase in the Part B premium and a supplementary surcharge. The surcharge was to cost higher-income beneficiaries—those with incomes greater than about $40,000—as much as $800 in 1989 and $1,050 in 1993 (Congressional Quarterly 1988, Coster 1990).

Opposition to the new benefit was fueled by confusion about the specifics of the financing (many lower-income beneficiaries thought they had to pay the full surcharge), as well as other concerns. First, enrollment in the program was mandatory, but many beneficiaries would never receive any benefits because their drug costs would never exceed the cap. Second, beneficiaries who already had drug coverage, from either Medigap or an employer-sponsored retiree plan, would be required to pay twice for the same benefit; these people also were the ones most likely to pay the maximum premium surcharge (although it is likely that retiree insurance premiums would either decline due to Medicare coverage or be a wrap-around benefit). Third, beneficiaries were required to start paying the supplemental premium in 1989, two years before the full benefit began. The law was ultimately repealed in 1989; few benefits had taken effect by this time.

Health Security Act of 1994

The Health Security Act, which was never enacted, proposed a new Medicare prescription drug benefit that would have included a $250 deductible, 20 percent coinsurance and an annual limit of $1,000 on out-of-pocket expenses. The deductible and out-of-pocket limit were to be indexed to ensure that the same proportion of beneficiaries received the benefit each year. It was estimated that 58 percent of beneficiaries would use the proposed drug benefit. The new coverage was to be added to Medicare Part B; approximately 75 percent of the benefit would be financed through general revenue and 25 percent through beneficiary premiums.

Opposition to this benefit focused on its complex cost-containment mechanisms and potential for price controls that some believed would stifle future pharmaceutical research and development.

For example, the Health Security Act would have limited Medicare drug spending by requiring manufacturers to provide a rebate in order for their drugs to be covered under the Medicare program. (No rebates would be required for generic drugs or for drugs used by beneficiaries enrolled in managed care.) The rebate was equal to the greater of the difference between average wholesale and retail prices or 17 percent of retail. An additional rebate would have been required for drugs with prices that increased faster than the rate of inflation. Because new drugs often initially have very high prices, the Secretary was to have the authority to negotiate special prices for breakthrough drugs considered overpriced and could exclude these new drugs from coverage if a rebate agreement could not be reached. The Act also would have created an Advisory Council on Breakthrough Drugs, which would advise the Secretary on the reasonableness of launch prices of new drugs representing significant advances over existing therapies. Although the findings of the council would not be binding, they would influence the Secretary and the drug payments of other entities with purchasing power. Most of the controversy over the Health Security Act focused on its means of achieving universal health insurance, but its prescription drug provisions and other cost-containment mechanisms contributed to the failure of this bill to become law. ■

2 The MCCA specifically prohibited the establishment of a national drug formulary.

Expenditures rose slower than general inflation during 1968–1978, but have accelerated since then. Drug expenditures per beneficiary nearly doubled from 1988–1998, even after adjusting for inflation. Expenditures per beneficiary were $848 in 1998. As a percent of income, beneficiary spending on drugs has increased from 2.4 percent to 4.1 percent from 1968–1998[3] (Figure 1-1).

Several factors have driven this increase in spending. Inflation for prescription drugs has averaged about 3.5 percent over the past five years. Although significant, this is only a small part of the overall growth.[4] The primary drivers have been the introduction of new products and the growth in prescription drug use. One study found that 36 percent of all drug spending in 1998 was on products introduced in the previous six years (Express Scripts 1999).

The introduction of new drugs to the marketplace is the result of substantial research and development (R&D) and a streamlined Food and Drug Administration (FDA) approval process. There has been a 14 percent annual rate of increase in R&D spending for pharmaceuticals over the past 19 years, with U.S. research-based companies spending $24 billion in 1999—equal to about 24 percent of U.S. outpatient spending for prescription drugs that year (HCFA 2000). Part of this increase is due to technological advances that have greatly increased testing capacity. Today, some 7,500 products are now under development—a 50 percent increase over five years ago. There are indications that more significant breakthroughs will occur in the future. Although the Human Genome Project has not yet influenced the products in the FDA pipeline, there is every indication that the mapping of the human genome will allow pharmaceutical scientists to develop more sophisticated drugs that will target not only individual diseases, but also individual patient variations (Maesner 2000).

The significant investment in R&D has been accompanied by an expedited FDA review process for new drugs. In 1992, the FDA implemented a program of user fees for companies that sponsor new drug applications, and by 1997 the new fees had allowed the agency to add 300 reviewers. Under the Food and Drug Administration Modernization Act of 1997, the FDA was also charged with expediting the review of priority drugs that offer patients significant therapeutic gains (PhRMA 1999). The result of expedited review has been dramatic; the average FDA approval time for new drugs has decreased from 23 months in 1993 to 12 months in 1998. As a result, the number of new drugs approved each year by the FDA has increased from 21.7 in the 1980s to 37.5 between 1995 and 1998 (Figure 1-2). Assuming that the addition of new FDA resources was responsible for breaking the approval bottleneck, the approval rate should now stabilize unless further resources are added.

Increased use has been spurred in part by the higher therapeutic value of many newer drugs. For example, peptic ulcers were frequently treated with surgery, but today, they are usually treated with drug therapy. Other examples of chronic conditions that can now be treated with improved drug therapies include migraine headaches, arthritis, depression, and allergies.

Definitions of insurance terms

Adverse selection—Any situation which results in a health plan, or group of health plans, having higher expected health costs as a result of risk selection (see risk selection).

Coinsurance—A type of cost sharing in which beneficiaries pay a fixed percentage of the cost or charge for a covered service.

Copayment—A type of cost sharing in which beneficiaries pay a fixed dollar amount for a covered service.

Cost sharing—Payments that health insurance enrollees make for covered services. Examples of cost sharing include coinsurance, copayments, deductibles, and premiums.

Deductible—A type of cost sharing in which beneficiaries must pay a specified amount for covered medical services before their insurer assumes liability for all or part of the cost of subsequent covered services.

Formulary—A list of drugs maintained by a provider or an insurer, containing drugs deemed appropriate for the treatment of designated conditions for both therapeutic and cost reasons.

Medical underwriting—The process of using information about a beneficiary's health status or prior use of medical services to determine the price of a health insurance policy or whether to sell a policy to a beneficiary.

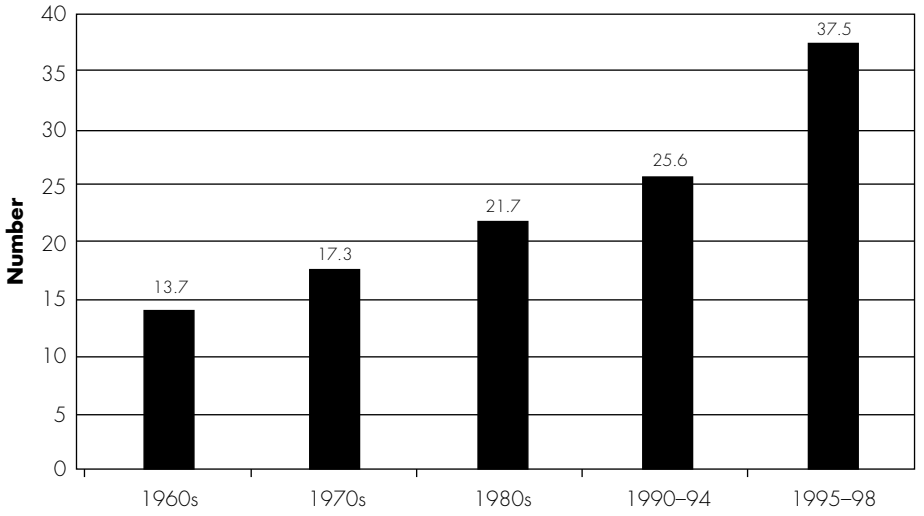
Risk selection—Any situation in which health plans differ from one another in the health risks associated with their enrollees because of enrollment choices made by the plans or the enrollees. Health plans' expected costs vary because of underlying differences in health of and use of services by their enrolled populations. ■

3 This calculation of spending as a percent of income was calculated with Watson Wyatt Worldwide's PreView Medical Benefits Modeling System.

4 The higher prices for new products are not reflected in the Consumer Price Index for prescription drugs, because the Consumer Price Index is based on the price of a fixed market basket of drug products.

FIGURE 1-2

Average annual number of new molecular entity approvals by the Food and Drug Administration: 1960–1998



Source: Lumpkin 1997, Lumpkin 1998, Lumpkin 1999.

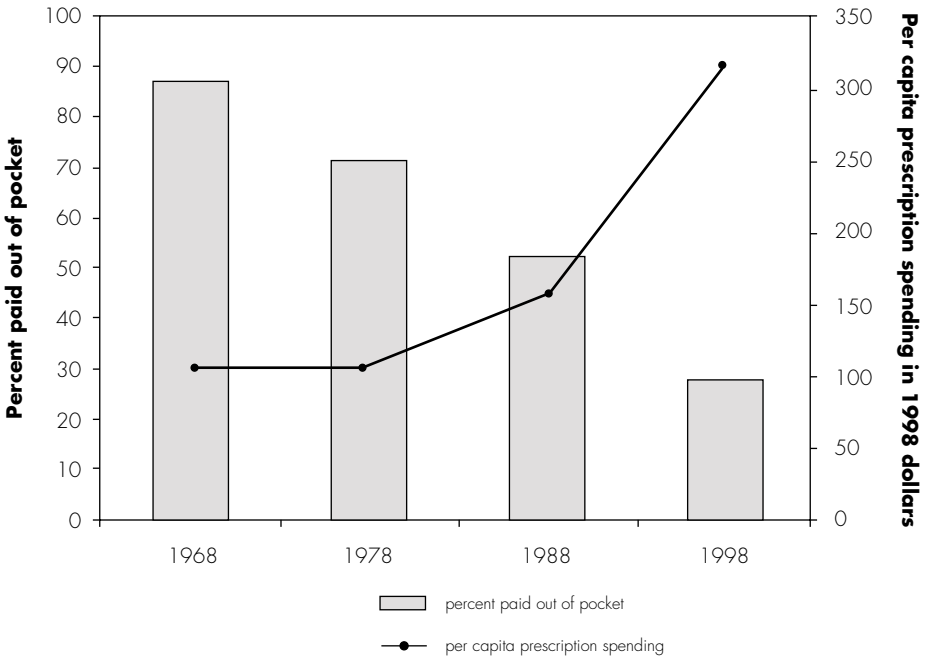
increases in both the dissemination of valuable information and unnecessary office visits.

Finally, substantial changes in the scope of third-party coverage for prescription drugs have reduced financial barriers for many people, allowing greater use. Research by the RAND Corporation in the 1970s found that people were very sensitive to price changes for prescription drugs (Liebowitz et al. 1985). For the entire U.S. population, 87 percent of outpatient prescription drug expenditures was paid out of pocket in 1968, falling to 28 percent in 1998. The percentage of prescription drug expenses paid out of pocket is considerably higher for the Medicare population, averaging 50 percent in 1996 (Davis et al. 1999). This decline in patient liability for prescription drug costs has been one of several factors that have contributed to a 200 percent increase in total real drug spending per person in the same period (Figure 1-3).

Another factor influencing use is the increased investment in marketing by pharmaceutical manufacturers. In 1997, the FDA loosened the advertising rules for prescription drugs. Manufacturers are now allowed to mention a product's name and the condition it could treat without disclosing all of the product's risks. Previously, full disclosure was required and advertisements could not fit all the required information into the short-time formats of television and radio commercials. In 1998, pharmaceutical manufacturers spent $8.3 billion promoting their products in the United States. Of that amount, $1.3 billion was spent on direct-to-consumer advertising, 55 percent more than in 1997 (Barents Group LLC 1999). However, it is unclear whether this advertising investment reinforces sound prescribing choices by alerting physicians and patients to the introduction of drugs offering real therapeutic value or whether it has encouraged inappropriate prescribing practices. Many physicians claim that the advertising has encouraged patients to make unnecessary appointments and request inappropriate prescriptions. It is likely that increased advertising has led to

FIGURE 1-3

Percent paid out of pocket for prescription drugs and U.S. per capita prescription spending in 1998 dollars, 1968–1998



Source: Watson Wyatt calculations based on National Health Accounts, HCFA and population estimates from HCFA.

Medigap insurance analysis: data and methods

Some studies based on beneficiary surveys, including the one by Poisal and Chulis (2000) presented in this chapter, have found 30 percent to 40 percent of Medigap purchasers have coverage for prescription drugs. MedPAC obtained insurance company filings to state insurance commissioners for an analysis of drug coverage. These data were from 1998 and had been compiled by the National Association of Insurance Commissioners (NAIC). MedPAC found that of all standard Medigap policies sold in 1998, only 7.4 percent included prescription drug coverage.

However, standardized policies make up only about 60 percent of the total Medigap market; another 35 percent are pre-standardized plans, and 5 percent are from the waiver states of Massachusetts, Minnesota, and Wisconsin. MedPAC communications with the waiver states suggest that up to a third of policies in those states are purchased with drug coverage. Calls to insurers that sell a substantial number of pre-standardized policies suggest that up to a fourth of those policies may include coverage for prescription drugs.

Analysis of the NAIC data suggests that not more than 15 percent of people with Medigap policies have any prescription drug coverage from those policies. This finding suggests that only 4 percent of Medicare beneficiaries in 1998 had prescription drug coverage through Medigap plans. It is unclear if this difference from other studies is a result of changes in the last few years or of methodological issues.

Data

In compliance with federal and state statutes, insurers annually file Medicare Supplement Experience Exhibits with state insurance commissioners. NAIC then collects this information from the states. The filings help determine whether insurers are meeting their loss-ratio requirements stipulated by law. However, these data also include information about covered lives, earned premiums, and certain plan characteristics. Data on the Medigap insurance market presented in this chapter stem from an analysis of the NAIC dataset containing filings reported as of December 31, 1998.

These data represent the best information on Medigap insurance currently available. They cover all polices in force during 1998, including pre-standardized policies, standardized policies, and policies for individuals living in the waiver states. The data are reported by insurers and required by law. Accuracy should, therefore, be fairly high. In addition, the data are not subject to recall bias, as consumer surveys might be.

Neverthless, several caveats apply. First, approximately 5 percent of the policies in the original dataset were missing information identifying the type of Medigap plan (pre-standardized, waiver state, or one of 10 standardized plan types). During the data cleaning process, we verified as many plan types as possible with insurers. In the final dataset, less than 1 percent of covered lives (57,000) were in plans still missing the Medigap plan type.

Second, the raw dataset included about 10.7 million covered lives. To increase the reliability of the results, we chose to limit our analysis to plans that included at least 50 covered lives. About 1.7 percent of covered lives (180,000) were lost when this criterion was applied. This approach is likely to result in a slight underestimate of pre-standardized policies, as the covered lives excluded from the analysis were more likely than those retained to be in pre-standardized policies.

Third, a number of policies in the dataset are identified as waiver state policies, although the state in which the policy is in force is not one of the waiver states. Some of these discrepancies may represent movements of beneficiaries from the waiver states to other states. During the data cleaning process, we reclassified some of these policies as pre-standardized because they had a date of issuance that preceded the standardization regulations. Nevertheless, the covered lives in waiver states may be overestimated. ■

To appreciate beneficiaries' financial risks for prescription drug expenses, it is important to look not only at the average drug expenditures of Medicare beneficiaries, but also at the distribution of the expenses. About 86 percent of Medicare beneficiaries have some drug expenditures, paid either out of pocket or through insurance coverage; average beneficiary expenditures were close to $1,000 in 1999. Because data are based on the Medicare Current Beneficiary Survey, which may somewhat under-report these numbers, the actual expenses may be even higher. About 32 percent of beneficiaries have expenses of more than $1,000, and 6 percent more than $3,000. Only about 14 percent of beneficiaries report no prescription drug spending (Gluck 1999) (Table 1-1).

Insurance coverage for prescription drugs

In 1996, about 70 percent of beneficiaries had supplementary prescription drug coverage, leaving 11.6 million without

TABLE 1-1

Distribution of Medicare enrollees by total prescription drug expenditures, 1999

No drug expenditures	14%
$1–$500	36
$500–$999	19
$1,000–$1,499	12
$1,500–$2,999	14
$3,000 or more	6

Note: Total does not add to 100% due to rounding.
Source: Gluck 1999.

coverage (Poisal and Chulis 2000). Thirty-one percent of beneficiaries had coverage through employer-sponsored health benefit plans, 11 percent had Medigap drug coverage, and 8 percent had coverage through Medicare+Choice plans. Medicaid covered about 11 percent of all those with coverage, while other public programs such as state drug assistance programs and the Department of Veterans Affairs covered about 2 percent of all beneficiaries. About 7 percent of beneficiaries switched coverage sources during the year, making the source classification unclear (Figure 1-4). Although these data represent the most recent comprehensive examination of prescription drug coverage for Medicare beneficiaries, MedPAC has examined the Medigap market and found differences between the comprehensive data reported here and specific Medigap data (see text box, page 8).

The prevalence of coverage varies by certain characteristics, such as age, income, and health status. Data sources are not entirely consistent on this point. However, an analysis by HCFA suggests that wealthier beneficiaries are more likely to have coverage, while those just above Medicaid eligibility are least likely. Older beneficiaries are less likely to have coverage than those younger than 85. This study also found that those with and without insurance tend to have about the same self-reported health status.

In assessing the need for a policy change, policymakers should consider existing sources of coverage, including the cost and scope of that coverage, and the adequacy of coverage in meeting beneficiary needs (Table 1-2). They should also examine indications of the future availability of coverage and how that availability might be affected by a new government-sponsored program.

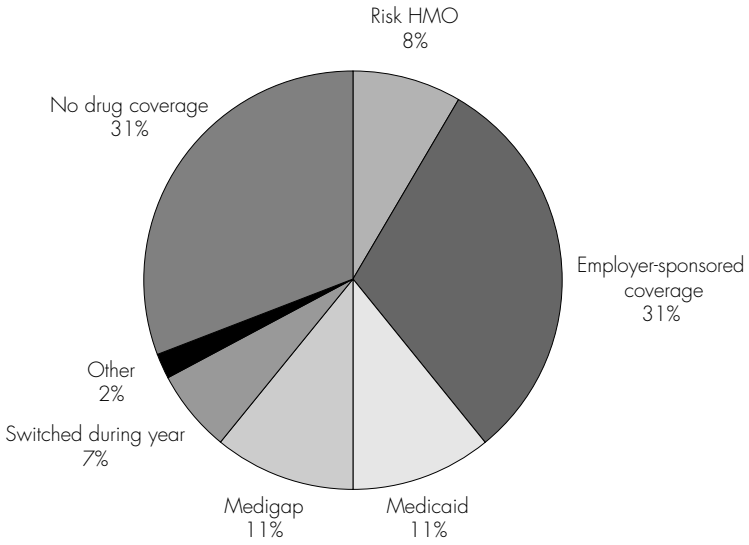
Employer-sponsored coverage

Employer-sponsored coverage is typically the most comprehensive supplemental drug coverage available for Medicare beneficiaries. The great majority of employer-sponsored medical plans for Medicare-eligible retirees include prescription drug benefits with low beneficiary cost sharing and no annual limits on the amount the plan will pay for prescription drug benefits.

Generally, the provisions of retiree medical plans closely parallel those of active employee plans. Based on active employee plans, most beneficiaries are not subject to a deductible and coinsurance for drugs, but they are typically subject to copayments in the $5–$15 range.[5] Beneficiaries pay an annual premium for their overall health insurance coverage (which includes prescription drugs) that averages $500–$600. Employer plans often include a $1 million lifetime cap, applicable to both medical and prescription drug costs, but this cap seldom comes into play because Medicare is the primary payer for costly medical services.

FIGURE 1-4

Coverage among noninstitutionalized Medicare beneficiaries by supplemental insurance status, 1996



Note: HMO (health maintenance organization). Total does not add to 100% due to rounding.

Source: Poisal and Chulis 2000.

5 The escalating costs of prescription drugs have induced employers to raise copayment levels substantially and move to implement newer plan designs, such as the three-tiered copayment structure.

TABLE 1-2

Typical benefit and cost sharing by source of coverage

	Prescription drug benefits			
Source of coverage	**Premiums paid by enrollee for entire insurance package**	**Deductible**	**Coinsurance/copay**	**Benefit maximum**
M+C HMO	$180	None	$5 generic $15 brand	Usually $500–$1500 per year, often unlimited
Medigap plans H, I and J	$2,000–$4,500 (varies by area)	$250 or $500	50%	$1,250 or $3,000
Employer	$500–$600	None	$5 generic $10 brand $20 off-formulary brand	$1,000,000* lifetime
Medicaid	None	None	less than $5	Some states limit fills per month

Note: M+C (Medicare+Choice), HMO (health maintenance organization).
* Applies to both medical and prescription drug costs.

Source: Watson Wyatt Worldwide survey of employer plans, HCFA's Medicare+Choice database, and beneficiary publications.

Retiree supplement plans were originally viewed by sponsoring employers as a low-cost benefit that filled some gaps of the Medicare program. Escalating costs have now made this benefit a substantial liability for many employers, and outpatient prescription drugs typically represent 50 percent or more of this liability.

Because of financial community concerns that employers had promised employees and retirees substantial future medical benefits that were not funded, in 1991 the Financial Accounting Standards Board[6] (FASB) required companies to begin reporting accrued post-retirement benefit obligations on their financial statements. This requirement has caused many employers to reassess their retiree medical commitments. Although the pay-as-you-go costs previously reported on their financial statements were substantial, reporting accrued obligations had a major negative effect on financial statements.

Over the past 10 years, many employers have been limiting future retiree medical commitments. One of the most common approaches has been to cap the level of future premium contributions. Today, 40 percent of large employers have instituted caps on future contributions (Health Policy Alternatives 1999), and some employers have already hit these caps. For example, under this approach an employer may cap its annual premium contribution at $2,000 for a benefit that currently costs $1,600 ($800 for drugs and $800 for medical expenses). If prescription drug spending grows 15 percent and medical spending grows 5.5 percent annually, in 10 years the benefit would be about $4,500, meaning that retirees would be paying about $2,500 in premiums on top of the $2,000 employer contribution.

The potentially large increases in the retiree portion of the premium are creating a sense of urgency to restrain plan spending. To control costs, employers have sought the help of pharmacy benefit managers (PBMs) to encourage generic substitution, negotiate discounts from pharmacies, promote the use of formulary drugs, and obtain manufacturer rebates. Employers are also experimenting with higher copayments and three-tier copayments that discourage the use of higher-cost brand drugs.

Finally, a substantial but unknown number of employers have dropped their retiree medical benefits for future Medicare-eligible retirees. Many took this action when the 1991 FASB requirement was implemented, but employers continue to drop coverage today. Recent analysis of the Current Population Survey indicates a decline in employer-sponsored coverage for seniors up to age 79. Prevalence of coverage in the youngest group of seniors fell about 3 percentage points from the 1994 level of 43 percent. Coverage for the other senior groups under age 80 fell by about 1 percentage point (Table 1-3).

While the prevalence of coverage in seniors ages 65-80 fell, the prevalence of coverage for those older than 80 actually rose. However, all members of these age cohorts had reached age 65 when the FASB standard was implemented in 1991,

6 The Financial Accounting Standards Board is recognized by the Securities and Exchange Commission as the designated organization in the private sector for establishing standards of financial accounting and reporting.

TABLE 1-3

Percentage of Medicare beneficiaries with employer-sponsored coverage, by age, 1994 and 1998

Age group	1994	1998
Total	35%	34%
65–69	43	40
70–74	37	36
75–79	33	32
80–84	24	28
85 and older	20	21

Note: Calculations based on Current Population Surveys for March 1995 and March 1999.

Source: Adapted from Copeland 2000.

and it is less likely that employers would have been able to drop coverage for those already eligible.

Medigap

Of the various forms of supplemental insurance, Medigap provides the least comprehensive coverage of prescription drugs. Most Medigap policies do not cover prescription drugs; those that do generally have high premiums and require significant out-of-pocket spending. In addition, Medicare beneficiaries with Medigap insurance, rather than other types of supplemental coverage, usually pay the entire premium out of pocket.

The Omnibus Budget Reconciliation Act of 1990 (OBRA-90) led to the standardization of the Medigap insurance market. All Medigap policies sold since July 1992 must conform to one of 10 standard policies, labeled A through J. Each plan provides a specific set of benefits. Only three (H, I, and J) cover prescription drugs, and coverage is limited: H and I are subject to a $250 annual deductible, 50 percent coinsurance, and a maximum annual benefit of $1,250. Plan J has the same deductible and coinsurance structure, but a higher maximum benefit of $3,000.[7] When the plans were standardized, beneficiaries were allowed to maintain their existing policies. These pre-standardized plans make up a large portion of the policies held today.

Three states (Massachusetts, Minnesota, and Wisconsin) had Medigap standardization policies that superseded the OBRA-90 legislation. In Minnesota and Wisconsin, coverage for outpatient pharmaceuticals is offered as an optional rider to a core plan. In Massachusetts, one of three plan options includes prescription drugs. Wisconsin is unique in that the core benefit package includes coverage for catastrophic outpatient pharmaceutical costs (20 percent coinsurance after a deductible of up to $6,250). Table 1-4 provides a summary of outpatient pharmaceutical benefits in Medigap plans.

Premiums Premiums for Medigap insurance are high and increasing. Insurance experts estimate that the average premium in 1998–1999 was $1,500, with annual rate increases of 8–10 percent in 1999–2000 (Weller 1999). Total increases of 35 percent, on average, were experienced from 1994–1998 (Consumer Reports 1998). Premiums for Medigap policies that cover pharmaceuticals are considerably higher than those for plans without drug coverage.

Given the design of the Medigap drug coverage and the large differences in premiums for Medigap plans with drug coverage, some consumer advocates recommend that seniors with low drug costs not purchase these products (Morrow 1996). For example, a beneficiary with average annual drug costs of $750 will pay $500 out of pocket under plan H, I, or J ($250 deductible plus 50 percent coinsurance on the remainder) while the plan pays $250. On the other hand, individuals who decide not to purchase a policy with drug coverage when they are younger may not be able to do so at a later date.

Beneficiaries with Medigap prescription drug coverage According to 1998 insurance company filings with the National Association of Insurance Commissioners (NAIC), fewer than 500,000 beneficiaries hold plans H, I, or J. The NAIC data do not allow measurement

TABLE 1-4

Structure of outpatient pharmaceutical benefits under Medigap plans

	Characteristics			
Plan type	Deductible	Coinsurance	Benefit limit	Catastrophic coverage
Standardized plans H and I	$250	50%	$1,250	No
Standardized plan J	250	50	3,000	No
Massachusetts supplement 2	35/quarter	0 generic, 80 brand-name	None	No
Minnesota prescription drugs rider	None	≤50	None	No
Wisconsin prescription drugs rider	250	50	3,000	Yes (in core benefit plan)

Source: MedPAC summary of public information.

7 The 1997 Balanced Budget Act (BBA) authorized high-deductible options for plans F and J, but few, if any, high-deductible plans have been marketed to date.

of the number of people with pre-standardized plans or the number of people in waiver-state plans that have prescription drug coverage. However, calls to insurers and state insurance commissioners lead MedPAC to believe that fewer than 2 million beneficiaries have drug coverage from Medigap plans (see text box; p. 8). Premiums vary widely within and across markets. One study found that quotes for a 65-year-old male in Billings, Montana to purchase plan J ranged from $1,500 to almost $3,500 (Weiss Ratings 1999). That study also showed that the same company selling Plan H in four sample markets had premiums that differed as much as 36 percent among those markets.

Beneficiary Access to Medigap plans H, I, and, J Federal law mandates certain periods during which beneficiaries can enroll in any Medigap plan offered in their state, regardless of health status. These periods include the first six months when beneficiaries are both 65 or older and enrolled in Part B, and in certain cases when beneficiaries return to fee-for-service Medicare after enrolling in a Medicare+Choice plan. Otherwise, insurers can deny policies or charge more based on health status.[8]

States determine which standardized plans may be offered to consumers; federal law requires only that the basic package (plan A) be offered. Given the potential for adverse selection into plans H, I, and J, many carriers do not offer them. For example, in New York, 14 carriers are offering Plan A in 2000, while only 1 insurer is offering Plan J (Medicare Rights Center 2000). Among those carriers that offer plans with drug coverage, many use medical underwriting (surveying a beneficiary's health status to determine whether to sell a policy to the beneficiary) outside the open enrollment period. Although virtually all carriers use medical underwriting for plans with drug coverage, some do not underwrite for non-drug plans.

Medicare+Choice

Medicare+Choice (M+C) plans make decisions about their participation in the Medicare program and the structure of their benefit packages on an annual basis. Until 1998, an increasing number of beneficiaries were able to access drug coverage through M+C plans. Since then, payment changes and market dynamics have led many M+C plans to scale back benefits or withdraw from the program, raising questions about the future availability and generosity of drug coverage through M+C plans.

Although the percentage of beneficiaries with drug coverage available through M+C plans has declined between 1999 and 2000, most beneficiaries still have access to M+C plans with some prescription drug coverage. In 1999, 65 percent of beneficiaries had access to a plan with drug coverage; in 2000, 64 percent had access. About 54 percent of beneficiaries had access to a zero-premium plan with drug coverage in 1999; 45 percent did in 2000.[9] Medicare+Choice plans are more available in urban areas—which also tend to be higher payment areas—than in rural areas. In 2000, 79 percent of urban beneficiaries and 16 percent of rural beneficiaries have a plan with drug coverage available. Further, 57 percent of urban beneficiaries and 6 percent of rural beneficiaries have a zero-premium plan with drug coverage available.

Although the design of the M+C prescription drug benefit varies, there are some common characteristics. In 2000, about 60 percent of Medicare beneficiaries have access to a M+C plan that includes drug coverage with an annual cap of at least $500, generic copayments of no more than $15, and brand copayments of no more than $20. Of these beneficiaries, 60 percent would have to pay no premium to join the plan and 75 percent would have to pay no more than $35 per month.

Medicaid

Medicaid programs are administered by the states, and the federal government provides matching funds for qualified expenditures. Coverage of outpatient prescription drugs is optional under Medicaid, but all states have chosen to provide this benefit. Medicaid coverage is comprehensive, with nominal copayments. There is no benefit cap, although some states impose a limit on the number of prescriptions filled each month.

States choosing to cover outpatient prescription drugs under Medicaid must cover, for their medically accepted indications, all FDA–approved prescription drugs made by manufacturers who have entered into drug rebate agreements with the Secretary of Health and Human Services. There are some exceptions, including vitamins, and drugs for anorexia, weight gain, fertility, hair growth, cosmetic effects, cough and cold relief, and smoking cessation.

8 Before the BBA, beneficiaries had no guaranteed access to Medigap policies after the open enrollment period. The BBA extended guaranteed issue rights to certain individuals leaving Medicare managed care plans, losing employer-sponsored coverage, or switching between Medigap plans. However, most of these guaranteed issue rights were limited to plans A, B, C, and F, which do not cover prescription drugs. There are two situations in which these beneficiaries may purchase drug plans:

1. Enrollees who enrolled with a Medicare+Choice plan when they first became eligible for the Medicare program at age 65 and who choose to return to FFS Medicare within the first 12 months of their initial enrollment in a Medicare+Choice plan may purchase any Medigap plan, including one that covers prescription drugs.
2. Beneficiaries who terminated a Medigap policy to enroll in a Medicare+Choice plan or other Medicare managed care plan for the first time, and subsequently disenroll within the first 12 months, may return to their previous Medigap policy (including H, I, and J) if it is still offered. Beneficiaries who terminated a pre-standardized plan may not return to that plan, as insurers are not allowed to sell them.

9 There is some evidence that the percentage of M+C enrollees with drug coverage is declining. A research team led by Dana Gelb Safran at the New England Medical Center found that the percentage of M+C enrollees whose M+C plan included drug coverage dropped by about 12 percentage points between 1998 and 1999 (Wall Street Journal 2000). MedPAC staff analysis suggests that there may have also been a drop between 1999 and 2000.

Most states use one or more tools to manage the benefit:

- Thirty-three states impose some form of prescription drug cost sharing (typically $0.50 to $3 per prescription).
- Forty-two states have some form of prior authorization process.
- Forty-six states place some limits on prescriptions, including a 30- to 34-day limit per prescription, a 100-unit dose limit per prescription, and a limit on the number of refills over a given time.

The Medicaid drug benefit is only available to individuals eligible for full Medicaid benefits. People in special groups—such as Qualified Medicare Beneficiaries, Specified Low Income Medicare Beneficiaries, and Qualifying Individuals, which have eligibility criteria that can include people with incomes up to 175 percent of poverty level—are not covered. Eleven percent of Medicare beneficiaries receive Medicaid drug coverage.

State drug assistance programs

Sixteen states operate pharmacy assistance programs. Several other states enacted programs in 1999 that are not yet operational, and several more states are actively exploring legislation to establish programs. For the most part, these programs are targeted at people 65 and older, and to a lesser extent, the disabled. Some programs cast broader coverage nets and make persons eligible based solely on level of income, rather than on age or disability status.

Collectively, these programs provide assistance to approximately 800,000 people. Three states (New Jersey, New York, and Pennsylvania) account for more than two-thirds of all state drug assistance program enrollees, and most states with operating programs are in the Mid-Atlantic and New England.

Most programs offer comprehensive prescription drug coverage, but some limit coverage through criteria such as disease-specific requirements, income limits, and formulary restrictions. All programs institute some form of cost sharing—typically a copayment of a few dollars per prescription, although in some programs the copayment can be substantially higher—and a few require deductibles. Funding sources are varied and include general revenues, state lottery proceeds, casino revenues, and tobacco settlement funds.

Department of Veterans Affairs

In fiscal year 1999, the Department of Veterans Affairs (VA) spent more than $1.8 billion (11 percent of its health care budget) to provide prescription drugs to approximately 3.65 million veterans, of which approximately 1 million are Medicare beneficiaries. Under this pharmaceutical benefit, veterans pay nothing for prescription drugs if they are being treated for service-connected conditions or have service-connected disabilities rated at 50 percent or greater. Veterans with service-connected disability ratings of less than 50 percent, those treated for non-service-connected conditions, and those who do not qualify as low income have $2 copayments for each 30-day drug supply. Covered drugs are distributed through a VA system of medical facilities and a mail service program for outpatient drugs.

The VA manages this drug benefit through a national formulary system administered by its Pharmacy Benefits Management Strategic Healthcare Group. This group can add and delete FDA-approved drugs from the formulary on the basis of its interpretation of cost, safety, and efficacy data. It also determines which drugs are therapeutically interchangeable and develops clinical guidelines to protect veterans from the inappropriate use of certain drugs. Final decisions are made by a Medical Advisory Panel, a group of 12 physicians responsible for managing the pharmaceutical benefit. From 1997 through 1999, this panel added 26 drugs and deleted 6 from the national formulary. Generic drugs are used whenever possible.

Prescription drugs not on the national formulary may be available to veterans if listed on the formularies of their local medical centers or Veterans Integrated Service Network (VISN), a regional organization responsible for basic decision-making and budgetary duties of the VA program.[10] These formularies include all drugs listed on the VA national formulary as well as drugs a VISN or medical center designates as necessary to address the special needs of the population it treats. As a result, local formularies provide some flexibility in the VA system by allowing physicians access to additional drugs.[11] Physicians may also prescribe drugs not listed on the national, VISN or medical center formularies if granted a nonformulary drug waiver.[12] New drugs may be added to VISN and medical center formularies immediately upon FDA approval. In contrast, such drugs may not be added to the national formulary until they have been on the U.S. market for at least one year, unless the FDA designates the product as a unique therapeutic entity. The VA believes this delay helps protect veterans from potential side effects not identified during the FDA drug review and approval process. They note that clinical trials are conducted with relatively small numbers of people and in environments that may not accurately reflect the drug usage and side-effect rates found in the VA population. This

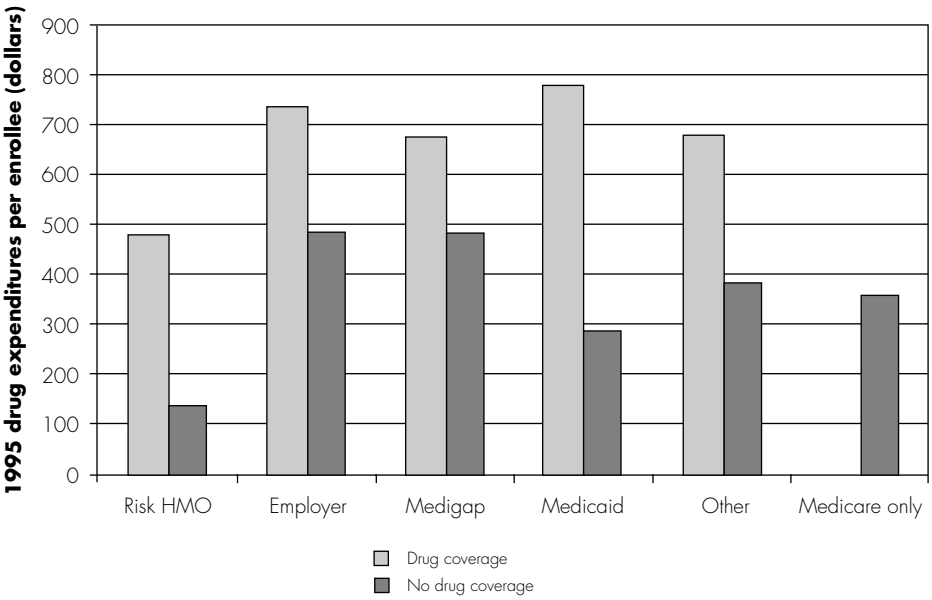
10 There are 22 VISNs, all of which have individual formularies. Only some medical centers have formularies.

11 Officials in charge of VISN and medical center formularies may not delete drugs listed on the national formulary or add drugs to classes for which there are national committed-use contracts, agreements which require the VA to primarily use specific products in a therapeutic category in exchange for reduced prices.

12 In a report to the Congress in February 1999, the VA stated that VISNs received an average of 109 requests to use nonformulary drugs each month in 1998. Eighty-eight percent of these requests were approved. Nationally, nonformulary drugs account for approximately 3 percent of all VA prescriptions (GAO 1999).

FIGURE 1-5

Drug coverage and drug expeditures per beneficiary, 1995



Note: HMO (health maintenance organization). About 3 million enrollees are excluded from this chart because they switched their source of coverage during 1995. Excludes institutionalized beneficiaries.

Source: Adapted from Davis et al. 1999.

treatment of new drugs creates discrepancies across VA's health care system, allowing veterans treated in some facilities to benefit from new drugs before veterans treated at others. It can also be argued that veterans receiving new drugs sooner may be exposed to side effects that could be identified within the first year of general use.[13]

Coverage and beneficiary access to prescription drugs

The type, or lack, of supplemental drug coverage appears to have a large effect on beneficiaries' prescription drug spending. Figure 1-5 shows average prescription drug spending by beneficiaries with different types of supplemental coverage, including whether that coverage includes a prescription drug benefit. Beneficiaries with employer-sponsored insurance or Medicaid have the highest total drug expenditures. These coverage sources tend to offer the most comprehensive benefits. Whether beneficiaries have any coverage at all seems to be more related to total expenditures than is the type of coverage: Those beneficiaries without supplemental drug coverage spent considerably less than those with coverage did in 1995.

The difference in drug expenditures between beneficiaries with and without drug coverage is also illustrated by a study of 1996 data that found beneficiaries with coverage purchased an average of $769 of prescription drugs and filled 21.1 prescriptions annually, compared with $463 and 16.0 prescriptions for those without coverage (Poisal and Chulis 2000).[14] However, beneficiaries who seek coverage are more likely to have significant drug costs. Also, the presence of coverage may induce beneficiaries to seek more prescriptions for drugs to help their conditions because they do not bear the full costs.

As a result of the costs borne by insurance, beneficiaries with drug coverage tend to spend considerably less out of pocket than do those without coverage. In 1996, those with coverage spent an average of $253 out of pocket, compared with $463 spent by those without drug coverage. On a per-prescription basis, covered beneficiaries paid $12 and non-covered enrollees paid $29 (Poisal and Chulis 2000).

Two studies illustrate the direct relationship between coverage and drug use. When the New Hampshire Medicaid program limited coverage to three prescriptions per month, chronically ill elderly and disabled enrollees significantly reduced the use of such medications as insulin, lithium, cardiovascular agents, and bronchodilators (Soumerai 1999). A more recent study found that those with drug coverage were more likely to purchase needed hypertensive medications (Blustein 2000).

Even nominal cost sharing appears to significantly reduce treatment compliance for low-income groups. One study of elderly and disabled Medicaid participants found that beneficiaries with even nominal copayments ($3 or less per fill) had significantly lower levels of drug utilization, compared with similar beneficiaries with no copayments (Stuart and Zacker 1999).

Substitution between drugs and other health care services

The lack of prescription drug coverage can lead to reduced compliance with drug treatment regimens, which may in turn lead to a greater need for other medical

13 The Institute of Medicine is currently evaluating the restrictiveness of the VA's formulary system, its impact on cost and quality, and how it compares with other formularies in the private and public sector. The report is to be released in June 2000.

14 The "number of prescriptions" figure per person should be used with caution and may be misleading because the total amount of the drug per prescription varies, particularly by whether it was received from a pharmacy or through mail order.

care covered by Medicare. This relationship is of particular budgetary concern because an increased need for other health care services will increase costs. One study found that 11 percent of Medicare hospital admissions were the result of non-compliance with drug regimens, with a lack of insurance coverage cited as one of the contributing factors (Col et al. 1990).

The ability of drug treatments to substitute for other types of health care services and the potential of expanded drug coverage to produce overall health care savings has drawn interest from policymakers. However, empirical evidence has not shown a consistent quantitative expression of this relationship. In some situations, new drugs have been found to reduce an individual's total health care costs—for example, anti-hypertensive drugs prevent strokes and the need for attendant health care services. In other cases, the new drugs have increased costs as people begin to treat conditions that previously went untreated (or were treated by less expensive and sometimes less effective drugs), such as arthritis. Lastly, because drugs may extend lifespans, overall health care spending may increase. To the extent that the increase in costs resulted in improved treatment outcomes and quality of life, many would argue that a drug's therapeutic value was worth the additional cost. The relative cost savings or cost effectiveness of expanding Medicare coverage is further complicated because as beneficiaries take more drugs, the chances of adverse drug reactions increase. These reactions can lead to costly hospital stays and other medical services.

Existing research studies on cost effectiveness and savings also make it difficult to generalize about the relationship between improved coverage and total health care costs, but it is safe to say that adding a prescription drug benefit to Medicare would increase total Medicare spending. Congressional Budget Office (CBO) analysts have expressed their reluctance to attribute savings based on studies of the Medicaid population (Christensen and Wagner 2000). Another group of analysts notes that evaluating cost effectiveness depends on what the analysis deems the relevant comparative treatment (or baseline treatment), and there may not always be consensus on the appropriate comparison (Neumann et al. 2000). Both teams concluded that a Medicare drug benefit would increase Medicare's overall costs.

Adding prescription drugs as an integrated Medicare benefit

Improving prescription drug coverage for the elderly and disabled could be addressed by adding a drug benefit to fee-for-service Medicare and requiring all M+C plans to provide the benefit. Advocates of this approach note that prescription drugs have become an essential component of the acute-care arsenal to combat disease and improve quality of life, and as such are an appropriate addition to the Medicare benefit package.

In considering the specifics of a Medicare prescription drug benefit, policymakers need to weigh various possible objectives, including targeting beneficiaries most in need of assistance versus helping all beneficiaries without adequate coverage, maximizing efficiency, safeguarding investments in research and development, minimizing government regulation, and achieving fundamental program reform, among others. This chapter does not evaluate the possible objectives that motivate policy choices, nor does it address questions about who should finance the benefit or how to avoid displacement of current resources. Instead, it identifies key design questions that define the terms and scope of coverage and the ability to control costs for beneficiaries and the Medicare program.

Policy decisions for an integrated Medicare benefit policy include:

- whether the drug benefit would be voluntary or mandatory for beneficiaries,
- whether to provide federal subsidies,
- how the benefit will be designed or specified,
- how the benefit would be managed,
- which drugs will be covered and how appeals would be handled,
- which entity or entities should administer the benefit, and
- how Medicare payment would be determined.

Voluntary or mandatory benefit

Under a voluntary benefit, beneficiaries could decide whether they wanted to enroll in the prescription drug portion of the expanded Medicare benefit. A voluntary benefit avoids requiring beneficiaries to receive and (depending upon the premium structure) pay for a benefit they do not want or already receive from another source. However, a voluntary benefit invites concern about adverse selection, a situation in which only those beneficiaries who believe they will experience high costs tend to opt for the coverage. This phenomenon would raise the average premium for all enrollees. Ways to minimize adverse selection—including subsidies, benefit design features, and enrollment restrictions—are discussed throughout this chapter.

A mandatory benefit requires that all people receiving all or certain Medicare benefits must also receive and (depending on premium requirements) pay a portion of the premium for the benefit. A mandatory benefit eliminates concerns about adverse selection because the cost of the benefit will be spread across high- and low-use beneficiaries. However,

because some beneficiaries may not want to purchase this coverage—particularly if it is not as comprehensive, or as good a value, as their current coverage—this approach may be controversial.

Subsidies

Policymakers may consider subsidizing a portion of the premium for prescription drug benefits. Subsidies could be tailored to certain low-income beneficiaries or extended to all beneficiaries. In addition, the subsidies could be considered taxable income for higher-income beneficiaries. Subsidies serve two functions. First, they relieve some of the burden of the cost of prescription drug coverage, which may result in more coverage and possibly better health care. Second, sufficiently generous subsidies encourage more beneficiaries to enroll in a voluntary prescription drug benefit product, which addresses the problem of adverse selection. If the benefit were voluntary, it is unlikely that crippling adverse selection effects could be avoided without substantial subsidies. However, in addition to federal budget concerns, providing federal subsidies for a drug benefit would raise concerns about the effects on employer-sponsored retiree drug coverage. Subsidies would almost certainly affect employer policies and actions, and would replace private-sector resources currently spent on prescription drug coverage for Medicare beneficiaries. Employers may drop coverage altogether, and either reduce retirement compensation packages or make up for the lost benefits by increasing pensions. To the extent that the new Medicare coverage is less comprehensive than previous employer-sponsored coverage, some beneficiaries will have reduced coverage under this scenario. Employers could also change the design of their health coverage to "wrap around" the new Medicare benefit, which may include paying the premium for the Medicare coverage as well as providing additional coverage. Finally, given incentives, employers could reduce prescription drug coverage but expand other benefits.

Benefit design

Plan sponsors—entities offering a drug benefit—have at their disposals many techniques for influencing the behavior of beneficiaries, physicians, and pharmacists. When deciding how to structure a drug benefit, plan sponsors must carefully define the goals of the plan. For example, is the goal to target certain beneficiary segments (such as high users), or is the goal to provide a broad-based benefit to all?

Once goals have been established, the most efficient techniques to meet those goals need to be considered. Plan sponsors must ensure that the drug benefit features do not conflict with their goals or with other plan features. For example, cost-sharing differentials that are too small to effectively steer beneficiaries to the desired drugs may not be worth the administrative costs of setting up a complicated, multi-tier copayment system. Similarly, a benefit that appeals only to a subset of beneficiaries may undermine the plan's ability to spread insurance risk or provide meaningful insurance coverage. Some cost-sharing features, such as deductibles, out-of-pocket maximums, and benefit limits, can be triggered when a fixed amount of spending has been exceeded. Others, such as copayments and coinsurance, can be triggered each time a service is delivered.

Deductibles, out-of-pocket maximums, and benefit limits

A deductible is the amount of money that beneficiaries must spend in a year before the plan begins to pay for expenses. An out-of-pocket maximum caps beneficiaries' annual cost sharing at a certain amount, after which the plan pays all expenses for the remainder of the plan year. An annual benefit limit is the amount above which beneficiaries must pay the full amount for additional services. A plan might include both an out-of-pocket maximum and a benefit limit. In this case, beneficiaries would have no further cost-sharing obligations after the out-of-pocket maximum (for example, $1,500) was met, but still would be responsible for all expenses above the benefit limit (for example, $1 million lifetime).

Many employer-sponsored plans include overall deductibles of $250 or more. Less common are deductibles specific to the drug benefit, typically $25 or $50 per year. To steer beneficiaries to cost-effective providers and drugs, drug-specific deductibles can apply only to non-network pharmacies or non-formulary claims. In contrast, out-of-pocket maximums and benefit limits are typically imposed not to encourage particular behaviors, but to limit the exposure of the beneficiary or the insurer.

A deductible can also finance other plan provisions. Annual prescription drug expenditures are typically distributed with many low users at one end of the scale and few high users at the other. With such a distribution of spending, in which nearly everyone has some drug expenditures, a plan could lower its drug costs considerably by imposing a deductible. If nearly everyone met the deductible, the plan could lower the premium cost by almost as much as the deductible amount, or use the savings to raise the benefit maximum or lower the out-of-pocket maximum.

There are administrative costs, however, to including a deductible in the benefit design. Plans would have to track where beneficiaries stood relative to the deductible. Each plan would have to communicate clearly to beneficiaries about which expenditures count toward fulfilling the deductible. For example, beneficiaries might believe that all drug expenditures count, but the plan might measure expenditures as the amount it would have paid for approved products. If the plan included a deductible, the beneficiary might not think to get approval or discover the amount that the plan would allow for a particular purchase.

If enrollment in the drug benefit is voluntary, then the plan sponsor faces other considerations in structuring the

benefit. If the benefit encourages sicker beneficiaries to enroll, then risk will not be evenly spread and the cost of the benefit will increase. A plan with a high deductible and an out-of-pocket maximum might increase the likelihood of attracting sicker enrollees. Beneficiaries who anticipate that they will meet the deductible and may need the out-of-pocket maximum are most likely to enroll. On the other hand, a benefit with a low deductible and no out-of-pocket maximum will be more appealing to healthier beneficiaries, whose inclusion in the purchasing pool will keep the average cost per beneficiary of the benefit lower. This is important if beneficiaries are paying all or part of the premium. To the extent that a low deductible is financed by higher copayments or coinsurance, beneficiaries who use many services will pay more.

Alternatively, a Medicare benefit could be designed to have only an out-of-pocket maximum and provide no coverage before reaching the maximum. This benefit would offer protection from high drug costs, but has several disadvantages. First, if enrollment is voluntary, it may be attractive only to beneficiaries who anticipate high drug costs, driving up the cost of the coverage to enrolling beneficiaries. Second, it may limit beneficiaries' incentives to control costs, especially as the out-of-pocket maximum amount is approached.[15] Third, this design requires that beneficiary spending be calculated under a standard methodology so that it would be clear when the out-of-pocket maximum is met, triggering coverage (Moran 2000).

Coinsurance and copayments

Copayments and coinsurance define the amount of each prescription paid by the beneficiary once the plan deductible has been satisfied. A copayment is a fixed dollar amount per prescription; a coinsurance is a fixed percentage of the cost per prescription (typically 20 percent).

These cost-sharing features influence beneficiary behavior. For example, copayments may vary depending on whether the drug is generic, brand on-formulary, or brand off-formulary. In specifying a lower copayment for preferred brand drugs and generics, patients are steered toward these preferred or less expensive alternatives. Currently, a common copayment structure is a "three-tier" system, under which the copayments might be $5 for a generic drug, $10 for an on-formulary or preferred name-brand drug, and $25 for other branded drugs.

A variation on the three-tiered approach would make cost-sharing dependent on the price of designated "reference" drugs—those drugs deemed most cost efficient in each class. Although more complicated to administer and not widely used in the private sector, this copayment arrangement is designed to encourage the use of those drugs deemed the most cost efficient; therefore, a beneficiary selecting a drug priced higher than the reference drug in a given class would pay the difference in price, in addition to the copayment.

Reference pricing would make drug manufacturers more likely to price their products competitively than would a three-tier copayment model. Under a three-tier copayment, manufacturers that believe their drugs will not be on the formulary have little incentive to price their products competitively, because beneficiaries pay a flat copayment for all off-formulary brand drugs regardless of price. In contrast, under a reference price approach, beneficiaries pay all of the additional cost above the reference drug price, which can be quite substantial. This difference in price sensitivity may induce manufacturers to bid more competitively, even for off-formulary drugs.

Perhaps the greatest challenge in implementing a reference-pricing approach is determining how to define clinically meaningful drug classes. If classes are narrowly defined, cost savings will be more difficult to achieve, because many drugs will be designated as reference drugs and the pool of other drugs in the classes will be small. The breadth of the classes also has important implications for the comparability of drugs within a class and for beneficiaries' access to prescribed drugs that will meet their clinical needs.

In employer-sponsored plans, copayments are far more common than coinsurance arrangements because they are simpler to administer and limit beneficiary liability in a predictable fashion. There are disadvantages of fixed copayment arrangements: beneficiaries are desensitized to rising drug costs, and the plan must absorb all price increases unless copayments are adjusted over time. Coinsurance arrangements, in contrast, preserve the cost-sharing balance between the plan sponsor and the beneficiary as costs increase. Some plans will impose "corridors" around the coinsurance rates to ensure that beneficiary payments are not less than a minimum amount or more than a maximum amount.

Benefit management

To control the use and cost of prescription drugs, plan sponsors have techniques, other than benefit parameters, that address provider and pharmacy behavior. Many of these tools have been developed and used by PBMs or other organizations that handle large volumes of claims and have relationships with pharmacy networks. Therefore, private third-party payers often contract with PBMs to manage their drug benefits. In addition to processing claims for prescription drugs, PBMs use many of the management tools, discussed in detail below, to reduce costs and improve quality of services and care. PBMs are not licensed to bear insurance risk. (Certain managed care plans have internal divisions that function like PBMs.) One reason that PBMs have not chosen to

15 Beneficiaries may drop their existing coverage, and insurers providing front-end coverage have a reduced incentive to manage costs because their liability will end once the out-of-pocket maximum is triggered. If the out-of-pocket maximum is high (for example, $1,000), beneficiaries with a significant copayment (or no other coverage) will minimize out-of-pocket expenses to some degree.

become insurers is that they have limited influence over the prescribing patterns of physicians, and are therefore restricted in their abilities to control costs. However, contracts between plan sponsors and PBMs may include payment incentives for improved service or other features within a PBM's control.[16]

For years, PBMs have negotiated discounts with pharmacies and rebates from pharmaceutical manufacturers. More recently, PBMs have taken more active roles in encouraging the substitution of lower-cost or more appropriate medications. This may involve communication with plan enrollees, phone calls to prescribing physicians, and dispensing through mail service vendors who supply maintenance medications for patients with chronic conditions.

Tools for benefit management

The next section discusses the tools used in the private sector and their potential applicability as part of an integrated Medicare drug benefit. Employer-sponsored plans most commonly encourage generic substitution through beneficiary cost sharing. Next in popularity are formularies (typically open) and concurrent drug utilization review. Less popular tools include retrospective drug utilization review, prior authorization, therapeutic substitution, disease management, and pharmacy incentives to dispense generic drugs.

Generic substitution Generic drugs contain the same active ingredients as their counterparts and are judged by the FDA to be bioequivalent. Generic drugs cost less than their brand-name counterparts and have played a significant role in constraining total prescription drug spending. The CBO estimates that by substituting generic drugs for brand-name drugs, purchasers saved $8 billion to $10 billion in 1994 (CBO 1998). In 1998, generic drugs accounted for 46.5 percent of all outpatient prescriptions dispensed—up from 18.4 percent in 1984 (Cook et al. 2000). As a percent of expenditures, however, generics comprised only 17 percent of the total prescription drug market (Watson Wyatt Worldwide 2000).

The most direct way to encourage use of generic drugs is to require higher beneficiary cost sharing for brand drugs. Typical employer-sponsored plans charge $5 for generics and $10 or higher for brand drugs. Some HMOs impose even stronger financial incentives for generic substitution by limiting payments for brand drugs to $500 while providing unlimited coverage for generics. A few M+C plans offer drug coverage for generics only.

Through their pharmacy networks, PBMs can also encourage pharmacies to dispense generics when available by paying a higher dispensing fee for generics. The dispensing fee is the amount that PBMs pay pharmacies, in addition to the amount that the PBMs believe the drugs cost the pharmacies to obtain. For example, assume a brand drug has a wholesale price of $20 from the manufacturer, and its generic equivalent has a wholesale price of $10. If a PBM would usually pay a dispensing fee of $2, the pharmacy would receive $22 for the brand prescription, and $12 for the generic prescription. If the PBM wanted to encourage the pharmacy to switch the brand prescription to generic, it could pay the pharmacy a dispensing fee of $4 for the generic. Reimbursements would then be $22 for the brand and $14 for the generic.

Formularies and rebates A formulary is a list of drugs promoted for therapeutic and cost reasons. Within a group of therapeutically equivalent drugs, a subset of the group might be placed on the formulary because it is priced favorably by the manufacturer. Negotiations between PBMs (or provider groups) and manufacturers are common for the placement of drugs on formularies. Because pharmaceutical companies rarely sell their products directly to the PBMs—sales usually go through wholesalers—rebates based on sales to the PBMs are often the mechanism the manufacturers use to lower the effective price paid by the PBMs.

Under a formulary, physicians are notified of the preferred drugs and encouraged to prescribe them. "Step therapy" is also often used, in which a less costly treatment is tried as a first step and the more expensive non-formulary drugs are available only after the less expensive alternative has been deemed inadequate. Formularies differ in their degree of rigor. Open formularies, the most common type, are structured such that doctors are merely encouraged to prescribe from the formulary. Managed formularies provide coverage for a broad range of drugs, but typically involve more intervention with physicians and higher copayments when a non-formulary prescription is filled. Closed formularies often require beneficiaries to pay the full cost of drugs not on the formulary.

Discount arrangements with pharmacies Almost all pharmacies accept discounted payment arrangements. The dispensing fee may also be negotiated. Under certain circumstances, "restricted" networks of preferred providers—sometimes "high-performance" pharmacies that are effective in promoting formulary compliance—accept deeper discounts than average in return for the promise of greater market share.

Therapeutic interchange Therapeutic interchange occurs when doctors permit one drug to be substituted for a different one (not generically equivalent) in the same therapeutic class. PBMs and beneficiaries may be motivated to contact the physician for permission to make the switch if the drug originally prescribed is not on the formulary. PBMs tend to target up to 15 therapeutic classes for such switching, usually those that account for a large proportion of drug expenditures (Cook et al. 2000).

16 PBMs have contracted mostly with employer-sponsored insurers. The top 20 PBMs currently manage an estimated 71 percent of the volume of prescription drugs dispensed through retail pharmacies covered by private third-party payers. The industry is relatively consolidated, with the top three PBMs—Merck-Medco Managed Care, PCS Health Systems, and Express Scripts—managing approximately 45 percent of all such prescriptions (Cook et al. 2000).

Drug utilization review Retrospective reviews are conducted to identify patients and/or prescribers with usage patterns outside an established standard. For example, patients may be taking a medication longer than recommended or taking too high or too low a dose. Drug utilization review is effective in identifying physicians whose prescribing patterns vary from the norm. One study suggests that a small percentage of physicians are responsible for 50 percent of the savings that can be realized from this type of review. (Cook et al. 2000).

Concurrent drug utilization review is used to identify potential adverse drug interactions. Insurers (or PBMs under contract) and pharmacies can both perform concurrent review, but insurers have the advantage of being able to review drug usage across pharmacies.

Mail service Mail service is particularly useful for dispensing drugs that treat chronic conditions, because often those drugs can be purchased in larger quantities and do not require special handling or a high degree of physician monitoring. Mail-order prescriptions are typically filled with a 90-day supply, compared with a 30-day supply in the retail environment. Mail-order prescriptions promote efficiency, higher rates of generic substitution, and therapeutic interchanges. Mail service copayments are lower to encourage the use of this service. However, the service will not save money for the plan sponsor if the patient does not use the full prescription or if the copayment is too low.

Prior authorization Prior authorization requires patients to obtain special permission from the plan when seeking coverage for certain types of prescription drugs, typically those with high costs or potential for misuse. Drugs in this category include fertility drugs, growth hormones, cosmetic drugs, and appetite suppressants. Clear clinical criteria for coverage must be established for this technique to be effective.

Disease management Disease management programs are designed to identify patients with specific medical conditions, in order to manage their use of drugs and related health care. Common disease management programs target diabetes, asthma, and hypertension. Interventions range from mailing educational materials to monitoring compliance with the therapeutic regimen. In some cases, these programs may include individual patient and case management. Disease management programs under PBMs usually focus on providing information about a specific disease and following up to ensure that the patient complies with the drug regimen. PBM programs are limited in that they are not usually integrated with the rest of the patient's care (Cook et al. 2000).

Applicability to Medicare

Policymakers need to decide whether tools acceptable in private-sector plans and in current M+C plans that offer drug coverage would be acceptable as part of the Medicare fee-for-service (FFS) benefit.[17] Medicare beneficiaries in the FFS program are accustomed to wide choice in the marketplace; they can see virtually any doctor and go to any hospital, and are subject to minimal utilization review. Limiting beneficiaries' choices or requiring them to pay higher cost sharing depending on their drug choice raises issues not previously considered in the context of Medicare's FFS benefit.

The implications of using formularies illustrate the potential conflict between PBM-style management techniques and Medicare's traditional approach. Formularies are frequently central to plan sponsors' abilities to negotiate discounts and offer lower-cost drug coverage. However, if a formulary is used in which beneficiaries have no or restricted coverage for a particular drug, some may forgo needed medication or use a less desirable substitute. For current Medicare benefits, Congress has been reluctant to restrict beneficiary access to most providers. However, Medicare physicians may bill beneficiaries above the Medicare amount by a set percentage. Thus, although a closed formulary would appear to run counter to current Medicare payment policies, an open formulary or a multi-tiered approach appears to be consistent with other Medicare payment policies.

The process for exceptions to formulary restrictions or higher copayment requirements under a three-tier or reference drug approach raises another issue. Most plan sponsors allow beneficiaries to appeal plan administrators' decisions. Following this model, it would be necessary for beneficiaries to be able to appeal, and at the highest level of appeal, to Medicare directly.

Policymakers also need to decide whether it is appropriate for the federal government to pay PBMs to encourage physicians to switch prescriptions. The practice of therapeutic interchange is more risky for elderly people, because they do not tolerate medication variation as well as younger people do.

Similarly, policymakers would need to consider whether limitations on pharmacy networks are appropriate. To the extent that insurers or PBMs negotiate lower prices with pharmacies by restricting the number of participating pharmacies, beneficiary access to drugs may be viewed as inadequate. Requirements governing the geographic distance between beneficiaries and network pharmacies are an option. Similar requirements now apply to M+C plan provider networks. Policymakers will also need to consider how Medicare policy should relate to state "any-willing-provider" laws. Twenty-one states have such laws for pharmacies (Laudicina 2000).

17 Although beneficiaries in M+C plans are frequently subject to utilization management and tailored restrictions on non-Medicare benefits, they have the option to remain in fee-for-service, which imposes few benefit management restrictions.

Implications for improved quality of care for beneficiaries

Drug utilization review and disease management offer the potential for improved quality of care, particularly in their abilities to reduce medication errors. The incidence of prescribing errors is high for the general population, but Medicare beneficiaries are particularly at risk, given the number of prescriptions they take simultaneously, their greater frequency of coexisting illness, and their diminished physiological function. One study found that 23.5 percent of people aged 65 years or older received at least one contraindicated drug in 1987, and 20.4 percent received two or more such drugs (Wilcox et al. 1994).

If drug benefit management tools prevent adverse drug interactions, the quality of care for beneficiaries would improve. Drug benefit management tools include increased automation—providing fewer opportunities for human error, such as transcription problems—and prompts to ensure that the prescribing doctor and pharmacist have prescribed an appropriate dosage and considered potential side-effects, interactions, and confusion with look-alike or sound-alike drugs.[18] Some pharmacies have these systems in place now; some do not.

Types of drugs covered

Policymakers will also need to determine which drugs Medicare should cover and what entity should make such decisions. Several options exist. First, all FDA-approved drugs could be covered, which would include drugs ranging from so-called lifestyle drugs, such as Rogaine for hair replacement and Claritin for non-drowsy allergy relief, to every drug in all therapeutic classes, regardless of relative therapeutic value, time on the market, or cost. This standard would preclude coverage for experimental drugs.

Another consideration is whether coverage for FDA-approved drugs would be limited to on-label use (uses specified by the FDA). Once a drug is on the market, it can be prescribed for other non-FDA approved uses. Presumably, monitoring coverage for unapproved uses would be difficult. Current Medicare coverage of outpatient oral anticancer drugs includes all FDA-approved uses, as well as uses listed in certain prescription drug compendia.

Policymakers can cover prescription drugs only for some treatments, which could help contain costs. Alternatively, policymakers could choose to exclude certain classes of drugs. As mentioned earlier, Medicaid excludes coverage for certain lifestyle drugs: drugs for weight loss, hair restoration, and fertility, among others. Determining these exceptions can be difficult, as the distinction between what is medical treatment and what simply improves quality of life is not always clear. (For example, coverage policies for Viagra have attracted a great deal of policy debate.)

The VA has adopted another approach in limiting coverage: its national formulary excludes coverage for drugs in the first year after their approval by the FDA. This exclusion is intended to ensure greater safety of covered drugs, as some drugs are taken off the market after experience reveals unforeseen complications.

Cost-effectiveness analysis could serve as a basis to limit coverage. Some foreign countries have begun to use cost effectiveness as a coverage criterion. A framework for such analysis, as well as analyses focusing on quality-of-life improvements and the clinical needs of beneficiaries, would need to be developed and would likely be a difficult undertaking for each drug.

There are other possibilities. A wide range of drugs could be covered, but benefit administrators would be permitted to impose cost sharing and other benefit restrictions. For example, non-formulary drugs are often assigned a higher copayment. Alternatively, drugs could be covered, but in limited amounts. For example, some employer-sponsored plans cover a limited number of Viagra pills per month. Finally, prior authorization and compliance with clinical guidelines could be required to obtain the drug. Growth hormones are often handled in this fashion in the private sector. Depending on the degree of discretion afforded to plan administrators, however, this approach could present opportunities for abuse: for example, a plan could offer full coverage for Viagra but impose high copayments for drugs treating diabetes, in the hope of attracting a healthier subgroup of enrollees.

The decision-making process for a publicly funded program will likely differ from that for private-sector plans. Currently, M+C plans make these decisions individually, because drugs are not a covered benefit. In the Federal Employees Health Benefits program, individual plans determine which drugs they will cover (there are a few specific minimum requirements). In the Medicare FFS environment, however, variation may be less acceptable, as evidenced by the continuing controversy over variation among fiscal intermediaries' and carriers' coverage decisions regarding other Medicare services.

Uniformity could be achieved by a standard—such as all FDA-approved drugs—or the standard could allow for exceptions, similar to those in Medicaid. However, such criteria may be too inclusive, given the need to contain costs. To narrow coverage to a smaller subset, another public process—through a federal board or agency—may be necessary. Similarly, if the benefit design links coinsurance amounts to a reference drug in a given class, a public body would need to make class determinations.

18 According to the FDA, roughly half of the 6,000 medication errors reported to the agency between 1992 and 1997 were due to labeling and packaging issues. Of that half, some 27 percent were caused by generic or trade-name confusion. For example, FDA has received numerous reports of dispensing errors involving Celebrex, Cerbyx, and Celexa, three sound-alike drugs that treat very different conditions (National Coalition on Health Care and The Institute for Healthcare Improvement

Benefit administrator and pricing issues

Policymakers must decide how a new drug benefit should be administered, who should bear the insurance risk, and how the prices for drugs would be determined. There is a continuum of approaches on these issues that ranges from a centralized, regulatory approach to a decentralized approach that delegates authority to multiple private-sector entities. The list of approaches that follows is illustrative, rather than exhaustive.

- *HCFA administers the benefit*. Under this model, HCFA would bear the insurance risk and might set a fee schedule, as it does currently with physicians. Alternatively, HCFA could adopt approaches similar to those used by Medicaid or other public purchasers, including the VA.
- *Federal agency contracts with PBMs* to administer a defined drug benefit to FFS beneficiaries. The PBMs would be responsible for negotiating prices with drug manufacturers, managing the benefit, contracting with pharmacies, and processing claims for beneficiaries. Because HCFA would pay the PBMs on primarily a FFS basis, HCFA would bear the risk of the cost of the benefit.
- *Beneficiaries contract with drugs-only insurance plans*. These plans would offer a defined drug benefit. This proposal would allow beneficiaries to receive drug coverage from other currently available sources as well. The insurance plans would bear the risk.[19]
- *Federal agency contracts with private insurance plans* to offer a comprehensive array of Medicare benefits, including prescription drugs, as proposed under a premium support model. Although this approach is similar to Medicare +Choice, beneficiaries would likely have an increased financial incentive to join these plans. Beneficiaries who choose to remain in the traditional FFS program could also purchase a prescription drug benefit. The drug benefit available to all beneficiaries would be equivalent to a certain actuarial value. Insurance plans would bear the risk associated with their enrollees; the government would bear the risk for beneficiaries in the FFS benefit.

Medicaid, the Department of Veterans Affairs, and other federally funded programs

Definitions of terms

The following terms are important in determining the price paid for prescription drugs in both the Medicaid and Veterans Affairs programs.

Average manufacturer's price (AMP)—The average price paid to manufacturers for products distributed to the retail class of trade.

Average wholesale price—The suggested wholesale price of a drug published in various national compendia. It is often used by pharmacies as a cost basis for pricing prescriptions.

Federal supply schedule (FSS)—The FSS for pharmaceuticals is a price catalog containing about 23,000 pharmaceutical products available to federal agencies and institutions and several other purchasers, such as the District of Columbia, U.S. territorial governments, and many Native American tribal governments.

Reimbursement policies

Medicaid directly reimburses pharmacists for drugs purchased by Medicaid beneficiaries and collects rebates from manufacturers. Prices paid to pharmacies may be subject to upper limits established by HCFA, depending on the drug, plus a dispensing fee established by the state. Upper payment limits apply only to drugs that have at least two other generic competitors. The limit for these drugs is 150 percent of the published price for the least-costly therapeutic equivalent, plus a reasonable dispensing fee.

Total Medicaid rebates are based on the quantity of drugs purchased by Medicaid beneficiaries. The basic rebate on brand drugs is the greater of 15.1 percent of the AMP or the difference between the AMP and the lowest price the manufacturer charges any private purchaser in the United States. If a brand drug's price rises faster than the inflation rate, an additional rebate is imposed. For generic drugs, a rebate of 11 percent of each product's AMP is required.

The VA, the Department of Defense, the Public Health Service, and the Coast Guard pay the lesser of:

- The Federal Ceiling Price (FCP), a discount of at least 24 percent off the non-federal average manufacturers price, minus cash discounts, rebates, or similar reductions. The FCP applies to new drugs, including certain single-source and innovator multiple-source drugs, biologic products, and insulin.
- The price listed on the FSS. The prices must be equal to or lesser than the best price charged to the manufacturer's most favorable comparable customer. ■

19 Requiring that a drugs-only plan be offered to beneficiaries could also be pursued as part of Medigap restructuring, which is discussed later in the chapter. Depending on how this is structured, it may not be considered a Medicare benefit.

A more centralized approach would take advantage of Medicare's market power in purchasing drugs on behalf of beneficiaries. This approach may also be considered inevitable, if not initially desirable, to restrain costs if private-sector entities are not permitted the same flexibility they have in the private sector to manage a cost-effective benefit. This centralized approach is used in Medicaid, the VA, and other public programs.

In contrast, the intended advantages of delegating management to private entities or insurance plans are to achieve cost savings similar to that achieved in the private sector and retain a more pluralistic marketplace for prescription drugs, rather than creating a monolithic purchaser that could distort the marketplace.

Whether there is centralized or decentralized purchasing power has significant policy implications for the ability to negotiate prices, the impact on pharmaceutical research and development, adverse selection in the marketplace, achievement of private sector efficiencies, the willingness of plans to participate, and the flexibility of the benefits package. In making such a decision, policymakers will need to consider the following issues.

Achieving a balance between reduced prices for Medicare beneficiaries and adverse effects on pharmaceutical research and development

Ideally, policymakers should balance achieving fair prices for drugs for beneficiaries with retaining investment incentives for drug research and development. However, many controversial issues would need to be addressed. How much profit do manufacturers need to continue to invest in R&D? How should that be determined? Is it possible for government to judge and direct where manufacturers should spend money (for example, on marketing versus R&D)?

The impact on R&D could be adverse if prices were set such that manufacturers did not perceive sufficient returns on future investments. However, several factors may limit the threat to R&D for the foreseeable future. First, price reductions may be, at least in part, offset by a potentially higher volume of sales resulting from greater access of Medicare beneficiaries to prescription drugs.

Second, discounts for Medicare beneficiaries will likely encourage manufacturers to increase private-sector prices. This has been the previous experience with the Medicaid program. In 1991, when the best-price provision was enacted, nearly one-third of all brand drugs still under patent had a best-price discount as high as 50 percent. By 1994, when there was no longer a cap on the basic rebate, only 9 percent of brand-name drugs still under patent had a best-price discount in that range. A similar experience occurred when in 1991 and early 1992, the Federal Supply Schedule (FSS) was counted as best price, meaning that Medicaid had access to most FSS prices. As a result, FSS prices rose, the VA and other federal purchasers complained, and the Congress exempted FSS prices from the best-price provision in 1992 (Cook 1999).

Third, administered pricing often creates unintended incentives, allowing the regulated entity to "game the system." For example, because the additional rebate provision in the Medicaid program prevents manufacturers from raising prices to Medicaid faster than the rate of inflation after the drug is launched, manufacturers have an incentive to charge a somewhat higher launch price to offset the rebate. Similarly, to the extent that discounts are mandated as a percent of average wholesale price, manufacturers could increase their average wholesale prices, limiting the discount's effect.

Nevertheless, although administered pricing may create opportunities for gaming, it also could encourage inappropriate patterns of investment, which might irreversibly affect the market. For example, a pricing structure that is more relaxed for innovator drugs could divert resources from research on drugs in existing therapeutic classes to drugs in new classes. To the extent that this redirection led to the abandonment of needed research in existing classes, the policy would have failed. Further, if Medicare were perceived as a poor payer, R&D efforts might be redirected away from products that would be expected to be used mostly by the elderly.

If multiple purchasers were to negotiate with drug manufacturers on behalf of a subset of beneficiaries, there may be less pressure on R&D investments. However, to the extent that multiple purchasers lacked market power to negotiate reasonable discounts or were restricted from managing the benefit effectively, beneficiaries and taxpayers (depending on how the benefit was financed) would pay a higher price for this benefit.

Reducing adverse selection

Any proposal that requires beneficiaries to pay a portion of premiums and choose between insurers or PBMs for drug coverage creates a concern about adverse selection. To avoid adverse selection, there first must be enrollment rules that limit beneficiaries' abilities to opt for coverage only when high drug costs are expected. Otherwise, beneficiaries have no incentive to participate when they expect low costs, limiting the program's ability to spread risk across high and low users.

One way to help avoid adverse selection in a voluntary benefit is to subsidize the cost of the benefit. Subsidies can help attract a more even distribution of beneficiaries because they may make it cost effective for the vast majority of beneficiaries to participate, regardless of health status. The effect of the subsidy is illustrated in Medicare program experience. Part A is subsidized at 100 percent, requiring no beneficiary contribution. Part B is subsidized at 75 percent, and 97 percent of eligible elderly participate.

Second, policymakers could require that beneficiaries enroll within the first six months of Medicare eligibility (the current open enrollment period for Medigap purchase). After that time, beneficiaries could either be subject to

medical underwriting or not be permitted to enroll. Alternatively, beneficiaries could be allowed to enroll annually (or at some other longer interval). If more than a one-time enrollment period is permitted, policymakers may consider subjecting those beneficiaries to a premium surcharge (as is done for Part B enrollment) as an incentive for earlier enrollment. This design feature is particularly important because prescription drug expenditures are highly predictable for seniors with chronic medical conditions, many of whom are treated with costly maintenance medications.

Third, the enrollment process could be uniform for all plans. Uniformity can help reduce selection. Policies that help enforce this uniformity include guaranteed issue, guaranteed renewal, open-enrollment periods, waiting periods, "lock-in" rules, prohibition of medical underwriting, uniform basis of premium (community or age rating), and report cards for consumers (Etheredge 1999). Not all of these policies would be necessary, but policymakers could choose a logical combination of them.

Fourth, the benefit package for plans could be similar. This enables consumers to select plans based on price and quality, rather than on benefits. If plans are allowed wide variation in benefits, some plans may be more likely to attract healthier (low-cost) beneficiaries. In fact, it is possible that no plan will design a benefit that offers needed coverage to less healthy beneficiaries. For example, if plans are given a choice, they may avoid offering catastrophic drug coverage and instead opt to provide a low-deductible, capped plan.

Fifth, a risk-adjustment system could be developed; plans that experience adverse selection would be paid at higher rates, and those experiencing positive selection would be paid at lower rates. Such a system would remove some incentives to design a benefit package that would attract better risks. Currently, Medicare+Choice plans are paid on a risk-adjusted basis.

Another way to avoid some of the market segmentation problems is to mandate enrollment. This approach was pursued in the Medicare Coverage Catastrophic Act of 1988 and led, in part, to its repeal. Consequently, this design feature tends to have little political appeal, and has not been widely suggested in current proposals.

Structuring administration contracts

Although HCFA administers the Medicare program, it is not a benefit administrator. HCFA contracts with claims administrators to process, adjudicate, and pay claims. If a drug benefit were added to Medicare, HCFA would have to either expand its current administrative contracts or develop new ones specific to drug issues. If HCFA were simply to expand current administrative contracts, the agency probably could not make much use of PBM cost containment and other management techniques. Also, because current contractors do not make pricing decisions, the use of current contractors would probably occur only under an administered-pricing system. Thus, the rest of this section will pose issues for consideration only under a PBM-like, drug-only administrative model.

Selection of contractors How should drug administrators be selected to contract with Medicare? Should they receive the sole contract in a region or compete with other regional drug administrators for beneficiaries in the region?

Selecting one administrator per region through a competitive contracting process mitigates the adverse selection that can occur when plans compete for beneficiaries. Renewing its contract, rather than competing for market share, provides an administrator with incentive to improve the quality of service. Further, a single administrator per area has an enhanced ability to negotiate discounts because it has a guaranteed market share. Presumably, the contracting criteria would value cost and service.

On the other hand, if more than one administrator were selected per region, competition would be present for both contract awards and market share, which might further improve the quality of service. Multiple administrators may also reduce barriers to market entry, as new administrators would not have to prove they could serve the whole market overnight or be at a competitive disadvantage due to transition confusion that beneficiaries might experience with wholesale change.

Having multiple administrators in a region could also reduce the need for federal regulation on formularies or other management tools related to beneficiary satisfaction, because beneficiaries could "vote with their feet" by selecting the administrator that best met their needs. Also, a single administrator might not have sufficient capacity to meet the needs of all the beneficiaries in a given geographic area.

However, allowing multiple administrators per region raises questions as to whether beneficiaries will value having a choice among administrators and whether competition among administrators would lead to adverse selection. Selection concerns may be minimal if administrators are paid on a fee-for-service basis, but if capitated payment is pursued, it may be necessary to consider ways to risk-adjust payments.

Length of contract Several PBM executives have expressed preferences for longer-term contracts, in part because they would encourage investment in better management techniques, such as promoting formulary compliance by educating doctors and beneficiaries (Cook et al. 2000). In addition, short-term contracts that lead to turnover in administrators might confuse beneficiaries, who would have to become familiar with new formulary rules. However, a short-term contract allows for a check on poor-performing administrators and for new entrants, which would likely promote competition.

Definition of the market area Most proposals suggest that administrators would compete on a regional basis, allowing for differences in local practice patterns and promoting more purchasers in the marketplace. In determining the size of local markets, the desire for more purchasers needs to be balanced with purchasers' abilities to achieve economies of scale and scope. If divided into too-small regions, administrators will find it difficult to negotiate effectively. Also, because there are important returns on scale in processing claims, administrators would have lower average costs in larger markets.

Payments for the administrators PBMs do not appear to be eager to become risk-bearing entities, largely because they have no direct control over physician prescribing practices. Nevertheless, pharmacy administrators can influence some costs and have negotiated performance guarantees in the private sector. They typically keep about 20 percent of the negotiated rebates and often have contractual incentives to meet certain service or generic substitution targets. For example, administrators that exceed performance targets for generic substitution or therapeutic substitution might receive a bonus payment; if they fail to meet such targets, they might face a financial penalty.

This model could be adopted and expanded by Medicare. Administrators could be placed at limited financial risk within a "corridor" around a claims target. For example, administrators might assume 50 percent of the risk for savings or losses within 10 percent of the target, making the total risk for a pharmacy administrator 5 percent of the target (Huskamp et al. 2000). Another approach would be to establish bonus payments for meeting performance standards, including enrollee satisfaction, speed in processing and paying claims, and access to pharmacies. To the extent that such arrangements were possible, administrators would add value and efficiency to the system and function less like claims processors.

Creating incentives to encourage private insurers to participate

The policy approach to encourage enrollment in privately offered drugs-only insurance plans faces the challenge of inducing plans to offer the product. Currently, no insurer offers a drugs-only plan to Medicare beneficiaries because of concerns about adverse selection and the difficulty of pricing this product.[20]

However, if the ground rules created an environment with sufficiently limited risk, insurers might be more inclined to participate. First, the potential for adverse selection would need to be minimized, either by establishing enrollment restrictions or by allowing underwriting if beneficiaries wanted to enroll outside of designated open enrollment periods.

Second, policies would need to address the difficulty insurers face in pricing a drugs-only product. The large volume of new and costly prescription drugs coming to the market, together with the demand generated by direct-to-consumer advertising, makes private insurers reluctant to bear the risk of future cost increases. To encourage participation, policies could provide plans with the flexibility to increase premiums and index their benefit characteristics—such as deductibles and copayments—to drug cost growth, to require a standardized benefit package, and to mandate a deductible high enough such that plans would insure for risk, rather than "dollar-trading." Plans might also be more likely to participate if they could withdraw their product from the market, which is often illegal under state guaranteed renewability laws.

To reduce plans' concerns about adverse selection and encourage their participation, some have also proposed creating a voluntary drug benefit with a federal subsidy for beneficiaries with high drug costs. The subsidy would be paid from a "high-risk pool" to plans that have higher-cost (the top 5 percent) beneficiaries (Health News Daily 2000). This approach would theoretically limit the financial hardship for plans that enrolled higher-cost beneficiaries but it raises serious practical questions. Would the pool be national or regional? People in some areas of the country tend to use more drugs than do people in other areas. How would beneficiaries' relative drug costs be measured and policed to ensure that all plans were counting costs similarly? Would plans that are more effective in managing costs be penalized because they are less likely to meet the threshold for accessing the high-risk pool? Who would police the program? Would plans be willing to share beneficiary cost information that would likely reveal negotiated discounts and rebates often considered proprietary?

Defining the benefit package

Any legislation will have to determine how much influence the federal government has on benefit design and management techniques. Standardizing the benefit package can reduce market segmentation and facilitate comparison of plans, but it would limit the ability of plans to innovate in their benefit designs and respond in ways that might ultimately benefit consumers, such as reducing premiums or minimizing increases. These trade-offs have been demonstrated in the Medigap market. Standardization required in OBRA-90 eased beneficiaries' abilities to compare plans but prohibited plans from experimenting with alternative benefit designs that might have limited premium increases (and been popular with beneficiaries).[21]

Deciding how specific to be in prescribing benefits may depend on whether the benefit is through the traditional FFS program or through contracting private

20 Medigap standardization does not preclude insurers from offering a drugs-only product; it only precludes insurers from marketing such a product as a Medicare supplemental plan.

21 OBRA-90 allowed for plans to implement "innovative benefits," but regulators have been reluctant to define or approve acceptable variation from the standardized plans.

plans, similar to the Federal Employees Health Benefits (FEHB) model or M+C model. In the traditional FFS program, available benefits are uniform across geographic areas (although not used uniformly) and beneficiaries have a great deal of choice among providers. Accordingly, a highly specified benefit would be consistent, but not necessary. There could be some flexibility around an established core set of benefits.

If the benefit were added in a reformed Medicare program—similar to premium support—or outside the FFS benefit, the policy questions would be somewhat different. It might not be necessary to detail the design of the benefit as specifically. Policymakers could allow more variation than under the traditional program by setting an actuarial value or range for the benefit.

Even with the more flexible approach based on actuarial value, policymakers may want to define some benefit guidelines. The guidelines or limits within the actuarial values could, for example, include an out-of-pocket maximum for drug expenses, limiting the ability of plans to target only the healthiest beneficiaries. If these restrictions are not specified in law, it could be expected that a Medicare board would negotiate with plans on these points, as currently occurs under the FEHB program model. However, it is unclear whether beneficiaries and policymakers would be comfortable delegating this level of authority to an appointed board.

Determining actuarial equivalence raises a variety of questions. How would the program ensure that the calculation of actuarial equivalence captures the selection effects of plans that impose higher copayments on services normally needed by the less healthy (or have a low deductible and no out-of-pocket maximum)? Would plans be required to submit cost reports to verify their expected costs? Should actuarial value take into consideration strict utilization management policies, or is that information provided separately to beneficiaries? How are plan profits calculated as part of actuarial equivalence?

Alternative policies to expand access to drug coverage

In addition to considering adding drug coverage as a Medicare benefit, policymakers are exploring other policy approaches. Some intend for their proposals to substitute for an enhanced Medicare benefit; others intend their proposals to serve as interim steps toward an enhanced benefit. Some proposals target assistance to low-income or high-cost beneficiaries by helping states provide coverage or subsidizing private coverage. Other proposals try to improve the private market structure such that more insurers and beneficiaries would be willing to participate in a private prescription drug insurance market.

The preferred policy levers will depend on many factors, including the desired target population, concern for government regulation, speed of implementation, and cost implications for beneficiaries, as well as other parties who might finance the policy. Naturally, each approach has its advantages and disadvantages, and trade-offs need to be considered. It is also possible that a few of the approaches below could be pursued concurrently or consecutively. Also, there are many proposals in the Congress that may not fit neatly into any of the following categories. Proposals may combine parts of several approaches. The following discussion is not intended to be an exhaustive identification of policy options, but an attempt to identify some of the key issues. Once the Congress sets priorities among its goals for prescription drug coverage for Medicare beneficiaries, the Commission will analyze proposals as measured against those policy goals.

Expanding Medicaid eligibility

Expanding Medicaid prescription drug coverage for Medicare beneficiaries would be one approach to help low-income beneficiaries. There are already predefined low-income Medicare groups that could serve as the target population, such as Qualified Medicare Beneficiaries (QMBs) and Specified Low Income Medicare Beneficiaries, and possibly Qualifying Individuals. If these groups were used, states could continue to use their current administrative structures. This approach could produce a system that could be implemented quickly; however, there would be a lack of flexibility in benefit design, and the price-setting issues surrounding the current Medicaid system would be perpetuated. While about a third of Medicare beneficiaries might be eligible to join one of the qualifying groups, many eligibles have not signed up for the programs. A 1996 study found that in that year, 63 percent of those eligible for the QMB program participated (Moon et al. 1996). Critics claim that lack of knowledge and the stigma associated with Medicaid programs have kept participation rates low. It could be argued that the addition of a valuable drug benefit to these programs might increase participation, but also increase costs.

The current Medicaid prescription drug benefit payment policies have been controversial. One of the primary cost-control policies is the rebate program, in which drug manufacturers provide mandatory rebates to the state Medicaid programs based on the sales of their drugs to Medicaid recipients. A key feature of this program is that the state programs are entitled to the best price that the manufacturer offers to any purchaser in the United States. This type of pricing structure has had large effects in the private markets (CBO 1996). If the Medicaid market were expanded, manufacturers would be even more reluctant to grant price discounts to any purchaser because they would have to

pass the discount along to the expanded Medicaid market. Therefore, supporters of private market flexibility are unlikely to want to use the highly inflexible Medicaid approach to expand prescription drug coverage among Medicare beneficiaries.

Federal grants to states (State Children's Insurance Program-like program)

Under this general approach, the federal government would make grants to states to expand drug coverage for Medicare population. Programs like the State Children's Insurance Program (SCHIP) might provide federal matching funds to states to contract directly with providers, or provide coverage through private health insurers that meets specific standards for benefits and cost sharing, through state Medicaid programs, or through a combination of arrangements. This approach would give states more flexibility to design their own programs than does Medicaid.

Although states would have more flexibility in designing benefit packages than under Medicaid, the federal government is still likely to require a minimum level of coverage in order to qualify for federal funds. Policymakers would therefore have to decide how to set standards for qualified benefits. Under SCHIP, for example, the standards for the minimum level of benefits are partially determined by factors within the state, including the state's Medicaid package, the benefit packages and actuarial values of some private plans commonly available in the state, and the package of a nationally available plan.[22] Also, the standards limit cost sharing for certain recipients.

It is also likely that the federal government would limit its financial liability by setting standards for beneficiary eligibility. In the absence of standards, or requirements for state matching funds, states might allow everyone to participate at the federal government's expense. The existing SCHIP program limits family income for participants and requires states to match some of the federal funds.

State drug assistance programs

Currently, 16 states have pharmaceutical assistance programs targeted to Medicare beneficiaries. Perhaps some of these programs could serve as models for state grant program options. The programs vary in terms of eligibility, coverage, cost controls, and program approach. A brief examination of programs in Pennsylvania, Minnesota, and Rhode Island reveals some of the variations in these programs.

In Pennsylvania the program has two tiers, the Pharmaceutical Assistance for the Elderly (PACE) program and the PACE Needs Enhancement Tier (PACENET). PACE and PACENET covered nearly 250,000 people ages 65 and older in 1999. They cover most prescriptions for persons with low incomes, as well as insulin and syringes. The program uses a prospective drug utilization review system to identify drug interactions, duplicative therapies, underutilization and overutilization (PACE 1999). Cost sharing for PACE enrollees consists of a flat copayment for each prescription. Enrollees in PACENET may have higher incomes than those in PACE. PACENET coverage has an annual deductible and a two-tiered copayment slightly higher than the PACE copayment.

Minnesota's Senior Drug Program has a single tier. It covered about 5,000 people ages 65 and older in 1999. Eligibility is based on income and assets. Coverage includes almost all drugs on the Medicaid formulary, as well as insulin and syringes. Drugs are not covered if the manufacturer does not participate in a rebate program. Cost sharing consists of a monthly deductible.

Rhode Island also has a single-tier program, which covered nearly 30,000 people ages 65 and older in 1999. Eligibility is based on income. The program covers drugs by medical condition (for example, asthma, diabetes, heart disease, and others). Participants pay coinsurance of 40 percent of the price of the prescription.

Other states' programs include some persons with disabilities and may also use income-based sliding scales to determine cost-sharing amounts or enrollment fees or benefit caps. These 16 states are acting as laboratories for many different drug assistance program designs.

Because most states would have to establish new programs, this approach would take longer to implement than would a Medicaid expansion. Although SCHIP was established in the Balanced Budget Act of 1997, 10 states had not spent any funds as of January 1, 2000. This slow start-up would be especially problematic if this approach were used as an interim step.

Tax credits, deductions, and vouchers

Under this approach, the tax code would be used to subsidize insurance coverage for prescription drugs or to subsidize prescription drugs themselves. Proponents argue that a tax credit system could be implemented quickly, would limit government budget liability to a set amount per beneficiary, and would make use of the private insurance market. The specific policy could be structured so that lower-income beneficiaries receive a greater share, or even all, of the subsidies.

Although this general approach may be simple in concept, there are many design issues to consider. Tax credits, in their most basic structure, are sums of money that taxpayers can use to reduce their tax bills. Because they work through the tax code, they can be targeted to lower-income groups. However, there are complications when targeting tax credits to low-income people. For example, if a taxpayer has less tax liability than the amount of the credit, some of the value of the credit is lost unless the credit is refundable, meaning that the taxpayer

22 The benefit standards are complex in that there are many variations that depend on how the state provides the coverage, what the plans in the state's private sector cover, and what the state's Medicaid package covers. For a more detailed discussion, see Herz and Baumrucker 2000.

could receive a cash payment from the government. If tax credits are used to help poorer taxpayers, then it would be important to design the credit as refundable. Many poorer individuals may not even file tax returns; for example, the Treasury Department estimates that in 1995, only about one-third of elderly potential tax-filers with income between $15,000 and $20,000 filed a return (Office of Tax Analysis 2000). Thus, many of the poor would miss out on the credits unless there were a mechanism to educate and help these people file returns. Finally, it is questionable whether the poor would have sufficient cash available to purchase the insurance or drugs they need and then wait for the tax refund to come.

Many of these difficulties could be addressed if vouchers for insurance coverage were issued in advance, based on income from a prior year. This approach would introduce a new set of issues. Who would administer the program? Would there be provisions to provide vouchers for beneficiaries whose income drops from the previous year?

Alternatively, a tax deduction approach could be targeted to those in need as a result of high expenditures. Currently, health expenditures can be deducted from taxable income if total health spending exceeds 7.5 percent of total income. This percentage threshold could be lowered for Medicare beneficiaries or it could be redefined as a dollar amount instead of a percentage of income.

Medigap market reform

Under this approach, an attempt would be made to restructure the private Medigap market in hopes of improving the availability of prescription drug coverage. It is widely acknowledged that Medigap plans, as currently structured, do not meet many of the needs of beneficiaries wishing to purchase prescription drug coverage. The design of plan options provides only limited protection and promotes self-selection, resulting in prohibitively high premiums for many. Although this approach is most likely to help those who can afford to seek private drug coverage, it could be combined with one of the subsidy approaches to target low-income beneficiaries.

As discussed earlier in this chapter, there are 10 standard Medigap packages, only 3 of which have any prescription drug coverage. Those three plans are also expensive because they experience unfavorable selection. Only 7.4 percent of beneficiaries enrolled in a standard Medigap plan were in the plans that offer some drug coverage (plans H, I, and J).

Numerous reasons have been cited for the high cost of plans covering prescription drugs. First, there is evidence of adverse selection. Also, individuals with drug coverage may be more likely to purchase drugs than if they did not have coverage. However, the high coinsurance and deductibles of the Medigap plans should mitigate this factor. Finally, insurers who offer prescription drug coverage are limited in their ability to manage drug costs through variable copayments and are limited by state "any-willing-pharmacy" laws. The plans also do not have much incentive to manage the benefit, given consumer incentives of high cost-sharing requirements for beneficiaries and the plans' limited liability due to benefit caps. Therefore, carriers and beneficiaries do not generally benefit from the discounts commonly obtained by managed care plans and pharmaceutical benefit managers.[23]

Perhaps the biggest obstacle to this approach is avoiding adverse selection and thus attracting insurer participation. This might be handled by giving each package the same drug benefit as part of the core package. Selection across plans would then not be affected by beneficiaries' knowledge of their expected prescription drug use. Because prescription drug coverage is expensive relative to the other benefits covered by Medigap plans, the price of Medigap policies would rise substantially under this approach. To keep packages affordable while covering prescription drugs, other benefits would have to be adjusted. Some critics of the current Medigap packages believe this would be a good opportunity to trade some first-dollar coverage for better catastrophic and drug coverage. The NAIC is exploring this approach.

If standard packages were configured to include an improved drug benefit, policymakers would have to decide whether to "grandfather" current plans. When standard plans were introduced in 1992, previous insurers were allowed to continue the policies they had in effect for the beneficiaries currently enrolled. More than one-third of beneficiaries with Medigap coverage are still in their pre-standardized plans. If grandfathering were allowed, the proposed standard plans, all with drug coverage, would probably experience adverse selection for a few years, but it might be unpopular to force beneficiaries out of the plans they have into new plans that could be more expensive.

The nature of the Medigap market also produces other potential concerns for using this approach. Medigap coverage is marketed and sold to individuals, rather than groups, and therefore higher administrative costs are involved (Fox et al. 1995). Also, Medigap plans tend to manage the prescription drug benefit differently than do PBMs. Given the coinsurance and benefit caps in the Medigap plans, the plans do not have much liability for high drug costs. Thus, management tends to be minimal and the hefty 50 percent coinsurance rate is relied on to control consumer incentives.

Finally, there may be concerns about insurer participation. The Health Insurance Association of America has formally opposed the use of this approach, although some of its members are in favor. One concern is that relatively few

23 In addition, the standardization of the Medigap plans prevents the industry from allowing other forms of prescription drug coverage, or other combinations of supplemental coverage, that might be more attractive to consumers, or less susceptible to adverse selection.

TABLE 1-5

Selected characteristics of approaches to expanding prescription drug coverage for Medicare beneficiaries

	Existing infrastructure	Target population	Administration
Medicare	Current contractors, might need to contract with pharmacy specialists	All beneficiaries (could be voluntary)	HCFA or contractors (could be PBMs)
Medicaid	Current eligibility and pharmacy benefit structures	Low-income	States
State grants	Most states would need new program structures	Probably low-income	States, contractors or private insurers
Tax subsidies	Current tax system	Current or potential purchasers—difficult to target low-income beneficiaries	IRS and private insurers
Medigap market	Current structure may require modifications	Current or potential purchasers—subsidies needed to target low-income beneficiaries	Private insurers

Note: PBMs (pharmacy benefit managers), IRS (Internal Revenue Service).

current insurers offer Medigap plans with drug coverage. Our analysis of Medigap data found that United Health Group, under the AARP name, writes about 20 percent of the total Medigap policies, but writes about 35 percent of the policies with prescription drug coverage. Covering prescription drugs is more challenging than covering other benefits for Medigap plans, because with other benefits, insurers simply write checks to cover coinsurance for services for which Medicare has already verified eligibility and coverage. Because Medicare does not cover prescription drugs, the Medigap plan would have to determine beneficiary eligibility and coverage. Thus, many Medigap insurers would not be prepared to offer policies that included prescription drug coverage. However, they probably could quickly contract with a PBM to administer the prescription drug coverage for them.

Table 1-5 briefly summarizes some of the characteristics of the potential approaches discussed. ■

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CHAPTER 2

Assessing the design and impact of the hospital outpatient prospective payment system

RECOMMENDATIONS

2A The Secretary should monitor changes in practice patterns across ambulatory care settings to ensure that differences in payment do not lead to inappropriate shifts in site of care.

2B The Secretary should study the accuracy of and changes in coding practices with the implementation of the outpatient prospective payment system.

2C The Congress should enact legislation to accelerate the rate of beneficiary coinsurance buy down under the outpatient prospective payment system and establish a date certain for achieving a coinsurance rate of 20 percent. This date should result in a time frame for implementation consistent with other Medicare payment policy changes.

2D The Secretary should carefully monitor implementation of the outpatient prospective payment system to ensure that:

- it does not have unintended, adverse consequences on beneficiaries' access to care,
- it does not compromise the quality of care delivered, and
- the annual reductions in beneficiary coinsurance as a share of total payment are realized.

CHAPTER 2

Assessing the design and impact of the hospital outpatient prospective payment system

In this chapter

- Evaluating the design of the outpatient prospective payment system
- Transitioning to the new payment system
- Updating payments and considering volume control
- Assessing the impact of the outpatient prospective payment system
- Ensuring beneficiary access to quality care

Services provided in hospital outpatient departments represent one of the last major types of care to be shifted from cost-based reimbursement policy by Medicare. The outpatient prospective payment system to be implemented on July 1, 2000 will provide better incentives to control costs in this rapidly growing sector of healthcare, simplify a complex area of payment policy, and begin a gradual decline in the disproportionate financial burden beneficiaries bear for outpatient services. Transitional policies introduced in the Balanced Budget Refinement Act of 1999 will mitigate the potentially negative financial impacts for hospitals of moving to the new payment policy. However, the administrative burden on hospitals of moving to the new system should not be underestimated. The decrease in beneficiary coinsurance and the transitional policies will raise Medicare program costs. MedPAC supports the goals and broad outlines of the outpatient prospective payment system, but has concerns about elements of its design and implementation. Our recommendations highlight the need to monitor shifts in practice patterns across settings, study changes in coding patterns over time, decrease beneficiary financial liability for outpatient services more quickly, and monitor beneficiary access to quality care.

The Health Care Financing Administration (HCFA) will implement the outpatient prospective payment system (PPS) on July 1, 2000, putting in place one of the last major elements of Medicare's transition from primarily cost-based reimbursement to prospective payment for most services. The design of the system has evolved over a number of years, with specific elements mandated by the Congress in the Omnibus Budget Reconciliation Act of 1986, the Balanced Budget Act of 1997 (BBA), and the Balanced Budget Refinement Act of 1999 (BBRA). This chapter evaluates the design of the outpatient PPS, including the classification system, the bundle of services covered by payment, and the setting of payment rates. It then discusses the policies governing the transition to the new payment system and the issues inherent in updating payments and addressing volume growth for outpatient services. The final section assesses the impacts of moving to the outpatient PPS on providers, beneficiaries, and the Medicare program.

The outpatient PPS will pay for facility costs incurred by hospitals in providing outpatient care to beneficiaries. Physicians' services and other professional costs will be reimbursed separately. The outpatient PPS centers on a fee schedule. This approach lets hospitals know their reimbursement in advance, giving them an incentive to keep costs below the fee schedule amount. This represents a fundamental change in the financial incentives facing hospitals. Historically, hospitals were reimbursed for services based on the lesser of their reported costs or charges for delivering care. Higher costs often led to higher payments. In addition, cost-based reimbursement led to large differences in payments among individual hospitals providing the same service. Until the PPS is implemented, Medicare payment for outpatient services will continue to be a mix of cost-based, fee-schedule, and blended payment methods, making it one of the most complicated areas of Medicare payment policy.

Prior payment methods for outpatient department services

Until the prospective payment system (PPS) is implemented, Medicare pays for outpatient services through a mix of cost-based reimbursement methods, fee schedules, and blended payment. The reimbursement method varies based on the type of service provided.

In general, payments for non-surgical procedures and emergency department and clinic visits are equal to the lesser of hospitals' reasonable costs or charges. For surgical services provided in an outpatient department, payments are based on the lesser of hospital costs or charges, or a blend of costs or charges with the ambulatory surgical center payment rate. Similarly, payments for radiology and certain diagnostic services are paid on the basis of costs, charges, and a blend of the lesser of costs and charges with the practice expense component of the physician fee schedule.

Medicare pays for most other services and items provided in the outpatient department according to their own fee schedules:

- clinical laboratory services,
- durable medical equipment, prosthetics and orthotics, and supplies,
- end-stage renal disease services,
- physical, occupational, and speech therapy, and
- ambulance services.

Although these fee schedules and the blended payment method for surgical and radiology services have slowed growth in Medicare payment rates, volume and expenditures have continued to rise, providing an impetus for instituting a PPS. ■

The growth of volume and expenditures for outpatient services is an important impetus for instituting a PPS. Despite a leveling off of growth in the Medicare fee-for-service population in recent years, volume growth has occurred because of increases in outpatient encounters per beneficiary and services provided in each encounter. According to MedPAC's estimates, both measures have increased at an average annual rate of about 3 percent between 1994 and 1997. The effect of volume growth on spending is amplified by the growing intensity of services provided—in other words, services associated with higher resource use and costs are provided more frequently, driving expenditure growth (Miller and Sulvetta 1994). MedPAC estimates that since 1983, expenditures have risen at an average annual rate of more than 12 percent, slowing slightly to 10 percent annually between 1993 and 1998. Medicare expenditures for outpatient services are estimated to be about $18.6 billion in 1998, making outpatient payments nearly 17 percent of total payments to hospitals.

Moving to a PPS will accomplish a number of goals. First, prospective payment will provide hospitals with better incentives to control costs. Second, the use of a fee schedule will give the Medicare program better tools for containing overall costs for outpatient services. Third, the use of a fee schedule will simplify a complex payment system and make payments more predictable and more equitable across hospitals. The outpatient PPS, in conjunction with policies included in the BBA and BBRA, will also reduce beneficiary financial liability for outpatient services to a degree,

and move slowly toward a more equitable distribution of payments among the program and beneficiaries. In designing and carrying out the PPS, HCFA must ensure adequate payment levels so that beneficiary access to care and quality of care are not compromised.

Evaluating the design of the outpatient prospective payment system

MedPAC supports the goals of the outpatient PPS. The final rule presented by HCFA provides a unified payment system that moves the Medicare program toward fully prospective payment. We commend HCFA for its substantial efforts in designing and refining the PPS. MedPAC's comments and recommendations center on specific elements of the payment system and implementation issues.

Classifying services

Under the PPS, outpatient services are classified into Ambulatory Payment Classification (APC) groups, which are intended to combine services that are clinically similar and require comparable resources. In response to legislation and comments from industry and other groups, HCFA made many changes to the APC classification system originally set out in its proposed rule (HCFA 1998). HCFA incorporated these changes into its final rule (HCFA 2000b). One major legislative requirement was the BBRA provision that limited the range of costs between the most and least expensive services in a given APC group to a factor of two: The median cost of the most expensive service in the group cannot be more than double the median cost of the least expensive service in the group, with some exceptions.

The final rule includes 451 groups, while the proposed rule included about 350 groups. However, the extent of change in the classification system is greater than these numbers might suggest. The proposed rule included more than 100 groups for emergency department and clinic visits, using a matrix definition that included diagnosis as part of the classification system. That system has been dropped, at least for now, resulting in fewer than 10 groups for emergency and clinic visits. Many services were reclassified into new groups and a number of services were added to the outpatient PPS that were previously to be paid for only when provided in the inpatient setting. These services include, but are not limited to, some insertions, removals, and replacements of pacemakers; transluminal balloon angioplasty; bone marrow transplantation; and surgical laparoscopies, including cholecystectomies. Finally, HCFA has created a set of new technology APC groups that will temporarily combine new services based solely on costs. New services will not be immediately placed into clinically related, existing groups as previously proposed.

In many ways, the expanded classification system improves on the system originally proposed by HCFA. Limiting the variation in costs within an APC should lead to a more accurate payment system. The median cost of services in a group is closer to the cost for each service in the group. Therefore, there is less risk of underpaying (overpaying) facilities that consistently provide services that are among the higher-cost (lower-cost) elements within a group. In addition, having a larger number of groups may facilitate consistency of payment across sites of care. The Commission continues to be concerned by large differences in payment for the same service provided in different settings.

Although increasing the number of groups has benefits, including fewer services in each group may create problems. Hospitals may have incentives to upcode, to the extent that clinically related services are now in separate groups due to differences in costs. Increases in coding intensity for non-clinical reasons have been documented in the inpatient PPS (Carter et al. 1991). A smaller number of services per group also complicates the placement of new and low-volume services. HCFA has previously argued that existing cost data do not support creating separate groups for these services, and setting payment rates for single services or small groups implies a level of precision that is not warranted (HCFA 1998).

Defining the appropriate bundle of services

The outpatient PPS provides incentives to control costs by incorporating payment for incidental ancillary services and items into the payment amount for a given service. For example, payment for surgery covers the hospital's costs for the operating and recovery room, medical and surgical supplies used in the surgery, anesthesia, most drugs, and other incidental costs. Previously, each item was paid for separately on a reasonable-cost basis or according to the appropriate fee schedule. Bundling payment for incidental services provides incentives to control the use of such services and items because hospitals retain any payments in excess of costs. Increasing volume of incidental services is thought to have played an important role in the rapid rise in expenditures for outpatient services in the 1980s (HCFA 1998).[1]

The bundle of incidental services and items included within the payment for the primary service has become smaller than originally proposed because of provisions in the BBRA and decisions made by HCFA. Specifically, blood and blood products will now be paid for separately, rather than as part of the bundled payment. HCFA has also created separate categories for casting, splints and strapping services, and certain high-cost drugs. Corneal tissue acquisition will be

1 HCFA uses the term "packaging" to describe the set of inputs covered by the payment for a service. For consistency with other MedPAC reports, we use the term "bundling."

paid for on a reasonable-cost basis. In addition, some drugs, biologicals, and medical devices will be subject to additional pass-through payments—additional amounts above the group payment rate—in the short term; thus, although these items remain in the bundle of services, payment above the APC group rate is possible.

Including fewer ancillaries in the payment bundle for a given service may reduce the incentives for efficiency. Additional payments for certain drugs and devices may undermine the goal of creating incentives for efficient use of these services which underlies the use of bundling. The ability to bill separately for additional incidental items and services, such as casts and splints, could lead to increased use of these services.[2] However, the effect of this type of unbundling on use depends on the relationship between the payment for the item or service and the marginal cost of providing it. If the payment is equal to marginal cost, there are no incentives to either over- or under-use an item or service. If the payment is above marginal cost, there is an incentive to increase use. If the payment is below marginal cost, there is an incentive to stint on services by decreasing use. MedPAC takes the position that Medicare should pay the marginal cost of the efficient provider, but recognizes the difficulty of determining that cost.

Setting payment rates

All services in an APC group have the same payment rate. Payment is derived from the product of a measure of the expected cost of the APC group relative to the average costliness of all services (the relative weight) and a factor that translates the relative weight into a dollar amount (the conversion factor). The process HCFA used to calculate relative weights for the APC groups and the conversion factor used in setting payment rates was established by statute. It relies on historical cost and charge data to set payment rates. After the conversion factor is determined, it is reduced to accommodate two budget-neutral payment adjustments: outlier payments and pass-through payments for new and innovative technologies. The conversion factor is $48.49 in 2000. (See Appendix A for more detail on elements of the outpatient PPS.)

This approach to setting payment rates focuses only on the outpatient sector. However, changes in technology, practice patterns, and the organization of medical services have led providers to offer the same services in multiple ambulatory settings. Ensuring consistency of payment across sites of ambulatory care, therefore, becomes an important issue. MedPAC continues to be concerned with the differences in payment rates for the same service provided in alternative settings. The financial incentives inherent in payment differences could lead to inappropriate decisions about where care is delivered.

RECOMMENDATION 2A

The Secretary should monitor changes in practice patterns across ambulatory care settings to ensure that differences in payment do not lead to inappropriate shifts in site of care.

Table 2-1 provides examples of the differences in payment for the same service in alternative settings for the year 2000. Under the outpatient PPS, hospitals will receive $387 for a diagnostic colonoscopy. If this procedure were performed in a physician's office, the practice expense base rate—the component of the physician's fee analogous to the hospital outpatient facility fee—would be $192. If performed in an ambulatory surgical center (ASC), the facility payment would be $425. ASC payments are moving to a PPS, and the transition to fully prospective payment for physician practice expenses will be completed in 2002. Therefore, payment rates are anticipated to change in these settings. Nevertheless, monitoring payment differentials will remain important.

These differences may represent underlying cost differences among settings, such as levels of staffing and critical care facilities provided or the case mix of patients receiving services in the different settings. Alternatively, they may be anachronistic differences due to the manner in which payment rates were set historically. If the latter is true, differences in payment across settings could lead to shifting care among ambulatory settings for financial rather than clinical reasons. Such differences may also provide incentives for a facility to change the way it is identified for the purposes of billing Medicare, in order to receive higher payments.[3] Analysis is needed to determine the magnitude of these differences, the extent to which they reflect underlying differences in the costs of providing services in each setting, and their impact on decisions regarding the site of care.

Transitioning to the new payment system

Moving to a fully prospective payment system for outpatient services will change the payments hospitals receive for the services they deliver. Instead of receiving payments based on their own reported costs, all hospitals will be paid the same base amount for a particular service, adjusted for geographical differences in input prices. Hospitals will fall along a continuum with respect to their financial

2 Providers' responses to financial incentives are also influenced by the extent of their control over the product, related potential costs (loss of reputation, for example), the likelihood of oversight by physicians or others, and personal and professional ethics and values.

3 These incentives have been recognized by HCFA. The final rule for the outpatient PPS includes a discussion of the requirements that must be met for a facility to be considered "provider based," and hence eligible for payment under the outpatient PPS. A facility must be an integral and subordinate part of a main provider in order to be considered provider based.

TABLE 2-1

Comparison of payment rates across settings for selected high-volume ambulatory care services, 2000

Type of service	HCPCS code	Description	OPD base rate	ASC base rate	Practice expense base rate*
Surgery	43239	Upper GI endoscopy with biopsy	$347	$425	$139
	45378	Diagnostic colonoscopy	387	425	192
	45380	Colonoscopy with biopsy	387	425	209
	45385	Colonoscopy with lesion removal	387	425	260
	66984	Extract cataract, insert lens	1,287	934	—
Radiology	71010	Chest X ray, one view	38	—	21
	71020	Chest X ray, two views	38	—	26
	73510	X ray of hip	38	—	25
	70450	CAT scan of brain/head	237	—	188
	76091	Mammography, both breasts	34	—	56
Diagnostic	93005	Electrocardiogram, tracing	18	—	17
	93017	Cardiovascular stress test	79	—	63
	93307	Echo exam of heart	213	—	171
	93880	Duplex scan of extracranial arteries	132	—	150
Clinic visit	99201	Office or outpatient visit, new patient	48	—	23
	99213	Office or outpatient visit, established patient	48	—	22

Note: HCPCS (HCFA Common Procedure Coding System), OPD (outpatient department), ASC (ambulatory surgical center), GI (gastrointestinal), CAT (computerized axial tomography).
* Practice expense base rates are for services provided in non-facility settings.

Source: HCFA 1999b, HCFA 2000a, HCFA 2000b.

gains or losses from moving to a new system. Some will have a PPS payment about equal to what it would have been under prior law, and a fair number can be expected to have greater payments under the PPS. Other hospitals, however, may receive PPS payments below previous levels.

In the short term, these changes could present financial challenges to hospitals that receive less under the PPS than they would have under the existing payment system. To soften the impact for such hospitals, the Congress included transitional corridor payments in the BBRA. The corridors are designed to make up part of the difference between payments that would have been received under the old payment system compared with the outpatient PPS.

To provide incentives for efficiency, the full difference between PPS payments and the estimate of what payments would have been under prior law is not compensated. The amount of transitional corridor payment varies with the extent of the difference between PPS payment levels and estimates of payment under prior law, and the time since implementation of the PPS. The first efficiency incentive provides a greater degree of subsidy to hospitals with costs closer to parity with PPS payments. Thus, to the extent that the PPS payment amounts reflect the cost of an efficient provider, more efficient providers are given greater financial protections. The second factor serves as a transition over time, with declining subsidies provided over the period 2000–2003. The text box on p. 40 explains the transitional corridors in more detail, and Figure 2-1 illustrates the effect of the efficiency incentives by showing the impact of the transitional corridor payments on total payments to a hospital.

HCFA projects that the transitional corridors will raise total payments to hospitals by 4.4 percent annually in 2000 and 2001 (HCFA 2000b). Total transitional corridor payments will decrease in 2002 and 2003, and end in 2004.

MedPAC concurs with the need for a transitional policy. Although it is complex, the approach laid out in the final rule provides some cushion for hospitals while maintaining incentives for efficiency. Monitoring access to care will be necessary, however, to ensure that beneficiaries remain able to obtain needed services as the PPS is carried out.

The BBRA also provided transitional polices for incorporating innovative and new drugs, biologicals,[4] and medical

4 Examples of biologicals include blood products, hormones, and antibodies.

Calculating transitional corridor payments

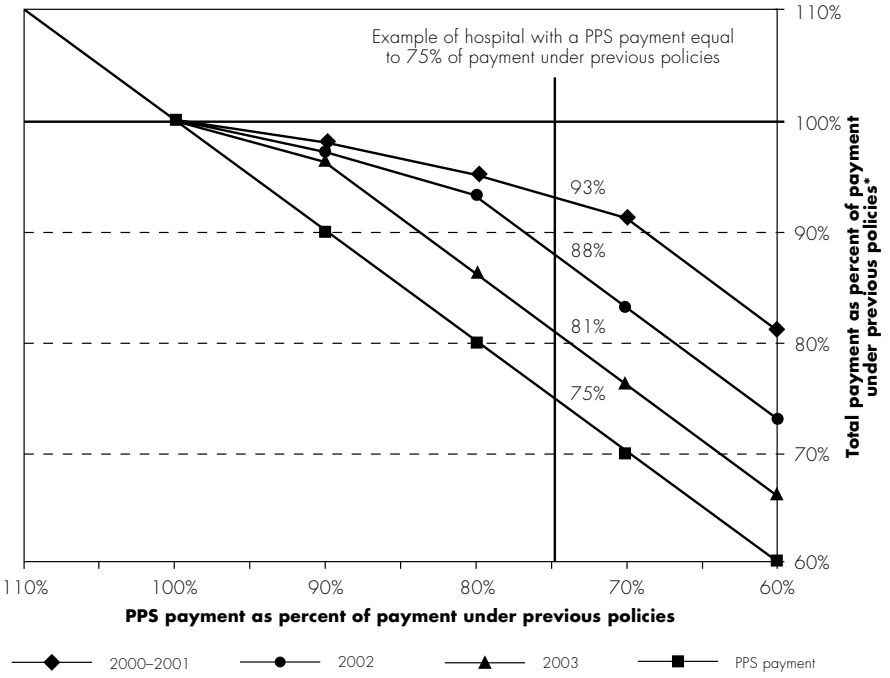
The Balanced Budget Refinement Act established transitional corridors to partially offset losses hospitals might experience as a result of the new outpatient prospective payment system (PPS). The amount of the transitional adjustment depends on the difference between PPS payments and what payments for services provided in the current year would have been under previous payment policy. HCFA determines what would have been paid under previous payment policy by establishing a hospital-specific payment-to-cost ratio based on 1996 cost reports.[5] The ratio is then applied to current-year reasonable costs.

In 2000 and 2001, for the first 10 percentage points of difference between PPS payments and what payment would have been under previous payment policy, an additional payment of 80 percent of the loss is made. For the second 10 percentage points of difference, an additional payment of 70 percent of the loss is made. For the third 10 percentage points of difference, an additional payment of 60 percent of the loss is made. If the difference between PPS payments and payments under previous policy exceeds 30 percent, no additional compensation is received. In years 2002 and 2003, the percentage of the difference subject to additional payments, and the percent of the loss paid, declines.

Figure 2-1 illustrates total payments—the PPS amount plus the transitional corridor adjustment—for those hospitals that are paid less under the PPS than they would have been otherwise. The longest diagonal line shows the relationship between the PPS amount and what payment would have been under previous policies. Hospitals will fall along a continuum, represented by the x-axis. Some will have PPS payments equal to or greater than 100 percent of payment under previous policies. For these hospitals, no adjustment is made. Other hospitals will have PPS payments below the level of previous policies, and will experience losses mitigated by the transitional adjustment. The vertical line demonstrates the transitional adjustment for hospitals where PPS payment is 75 percent of what it would have been under previous policies in each year. In 2000 and 2001, the transitional adjustments bring hospital payments up from 75 percent to 93 percent of what payments would have been under previous policies. A smaller adjustment is received in 2002 and 2003, bringing total payment up to 88 and 81 percent of what payments would have been under previous policies, respectively. ■

FIGURE 2-1

Effect of transitional corridors on total payments to hospitals, 2000–2003



Note: PPS (prospective payment system).
*Total payment equals PPS payment plus transitional corridor adjustment.

Source: MedPAC analysis of BBRA legislative language.

5 This ratio incorporates the elimination of formula-driven overpayments, which were excessive payments made to hospitals under blended payment methods that failed to adequately account for beneficiary coinsurance.

devices into the outpatient PPS. Unlike the transitional corridors, which address hospital financial performance, these provisions allow for additional payments above the APC group payment rate—termed pass-through payments—for specific classes of items that are generally included in the bundled payment. HCFA has put forth detailed criteria to establish items as eligible for pass-through payments and to determine payment amounts (see Appendix A for additional detail on the transitional pass-throughs).

Although the transitional pass-through payments may help to ensure access to new and innovative technologies, they may also dilute the ability of the prospective payment system to provide incentives for efficiency and cost control. The mechanisms for establishing the pass-through payments introduce cost-based pricing into the PPS. Because data collected during the pass-through process will be used to establish future PPS payment amounts, hospitals and manufacturers have an added incentive to inflate the prices of these products: both current and future payments will increase as a result.

The BBRA stipulates that the transitional pass-throughs be applied in a budget-neutral fashion—increased payments for new technologies must be offset by decreases in total payments for outpatient services. This provision raises a concern. Most studies have shown that new technologies increase costs. Much of the growth in spending for medical services is tied to new technologies (Newhouse 1993). The pass-through payments for new technologies pay hospitals for the increased costs of these technologies but do not account for their cost-increasing nature. The budget-neutrality provision leads to redistribution of payments among services, rather than the provision of new funds, when pass-through payments are authorized. This approach is likely to have a differential impact on hospitals by type; community and rural hospitals will likely see decreased payments, while teaching, specialty, and large urban hospitals will receive increased payments for new technologies as they are introduced. The impact on rural and community hospitals will depend on the extent to which the update process takes into account costs of new technologies.

Updating payments and considering volume control

As required by the BBRA, the outpatient PPS will be subject to an annual review of classification groups and payment weights. Based on these reviews, HCFA will recalibrate the system and modify groups at its own discretion. Decisions on the payment groups and weights will be made in consultation with an expert, external advisory panel, similar to the Relative Value Scale Update Committee, which advises HCFA on changes to the physician fee schedule. Detailed information on the structure of the advisory panel and its level of authority is not available, although the group is expected to assist in a review of payment groups and weights in 2001.

Beyond establishing a schedule and mechanism for reviewing payment groups and weights, the process for updating payments under the outpatient PPS remains uncertain. By law, an update of the hospital market basket index minus 1 percent can be used by the Secretary through 2002. The Secretary has stated her intention to do so, although she may also design an outpatient-specific update factor.

Careful consideration must be given to the design of future update mechanisms. Options include an expenditure target system, which would limit total spending for outpatient care, and an update framework, which would consider the individual factors influencing the costs of providing care. However they are structured, updates to the outpatient PPS should take into account changes in the underlying costs of providing care, the costs of new technologies, coding changes, and changes in complexity. The update mechanism must also balance the need to provide adequate payments to ensure access to care with the obligation to control costs by maintaining incentives for efficiency.

In its March report, MedPAC recommended that Congress refrain from establishing a single expenditure target to determine updates for physician services and ambulatory care facilities (MedPAC 2000). Although the goal of consistency in updates across settings is desirable—and speaks to the Commission's concerns regarding differences in payment rates across settings—a global expenditure target is unlikely to accommodate the complex and variable shifts in practice patterns from inpatient to ambulatory settings. Given the potential for shifts of services among ambulatory care settings, the Commission also stated that the Secretary should not establish setting-specific expenditure targets.

Designing an update mechanism is related to the issue of ensuring volume control. MedPAC has previously noted the delicate balance required to develop an update mechanism that counters the incentives to increase use inherent in a fee schedule, while also remaining flexible enough to accommodate clinically appropriate shifts in the site of care. As medical technology advances, more surgical and diagnostic services are provided on an outpatient basis. Thus, some increases in outpatient volume may be appropriate. However, a fee schedule provides incentives to increase the volume of services delivered as a way to maximize payments. In the case of payments to hospital outpatient departments, this incentive is softened by the central role of physicians. Although payments to hospitals will increase if volume increases, physicians—not hospitals—order the diagnostic tests, surgeries, and other procedures that make up the bulk of outpatient services. It is likely, however, that hospitals have some indirect influence on the volume of outpatient services through hospital policies and the direction provided by medical staff.

In the short term, no volume control mechanism will be implemented for outpatient services. The law does, however, allow the Secretary to modify updates in response to unnecessary increases in the volume of services provided. HCFA is currently assessing alternative volume control mechanisms for future implementation. Options presented in the proposed rule included variants on the expenditure target approach used for physician services, whereby future payment updates are reduced in response to excessive increases in volume, defined as increases that take total expenditures beyond the target amount.

Evaluating the nature of changes in the volume of services delivered is complicated by the incentives to improve coding accuracy under the outpatient PPS. Previous payment systems were not always tied to the service codes reported by hospitals; therefore, hospitals did not have an incentive to code accurately. Under the PPS, however, payment will be tied to such coding and improved coding can be anticipated.

Improved coding accuracy may lead to an increase in coding intensity, in which procedures related to greater resource use may be coded more frequently than clinically similar procedures related to lesser resource use. For example, coding for hospital inpatient evaluation and management services has shown an increase in intensity during 1993–1998 (MedPAC 2000). Lower-intensity visits were coded less frequently and higher-intensity visits more frequently over time. This increase in coding intensity may reflect actual changes in the case mix of the Medicare population, changes in coding and administrative practices, or both.

RECOMMENDATION 2B

The Secretary should study the accuracy of and changes in coding practices with the implementation of the outpatient prospective payment system.

Previous research conducted on the inpatient setting indicates that changes in coding practices do significantly contribute to changes in measured case mix. In 1987–1988, the Medicare program's case-mix index (based on diagnosis related group (DRG) data) increased by about 3.3 percent. However, approximately 50 percent of that increase was attributed to changes in coding behavior by hospitals and carriers (Carter et al. 1991). More recent analyses by MedPAC have assessed coding changes in inpatient services by examining data collected by HCFA. A HCFA contractor had independent reviewers assign DRG codes to abstracted medical records for fiscal years 1996–1999. Comparing these independent codes to those assigned by hospitals provides additional insight into how coding changes occur over time. The study found hospital coding to be more intensive than that assigned by the independent reviewers in 1996–1997, but less intensive than the independent coding in 1998.[6]

Because coding behavior is anticipated to change with the implementation of the outpatient PPS, similar analyses are needed for outpatient services to separate which changes in measured service mix are attributable to true changes in resource use versus changes in coding practices. Although inpatient services are reimbursed based on diagnosis or DRG information, outpatient services are reimbursed based on service use or APC information. Measuring service-mix change based on the APC system may present some challenges, due to the unavailability of APC group data until the PPS is implemented. Also, because APC group data are not tied to diagnosis, as the DRG system is, analysis of coding changes may require other approaches.

MedPAC will be considering options for analyzing changes in coding intensity during the coming year. MedPAC also strongly encourages the Secretary to conduct analyses similar to those performed on the inpatient side to tease out changes in service mix attributable to coding and administrative practices versus changes in the underlying resource use.

Assessing the impact of the outpatient prospective payment system

The outpatient PPS will affect hospitals, beneficiaries, and the Medicare program in different ways. Hospitals face the administrative challenges of revising billing systems and adapting to a new payment system during a short time frame. While they make this transition, the inclusion of transitional corridors will soften the financial impact of moving to a PPS for hospitals that suffer losses under the new system. Beneficiaries will see a decrease in coinsurance payments, but will still pay a disproportionate share of total payments for outpatient services well into the future. Medicare program payments will increase as some costs are shifted from beneficiaries to the program and as cost-increasing transitional policies are carried out.

Impact on hospitals

Although the outpatient PPS has been under discussion for more than a decade and a proposed system was laid out in 1998, there is little time between the release of the final rule in April 2000 and implementation of the new system on July 1, 2000. In that time, hospitals must revise their information management and billing systems and train staff to use them. In addition, in some areas in which payment was not previously tied to coding, such as clinic and emergency visits, physicians as well as hospital staff will need to be trained how to properly code visits and procedures. Some of the provisions of the PPS will be difficult to administer, such as the calculation of separate coinsurance amounts for each APC group. Given the short time frame, industry representatives fear that hospitals and HCFA's intermediaries will not be sufficiently prepared (Pollack and Scully 2000).

6 See the discussion of changes in inpatient PPS case mix in Chapter 5 for more detail.

However, the industry is working closely with HCFA to undertake training and minimize disruptions as the new system is instituted. HCFA has launched training activities for both intermediaries and hospitals.

Under the outpatient PPS, hospitals will operate in an environment that rewards efficiency more directly than in the past, but they will also face financial risk if they cannot control costs adequately. The overall effect of the new payment system on individual hospitals will depend on their ability to adapt. The experience from inpatient PPS implementation suggests that hospitals can rapidly modify behavior in response to new payment rules (Altman and Young 1993, Russell 1989). Behavior changes that might influence the impact of the outpatient PPS on individual hospital financial performance include improved coding and increased efficiency (such as limiting labor, supply, and overhead costs incurred in providing outpatient care). As hospitals make these changes and adapt to the new policies, the transitional corridors will provide respite from severe financial losses.

Two classes of hospitals are protected from the potentially negative effects of moving to the outpatient PPS: rural hospitals with up to 100 beds and cancer hospitals.[7] Total payments to these hospitals for covered services must be at least equal to 100 percent of what they would have been under previous payment policy.[8] If outpatient PPS payments are lower than they would have been, then additional payments will be made. No adjustments will be made if outpatient PPS payments are above the pre-BBA amount. This "hold harmless" provision applies to small rural hospitals through 2003, and is permanent for cancer hospitals. These provisions are not required to be budget neutral.

MedPAC has previously recommended that adjustments to payment rates, where feasible, be based on patient characteristics, rather than facility characteristics. The final rule governing the PPS does not include patient-level adjusters. We reiterate our concern that facility-level adjustments, such as those for small rural and cancer hospitals, provide differential treatment by hospital class that is not necessarily tied to underlying differences in the populations served by these facilities. As required by the BBRA, MedPAC will study the appropriateness of using the outpatient PPS for payments to cancer hospitals and certain rural hospitals.

HCFA estimates that some classes of hospitals will fare better under the outpatient PPS than others. Table 2-2 presents estimates of annual changes in total outpatient payments to hospitals under the PPS, with and without the transitional corridors, for 2000 and 2001.[9] The distributional impacts excluding the transitional corridors provide an understanding of the effect of the PPS alone. This is the system that will remain in place after the transitional corridors end in 2004 and shows the distributional impacts of the long-term policy change. Without the transitional corridors, overall hospital payments would increase slightly under the PPS (0.2 percent) due to the hold-harmless provisions for cancer hospitals.[10] The estimates show that large urban hospitals would have seen a small (0.3 percent) annual decline in total payments, and rural hospitals would have experienced a larger, but still small, decline of 1.8 percent. Among rural hospitals, those with fewer beds could be expected to experience large annual decreases in payments (8.5 percent for 1–49 beds and 2.7 percent for 50–99 beds), while rural hospitals with 150 or more beds would experience increases of about 2.5 percent. In urban areas, only hospitals with 500 or more beds are projected to suffer losses (2.9 percent) under implementation of the PPS in the absence of the transitional corridors. Considering the estimates by teaching status, major teaching hospitals would have experienced a reduction in total payments of 3.7 percent if the outpatient PPS were implemented without the transitional corridors. Cancer hospitals are expected to experience a slight increase in total payments (0.8 percent) due to the hold-harmless provisions.

In the short term, the distributional impacts of moving to a PPS are muted by the transitional corridors. After accounting for the transitional corridors, most of these estimated decreases become increases. For all hospitals, annual payments will increase by 4.6 percent in 2000 and 2001. For hospitals also subject to the inpatient PPS, the impacts are all positive, with slight variations by location, bed size, teaching status, and ownership. For hospitals exempt from the inpatient PPS (referred to as TEFRA hospitals[11]), the impacts range from small, negative

7 HCFA's impact estimates under the proposed rule indicated that these hospitals would be severely affected by the PPS, with Medicare outpatient payments declining by 32 percent for cancer hospitals, 14 percent for rural hospitals with fewer than 50 beds, and 8 percent for rural hospitals with 50–99 beds (HCFA 1999a).

8 Payment under previous policies is defined as the hospital's reasonable costs for providing covered outpatient services in the current year, multiplied by a base payment-to-cost ratio for the hospital for 1996. The payment-to-cost ratio is determined after the elimination of formula-driven overpayments, which were excessive payments made to hospitals under blended payment systems that failed to adequately account for beneficiary coinsurance.

9 The PPS will be operating for only six months in 2000, so the actual impact for that year is half of that reported. Numbers are estimated impacts based on claims data from 1996. In estimating the impacts, HCFA made no adjustments for future changes in volume and intensity or coding behavior.

10 For the impact estimates, HCFA included the hold-harmless provisions for small rural hospitals in the transitional corridors because they expire in 2004. The hold-harmless provisions for cancer hospitals, however, are not included in the transitional corridors because they are permanent. The impact of other provisions of the BBA, such as formula-driven overpayment elimination, on hospital financial performance are discussed in Chapter 5.

11 TEFRA hospitals are paid according to rules established by the Tax Equity and Financial Responsibility Act of 1982 and modified by the Social Security Amendments of 1983. See Chapter 6.

TABLE 2-2

Projected impact of outpatient prospective payment system on payments to hospitals, 2000–2001

Hospital group	Number of hospitals	Percent change in total Medicare outpatient payments excluding transitional corridors*	Percent change in total Medicare outpatient payments including transitional corridors§
All hospitals	5,362	0.2%	4.6%
Non-TEFRA hospitals	4,828	0.1	4.6
Urban#	2,665	0.6	4.6
Large urban (>1 million)	1,505	−0.3	4.3
Other urban (<1 million)	1,160	1.8	5.1
1–99 beds	672	0.6	4.6
100–199 beds	924	1.3	5.2
200–299 beds	533	0.8	4.4
300–499 beds	399	1.8	5.2
500+ beds	137	−2.9	2.8
Rural	2,160	−1.8	4.4
1–49 beds	1,170	−8.5	3.3
50–99 beds	615	−2.7	4.4
100–149 beds	223	−0.2	3.8
150–199 beds	81	2.5	5.5
200+ beds	71	2.7	6.1
Teaching status			
Minor	821	1.6	5.0
Major	269	−3.7	2.6
Nonteaching	3,738	0.5	5.0
Ownership status			
Voluntary	2,816	0.6	4.7
Proprietary	752	−0.1	4.7
Government	1,260	−2.3	3.6
Cancer	10	0.8	0.8
TEFRA hospitals			
Rehabilitation	147	−9.4	1.7
Psychiatric	281	21.3	27.9
Long-term care	65	−15.3	−1.7
Children's	41	−11.9	−3.2

Note: TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).
* Includes all BBRA provisions except the transitional corridor provisions that expire January 1, 2004.
§ Estimates of change compared with prior policy payments, which reflect the payment methodologies in effect as of January 1, 2000, and prior to July 1, 2000.
# Does not include the impact of reclassifications as allowed under section 401 of the BBRA.

Source: Adapted from HCFA 2000b.

impacts for long-term care and children's hospitals to a large, positive impact on psychiatric hospitals. However, HCFA states that the estimates for these hospitals may be affected by differences in coding and billing procedures for TEFRA hospitals.

Impact on beneficiaries

The outpatient PPS carries out provisions of the BBA designed to decrease beneficiary financial liability for outpatient services. Historically, beneficiary coinsurance was based on hospital charges, and Medicare program payments were based on reasonable costs minus beneficiary deductibles and coinsurance. As hospitals' charges have increased more rapidly than costs over time, beneficiaries' coinsurance payments have come to represent an increasingly large share—currently around 50 percent—of the total payment that hospitals receive. The BBA mandated that

beneficiary coinsurance eventually equal 20 percent of the payment rate under the outpatient PPS, similar to the coinsurance rate in other areas of the program. However, the process for achieving a 20 percent coinsurance rate—referred to as the beneficiary coinsurance buy down—is gradual and could take decades to achieve. MedPAC has previously recommended that Congress pass legislation to increase the rate of the beneficiary coinsurance buy down, thereby allowing for a more equitable distribution of payments. We reiterate that recommendation here.

RECOMMENDATION 2C

The Congress should enact legislation to accelerate the rate of beneficiary coinsurance buy down under the outpatient prospective payment system and establish a date certain for achieving a coinsurance rate of 20 percent. This date should result in a time frame for implementation consistent with other Medicare payment policy changes.

Under the outpatient PPS, beneficiaries will, as a whole, pay a smaller share of total outpatient payments than they did under prior law. Historically, beneficiaries' coinsurance amounts were specific to the hospital in which the service was provided. Under the outpatient PPS, however, all beneficiaries will face the same schedule of coinsurance amounts, adjusted to reflect geographic wage differences.[12]

The method used by HCFA to calculate the coinsurance amounts leads to a reduction of about 10 percent in beneficiary coinsurance overall (HCFA 1999a). Those savings for beneficiaries will be shifted to program spending; they will not become net reductions in payments to hospitals. The outpatient PPS also limits beneficiary coinsurance amounts for a given service to the amount of the inpatient hospital deductible ($776 in 2000). About 15 APC groups have national unadjusted coinsurance amounts that meet this limit in 2000. Given that the coinsurance amounts are frozen, the only additional services that could be subject to the limit will be new, expensive ones.[13]

As mentioned previously, the outpatient PPS also implements the buy-down provisions of the BBA. The buy down of the beneficiary coinsurance rate will occur on a service-by-service basis. Analysis of the copayment amounts by APC in the final rule indicates that when the outpatient PPS is first implemented, beneficiary coinsurance will represent, on average, 47 percent of the payment rate for a service.[14] Buying this percentage down to 20 percent is projected to take 45 years, on average (see text box, p. 47). In contrast, the inpatient PPS for hospitals' operating expenses was phased in over four years, while the move to the physician fee schedule took five years. A more gradual, 10-year transition period was used to adopt prospective payment for hospitals' capital expenses under the inpatient PPS.

The average time to achieve the coinsurance rate of 20 percent masks considerable variation in the rate of beneficiary coinsurance buy down among services (Table 2-3). A few services, including outpatient visits and new technology APCs, will have coinsurance amounts already limited to 20 percent of the base payment amount. For these APCs, there is no buy-down period. For other services, achieving a coinsurance rate of 20 percent will take decades.

MedPAC estimates that buying down the coinsurance payment for computerized axial tomography scans (APC group 0283) will take 71 years. For an upper gastrointestinal endoscopy (APC group 0141), the buy down will take 52 years. As discussed in the text box, these estimates are dependent upon assumptions regarding annual update amounts.

Impact on the Medicare program

The Medicare program will benefit from a simplified payment system that allows for more predictable costs and better cost-control measures. However, establishing the PPS will lead to increased program costs, even without increases in the volume of services provided, partly due to the shift in costs from beneficiaries to the program. The transitional corridors and hold-harmless provisions will also increase spending.

HCFA projects that costs will increase by $490 million in fiscal year 2000 and $3 billion in fiscal year 2001, and by a total of $16 billion for fiscal years 2000 through 2004 (HCFA 2000b). The Office of the Actuary estimates that about 20 percent of this increase is due to the transitional corridors and hold-harmless provisions. Almost 40 percent is due to the one-time shift in costs from beneficiaries to the program, which results from the method HCFA used to calculate the base coinsurance amounts for each APC group. Approximately 1 percent is due to the limit on beneficiary copayments. The remainder (about 39 percent) represents increases in costs due to the buy down of beneficiary coinsurance over time and anticipated increases in the volume of services provided (Warfield 2000). These

12 Note that the relationship between previous coinsurance amounts and PPS coinsurance amounts for a given beneficiary will vary with a hospital's historical charge structure. If the hospital's charge was above the median, the PPS coinsurance amount will be less than before; if the historical charge was below the median, beneficiaries may actually face a higher coinsurance amount. Hospitals have the right to waive a portion of the coinsurance amount above 20 percent of the PPS payment rate for an APC group, as long as they do so for all beneficiaries and for all services in the group.

13 The limit on coinsurance will be applied only after coinsurance amounts are subject to geographic wage adjustments. Thus, the services affected by the limit may vary by location.

14 This figure is derived by dividing the unadjusted national coinsurance amount by the APC payment rate for each service. The percent coinsurance is then averaged over all services. A coinsurance amount of $776 is used for services for which the unadjusted national coinsurance is above $776. This calculation is distinct from the share of total payments paid by beneficiaries, because the latter is influenced by volume and service mix.

TABLE 2-3

Years required to buy down beneficiary coinsurance to 20 percent of payment, for selected high-volume ambulatory payment classification groups

Type of service	APC group	Group title	Payment rate	Coinsurance amount	Initial coinsurance share	Years to achieve 20 percent coinsurance*
Surgery	0141	Upper GI procedures	$347	$185	53%	52
	0143	Lower GI endoscopy	387	199	51	50
	0246	Cataract procedures with IOL insert	1,287	624	48	47
Radiology	0260	Level I plain film except teeth	38	22	57	56
	0283	Level II computerized axial tomography	237	179	76	71
	0271	Mammography	34	19	57	56
Diagnostic	0366	Electrocardiogram	18	16	85	77
	0097	Cardiovascular stress test	79	62	79	73
	0269	Echocardiogram except transesophageal	213	114	53	52
Clinic or emergency visit	0600	Low-level clinic visits	48	10	20	0
	0601	Mid-level clinic visits	48	10	20	0
	0610	Low-level emergency visits	65	21	32	25

Note: APC (ambulatory payment classification), GI (gastrointestinal), IOL (intraocular lens).
* The estimated years to achieve 20 percent coinsurance is based on an assumed update of 1.9 percent. A higher update assumption yields a lower estimate. See text box, p. 47, for more information on the beneficiary coinsurance buy down.

Source: MedPAC analysis of Addendum A, HCFA 2000b.

estimates include the compounded costs of increased payments over time. They are associated with implementation of the outpatient PPS, but do not represent all of the changes to outpatient payments under the BBA. Other policy changes, such as the elimination of the formula-driven overpayment and the extension of capital and operating cost reductions, reduced outpatient payments substantially.[15]

Although program costs for outpatient services will increase, the program should benefit from moving to a unified, simpler payment system. Achieving the goal of simplicity is hampered, however, by layers of complexity introduced in the BBRA. Considerable administrative resources will be required to process the outlier payments, pass-through payments, transitional corridors, and hold-harmless adjustments. In addition, the administrative burden of setting up and maintaining new claims processing systems will be significant for HCFA, its fiscal intermediaries, and hospitals.

Ensuring beneficiary access to quality care

The move to a prospective payment system represents a significant change in how Medicare pays for outpatient services, including the introduction of a grouping methodology for payment, an expanded list of outpatient procedures, and a change in beneficiary coinsurance amounts. In addition, the time allowed for implementing the changes is short, leading to significant administrative challenges for hospitals. Given the scope of the changes and the limited time frame, the Commission strongly recommends that the Secretary monitor various aspects of the PPS to ensure continued beneficiary access to quality services.

RECOMMENDATION 2D

The Secretary should carefully monitor implementation of the outpatient prospective payment system to ensure that:

- **it does not have unintended, adverse consequences on beneficiaries' access to care,**
- **it does not compromise the quality of care delivered, and**
- **the annual reductions in beneficiary coinsurance as a share of total payment are realized.**

The Commission's concerns about access arise from structural aspects of the payment system, the financial and administrative impacts of the PPS on individual hospitals, and the relatively complex process for reducing beneficiary financial liability for outpatient services.

The use of a grouped classification system provides incentives to limit the use of

15 See Chapter 5 for a discussion of the impact of these reductions on hospital outpatient margins.

Beneficiary coinsurance buy down

Under the outpatient prospective payment system (PPS), each Ambulatory Payment Classification (APC) group has a unique rate of coinsurance derived from historical experience. The average coinsurance rate across APC groups is 47 percent. The Balanced Budget Act of 1997 established a system for buying the beneficiary coinsurance share of total payment down to 20 percent over time. This buy down will be achieved separately for each APC group. To reach a coinsurance amount of 20 percent, the coinsurance amount for an APC group is frozen, while the total payment rate increases with the annual updates. For example, if an APC group has a total payment of $1000 and a coinsurance amount of $470, coinsurance equals 47 percent of total payment. Assuming an annual update of 1.9 percent, total payment would be $1019 in the next year and coinsurance would remain at $470, which is now 46 percent of total payment. Once the coinsurance rate is 20 percent, the coinsurance amount will also increase by the annual update.

The buy-down mechanism may be stated as the following mathematical relationship:

$$\frac{\text{Coinsurance amount}}{\text{Total payment} \times (1 + r)^t} = 0.20$$

Where r is the annual update rate of growth and t is the number of years required to achieve beneficiary coinsurance liability of 20 percent. This equation is then solved for t.

In Table 2-3, r is assumed to be 1.9 percent, HCFA's estimate of the hospital market basket for 2001 minus 1 percentage point. The outpatient PPS payment rates will be updated by the hospital market basket minus 1 percentage point in 2001 and 2002.

The estimate of the years required to achieve the beneficiary coinsurance buy down is sensitive to the growth rate assumption. For this example, if a growth rate of 3 percent is assumed, then the average number of years required to achieve the buy down drops to 29. ■

higher-cost services within a payment group, even when they may be more clinically appropriate than lower-cost services in the group. Although this incentive is diminished by the limitation in cost variation among services in a group, one service in a group may still be twice as expensive as another. In addition, the bundling of ancillary services and items for payment may lead to stinting on ancillary services and items. Financial losses and/or the administrative burdens resulting from transition to the PPS might also lead hospitals to limit access to all or some outpatient services for Medicare beneficiaries. Although the transitional corridors will minimize financial losses, individual hospitals may still find it difficult to contain costs and, consequently, may limit the provision of outpatient services to Medicare beneficiaries. The phasing out of the transitional corridors by 2004 increases the potential for future access problems. The administrative burden of carrying out a new payment system in a short period of time may also lead to access problems.

In addition to concerns about access, some elements of the PPS raise quality concerns. Expanding the list of services that can be provided in an outpatient setting to include services such as insertion and removal of pacemakers, surgical laparotomies, and bone marrow transplantation entails an obligation to ensure adequate quality of care for beneficiaries receiving these services in this setting. Although HCFA states its expectation that only the least intensive cases would be treated in an outpatient setting, careful monitoring of the outcomes of care for beneficiaries receiving outpatient services previously limited to the inpatient setting is necessary. HCFA has indicated that the use of observation beds will be monitored to ensure that patients receiving these services are not kept in observation beds for an extended period instead of being admitted to the hospital. However, to ensure adequate quality, monitoring should go beyond the extent to which hospitals use observation beds after these procedures are performed to include analysis of the outcomes of care.

Finally, the process for buying down beneficiaries' disproportionate share of payments for outpatient services is relatively complex. Each APC group has its own coinsurance amount, based on historical charges. The reduction in beneficiary payments as a share of total payment takes place as the outpatient PPS payment rates are updated each year. As previously noted, the time taken to reach a coinsurance rate of 20 percent varies by APC group. Hospital representatives have suggested that the APC-group-specific changes in coinsurance amounts could generate confusion for hospital billing clerks and beneficiaries. Educational efforts are needed to inform hospitals and beneficiaries about the changes in coinsurance over time.

The limits placed on balance billing by physicians in the early 1990s provide an example of implementing a policy meant to limit beneficiary coinsurance. Physician compliance with the balance billing limits was a concern; non-compliance was found to be primarily due to physicians' poor understanding of the law. Congress passed clarifying legislation allowing HCFA to enforce the limits and impose sanctions if necessary (PPRC 1996). Given the complexities of the buy down and given previous experience with implementing restrictions on balance billing by physicians, it will be important to monitor whether beneficiaries realize the reductions in financial liability over time.

The Secretary has noted her intention to evaluate the operation of the outpatient

PPS, but provides no specific plans to monitor beneficiary access to care as the PPS is implemented. Given the magnitude of the change, significant resources should be devoted to monitoring access. Access and quality indicators that might be developed include:

- changes in the provision of services in outpatient departments overall and by hospital type,
- shifts in the settings in which care is delivered,
- differential outcomes of care among settings and pre- and post-PPS,
- post-procedure admission rates for services that shift from inpatient to outpatient settings,
- changes in hospitals' willingness to provide outpatient services to Medicare patients,
- rates of decrease in beneficiary coinsurance amounts, and
- other measures that could indicate compromised access.

This recommendation is consistent with our March report to the Congress, which recommended that the Secretary make a greater effort to ensure that the considerable changes occurring in the Medicare program not compromise beneficiaries' access to quality care (MedPAC 2000). MedPAC will work to develop appropriate methods for assessing the adequacy of access to quality outpatient services. ■

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CHAPTER 3

Improving Medicare's payments for inpatient care and for teaching hospitals

RECOMMENDATIONS

3A The Secretary should improve the hospital inpatient prospective payment system by adopting, as soon as practicable, diagnosis related group (DRG) refinements that more fully capture differences in severity of illness among patients. At the same time, she should make the per discharge payment rates more accurate by basing the DRG relative weights on the national average of hospitals' relative values in each DRG.

3B The Congress should amend the law to change the method now used to finance outlier payments under the hospital inpatient prospective payment system. Projected outlier payments in each DRG should be financed through an offsetting adjustment to the relative weight for the category, rather than the current flat adjustment to the national average base payment amounts.

3C To avoid imposing extraordinary financial burdens on individual providers, the Congress should ensure that the case-mix measurement and outlier financing policies recommended earlier are implemented gradually over a period of several years. Further, the Congress should consider including protective policies, such as exemptions or hold-harmless provisions, for providers in circumstances in which vulnerable populations' access to care might be disrupted.

3D The Congress should give the Secretary explicit authority to adjust the hospital inpatient base payment amounts if anticipated coding improvements in response to refinements in case-mix measurement are expected to increase aggregate payments by a substantial amount during the forthcoming year. This adjustment should be separate from the annual update. Further, the Congress should require the Secretary to measure the extent of actual coding improvements based on the bills providers submit for payment and make a timely adjustment to correct any substantial forecast error.

3E The Congress should fold inpatient direct graduate medical education costs into prospective payment system payment rates through a revised teaching hospital adjustment. The new adjustment should be set such that the subsidy provided to teaching hospitals continues as under current long-run policy. This recommendation also should be implemented with a reasonable transition to limit the impact on hospitals of substantial changes in Medicare payments and to ensure that beneficiaries have continued access to the services that teaching hospitals provide.

CHAPTER 3

Improving Medicare's payments for inpatient care and for teaching hospitals

In August 1999, MedPAC recommended combining Medicare's two special payments to teaching hospitals, currently labeled as medical education, into a single teaching hospital payment adjustment that would better account for the higher costs of inpatient care in those facilities. We also recommended refining certain elements of Medicare's case-pricing methods to make inpatient payments per case better match the expected costs of inpatient care in all types of hospitals. We deferred specifying how these recommendations might be implemented, however, pending further study. In this chapter, we make specific recommendations for refining methods for case-mix measurement, financing outlier payments, and combining special payments to teaching hospitals. To avoid imposing large financial burdens on individual providers, we also recommend that these policies be phased in over a period of several years.

In this chapter

The Balanced Budget Act of 1997 required the Medicare Payment Advisory Commission (MedPAC) to examine the need for changes in Medicare's payment policies and other federal policies that affect graduate medical education (GME), payments to teaching hospitals, and other health care workforce training. This request was motivated by a variety of concerns. One was the impending insolvency of the Medicare Part A trust fund. Related issues included whether the federal government should continue to support GME programs and whether Medicare should be the focal point of that effort. Another concern was the wide variation in Medicare's payments to teaching hospitals. Finally, many were concerned that supporting GME programs through Medicare's hospital payment policies was distorting teaching hospitals' choices about the number and specialty mix of residents to train and the appropriate sites for training.

Our August 1999 analysis of teaching hospitals' characteristics and related Medicare payment policies (MedPAC 1999a) led us to a number of conclusions and recommendations. First, we concluded that teaching facilities have systematically higher costs for inpatient care than do other hospitals because teaching facilities offer a broader and more technologically sophisticated array of services, attract patients who are more acutely ill, and furnish care that is more complex and intensive. Second, based on established economic theory, we found the traditional distinction between the direct costs of GME programs and patient care costs to be artificial and misleading.[1] Like other trainees, residents bear the costs of their training by accepting lower compensation than they could earn given their skill level. The direct costs of GME programs represent what teaching hospitals are willing to pay for the patient care services residents provide as they train.

We recognized that teaching hospitals' higher costs reflect a number of factors likely to strengthen the clinical care that beneficiaries and other patients receive. Medicare has traditionally paid for the higher costs of care in these hospitals and we recommended that this continue, as long as the benefits exceed the additional costs. We also noted that to ensure beneficiaries' access to care, Medicare's payments must approximate efficient providers' patient care costs and reflect differences in costs that arise from variations in patient complexity and the intensity of the care provided.

We recommended changing Medicare's payment policies in two ways. First, Medicare's inpatient case-mix measurement methods should be improved to reflect more accurately the relationship between illness severity and the cost of inpatient care. We suggested that policymakers consider making refinements to the diagnosis related groups (DRGs), the methods used to set DRG relative weights, and the financing of outlier payments.

Second, we recommended that Medicare adjust its payments to teaching hospitals to reflect their systematically higher patient care costs. We envisioned a new teaching hospital payment adjustment that would replace Medicare's current inpatient teaching-related payments—the direct GME payments based on hospital-specific per resident amounts and the indirect medical education (IME) payments teaching hospitals receive under the prospective payment system (PPS).

Like the IME adjustment, the new teaching hospital adjustment would be applied to teaching hospitals' base DRG payments. The new adjustment would reflect the effect on inpatient costs per discharge of including inpatient direct GME costs, enabling Medicare's payment rates to account for systematic differences in care costs between teaching facilities and other hospitals. In addition, distributing Medicare's payments for these cost differences through the new teaching hospital payment adjustment would remove much of the variation in Medicare's payments to teaching hospitals, which today reflects historical decisions made by teaching hospitals, medical schools, universities, and others about financing expenses for hospital-operated GME programs.[2]

We also stated in our August report that these policy changes were not intended to produce large increases or decreases in Medicare spending, but to improve the accuracy of overall Medicare payment policy. The current IME adjustment, however, pays teaching hospitals more than would be indicated by the estimated relationship between costs per case and resident intensity.[3] The goal of making payments consistent with efficient providers' costs thus raises the question of whether continued payment of these higher amounts is appropriate.

Finally, we recognized that adopting our recommendations might redistribute Medicare payments among hospitals. We therefore recommended that policymakers provide an appropriate phase-in period to avoid placing too great a financial burden on individual facilities.

Since publication of the August report, MedPAC has evaluated alternative ways to make its recommendations operational. This chapter offers specific policy recommendations based on that evaluation. It also describes the estimated

1 Hospitals' direct costs for operating residency training programs generally comprise compensation for supervisory physicians and residents and allocated overhead expenses.

2 Based on the same reasoning, we noted that a similar teaching facility payment adjustment might be developed for making payments in other settings where training occurs, including training programs for residents and those for other health professions. Because only limited data are available for programs outside the hospital inpatient setting, however, developing appropriate teaching facility payment adjustments for other settings would require substantial additional effort.

3 The IME adjustment for fiscal year 2000 is currently set at approximately 6.5 percent for every 10 percent increment in teaching intensity, as measured by residents per bed. Beginning in fiscal year 2002, the adjustment will be set at approximately 5.5 percent. Analysis of the relationship between costs per case (adjusted for payment factors) and resident intensity, however, shows that teaching hospital costs increase only about 3.2 percent for every 10 percent increment in teaching intensity. The difference between the payment adjustment and the estimated cost relationship reflects a subsidy to teaching hospitals.

effects of these policies, if adopted, on payment accuracy under Medicare's hospital inpatient PPS and on the level and distribution of hospitals' payments, inpatient margins, and total margins.

We conducted our evaluation of policy options following two lines of inquiry. One set of analyses explored options for refining case-mix measurement and outlier financing methods. The other set examined options for combining special payments to teaching hospitals with and without holding total special payments constant. In the latter case, we considered returning the savings to all hospitals by increasing the DRG payment rates proportionately or retaining the savings in the Medicare Part A trust fund.[4]

The chapter begins by describing the criteria and issues that we considered in evaluating alternative policies. The following section outlines the findings and specific recommendations based on our analysis of alternative refinements in Medicare's case-mix measurement and outlier financing policies. Then, we discuss our findings and recommendations on methods for folding inpatient direct GME costs into the PPS payment rates and developing a combined teaching hospital payment adjustment. Finally, we summarize the estimated effects these policies would have if they were adopted simultaneously.

Evaluating potential changes in payment policy

As discussed in previous MedPAC reports (MedPAC 1999a, MedPAC 1999b), Medicare's payment policies should be judged by how well they promote the program's principal goals. Medicare was enacted to improve access to care by reducing the financial burden faced by elderly (and later, disabled) people in obtaining medically necessary services. Accordingly, Medicare's principal goal is to ensure that its beneficiaries have access to high-quality care in the most appropriate clinical setting. At the same time, the program's policies must balance the interests of the providers who furnish care and the beneficiaries and taxpayers who finance that care.

Medicare's payment policy objectives

To ensure access to care in the most appropriate setting, Medicare's payment policies must encourage providers to supply high-quality services to its beneficiaries and to produce those services efficiently. To accomplish these objectives, the program's payment rates must be consistent with efficient providers' costs. Consequently, we believe that Medicare's payment rates should:

- be high enough to enable efficient providers to furnish high-quality services consistent with the trade-offs between cost and quality that exist with current medical technology and local market conditions,
- induce providers to produce services efficiently, neither encouraging nor discouraging use of particular types of resources, and
- account for predictable differences in unit costs that arise from appropriate variations in the complexity and intensity of services furnished to patients with different clinical conditions and severities of illness.

Following these principles helps to ensure that Medicare's limited funds are used effectively and that providers' payments enable them to furnish services of value to beneficiaries.

Criteria for evaluating changes in payment policy

These principles suggest criteria for evaluating the desirability of Medicare's payment policies or proposed changes in those policies. One important criterion is payment accuracy—the extent to which Medicare's payment rates reflect efficient providers' costs of furnishing care to beneficiaries. Systematically paying too much or too little for specific types of inpatient care or for care furnished by particular types of hospitals creates undesirable financial incentives for providers. If providers were to respond to these incentives, they might seek to attract certain kinds of patients while avoiding others, or they might admit patients who could be treated more efficiently—and at no greater risk—in other settings, or furnish fewer services than clinically appropriate. In addition, inaccurate payments weaken the link between provider efficiency and financial performance.

Related criteria include the effects of payment policy changes on beneficiaries' access to services and the quality of care they receive. We have carefully considered how potential refinements in case-mix measurement, outlier financing, and teaching hospital payment adjustment policies might affect providers' financial incentives and how their responses might affect beneficiaries' access to or quality of care. These effects cannot be measured, however, until the policy changes have been made and providers' responses can be observed. Consequently, we cannot predict the access and quality effects that might result from the policy options we are evaluating. Instead we must anticipate the likely directions of any potential access or quality effects.

In addition, we have evaluated a number of other consequences that might be associated with the policy changes under consideration, including:

- increases in administrative burdens borne by the Health Care Financing Administration (HCFA) or providers,

4 The options involve continuing the subsidy to teaching hospitals or setting the amount of special payments to teaching hospitals based on the empirically estimated teaching hospital payment adjustment. Under the second option, the savings—the difference between the amounts of total special payments to teaching hospitals under the two options—could be included in the national base payment amounts, raising all DRG payment rates, or retained in the trust fund, reducing payments to teaching hospitals but leaving payments to other hospitals unchanged.

- inappropriate increases in Medicare spending that might result from improvements in hospitals' clinical coding and reporting,
- changes in the distribution of residents between inpatient and outpatient training sites that might occur in response to financial incentives inherent in alternative resident intensity indicators used to determine the teaching hospital adjustment, and
- increases in the financial burdens borne by those rural providers traditionally considered especially vulnerable.

We have weighed the extent to which each of these consequences might be important; when they appear potentially significant, we have attempted to identify actions that policymakers could take to minimize their effects.

Measuring the effects of policy changes on payment accuracy

In principle, payment accuracy could be evaluated by measuring the extent to which Medicare's payment rates account for the effects of factors expected to influence efficient hospitals' costs, such as differences in the mix of cases treated or in market prices for labor and capital inputs. If we could compare Medicare's payment rates with efficient facilities' costs for individual cases, we could measure the extent to which gains or losses—differences between payments and costs—vary systematically across types of cases, types of hospitals, or market areas.

In practice, however, our ability to develop unambiguous payment accuracy measures is limited in several ways. Efficient hospitals are difficult to identify because facilities' accounting costs may reflect variation in accounting practices rather than differences in real economic costs. Moreover, existing measures and data are inadequate to control for quality differences among providers, compromising our ability to make fair comparisons.

In addition, comparisons of case-level gains or losses under different payment policies may be confounded by errors in one or more of the payment adjustments included in the hospital inpatient PPS. For instance, errors in the system's adjustments for variations in input prices might make PPS payment rates too low for hospitals in some areas and too high for those in other areas. Under these circumstances, improvements in case-mix measurement might compound the effects of input-price adjustment errors and thus appear to worsen payment accuracy rather than improve it. Although this kind of potential compounding would be unlikely to overwhelm the payment accuracy effects of substantial case-mix measurement improvements, it could make them seem less desirable than they would in the absence of other payment errors.

Nevertheless, changes in the distribution of gains and losses among cases provide the only direct information we have on how changes in Medicare's payment policies may affect payment accuracy. In our evaluation of the effects of specific policy options, we have relied primarily on two measures of payment accuracy. One is the standard deviation of the distribution of gains and losses among cases within DRGs, hospitals, or hospital groups. The standard deviation of the distribution measures the extent to which gains or losses on individual cases vary from the average gain. For a payment system with a given level of average gain per case, the standard deviation measures the residual variation in costs among cases that is unexplained after accounting for the factors included in the payment system. Other things being equal, policy changes that narrow the distribution among cases would improve payment accuracy by accounting for more of the systematic variation in costs and thus would be preferred over policies that result in wider variation.

The other measure is variation in the average gain or loss across DRGs, hospitals, or hospital groups. The distribution of average gains or losses across DRGs or hospital groups measures the extent to which the payment adjustments in the PPS capture variation in the major factors affecting providers' costs among types of cases and types of facilities, respectively. Changes in the distribution of average gains and losses across DRGs and hospital groups indicate whether specific policy changes enlarge or reduce systematic inconsistencies between payments and costs. Other things being equal, policies that make the distribution of average gains and losses more uniform across DRGs and hospital groups would improve payment equity among providers.

Other issues

As discussed earlier, we also recognize that the policy options we are considering likely would affect many hospitals in important ways. The preliminary estimates we published earlier on the payment effects of case-mix refinement and outlier financing options, for example, clearly showed that these policies would substantially change PPS payments for many hospitals (MedPAC 2000). Our revised estimates indicate the same outcome. To add perspective to these effects, we have developed estimates indicating how these payment changes would affect hospitals' Medicare inpatient and total margins.

Without developing detailed proposals, we also have considered how the immediate financial impact of our recommendations could be ameliorated by the use of phase-in periods, targeted additional payments, exemptions, or other methods. Because the hospital industry has experienced a variety of major changes in both public and private payments, the Congress and the Secretary should make every effort to ensure that further policy changes do not impose heavy additional burdens on providers. To avoid potential adverse effects on rural beneficiaries' access to inpatient care, we urge policymakers to protect rural providers traditionally considered financially vulnerable, especially those in areas that have few hospitals or in which a substantial proportion of providers would face large reductions in Medicare payments.

Estimating hospitals' payments, gains, and margins

In analyzing options for case-mix refinement and teaching hospital payment adjustments, we focused on several measures of payment accuracy and financial impact under each policy option. Estimates for these measures were based on Medicare hospital inpatient claims for PPS hospitals in fiscal year (FY) 1997 and hospitals' Medicare cost reports for reporting periods beginning during that year. To estimate hospitals' payments under current policies and each policy option, we used our PPS payment model with operating and capital base payment amounts for FY 1999, but with most other parameters set to reflect the policies in effect for FY 2000. Because the Congress reduced the IME adjustment in the Balanced Budget Act of 1997 (BBA) to 5.5 percent beginning in FY 2002, we incorporated that change in our payment models. As a result, our PPS payment estimates for current policies reflect the IME adjustment that will be in effect in FY 2002 under current law (long-run BBA policy).[5]

To estimate how different policy options would affect hospitals' gains and losses on individual cases, we applied the model for each option to a 40 percent sample of 1997 Medicare hospital inpatient claims, estimating payments and costs for each case.[6] We estimated the cost for each case by applying hospitals' operating and capital cost to charge ratios to the total charges for their cases.[7]

Because the teaching hospital adjustment options involve folding inpatient direct GME costs into the PPS payment rates, we added an estimate of these costs to the calculated operating and capital costs for each case. To ensure that estimated gains and losses would be comparable across policy options, we also added an estimate of inpatient GME payments to the estimated PPS payment for each case under current policy and for the case-mix refinement and outlier policy options in which inpatient GME costs are not folded into PPS payments.[8]

To develop hospital-specific Medicare inpatient and total margin estimates under current policy and each policy option, we first estimated hospitals' PPS and inpatient direct GME payments under the policies in effect during FY 1997 and separately under current policies, which reflect the long-run BBA adjustments for IME and disproportionate share (DSH) payments. We then used the estimated hospital-specific percentage differences in payments between these models to estimate what hospitals' FY 1997 Medicare inpatient and total margins would have been under long-run BBA policies. We developed estimates for the various policy options by applying similar estimates of percentage differences in payments—comparing payments under each policy option with those in the long-run BBA model—to adjust the long-run BBA margins. Thus, the estimated Medicare inpatient margins reported later for each policy option reflect providers' PPS revenues and costs, as well as their inpatient direct GME payments and costs.

We estimated hospitals' total margins similarly. We first segregated hospitals' reported total revenues for FY 1997 into Medicare inpatient payments (PPS plus inpatient direct GME) and all other revenues. Then we applied the estimated hospital-specific change in Medicare inpatient payments under current policy and each policy option to the corresponding revenue component and recalculated hospitals' total margins.

These Medicare inpatient and total margin estimates differ in several ways from margin projections reported in other studies, including those in Chapter 5 of this report. In particular:

- Medicare inpatient margins reported here reflect only PPS payments and the inpatient portion of payments for direct GME programs, excluding payments and costs for PPS-exempt inpatient units, such as rehabilitation and psychiatric units or hospital-based skilled nursing facilities.
- The payment models used for all policy options are hybrids based on claims from 1997, base payment amounts from 1999, other policy parameters (such as the wage index) from 2000, and IME and DSH policies from 2002. Consequently, estimated payments for each option do not reflect the payment levels in effect during any specific year.
- Because hospitals' costs per case have shown only modest growth in the last few years, we did not inflate the costs they reported on their 1997 cost reports or the case-level cost estimates we calculated by adjusting total charges by hospitals' operating and capital cost to charge ratios.

Consequently, the payment and margin estimates we report do not represent what would have happened under current or alternative policies in any specific year. However, we believe they do accurately reflect relative differences in payments and margins that might be expected under the alternative policies we modeled.

5 In the absence of reliable estimates, we did not include the separate IME and direct GME payments hospitals receive from HCFA for beneficiaries enrolled in Medicare+Choice plans.

6 The 40 percent sample includes approximately 4 million 1997 hospital inpatient claims.

7 We used hospitals' operating and capital cost to charge ratios from HCFA's FY 2000 Impact file. This method is similar to that used to determine PPS outlier payments based on covered charges.

8 The additional amounts were estimated by calculating hospital-specific average per diem inpatient direct GME costs and payments based on each hospital's FY 1997 Medicare cost report and multiplying these amounts by the number of covered days for each case.

Refining Medicare's case-mix measurement and outlier financing policies

As discussed in our March report (MedPAC 2000), we have been analyzing several potential refinements to Medicare's case-mix measurement and outlier financing policies. These refinements are intended to improve payment accuracy by addressing limitations in the current DRG definitions and in the methods now used to set DRG relative weights. One limitation is that individual DRG categories often combine subgroups of patients with predictably different expected resource costs. Although HCFA has repeatedly improved the DRG definitions since 1984, they still fail to account fully for differences in illness severity associated with substantial disparities in providers' costs.[9]

Limitations in the relative weights stem from their basis and method of calculation and from the statutory scheme for financing outlier payments for extraordinarily costly cases. As presently calculated, the weights understate the relative costliness of typical cases in some DRGs and overstate costliness for cases in other DRGs. These distortions occur for two reasons. First, the weights are based on the total billed service charges hospitals report on their claims for all cases in each DRG. As a result, the measured relative values partly reflect systematic differences among hospitals in the average mark-up of charges over costs and in the average level of costs. Second, the weights are calculated without accounting for differences among DRGs in the prevalence of outlier cases and related payments.

To address these limitations, we considered three potential refinements in Medicare's policies and methods. One refinement would involve changing the DRG definitions to account more completely for severity differences among patients. Another would alter the methods currently used to calculate the DRG relative weights. The third refinement would change the method of financing extra payments for outlier cases.

Refining diagnosis related group definitions and the method of calculating relative weights

To illustrate the potential gains that might be obtained from refining the DRGs, we used the severity class definitions from the all patient refined diagnosis related groups (APR-DRG) patient classification system.[10] The APR-DRG definitions differ from the current DRGs primarily in the way they use information about patients' secondary diagnoses reported on hospital claims. Each patient is initially assigned to 1 of 355 categories (APR-DRGs) that reflects the main illness or condition (indicated by the principal diagnosis) and the medical or surgical nature of the treatment strategy. Patients in each APR-DRG are then assigned to one of four severity classes—minor, moderate, major, or extreme—based on specific combinations of secondary diagnoses, age, procedures, and other factors. This process yields 1,420 groups distinguished by APR-DRG and severity class, compared with about 500 current DRGs.[11]

We also evaluated an alternative method of calculating DRG relative weights that would make them more accurate. Relative weights are intended to measure the costliness of treating a typical case in each DRG, compared with the cost of the average Medicare case. Currently, the weight for each DRG is calculated by dividing the national average standardized total charge per case for all cases in the category by the overall national average standardized charge for all cases.[12] Basing the weights on the national average standardized charge per case in each DRG, however, makes them vulnerable to distortion from systematic differences among hospitals in the mark-up of charges over costs and in the level of costs.

We propose to address this by calculating the DRG relative weights based on hospital-specific relative values. The relative weights would continue to be based on hospitals' billed charges, but the charges for each hospital's cases would be converted to hospital-specific relative values, adjusted for case mix.[13] Then, the national relative weight in each DRG would be calculated as the case-weighted national average of the relative values for all cases in the category.

The relative value method would eliminate distortions in the weights due to systematic differences among hospitals in

9 In 1994, HCFA considered making substantial refinements to the DRG definitions to better capture severity differences among patients (HCFA 1994). In its 1995 March report to the Congress, the Prospective Payment Assessment Commission recommended that the Secretary adopt the proposed refinements and change the methods used to calculate the DRG weights (ProPAC 1995b). HCFA did not adopt the proposed refinements, largely on the grounds that it lacked statutory authority to make prospective adjustments to the PPS payment rates. HCFA policymakers felt that prospective adjustments would be needed to offset unwarranted spending growth that might result from changes in hospitals' case-mix reporting in response to major revisions in the DRG definitions and weights.

10 The APR-DRGs are one of several commercially available sets of refined DRG definitions (Averill et al. 1998). Other refined definitions might have been used to illustrate potential gains from improving severity measurement; evaluating alternative DRG refinements, however, was beyond the scope of this study.

11 Of the 1,420 categories, 134 (primarily pediatric conditions) had no Medicare cases in the full 1997 claims file; 87 had fewer than 25 cases, and 280 had fewer than 500 cases. Many of these categories might be consolidated with other APR-DRG severity classes to avoid instability in the weights without sacrificing important information.

12 The reported total charges for each case are standardized to remove the effects of geographic differences in input prices, the payment adjustments for teaching activity (the IME adjustment), and the extent to which the hospital serves a disproportionate share of low-income patients (the DSH adjustment).

13 The adjustment for case mix is necessary to scale the relative values consistently across hospitals because a hospital's overall average charge, and the level of its relative values, reflects its mix of cases.

the level of charge mark-ups or costs.[14] Other things being equal, the relative weights would thus more accurately reflect the relative costliness of typical cases in each DRG.

Revising Medicare's outlier financing policy

The third potential refinement attempts to address long-standing problems associated with the method of financing outlier payments. Medicare makes extra payments for cases that have unusually high costs compared with the regular payment the hospital otherwise would receive. These outlier payments are intended to limit hospitals' financial risks from extraordinary cases and diminish financial incentives to avoid patients with especially serious illnesses. Under current law, outlier payments are financed by offsets applied to the operating and capital base payment amounts—5.1 percent for the operating payment amount and 6.1 percent for the capital amount in FY 2000. These offsets reduce hospitals' base payment rates for all DRGs proportionately.

Although all hospitals pay for mandatory outlier insurance through a flat proportionate reduction in their base DRG payments, outlier cases and payments are concentrated in certain DRGs. Outlier payments as a proportion of DRG payments vary from zero in some DRGs to more than 20 percent in a few categories. The mismatch between uniform financing of outlier payments and the substantial disparities in their prevalence among DRGs causes two problems. First, the amounts Medicare charges for outlier insurance do not reflect hospitals' risks of encountering outlier cases; low-risk hospitals—small urban or rural hospitals, for instance—are overcharged for outlier coverage, while high-risk providers—large urban and teaching hospitals, for example—are undercharged.

The second problem is that cases in some DRGs are substantially overpaid, while cases in other DRGs are underpaid. This problem occurs because the relative weight in each DRG is based on the total standardized charges for all cases in the category, without accounting for differences in the expected prevalence of outlier cases and payments among DRGs. If outlier payments were expected to account for 20 percent of total DRG payments in a particular category, and the weighted average operating and capital offset was only 5.2 percent, then the payment rates for typical cases in that DRG would be about 14.8 percent too high. Similarly, the payment rates for a DRG in which outlier payments account for 0.1 percent of total DRG payments would be 5.1 percent too low.

The refinement we propose would finance expected outlier payments in each DRG through an offsetting reduction in the relative weight for the category, rather than by the current flat reduction in the base payment amounts. The relative weight for each DRG would thus approximate more accurately the relative costliness of typical (non-outlier) cases in the category, largely eliminating this source of distortion in the payment rates among DRGs with different outlier prevalence rates. In addition, hospitals would face premiums for outlier insurance that reflect their expected relative risks, given the mixes of cases they treat.

Findings and recommendations for case-mix refinement and outlier financing options

In analyzing these policy changes, we focused on the effects of each policy option, compared with current policies, with the refinements evaluated as incremental policy combinations (Table 3-1). The first option consists of using refined DRGs—as illustrated by the severity class distinctions of the APR-DRGs—with weights based on hospitals' relative values (relative value weights). The second option uses refined DRGs with relative value weights individually reduced to finance expected outlier payments for the cases in each category.

Effects on payment accuracy

We previously reported preliminary results from our analyses of using refined DRGs and weights based on hospitals' relative values (MedPAC 2000). Those results strongly suggested that these refinements would improve payment

TABLE 3-1 **Current policies and incremental case-mix refinement policy options**

Policy components	Current policies	Option A	Option B
Patient classification system			
DRGs	✔		
Refined DRGs (APR-DRG/severity classes)		✔	✔
Relative weight calculation method			
Conventional method	✔		
Relative value method		✔	✔
Outlier financing method			
Offsets to the base payment amounts	✔	✔	
Offsets to the weights for refined DRGs			✔

Note: DRG (diagnosis related group), APR-DRG (all patient refined diagnosis related group). Conventional method: weights are based on average standardized charges in each DRG or refined DRG. Relative value method: weights are based on the average of hospitals' relative values in each refined DRG.

14 Dividing the charges for each case by the hospital's average charge per case removes the effect of systematic differences in markups or costs that apply to all of its cases. Some distortion in the weights might remain to the extent that patterns of charge mark-ups among services vary systematically across hospitals. These distortions would be reflected in the weights because the mix of services furnished differs across DRGs.

TABLE 3-2

Changes in payment accuracy within DRGs under alternative policies

Policy option	Standard deviation of gains and losses at percentiles of DRG distribution				
	10th	25th	50th	75th	90th
Current policy	1,751	2,386	3,286	4,895	7,794
Option A	1,672	2,216	2,986	4,390	7,102
Option B	1,696	2,241	3,057	4,367	6,852
	Percent change in standard deviation compared with current policy				
Option A	−4.5%	−7.1%	−9.1%	−10.3%	−8.9%
Option B	−3.1	−6.1	−7.0	−10.8	−12.1

Note: DRG (diagnosis related group). Standard deviation measures the variability of gains and losses around the average gain in each DRG. Gain or loss for each case equals payment minus cost; payments and costs include amounts for inpatient care under PPS plus hospital-specific amounts for inpatient direct graduate medical education programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare hospital inpatient claims.

accuracy at the case level and make Medicare's payments to hospitals more accurately reflect their expected costs of furnishing care, given the mix of cases they treat.

Payment accuracy within DRGs

Several measures of case-level payment accuracy and hospital-level payment equity confirm our tentative conclusions based on those earlier findings. The standard deviations of case-level gains within DRGs decline when payments are based on the combination of refined DRGs and hospital relative value weights (option A), compared with their values under current policies (Table 3-2). The refined DRGs and relative value weights thus reduce discrepancies between payments and costs, thereby improving payment accuracy, on average, compared with current DRGs and weights.

Adding DRG-specific outlier offsets (option B) would sacrifice some of the improvement in payment accuracy for cases in low-cost DRGs, but further improve accuracy for those in the highest-cost categories. Replacing the uniform outlier offsets in current policy with DRG-specific offsets would raise the payment rates for cases in DRGs that have few outlier cases—primarily low-cost DRGs—thereby reducing payment accuracy in those categories, compared with option A.[15] In those DRGs with a high prevalence of outlier cases—primarily high-cost categories—adding DRG-specific outlier offsets would reduce the payment rates for typical (non-outlier) cases, thereby further improving payment accuracy.

Payment accuracy within hospital groups

Payment accuracy measured over all sample cases in hospital groups shows a strong and consistent pattern of incremental improvements for options A and B, compared with current policy (Table 3-3). The standard deviation of

TABLE 3-3

Payment accuracy under alternative policies

Hospital type	Number of hospitals	Standard deviation of gains and losses among cases		
		Current policy	Option A	Option B
All hospitals	4,720	5,103	4,649	4,370
Geographic location:				
Large urban	1,481	6,004	5,538	5,135
Other urban	1,133	4,701	4,171	4,000
Rural	2,106	3,240	2,901	2,835
Rural referral	222	3,756	3,347	3,238
Sole community	619	3,127	2,790	2,761
Other rural	1,203	2,861	2,583	2,537
Teaching status:				
Academic medical center	113	8,234	7,478	6,834
Other teaching >100 residents	127	7,173	6,712	6,120
Other teaching 51-100 residents	120	5,589	5,134	4,813
Other teaching 10-50 residents	366	5,039	4,518	4,309
Other teaching <10 residents	380	4,764	4,286	4,082
Nonteaching	3,614	4,085	3,681	3,535

Note: Standard deviation measures variation in gains and losses around the average gain for all cases in each hospital group. Gain or loss for each case equals payment minus cost; payments and costs include amounts for inpatient care under PPS plus hospital-specific amounts for inpatient direct GME programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare hospital inpatient claims.

15 Removing the current uniform offsets to the operating and capital base payment amounts would raise those amounts by approximately 5.5 percent. The net increase in the payment rates for each DRG generally would be somewhat less, however, according to the size of the DRG-specific outlier offset for the category.

TABLE 3-4

Improvement in payment accuracy compared with that under current policy

Hospital type	Number of hospitals	Standard deviation relative to that under current policy*	
		Option A	Option B
All hospitals	4,720	91	86
Geographic location:			
Large urban	1,481	92	86
Other urban	1,133	89	85
Rural	2,106	90	87
Rural referral	222	89	86
Sole community	619	89	88
Other rural	1,203	90	89
Teaching status:			
Academic medical center	113	91	83
Other teaching >100 residents	127	94	85
Other teaching 51-100 residents	120	92	86
Other teaching 10-50 residents	366	90	86
Other teaching <10 residents	380	90	86
Nonteaching	3,614	90	87

Note: *Current policy = 100. Standard deviation measures variation in gains and losses around the average gain for all cases in each hospital group. Gain or loss for each case equals payment minus cost; payments and costs include amounts for inpatient care under PPS plus hospital-specific amounts for inpatient direct graduate medical education programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare hospital inpatient claims.

case-level gains declines substantially for every hospital group under both options, suggesting that using refined DRGs and relative value weights would improve payment accuracy compared with current policy and that adding DRG-specific outlier offsets would further improve accuracy.

The pattern of improvement across hospital groups and policy options is more easily seen when the case-level standard deviations under options A and B are recast as relative values compared with those under current policy (Table 3-4). Compared with gain variation under current policy, the overall average improvement in payment accuracy would be 9 percent for option A and 14 percent for option B. The near-uniformity of these gains across hospital groups is also consistent with our earlier findings, which suggested that using refined DRGs and refined weights would better capture differences in severity of illness and costs among both low-cost and high-cost DRGs.

Payment equity among hospital groups

The case-mix refinement and outlier financing options would change payment equity among hospital groups only slightly compared with that under current policies (Table 3-5).[16] Payment equity, as measured by differences in per case average gains among hospital groups, would be mildly worse under option A because average gains would rise for large urban and teaching hospitals and fall for other urban, rural and nonteaching facilities. This result is consistent with our earlier findings; the refined DRGs and weights would raise payments for the high-severity cases more commonly treated in large urban and teaching hospitals, and reduce payments for the low-severity cases common in other urban, rural, and nonteaching hospitals. These changes in payments would tend to compound existing disparities in average per case gains under current policies.

Payment equity under option B, however, would be comparable to that of current policy. The decline in payment equity under option A would be reversed because replacing the uniform outlier offsets used in both current policy and option A with DRG-specific offsets would tend to reduce payments for high-severity DRGs and raise them for low-severity categories. Payments would be reduced in high-severity DRGs because the prevalence of outlier cases and payments is usually disproportionately high in these groups. Conversely, using DRG-specific offsets would tend to raise payments in low-severity DRGs because these categories rarely have outlier payments. Consequently, per case average gains for most hospital groups under option B would be roughly similar to those under current policies.

Based on this finding, policymakers might be tempted to conclude that the policies reflected in option B would have little overall effect and thus would not be worth adopting. That conclusion, however, is not supported by our findings. Although average per case gains over all cases would be similar under current policies and option B for most hospital groups, the distribution of per case gains among hospitals within each group generally would be quite different. These changes in average gains among hospitals reflect improved accuracy under option B in measuring expected costs, given the illness severity of the mix of Medicare

16 Estimated aggregate Medicare inpatient payments and overall average gains under options A and B are virtually identical to those under current policies. The discrepancies in overall per case average gains in the first line of Table 3–5 are extremely small relative to the overall national average cost per case, which is $7,008 for cases in the 40 percent sample.

TABLE 3-5

Payment equity under alternative policies

Hospital type	Number of hospitals	Average per case gain or loss		
		Current policy	Option A	Option B
All hospitals	4,720	$481	$483	$492
Geographic location:				
Large urban	1,481	739	804	779
Other urban	1,133	319	297	318
Rural	2,106	185	88	152
Rural referral	222	229	176	222
Sole community	619	11	−73	−3
Other rural	1,203	235	97	171
Teaching status:				
Academic medical center	113	1,924	1,996	1,853
Other teaching >100 residents	127	1,278	1,391	1,327
Other teaching 51-100 residents	120	1,016	1,053	1,046
Other teaching 10-50 residents	366	386	425	434
Other teaching <10 residents	380	237	233	248
Nonteaching	3,614	191	153	193

Note: Gain or loss for each case equals payment minus cost; payments and costs include amounts for inpatient care under PPS plus hospital-specific amounts for inpatient direct graduate medical education programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare hospital inpatient claims.

patients they treat.[17] The refined case-mix measurement and outlier financing policies under option B thus result in improved equity of payment among individual hospitals, even though they do not enhance payment equity among hospital groups.

Changes in the distribution of outlier payments

Outlier cases and payments are disproportionately prevalent in large urban and teaching hospitals under current policy, and they would remain so under both options (Table 3-6). Compared with current policies, however, options A and B would identify substantially different sets of outlier cases.

Under current policies, approximately 311,000 cases in the 1997 claim file would have qualified for outlier payments because their costs exceeded the outlier threshold for the DRG based on a national fixed loss amount of $11,900. Under option A, about 384,000 cases would have qualified for outlier payments based on an estimated national fixed loss amount of $7,750; only 69 percent of these cases also would have been outliers under current policy. Based on an estimated national fixed loss amount of $9,300, about 336,000 cases would have qualified for outlier payments under option B; 97 percent of these cases also would have been outliers under option A, but only 79 percent would have qualified under current policies.

Although the case-mix refinement and outlier financing options would not substantially change the distribution of outlier payments among hospital groups, analysis suggests that they would improve the effectiveness of the outlier policy. Because the refined DRGs and weights would more accurately capture severity differences among cases, outlier cases would be more appropriately identified and outlier payments would be targeted more accurately to the cases that pose the greatest financial risks for providers. Using DRG-specific outlier offsets would further improve the outlier policy by increasing the concentration of outlier payments in DRGs and hospitals that have the highest shares of disproportionately high-cost cases.

Effects on hospitals' Medicare inpatient payments

Consistent with our earlier findings, our estimates show that adopting refined DRGs and weights would change Medicare inpatient payments substantially for many hospitals. Compared with Medicare inpatient payments under current policies, payments to large urban and teaching hospitals would rise, on average, while payments to other urban, rural, and nonteaching facilities would fall (Table 3-7).

Adding DRG-specific outlier offsets under option B would result in smaller payment changes than most hospital groups would experience under option A. This reflects two factors. The nationally uniform outlier offsets in current policy and option A would be returned to the base payment amounts under option B, thereby raising payments to hospitals that primarily treat cases in low-cost DRGs. Also, adding DRG-specific offsets would reduce the DRG weights and payment rates for primarily high-severity, high-cost categories because outlier cases and payments tend to be disproportionately prevalent in those DRGs. This effect would tend to offset, at least partially, payment increases under option A for large urban and teaching hospitals, in which high-severity cases are more common.

Our hospital-specific payment estimates also confirm the earlier finding that both options would result in a substantial redistribution of Medicare inpatient payments among hospitals within each

17 Changes in average gains among hospitals reflect often substantial changes in their PPS payments, which we previously illustrated graphically (Chapter 3, MedPAC 2000).

TABLE 3-6

Prevalence of outlier payments among hospital groups

Hospital type	Number of hospitals	Outlier payments as a percent of total DRG payments		
		Current policy	Option A	Option B
All hospitals	4,720	5.1%	5.1%	5.1%
Geographic location:				
Large urban	1,481	5.7	5.6	5.7
Other urban	1,133	5.3	5.3	5.4
Rural	2,106	2.5	2.9	2.7
Rural referral	222	3.2	3.4	3.3
Sole community	619	2.6	3.2	2.9
Other rural	1,203	1.7	2.2	2.0
Teaching status:				
Academic medical center	113	10.0	9.0	9.9
Other teaching >100 residents	127	6.7	6.3	6.7
Other teaching 51-100 residents	120	5.3	5.0	5.3
Other teaching 10-50 residents	366	5.4	5.4	5.5
Other teaching <10 residents	380	4.7	4.9	4.8
Nonteaching	3,614	3.7	4.0	3.8
Outlier prevalence:				
High outlier (top decile)	474	12.1	12.3	12.5
Other (lower nine deciles)	4,246	3.8	3.5	3.6

Note: Outlier payments for a case are equal to 80 percent of the difference between its estimated cost and a DRG-specific threshold amount, which equals the normal PPS payment for the case plus a fixed loss amount. Total DRG payments equal the sum of DRG payments (exclusive of teaching and disproportionate share payments) plus outlier payments. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare hospital inpatient claims.

provider group, compared with payments under current policies (see Appendix B, Table B-1). Under these options, most hospitals in every provider group would experience some change in Medicare inpatient payments, reflecting more accurate measurement of the illness severity of their cases. Although a small number of hospitals could face payment changes of 10 percent or more, such instances almost always involve facilities with fewer than 30 Medicare cases in 1997.

Effects on hospitals' Medicare inpatient margins

Estimated changes in hospitals' Medicare inpatient margins mirror the anticipated changes in their inpatient payments (Table 3-8). Compared with their Medicare inpatient margins under current policy, large urban and teaching hospitals would have somewhat improved financial performance under option A, but performance would decline for other urban, rural, and nonteaching facilities. Adding DRG-specific outlier financing would partially reverse many of these changes, although inpatient margins would not recover fully for rural hospitals.

Financial outcomes for hospitals with unusually high prevalences of outlier payments (the high outlier category) would remain remarkably stable under both options. Medicare inpatient margins would rise slightly for these hospitals under option A and then fall back under option B. This suggests that, on average, these options would neither harm nor help hospitals willing to treat patients with unusually serious illnesses. Many hospitals in this group may be more vulnerable than facilities in other groups (see Appendix B, Table B-2), but that would not change under either option.

Recommendations on case-mix refinement and outlier financing policies

In view of our findings, we believe that the Secretary and the Congress should adopt the refinements included in option B.

RECOMMENDATION 3A

The Secretary should improve the hospital inpatient prospective payment system by adopting, as soon as practicable, diagnosis related group (DRG) refinements that more fully capture differences in severity of illness among patients. At the same time, she should make the per discharge payment rates more accurate by basing the DRG relative weights on the national average of hospitals' relative values in each DRG.

Our analyses of potential refinements in the DRG definitions, as illustrated by the APR-DRGs, and in the methods used to calculate the DRG relative weights demonstrate that these policies would yield substantial improvements in payment accuracy. They would better align hospitals' financial incentives with Medicare's policy goal of ensuring beneficiaries' access to medically necessary inpatient care of high quality.

Historically, researchers and policymakers generally have not been able to find much evidence to suggest that hospitals have responded to Medicare's payment policies under the PPS by denying beneficiaries access to medically necessary inpatient care. In the past, however, providers generally could choose to ignore the effects of payment inaccuracies because they could use excess revenues from some payers to offset revenue shortfalls from others. Throughout the late 1980s and most of the 1990s, for instance, hospitals used substantial gains on care furnished to privately insured patients to offset losses on care furnished to patients covered by Medicare and Medicaid, and to finance their expenses for uncompensated care (see Chapter 5 and Appendix C).

TABLE 3-7

Change in Medicare inpatient payments compared with current policy

Hospital type	Number of hospitals	Percentage change in inpatient payments: Option A	Option B
All hospitals	4,762	0.0%	0.0%
Geographic location:			
Large urban	1,499	0.7	0.5
Other urban	1,142	−0.3	−0.1
Rural	2,121	−2.1	−1.6
Rural referral	222	−1.1	−0.8
Sole community	627	−2.2	−2.9
Other rural	1,208	−3.1	−1.6
Teaching status:			
Academic medical center	113	0.7	−0.3
Other teaching >100 residents	127	1.0	0.5
Other teaching 51-100 residents	120	0.3	0.3
Other teaching 10-50 residents	367	0.5	0.5
Other teaching <10 residents	382	−0.1	0.0
Nonteaching	3,653	−0.7	−0.2
Outlier prevalence:			
High outlier (top decile)	474	0.8	0.2
Other (lower nine deciles)	4,246	−0.2	0.0

Note: Inpatient payments equal the sum of PPS payments plus inpatient direct graduate medical education payments for all cases in each hospital group. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of 1997 data from Medicare hospital inpatient claims and hospitals' cost reports.

Recently, however, providers have been facing increased financial pressure, as private insurers and employers have become less willing to make payments that greatly exceed the costs of furnishing care to their covered patients. In addition, the Congress adopted policies in the BBA that reduced Medicare's payments for inpatient care and other hospital services, such as skilled nursing and home health care.

As hospitals face pressure from public and private payers, they are less able to subsidize losses on some patients or services with gains from others. Consequently, the accuracy of Medicare's payments for care may become increasingly important in ensuring that all beneficiaries have access to medically necessary inpatient care of high quality.

The improvements in payment accuracy that we have demonstrated based on the APR-DRGs are illustrative of the gains the Secretary could achieve by adopting refinements that make more effective use of available information about patients' complications and comorbidities. However, the APR-DRGs were designed to classify patients of all ages and include many categories that generally would have few or no patients in the Medicare population. To avoid creating refined DRGs that might have unstable relative weights, the Secretary should be selective in adopting clinical distinctions similar to those reflected in the APR-DRGs. This will require carefully weighing the benefits of more accurate clinical and economic distinctions against the potential for instability in relative weights based on small numbers of cases.

RECOMMENDATION 3B

The Congress should amend the law to change the method now used to finance outlier payments under the hospital inpatient prospective payment system. Projected outlier payments in each DRG should be financed through an offsetting adjustment to the relative weight for the category, rather than the current flat adjustment to the national average base payment amounts.

As discussed earlier, adopting DRG-specific outlier offsets to finance outlier payments in each category would have two benefits. First, this policy would further improve payment accuracy for ordinary (non-outlier) cases, especially those in categories with disproportionately high proportions of outlier cases. Second, it would improve payment equity among hospitals by replacing outlier premiums based on community rating over all cases in all DRGs with premiums based on community rating within each DRG. DRG-specific offsets thus would make the premiums that Medicare charges all hospitals for mandatory outlier insurance match the expected outlier risk.

If the Congress adopts this policy, the Secretary should exercise careful judgement in resolving two potential implementation issues. One issue is whether estimated DRG-specific outlier offset factors based on a single year's cases would be sufficiently stable in refined DRG categories that have few cases. This potential problem might be resolved by using data for several years to develop offset factors for refined DRGs with relatively few cases.

The other potential issue is how DRG-specific financing of outlier payments might affect providers' decisions about transferring patients or accepting those transferred from other PPS hospitals. By definition, hospitals always take a financial loss on outlier cases.[18] As a

18 Hospitals only qualify for outlier payments after their costs for a case exceed an outlier threshold equal to the regular DRG payment for the case plus a fixed loss amount. The national fixed loss amount for FY 2000 is $14,050; each hospital's fixed loss amount is determined by adjusting the national amount to reflect the level of input prices in its location. Consequently, depending on where it is located, a hospital must take a loss ranging from about $11,000 to about $19,000 before it receives any additional payments, and those payments cover only 80 percent of the loss above the outlier threshold.

TABLE 3-8

Hospitals' average Medicare inpatient margins under alternative policies

Hospital type	Number of hospitals	Average inpatient margin		
		Current policy	Option A	Option B
All hospitals	4,173	13.3%	13.3%	13.3%
Geographic location:				
Large urban	1,272	15.8	16.4	16.2
Other urban	988	10.8	10.6	10.8
Rural	1,913	10.1	8.2	8.7
Rural referral	198	10.9	10.0	10.2
Sole community	568	10.6	8.7	8.1
Other rural	1,093	9.2	6.3	7.7
Teaching status:				
Academic medical center	98	20.8	21.2	20.5
Other teaching >100 residents	105	18.9	19.6	19.2
Other teaching 51-100 residents	101	14.3	14.5	14.5
Other teaching 10-50 residents	317	12.2	12.5	12.6
Other teaching <10 residents	331	10.5	10.4	10.6
Nonteaching	3,221	10.7	10.1	10.5
Outlier prevalence:				
High outlier (top decile)	406	12.9	13.5	13.0
Other (lower nine deciles)	3,749	13.5	13.3	13.4

Note: Medicare inpatient margins equal Medicare inpatient revenues minus inpatient costs as a percentage of Medicare inpatient revenues. Margins reflect payments and costs for both PPS and inpatient direct GME programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of 1997 data from Medicare hospital inpatient claims and hospitals' cost reports.

result, they have a financial incentive to transfer patients who are likely to become outliers. Patient transfers, however, do not often appear motivated by providers' financial incentives; in most instances, they appear clinically desirable because the patient is sent to a hospital better equipped and staffed to treat serious conditions.[19]

Replacing national uniform outlier offsets with DRG-specific ones probably would have little effect on providers' incentives to transfer seriously ill patients. This policy change, however, might affect a hospital's willingness to accept transfer patients if it increased the likelihood that the receiving facility would take substantial losses. Previous studies of Medicare's transfer policy have shown that transfer patients are twice as likely as other patients to become outliers (ProPAC 1995a, Buczko 1993). However, MedPAC has not established whether the same finding would hold if PPS payments were based on refined DRGs, relative value weights, and DRG-specific outlier offsets. Moreover, because this issue involves hospitals' behavioral responses to small potential changes in financial incentives, it is not certain that a valid answer could be obtained by further analyzing data from the period before the adoption of these policies.

In the absence of better information about potential changes in transfer-receiving hospitals' behavior under our recommended policy changes, the Secretary should carefully monitor transfer patterns during and after the implementation phase to discover whether these policies may reduce transfers of critically ill beneficiaries to more clinically appropriate settings.

RECOMMENDATION 3C

To avoid imposing extraordinary financial burdens on individual providers, the Congress should ensure that the case-mix measurement and outlier financing policies recommended earlier are implemented gradually over a period of several years. Further, the Congress should consider including protective policies, such as exemptions or hold-harmless provisions, for providers in circumstances in which vulnerable populations' access to care might be disrupted.

Our analyses show that the recommended refinements in Medicare's case-mix measurement and outlier financing policies would substantially change PPS payments for many hospitals. Recently, the hospital industry has been experiencing a period of extraordinary change in financial conditions, driven by major shifts in public and private payers' policies. Consequently, the Congress and the Secretary should make a concerted effort to ensure that further policy changes, such as those recommended here, do not impose heavy additional burdens on individual providers.

Many hospitals facing payment changes under our recommended policies could accommodate those changes in an orderly way in a relatively short period. Traditional phase-in mechanisms likely would prevent substantial or lasting harm to these providers.

For some hospitals, however, the Congress and the Secretary may need to consider providing longer-term relief from the financial impact of these policy changes. In particular, the estimated payment effects associated with our recommendations are greater, on average,

19 Many patients are transferred to receive specialized surgical procedures that the transferring hospital is unable to provide.

for some groups of rural hospitals than for other providers. To avoid potential adverse effects on rural beneficiaries' access to inpatient care, we urge policymakers to protect rural providers traditionally considered financially vulnerable: sole community hospitals, those with fewer than 50 beds, and those dependent on Medicare because the program's beneficiaries comprise a high proportion of their patients. Special protective policies are likely to be especially important for providers located in areas with few other hospitals or in which a substantial proportion of providers would face large reductions in Medicare payments. Potential approaches to counteract anticipated payment changes might include targeted additional payments, hold-harmless provisions, and temporary or permanent exemptions.

The Secretary also should implement these policies in a way that avoids substantial increases in administrative burdens. Because the refined DRGs use existing diagnosis and procedure codes, we believe providers' incremental costs for adopting these refinements would be limited to upgrading the coding and classification software they now use for DRGs and providing a small amount of additional staff training. Sometimes, however, unforeseen costs arise when new systems are implemented.

RECOMMENDATION 3D

The Congress should give the Secretary explicit authority to adjust the hospital inpatient base payment amounts if anticipated coding improvements in response to refinements in case-mix measurement are expected to increase aggregate payments by a substantial amount during the forthcoming year. This adjustment should be separate from the annual update. Further, the Congress should require the Secretary to measure the extent of actual coding improvements based on the bills providers submit for payment and make a timely adjustment to correct any substantial forecast error.

Adopting our recommended refinements in the DRG definitions and weights would substantially change Medicare's payment rates for many types of cases. It also would strengthen providers' incentives to accurately report patients' comorbidities and complications. Although improvements in providers' reporting practices are otherwise desirable, they are likely to inappropriately raise Medicare's total payments, thereby imposing an unnecessary financial burden on taxpayers and beneficiaries. To avoid this result, the Secretary could project the likely effect of reporting improvements on total payments and make an offsetting adjustment to the national average base payment amounts.

Under current law, the Secretary is required to update the DRG definitions and weights annually to account for changes in practice patterns, medical science, and technology that alter the relative use of hospital resources among types of patients. In most years, the Secretary has made minor changes in the DRG definitions to address issues raised by the public and the hospital industry regarding the appropriate classification of patients. HCFA also recalculates the DRG relative weights each year to reflect changes in the relative costliness of each type of case, as indicated by the most recent billing data.

In making these changes, the Secretary is required to hold constant the projected total PPS payments for the forthcoming year. This requirement is met by recalibrating the weights and by making a small budget-neutrality adjustment to the national average base payment amounts. The annual weight recalibration adjusts the new weights to equalize the national average weight using the new DRG definitions and weights, with the national average weight based on the current year's definitions and weights applied to the same case records. This removes most of the potential effect on total payments of changes in DRG definitions and weights. A small budget-neutrality adjustment is usually necessary to ensure that projected total payments remain unchanged.

Actual payments in the forthcoming year, however, may differ from the projected amount for several reasons. The mix of cases among DRGs may have shifted because of changes in practice patterns or the incidence of illness. These real changes in case mix are expected to affect the cost of inpatient care; thus, the accompanying changes in payment are appropriate.

Hospitals also may have improved the accuracy and completeness of the clinical information they report on their claims, shifting cases among DRGs. This kind of case-mix change usually increases total payments and redistributes them among hospitals. The redistribution is appropriate because assigning cases more accurately to DRGs better reflects the incidence of hospitals' costs. But shifts in reporting should not affect the total cost of treating Medicare patients, because cases are merely reclassified. Consequently, any resulting changes in total payments are not appropriate (see Chapter 5 for a discussion of the components of case-mix change).

Although both MedPAC's and the Secretary's update recommendations exclude the estimated historical change in case mix associated with reporting improvements, neither attempts to exclude prospectively the effects of reporting improvements expected in the forthcoming year. Providers thus get the benefit of reporting changes during the year in which they occur. Estimates of these effects are then removed from the base payment amounts in the following year. However, because the Congress sets the annual update factors in law, it is difficult to know whether changes in case-mix reporting are fully or partially offset each year.

The Secretary previously raised concerns about the effects on total PPS payments of reporting improvements that might accompany major changes in the DRG definitions and weights. Refining the DRGs would create a number of new categories with very high weights, and hospitals would receive a much higher payment rate if one of a set of major complications were reported on the claim. Consequently, adopting our recommended refinements would change the relative

importance of many secondary diagnoses and encourage efforts by hospital coders to ensure that these diagnoses are reported on claims when they appear in patients' medical records. Although this is appropriate behavior, it leaves unresolved the question of how to ensure that providers are fairly compensated for changes in costs that result from real changes in case mix while protecting the Medicare program from increases in payments that reflect only better reporting.

To address this problem, the Congress should give the Secretary explicit authority to adjust the base payment amounts, separate from the annual update, to offset the projected effect of reporting changes that are expected during the coming year in response to DRG refinements. The Congress also should take into account the Secretary's use of this authority when it sets annual updates. In addition, the Congress should require the Secretary to measure the extent of any actual changes in reporting following substantial DRG refinements and, after the actual change is known, to make a further adjustment to correct for any projection errors.

This solution would require a change in current law. In addition, an ongoing database of reabstracted medical records would be needed to make projections of the likely extent of reporting improvements and to estimate actual reporting changes.

HCFA has developed a reabstract database in its quality assurance program that could be used for these purposes. Given a projection of the case-mix change that might occur if hospital coders began to report as accurately as expert coders do, the Secretary then would have to use her judgment about how much of the potential change likely would occur during the forthcoming year. If the projection were accurate, the hospital industry as a whole would no longer gain the short-term benefit of substantial reporting improvements. Medicare also would avoid large, inappropriate increases in payments. Because it may be difficult to predict accurately how much reporting change would occur in response to DRG refinements, the Secretary should be required to make forecast corrections once the actual change is known. This requirement would protect both providers and the program from the effects of large projection errors.

Folding inpatient direct graduate medical education costs into prospective payment system payment rates and adopting a new teaching hospital adjustment

In August 1999, the Commission recommended that the Congress revise Medicare's payments for inpatient hospital care to recognize the higher value of patient care services provided in teaching hospitals (MedPAC 1999a). We envisioned combining Medicare's current additional payments to teaching hospitals into a single adjustment to PPS payments for patient care. The teaching hospital adjustment would be created by first folding inpatient direct GME costs into patient care costs to recognize that expenses for training represent patient care costs. The relationship between this revised measure of inpatient costs and some measure of the enhanced patient care that teaching hospitals provide, such as a resident-to-bed ratio, would then be calculated to derive a new teaching hospital adjustment. This new adjustment would replace the current IME adjustment and direct GME payments for residents providing inpatient care. Hospitals would continue to receive direct GME payments for care provided by residents in outpatient and other settings until similar adjustments were developed.[20]

Our proposal would improve payment equity among teaching hospitals by eliminating the wide variation in current hospital-specific GME payment amounts, which are based on reported costs from more than 15 years ago. Eliminating this variation would make payments more consistent with Medicare's chief payment goal, which is to set payment rates that approximate efficient providers' costs after accounting for predictable differences in costs arising from clinically appropriate variations in service complexity and intensity. Folding direct GME costs into the payment rates would also firmly establish that these expenses are a part of patient care costs that Medicare should recognize in its payment rates.

Issues to consider in creating a new teaching hospital adjustment

Combining direct GME payments and the IME adjustment into a single teaching hospital adjustment raises several issues, including which costs should be folded into the payment rates, how the adjustment should be calculated, and whether the teaching hospital subsidy currently embedded in PPS payment rates through the IME adjustment should be maintained.[21]

Which costs should be folded into the payment rates?

Either inpatient direct GME costs or payments could be folded into the Medicare inpatient cost base for estimating the empirical level of the teaching hospital adjustment. If costs were included, the estimated teaching hospital adjustment would reflect the actual relationship between resident intensity and cost per case. However, the Congress has limited the growth in direct GME

20 The Commission believes that these concepts should also be extended to the outpatient setting and to other types of training programs. However, due to a lack of appropriate data, we are unable to develop adjustments for these settings and programs at this time.

21 The IME adjustment historically has been set higher than what would be indicated by the relationship between per case costs and resident intensity (as measured by the ratio of residents to hospital beds). This results in a subsidy being provided to teaching hospitals. The estimated subsidy is defined as the amount of IME payments in excess of payments based on the measured relationship between resident intensity and costs per case.

payments, and these payments are now 16 percent less than reported costs. If payments were included, the adjustment would reflect what Medicare might consider reasonable costs. Because the teaching hospital adjustment in our proposal is limited to PPS inpatient payments, only costs or payments associated with inpatient activity should be added to the cost base. Direct GME costs related to outpatient training would be treated separately.

How should the adjustment be calculated?

A second set of issues involves the methods used to calculate the level of the teaching hospital adjustment. Two technical issues need to be considered: the measure of teaching intensity used to capture the systematically higher costs of patient care in teaching hospitals, and how to calculate an appropriate adjustment percentage.

Under current law, Medicare adjusts payments to teaching hospitals using a formula that depends on the resident-to-bed ratio. In the August report, we noted that to avoid distorting hospitals' demand for residents, the teaching hospital adjustment should be based on a measure that does not involve counting residents (MedPAC 1999a). However, we were unable to find a readily available substitute. Because the focus of our analysis was inpatient costs, we used a measure of inpatient resident intensity. An inpatient resident intensity measure should be more closely associated with inpatient costs than an intensity measure based on total hospital residents. However, an inpatient measure might encourage hospitals to shift residents from outpatient training sites to inpatient sites. Using an intensity measure based on the full hospital resident count, as currently used for the IME adjustment, might create an opposite incentive, especially if hospitals were paid separately for residents in outpatient settings based on a per resident amount.

The teaching hospital adjustment should capture the extent to which teaching hospitals' costs are systematically higher, after accounting for all other adjustments in the payment system. The empirical level of this adjustment can be estimated in different ways, and the statistical methods used will affect the level of the adjustment. We used a regression analysis that adjusts per case costs for cost-related payment factors such as case mix, wages, and outlier payments. This approach allows the teaching hospital adjustment to reflect part of the effect of cost factors that the payment system does not recognize, such as hospital size and regional practice patterns, to the extent that these factors are correlated with teaching status. Other researchers have used different approaches and their analyses have produced different estimates of the relationship between resident intensity and costs per case (Anderson and Lave 1986, Mechanic et al. 1998, Rogowski and Newhouse 1992, Thorpe 1988, Welch 1987). We believe our approach is appropriate given Medicare's current payment policies, but differing views on the methods for calculating the adjustment leave some uncertainty about the most appropriate value for the adjustment and the estimated size of the resulting subsidy.

Should the current subsidy to teaching hospitals be maintained?

In MedPAC's August 1999 report, we stated that the policies we were recommending were not intended to produce budget savings. At the same time, we noted that the new adjustment should reflect as closely as possible the efficient cost of providing care in teaching hospitals. These two objectives are partially at odds because even after the BBA is fully implemented, the IME adjustment will still be much higher than can be empirically justified.[22] If Medicare were to set payments to represent the efficient cost of providing care, the teaching hospital adjustment would be much lower than at present, raising the issue of whether to maintain the subsidy embedded in the current law adjustment.

We analyzed three options for folding direct GME costs into PPS payment rates (Table 3-9). Under the first option, teaching-related payments and total Medicare inpatient payments are held constant. Special payments to teaching hospitals would be redistributed among teaching facilities. This is because direct GME costs would be folded into patient care payment rates and paid on a national average basis (through the teaching hospital adjustment) rather than on a hospital-specific basis. Payment rates would not change for nonteaching hospitals.

Under the second option, aggregate Medicare inpatient payments would be held constant, but the teaching hospital adjustment would reflect the measured relationship between per case costs and

TABLE 3-9 **Payment policy options for teaching hospitals**

	Fold inpatient direct GME costs into PPS rates	Use inpatient resident count	Hold total inpatient payments constant	Hold total teaching-related payments constant
Option 1	✔	✔	✔	✔
Option 2	✔	✔	✔	
Option 3	✔	✔		

Note: GME (graduate medical education), PPS (prospective payment system).

22 We estimate that the IME adjustment for operating payments would be 3.2 percent if it were based on the empirical relationship between costs and the ratio of residents to hospital beds. When the BBA provisions are fully phased in, the adjustment will be 5.5 percent.

resident intensity. The teaching hospital subsidy would thus be returned to the base payment rates for all hospitals. Returning these payments to the base would be consistent with how the initial IME level was financed; base payments were reduced to fund the subsidy when the IME adjustment was doubled in 1983.

Under the third option, the teaching hospital adjustment would be based on the measured relationship between per case costs and resident intensity as in the second option, but the resulting savings from eliminating the subsidy would be returned to the trust fund. Base payments under this option would increase slightly, however, reflecting the effect of folding inpatient direct GME costs into the per case payment rates. Aggregate payments, though, would fall, because the current teaching hospital subsidy would no longer be provided. Although some budget savings would result from this third option, if these savings were used for other purposes within the Medicare program, that would affect this option's total redistributive impact.

We compared the impact of each option with a current policy that includes inpatient direct GME payments and reflects long-run BBA and Balanced Budget Refinement Act (BBRA) payment policies for DSH and IME payments.[23]

Our models examine the impact of these policies on Medicare inpatient payments. The sizes of the potential impacts can be used to gauge the length and type of transition that might be needed if these policies were adopted.

Effect on payments to hospitals

The payment impacts of these options can be examined in several ways. In this section we first discuss the aggregate impact on Medicare spending. Then we consider the impact on payment accuracy, followed by an examination of the distributional impact of these policies.

Finally, we discuss the impact on Medicare inpatient and total hospital margins.

Aggregate impacts

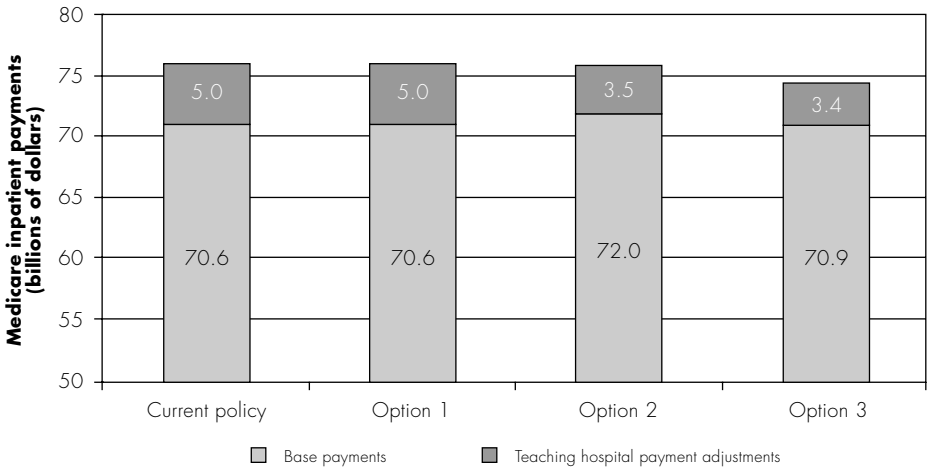
Under our long-run BBA baseline, Medicare inpatient payments (including direct GME payments) total about $75.6 billion (Figure 3-1). Of this amount, special payments to teaching hospitals total about $5.0 billion. These special payments include more than $3.5 billion in IME payments and $1.4 billion in direct GME payments for residents providing inpatient care. About $1.5 billion of the IME payments constitutes a subsidy to teaching hospitals (Figure 3-2).

Under the first option, total inpatient spending would remain the same as under current policy. Special payments to teaching hospitals would also be held constant, as teaching hospitals would retain the overall subsidy currently embedded in the IME adjustment. Base payments would also remain unchanged in the aggregate.

Under the second option, Medicare inpatient spending would remain unchanged, but the teaching hospital subsidy would be taken away from teaching hospitals and added back into base payments. Special payments to teaching hospitals, therefore, would drop by $1.5 billion, but base payments for all hospitals would climb by an equal amount. Teaching hospitals, though, would retain a portion of the $1.5 billion because of the increase in base payment amounts.

FIGURE 3-1

Effect on Medicare inpatient payments of options for folding direct graduate medical education costs into Medicare inpatient payment rates



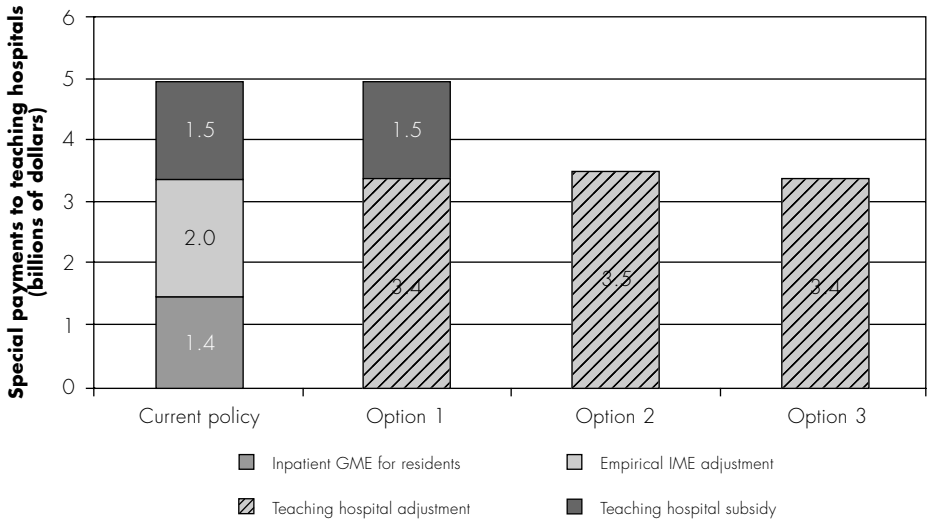
Note: Medicare inpatient payments include direct GME payments for inpatient residents. Base payments reflect base operating, capital, outlier, and disproportionate share hospital payments. Teaching hospital payment adjustments reflect the indirect medical education adjustment and inpatient direct GME payments for residents under current policy and the teaching hospital adjustment under each of the policy options. Current policy reflects long-run BBA policies for Medicare DSH and IME payments. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy distributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payments rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims data and cost reports.

23 We did not model BBRA policies that affect direct GME payments; the BBRA increased the per resident payment amounts for hospitals with low amounts and limited annual updates for hospitals with high amounts.

FIGURE 3-2

Effect on special payments to teaching hospitals of options for folding direct graduate medical education costs into Medicare inpatient payment rates



Note: GME (graduate medical education), IME (indirect medical education). Current policy reflects long-run BBA policies for Medicare DSH and IME payments. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy distributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims data and cost reports.

The third option would eliminate the teaching hospital subsidy, dropping special payments to teaching hospitals by $1.5 billion. However, total payments would fall by only $1.1 billion because inpatient direct GME costs, which are about $400 million more than inpatient direct GME payments, would be folded into the PPS payment rates. Special payments to teaching hospitals would total about $3.4 billion under this option.[24] Payments made through the teaching hospital adjustment would be lower in this option than in the second option, because the base to which the teaching adjustment is applied would be smaller. Base payments also increase under this option compared with current policy. This increase represents the portion of direct GME costs added to the base that are not paid out through the teaching hospital adjustment.

As modeled, none of these options affects direct GME payments related to resident training in outpatient settings, PPS-exempt hospitals or units, or direct GME payments for nursing and allied health professions training programs. We estimate that approximately $900 million in direct GME payments would continue to be paid under current policies until similar adjustments could be developed for these other settings and programs.[25]

Payment accuracy

One indicator of payment accuracy is the extent to which the difference between payments and costs—per case gains or losses—varies among hospital groups. Average per case gains and losses vary widely under current policy across different hospital groups. Teaching hospitals have much larger average gains than do nonteaching hospitals, and the size of the gain is strongly related to the number of residents (Table 3-10). The average per case gain for academic medical centers, for instance, is $1,924, compared with $191 for nonteaching hospitals. Among teaching hospitals, the size of the gain is also related to the level of hospitals' direct GME per resident payment amounts. Hospitals with low per resident amounts tend to have smaller gains than do those with high per resident amounts.

Folding inpatient direct GME costs into PPS payment rates tends to reduce the disparity in per case gains between hospitals with low and high per resident payment amounts. This would be expected, because folding direct GME costs into PPS payment rates in effect substitutes one payment based on a national average formula for highly varied, hospital-specific payments.

The first option does nothing to reduce the disparity in gains and losses between teaching and nonteaching hospitals, because the teaching hospital subsidy is retained. The disparity would be greatly reduced, however, if the teaching hospital subsidy were eliminated. Even then, the average per case gain would continue to be much higher for academic medical centers (AMCs) and other large teaching hospitals, relative to nonteaching providers. Under the second option, which returns the teaching subsidy to base PPS payments, nonteaching hospitals' average gains would increase from $191 to $307 per case. Payments to nonteaching hospitals would increase by a much smaller amount if the subsidy were returned to the trust fund (option 3) because the standardized amounts would

24 The teaching adjustment does not return all of the GME costs included in the payment base to teaching hospitals because teaching intensity and the increase in costs per case (due to including direct GME costs in the cost base) are not perfectly correlated.

25 Our estimates assume that hospitals would continue to be paid for resident training in outpatient settings using per resident payment amounts and that nursing and allied health professions training programs would continue to be paid on a reasonable cost basis for Medicare's share of these programs' costs.

TABLE 3-10

Payment accuracy among hospital groups under current policy and alternative payments to teaching hospitals

Hospital type	Number of hospitals	Average gain or loss per case			
		Current policy	Option 1	Option 2	Option 3
All hospitals	4,720	$481	$484	$484	$366
Geographic location:					
Large urban	1,481	739	736	734	547
Other urban	1,133	319	330	304	235
Rural	2,106	185	189	235	188
Rural referral	222	229	233	274	216
Sole community	619	11	16	65	22
Other rural	1,203	235	237	287	245
Teaching status:					
Academic medical center	113	1,924	2,097	1,420	1,193
Other teaching >100 residents	127	1,278	1,201	937	738
Other teaching 51-100 residents	120	1,016	986	873	723
Other teaching 10-50 residents	366	386	367	384	264
Other teaching <10 residents	380	237	239	350	239
Nonteaching	3,614	191	198	307	219
Direct GME per resident payment quintiles:					
0 to 20	210	393	486	460	350
20 to 40	211	825	919	803	648
40 to 60	211	792	842	704	559
60 to 80	212	915	875	700	533
80 to 100	210	1,108	927	745	567
Nonteaching	3,614	191	198	307	219

Note: GME (graduate medical education). Gain or loss refers to the difference between payments and costs. Costs include inpatient direct GME costs for residents. Current policy reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

rise slightly if inpatient direct GME payments were folded into base payment rates.

Another measure of payment accuracy is the standard deviation of gains and losses among cases within hospital groups under each option. Folding direct GME costs into PPS payment rates increases the variability of gains and losses, compared with current policy (Table 3-11).[26] This occurs because we are folding highly variable GME costs into PPS payment rates but making payments based on a national formula. In contrast, under current policy, direct GME payments are likely to reflect much of this variation in costs because the payments are based on hospital-specific per resident costs from 1984 trended forward. Removing the teaching hospital subsidy would reduce the standard deviation of case-level gains relative to simply folding direct GME costs into PPS payment rates.

Distributional impact

The impacts of these three options vary across teaching and nonteaching hospitals. In general, the first option redistributes payments among teaching hospitals, while payments to nonteaching hospitals remain essentially unchanged (Table 3-12).[27] Under the second option, payments are redistributed from teaching hospitals to nonteaching hospitals, although payments are redistributed among teaching hospitals as well. In the third option, aggregate payments fall by 1.6 percent or $1.1

26 The pattern of changes in payment accuracy across hospital groups and policy options is more easily seen when the case-level standard deviations under the different options are recast as relative values compared with those under current policy.

27 Some nonteaching hospitals see a slight increase in outlier payments because the outlier threshold is reduced slightly. Base payment rates do not change for nonteaching hospitals.

TABLE 3-11

Payment accuracy among cases under alternative payments to teaching hospitals

Hospital type	Number of hospitals	Standard deviation of gain or loss relative to current policy*		
		Option 1	Option 2	Option 3
All hospitals	4,720	104	102	102
Geographic location:				
Large urban	1,481	105	103	103
Other urban	1,133	102	101	101
Rural	2,106	100	100	100
Rural referral	222	100	100	100
Sole community	619	100	99	100
Other rural	1,203	100	100	100
Teaching status:				
Academic medical center	113	112	107	107
Other teaching >100 residents	127	108	105	104
Other teaching 51-100 residents	120	105	104	103
Other teaching 10-50 residents	366	102	102	102
Other teaching <10 residents	380	100	101	100
Nonteaching	3,614	99	100	100
Direct GME per resident payment quintiles:				
0 to 20	210	103	101	101
20 to 40	211	105	103	103
40 to 60	211	106	103	103
60 to 80	212	107	104	104
80 to 100	210	109	106	105
Nonteaching	3,614	99	100	100

Note: *Current policy =100. GME (graduate medical education). Gain or loss refers to the difference between payments and costs. Costs include inpatient direct GME costs for residents. Current policy reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

billion, shifting payments away from teaching hospitals and into the Medicare trust fund, with only a small redistribution of payments from teaching to nonteaching hospitals. As in the first two options, folding direct GME costs into PPS payment rates also redistributes payments among teaching hospitals.

The redistributive effects in the second and third options are strongly related to the size of the teaching program; hospitals with more residents generally see larger declines in payments. For example, AMCs would see Medicare inpatient payments fall 3.9 percent under the second option, compared with a drop of 0.1 percent for teaching hospitals with 10 to 50 residents. Similarly, in the third option, AMCs see payments fall 5.5 percent; hospitals with 10 to 50 residents see payments drop 1.6 percent. The redistributive effects of the first option, however, do not appear to be related to the number of residents that hospitals train. For example, AMCs would see payments rise 1.1 percent while other large teaching hospitals—those with more than 100 residents—would see payments fall 0.8 percent.

The redistribution effect is also related to the level of a hospital's direct GME per resident payment amount. Under the first option, hospitals with low per resident payment amounts tend to see an increase in payments, whereas hospitals with high amounts tend to see a decrease. Payments increase 1.2 percent in aggregate for teaching hospitals in the lowest quintile (0 to 20th percentile) and 0.9 percent for hospitals in the second-lowest quintile (20th to 40th percentile). In contrast, hospitals in the highest per resident payment quintile (80th to 100th percentile) see Medicare inpatient payments fall 1.9 percent. If the teaching hospital subsidy were removed, most teaching hospitals would see a decline in payments, with the size of the reduction strongly related to the level of per resident payment.

The payment impacts differ substantially among providers within teaching hospital groups. (See Appendix B tables B-4, B-5, and B-6, which show the distributional impact of these options on hospital payments, Medicare inpatient revenue, and total hospital revenue.) Under the first option, 10 percent of AMCs would have Medicare inpatient payments fall more than 4 percent, but an equal number would have payments rise almost 8 percent. A similar pattern holds across other teaching hospital groups, although the relative sizes of the changes are generally smaller in hospitals with fewer residents.

When the teaching hospital subsidy is removed, Medicare inpatient payments fall for most teaching hospitals, and the size of the decline in payments is related to the number of residents that a hospital trains. The greatest impact, therefore, is

TABLE 3-12

Percentage change in Medicare inpatient payments under alternative payments to teaching hospitals

Hospital type	Number of hospitals	Percentage change		
		Option 1	Option 2	Option 3
All hospitals	4,762	0.0%	0.0%	−1.6%
Geographic location:				
Large urban	1,499	−0.1	−0.1	−2.2
Other urban	1,142	0.1	−0.2	−1.2
Rural	2,121	0.0	0.8	0.0
Rural referral	222	0.0	0.7	−0.2
Sole community	627	0.0	0.5	0.0
Other rural	1,208	0.0	1.1	0.2
Teaching status:				
Academic medical center	113	1.1	−3.9	−5.5
Other teaching >100 residents	127	−0.8	−3.2	−5.0
Other teaching 51-100 residents	120	−0.4	−1.6	−3.3
Other teaching 10-50 residents	367	−0.3	−0.1	−1.6
Other teaching <10 residents	382	0.0	1.6	0.0
Nonteaching	3,653	0.1	1.9	0.4
Direct GME per resident payment quintiles:				
0 to 20	211	1.2	0.8	−0.6
20 to 40	212	0.9	−0.3	−2.0
40 to 60	211	0.5	−1.0	−2.6
60 to 80	212	−0.5	−2.3	−4.0
80 to 100	211	−1.9	−3.7	−5.4
Nonteaching	3,653	0.1	1.9	0.4

Note: GME (graduate medical education). Payment changes made relative to current policy which reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims data.

on AMCs and other teaching hospitals with more than 100 residents. For example, one-quarter of AMCs would have Medicare inpatient payments fall 6.2 percent or more under the second option and 7.7 percent or more under the third option. This compares with at least 1.9 percent and 3.6 percent declines in payments under the second and third options, respectively, for one-quarter of hospitals with 10 to 50 residents.

The payment changes can also have a fairly substantial impact on total hospital revenues. Again, the size of the impact is related to the number of residents a hospital trains and whether the teaching hospital subsidy is taken away. Under the first option the impact is relatively small; for example, only 10 percent of AMCs and other teaching hospitals with more than 100 residents would have total revenues fall more than 1 percent. Many would have modest increases in total revenues.

The impact on total revenues is much greater when the subsidy is removed from teaching hospital payments, however. Under the third option, more than one-half of AMCs and teaching hospitals with 100 or more residents see total revenues fall more than 1 percent, and 10 percent see total revenues drop more than 2 percent. In general, total revenues fall for most teaching hospitals under the second and third options, and increase by a small amount for most nonteaching hospitals.

Medicare inpatient margins

Medicare inpatient margins can be a useful tool for gauging payment adequacy and equity. The PPS inpatient margin that MedPAC usually calculates compares PPS operating and capital payments with Medicare-allowable inpatient operating and capital costs. It does not include direct GME costs or payments or reflect future payment policy changes. In this analysis, we created a hybrid current policy margin for Medicare inpatient services that includes inpatient GME costs and payments for residents and selected BBA/BBRA payment policy changes that have taken place or will take place.[28] This hybrid margin provides a guide for judging potential impacts on hospital financial performance.

Historically, the Medicare inpatient margins for AMCs and other large teaching hospitals have been much higher than those for other hospitals. This continues to be true even after direct GME costs and payments are added to the margin calculation, the IME adjustment is reduced to 5.5 percent, and DSH payments are cut by 3 percent. Under current policy, AMCs' inpatient margins will still be much higher than those for nonteaching hospitals: 20.8 percent, compared with 10.6 percent (Table 3-13). The Medicare inpatient margin under current policy is strongly related to the number of residents a hospital trains. It is also related to the size of the per resident payment amount, with teaching hospitals

28 The current policy Medicare inpatient margin is based on FY 1997 data and adjusted to reflect direct GME costs and payments and selected long-run BBA/BBRA policy changes. These include the 5.5 percent IME adjustment and 4 percent reduction in DSH payments that will be in effect in FY 2002. The margin also reflects the impacts on payments of most policy changes in effect in FY 2000. It does not, however, reflect certain other policy changes, such as the expanded transfer policy and expansion of the critical access hospital program.

TABLE 3-13

Medicare inpatient margins under current policy and alternative payments to teaching hospitals

Hospital type	Number of hospitals	Simulated Medicare inpatient margin			
		Current policy	Option 1	Option 2	Option 3
All hospitals	4,173	13.3%	13.3%	13.3%	12.0%
Geographic location:					
Large urban	1,272	15.8	15.8	15.8	13.9
Other urban	988	10.8	11.0	10.7	9.8
Rural	1,913	10.1	10.1	10.8	10.1
Rural referral	198	10.9	10.9	11.5	10.7
Sole community	568	10.6	10.6	11.0	10.6
Other rural	1,093	9.2	9.3	10.2	9.4
Teaching status:					
Academic medical center	98	20.8	21.6	17.6	16.2
Other teaching >100 residents	105	18.9	18.4	16.3	14.7
Other teaching 51-100 residents	101	14.3	14.0	13.0	11.5
Other teaching 10-50 residents	317	12.2	12.0	12.2	10.9
Other teaching <10 residents	331	10.5	10.6	11.9	10.6
Nonteaching	3,221	10.6	10.7	12.3	11.0
Direct GME per resident payment quintiles:					
0 to 20	178	12.3	13.2	13.0	11.8
20 to 40	172	14.3	15.1	14.1	12.7
40 to 60	185	13.0	13.4	12.1	10.7
60 to 80	189	16.7	16.4	14.9	13.4
80 to 100	183	19.1	17.6	16.1	14.6
Nonteaching	3,221	10.6	10.7	12.3	11.0

Note: GME (graduate medical education). Estimated inpatient margins reflect both payments and costs under PPS and for inpatient direct GME programs. Current policy: Hospital payment under long-run BBA teaching and DSH policies. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

in the lowest quintile having a margin (12.3 percent) lower than that of teaching hospitals in the top quintile (19.1 percent).

Folding direct GME costs into PPS payment rates decreases the disparity in inpatient margins between hospitals with high and low per resident payment rates. Removing the subsidy reduces, but does not eliminate, the disparity in Medicare inpatient margins between teaching and nonteaching hospitals. Hospitals with the most residents continue to have inpatient margins substantially greater than nonteaching and smaller teaching hospitals.

Folding inpatient direct GME costs into PPS payment rates while holding aggregate Medicare inpatient payments and special payments to teaching hospitals constant does not change aggregate Medicare inpatient margins for nonteaching hospitals. In contrast, eliminating the teaching hospital subsidy and returning these revenues to base PPS payments results in a 1.7 percentage point jump in inpatient margins for nonteaching hospitals. If the subsidy is taken as savings instead—as in option three—nonteaching hospitals would see a 0.4 percentage point increase in their Medicare inpatient margin, because this option increases base payment rates for all hospitals slightly.

Even after the teaching hospital subsidy is removed, AMCs and other large teaching hospitals continue to have higher Medicare inpatient margins, due in large part to DSH payments. DSH payments cover Medicare's share of hospitals' costs of providing uncompensated care and are not a Medicare cost-related payment adjustment. If Medicare DSH payments are excluded from the calculation of the Medicare inpatient margin, the resulting margins under the third option would be very similar for teaching and nonteaching hospitals; for example, the aggregate margin for both AMCs and nonteaching hospitals would be about 7 percent.

None of these policy options reduce the wide disparities in inpatient margins among facilities in teaching hospital size groups. Still, teaching hospitals' margins tend to be higher than those of nonteaching hospitals across the entire distribution. The inpatient margins for teaching hospitals for all policy options are mostly positive and generally well above those for nonteaching hospitals. (See Table B-7 in Appendix B, which shows the distribution of Medicare inpatient margins under the different policy options.)

Total hospital margin

Total margins provide an indication of overall hospital financial condition. For this analysis, we created a hybrid total margin that reflects the impact of Medicare policy changes in the BBA and BBRA on total hospital revenue, based on 1997 hospital cost report data. Because total revenues are reduced to reflect Medicare policy changes, the total margin we show under current policy is lower than what we show elsewhere for 1997.[29] This total margin, therefore, should be used to compare the relative impacts of different options on hospitals' overall financial status, rather than to gauge hospitals' current financial status.

Total margins tend to be inversely related to the number of residents a hospital trains (Table 3-14). AMCs, for example, historically have lower total margins than other facilities. Under current long-run BBA policy, total margins for AMCs are 3.6 percent, compared with 6.0 percent for nonteaching hospitals.

By itself, folding direct GME costs into PPS payment rates would not substantially

TABLE 3-14

Total hospital margins under current policy and alternative payments to teaching hospitals

Hospital type	Number of hospitals	Simulated total hospital margin			
		Current policy	Option 1	Option 2	Option 3
All hospitals	4,173	5.4%	5.4%	5.4%	5.0%
Geographic location:					
Large urban	1,272	4.3	4.3	4.3	3.8
Other urban	988	6.5	6.5	6.5	6.2
Rural	1,913	6.9	6.9	7.0	6.9
Rural referral	198	9.7	9.7	9.9	9.7
Sole community	568	5.9	5.9	6.0	5.9
Other rural	1,093	5.1	5.1	5.4	5.2
Teaching status:					
Academic medical center	98	3.6	3.8	2.8	2.5
Other teaching >100 residents	105	4.9	4.7	4.2	3.8
Other teaching 51-100 residents	101	5.6	5.5	5.2	4.9
Other teaching 10-50 residents	317	5.9	5.9	5.9	5.6
Other teaching <10 residents	331	4.9	4.9	5.3	4.9
Nonteaching	3,221	6.0	6.0	6.4	6.1
Direct GME per resident payment quintiles:					
0 to 20	178	5.3	5.5	5.5	5.2
20 to 40	172	5.3	5.5	5.3	4.9
40 to 60	185	4.5	4.6	4.3	3.9
60 to 80	189	4.6	4.5	4.1	3.7
80 to 100	183	5.2	4.8	4.4	4.0
Nonteaching	3,221	6.0	6.0	6.4	6.1

Note: GME (graduate medical education). Estimated total hospital margins adjusted to reflect long-run BBA payment policy changes for Medicare DSH and IME payments. Current policy: Total inpatient margin under long-run BBA teaching and DSH policies. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

29 The hybrid total margins are roughly a full percentage point lower than the actual total margin in 1997.

affect aggregate total margins. This is not unexpected, given the small impact on Medicare inpatient margins. In contrast, removing the teaching hospital subsidy would substantially reduce total margins for AMCs and other teaching hospitals with more than 100 residents. AMCs' total margins would drop from 3.6 percent under current policy to 2.8 percent in the second option and 2.5 percent in the third option. In contrast, total margins for nonteaching hospitals would remain unchanged at 6.0 percent under the first option and rise to 6.4 percent under the second option and 6.1 percent in the third option. The disparity in total financial performance between teaching and nonteaching hospitals, therefore, would increase if the teaching subsidy were removed. The distribution of total margins shows a similar picture. (See Table B-8 in Appendix B, which shows the distribution of total margins under the different policy options.)

Recommendations on teaching hospital payments

After reviewing our results, MedPAC concludes that the Congress should adopt the general concepts outlined in the August report. Specifically, we recommend adopting option one, phased in over a reasonable period of time.

RECOMMENDATION 3E

The Congress should fold inpatient direct graduate medical education costs into prospective payment system payment rates through a revised teaching hospital adjustment. The new adjustment should be set such that the subsidy provided to teaching hospitals continues as under current long-run policy. This recommendation also should be implemented with a reasonable transition to limit the impact on hospitals of substantial changes in Medicare payments and to ensure that beneficiaries have continued access to the services that teaching hospitals provide.

Given the current financial environment faced by teaching hospitals, we concluded that reducing the subsidy beyond what the BBA requires would not be desirable now. Total margins for AMCs and other large teaching hospitals are much lower than they are for other hospitals, and a large drop in Medicare revenues from eliminating the teaching hospital subsidy at this time could place undue financial strain on these facilities.

In addition, because this recommendation would redistribute Medicare's special payments among teaching hospitals, many hospitals could see substantial changes in Medicare revenue. We believe a transition mechanism would help dampen the impact of such changes and ensure that beneficiaries have continued access to the services of teaching hospitals.

Although our analysis was based on the inpatient resident count rather than a full hospital resident count, we prefer using a full hospital resident count because we are concerned that hospitals would have an incentive to shift residents from outpatient settings to inpatient settings to increase payments if an inpatient resident count were used.[30] In addition, we assume that the resident caps included under BBA

TABLE 3-15

Payment accuracy under selected policies

Hospital type	Number of hospitals	Standard deviation relative to current policy*		
		Option B	Option 1	Option B1
All hospitals	4,720	86	104	89
Geographic location:				
Large urban	1,481	86	105	90
Other urban	1,133	85	102	87
Rural	2,106	87	100	87
Rural referral	222	86	100	86
Sole community	619	88	100	88
Other rural	1,203	89	100	88
Teaching status:				
Academic medical center	113	83	112	95
Other teaching >100 residents	127	85	108	93
Other teaching 51-100 residents	120	86	105	91
Other teaching 10-50 residents	366	86	102	87
Other teaching <10 residents	380	86	100	85
Nonteaching	3,614	87	99	86

Note: * Current policy =100. Gains refers to the difference between payments and costs. Costs include inpatient direct GME costs for residents. Current policy reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option B: Payments based on APR-DRGs, hospital relative value weights and DRG-specific outlier offsets. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option B1: Combines option B and option 1.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

30 We did not use an all-resident count in our impact analysis because it would have greatly increased the number of options we were examining and we did not have the time to examine each option. We did examine the estimated relationship between teaching intensity and costs per case using both inpatient and full resident counts (through a resident-to-bed measure). The empirical level of the adjustment based on an inpatient resident count would be 6.6 percent for every 10 percent increment in resident intensity. The empirical level of the adjustment using the full hospital resident count is 5.2 percent. (Both of these estimates are based on folding only inpatient direct GME costs into the Medicare inpatient cost base.) Although the full resident count produces a lower adjustment level, the distribution of total payments would be similar because the smaller adjustment would be applied to a higher resident-to-bed ratio.

payment policies would still apply, and that residents would not be allowed to bill for patient care services.

Under our recommendation, direct GME payments would continue to be made for residents providing care in outpatient and other settings. However, the use of the full resident count for inpatient payments raises potential problems for calculating outpatient direct GME payments. Unless restrictions were placed on outpatient direct GME payments or resident counts, hospitals would have strong incentives to shift residents to outpatient settings and receive additional payment for the same residents in both inpatient and outpatient settings.

One approach to address these undesirable financial incentives would be to calculate the amount of direct GME payments related to outpatient training and establish an aggregate, hospital-specific, outpatient direct GME payment amount. This amount would be divided by the hospital's full resident count to establish an outpatient per resident payment amount. The outpatient direct GME payment in future years would then be determined by multiplying this new outpatient per resident payment amount, adjusted for inflation, by the number of residents a hospital trains. These payment amounts would be subject to the current caps on hospital resident counts. This approach essentially eliminates the financial incentive hospitals might have to shift residents among settings.

Combined effects of recommended case-mix and teaching hospital payment policies

The combined impacts on hospitals of adopting both the case-mix refinement and the teaching hospital payment recommendations are also important to examine. Overall payment accuracy increases when both sets of policies are combined (Table 3-15). The standard deviation of case-level gains relative to current policy drops by 11 percent. Although the drop in the standard deviation is not as large as under the case-mix refinements alone, it is substantial. The standard deviation of case-level gains also falls for teaching hospitals, even though folding direct GME costs into PPS payment rates increased the variability in gains and losses among this group of providers.

The case-mix refinement recommendations we present here tend to have the greatest impacts on rural hospitals. The recommendation for folding direct GME costs into PPS payment rates has the greatest impact on teaching hospitals. The interaction between these two policies is relatively weak. Consequently, combining the policies does not fundamentally alter the results presented above for the individual policies. The combined impacts tend to have either small offsetting or small compounding effects, depending on hospitals' circumstances (Table 3-16). For example, the case-mix refinement policies we recommend would increase payments to teaching hospitals with 100 or more residents by 0.5 percent, but the teaching hospital policy would reduce payments by 0.8 percent. The combined impact of these two policies is somewhere in between (a 0.2 percent drop in payments). The combined impact of both sets of policies results in a slightly larger reduction in payments for rural hospitals, even though the teaching recommendation had almost no impact on rural hospital payments. The net effect of these polices, however, depends largely on an individual hospital's particular situation. ■

TABLE 3-16

Percent change in Medicare inpatient payments under selected policies

Hospital type	Number of hospitals	Percent change in Medicare inpatient payments		
		Option B	Option 1	Option B1
All hospitals	4,762	0.0%	0.0%	0.0%
Geographic location:				
Large urban	1,499	0.5	−0.1	0.4
Other urban	1,142	−0.1	0.1	0.0
Rural	2,121	−1.6	0.0	−1.7
Rural referral	222	−0.1	0.0	−0.9
Sole community	627	−2.9	0.0	−3.1
Other rural	1,208	−1.6	0.0	−1.8
Teaching status:				
Academic medical center	113	−0.3	1.1	1.1
Other teaching >100 residents	127	0.5	−0.8	−0.2
Other teaching 51-100 residents	120	0.3	−0.4	−0.1
Other teaching 10-50 residents	367	0.5	−0.3	0.2
Other teaching <10 residents	382	0.0	0.0	−0.1
Nonteaching	3,653	−0.2	0.1	−0.3

Note: Payment changes made relative to current policy which reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option B: Payments based on APR-DRGs, hospital relative value weights and DRG-specific outlier offsets. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option B1: Combines payment policies from option B and option 1.

Source: MedPAC analysis of 1997 Medicare claims data.

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CHAPTER 4

Improving quality assurance for institutional providers

RECOMMENDATIONS

4A The Secretary should require providers participating in Medicare to report a minimum, core set of data needed to generate standardized, evidence-based measures of quality and other dimensions of facility performance.

4B To strengthen the evidence basis of Medicare's conditions of participation, the Secretary should support additional research on the relationship between health care outcomes and both structural characteristics and processes of care.

4C The Congress should mandate the Secretary to review and update the conditions of participation on a specific periodic basis and should require the use of negotiated rulemaking to do so.

4D The Congress should require that the Secretary annually survey at least one-third of each facility type to certify compliance with the conditions of participation. The Secretary should also monitor facilities' compliance with conditions of participation on an ongoing basis.

4E The Secretary should request, and the Congress should appropriate, adequate levels of funding for survey and certification activities to enable HCFA and state survey agencies to increase the frequency of inspections and take other steps to strengthen the quality oversight process.

4F The Congress should assure that the federal appropriations process does not impede states' abilities to fund Medicare and Medicaid survey and certification activities.

4G State survey agencies should use health care quality measures and other measures of facility performance to:

- determine which facilities to survey more and less frequently,
- target specific issues or quality concerns for focused attention in the survey process, and
- monitor facility performance between inspections.

4H The Congress should authorize the Secretary to develop intermediate sanctions specific to each institutional provider type that reflect the scope and severity of the deficiency and to consider a provider's past performance in levying sanctions.

4I The Secretary should take additional steps to ensure that private accrediting organizations with Medicare deeming authority are, in fact, ensuring that facilities meet Medicare certification standards.

4J The Secretary should make more information about the results of the survey and certification process available to beneficiaries.

CHAPTER 4

Improving quality assurance for institutional providers

In this chapter

- Roles in Medicare quality assurance
- The changing context for quality assurance
- Addressing problems with Medicare's quality assurance system

Medicare's quality assurance system—essentially a regulatory process through which providers' capacities to safely furnish quality care are assessed against established standards—needs to be strengthened if it is to meet its intended objectives. MedPAC believes the system must be preserved, as it benefits not only program beneficiaries, but also all patients who use Medicare-certified providers. However, the Congress and the Secretary must address critical problems with the system by updating standards more frequently, funding the system adequately, strengthening sanctions, and making other changes. In addition, the Secretary must ensure that new tools for measuring the quality of care providers furnish are used appropriately and that quality improvement activities complement, rather than erode, Medicare's quality assurance system.

Quality assurance (QA) aims to provide a means of ensuring that health care providers have the capacity to furnish safe care of good quality. Medicare's QA system must serve this vital role in patient protection, but the present system is failing in important ways to meet the needs of most stakeholders.[1] To continue to assure that Medicare beneficiaries obtain quality health care, policymakers must take steps to address those failings and to ensure that Medicare's QA system evolves with changes in the program and the larger health system.

Medicare's quality assurance system for institutional providers is essentially a regulatory process that involves establishing conditions of participation (COPs)—known as conditions of coverage for some types of providers—through a rulemaking process and assessing provider compliance with those conditions.[2] Conditions of participation consist primarily of structural requirements believed to ensure the capacity of providers to safely furnish quality health care. Compliance is assessed either through a survey and certification process conducted by state agencies under contract to the Health Care Financing Administration (HCFA), or through a private accreditation process that HCFA has determined to be equivalent to its own.[3]

As it stands today, Medicare's QA system is satisfying none of its stakeholders. Health care providers complain that the system is expensive, burdensome, and seemingly focused on aspects of the organization and delivery of health care that are not important determinants of quality. Consumer advocates decry the lack of information publicly available on outcomes of the QA process and the lack of consumer representation. Policymakers are dubious that the system achieves its intended effects.

However, the need for a strong system of quality assurance is evidenced by recent examples of substandard quality reported in the news media, as well as by reports from federal oversight agencies. For example, a 1999 report by the U.S. General Accounting Office (GAO) revealed that more than one-fourth of the nation's nursing homes had caused actual harm to residents or placed them at risk of death or serious injury at some point during the previous year (GAO 1999). The President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry, the Institute of Medicine's National Roundtable on Health Care Quality, and other experts have concluded that quality problems such as underuse, overuse, and misuse of services can be measured and that these problems have been documented as serious and extensive (Quality Commission 1998, Chassin et al. 1998).

This chapter presents the findings from an examination by the Medicare Payment Advisory Commission (MedPAC) of Medicare's system for establishing and enforcing minimum health care quality and safety standards for institutional providers.[4] It begins by describing the evolving roles in quality assurance played by key participants and assesses whether and how those roles might be strengthened. It next considers two key changes in the context for quality assurance—the rise of the quality improvement movement and the development of health care quality indicators that can be used to evaluate provider performance—and assesses the implications of these developments for Medicare. The chapter's final section focuses on specific problems with Medicare's QA system and considers ways in which it might be improved.

Roles in Medicare quality assurance

Policymakers addressing problems with Medicare's QA system must consider the roles played by key participants—public sector entities, private accrediting bodies, and beneficiaries. Policymakers may disagree on which participants are best suited for which roles. Some might argue that the Medicare and Medicaid programs, which serve primarily as health care purchasers, do not provide the most appropriate vehicles for identifying quality and safety standards and ensuring that those standards are met. Alternative approaches might draw upon the resources of other public- or private-sector entities for setting standards or for determining or enforcing compliance. At the same time, the role of beneficiaries in Medicare QA could be strengthened to help ensure that the system better meets their needs.

Current roles

The public sector currently takes the lead in assuring quality in the Medicare system. HCFA, as the administrator of the Medicare and Medicaid programs, is responsible for establishing quality standards for numerous types of providers and suppliers that furnish care to beneficiaries and for enforcing compliance with those standards. In accordance with statute, the agency has established such standards for hospitals; long-term care (LTC) facilities[5]; home health agencies; comprehensive outpatient rehabilitation facilities; hospices;

1 Medicare and Medicaid use the same conditions of participation and certification process. For convenience, this chapter refers to Medicare's quality assurance program.

2 Program regulations distinguish health care providers and health care suppliers. The former are generally subject to conditions of participation (sometimes called requirements) and the latter to conditions of coverage. In this chapter, the term "provider" is used to refer to both providers (such as hospitals) and suppliers (such as renal dialysis facilities).

3 Because the hospital accreditation program of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is specified in law as satisfying Medicare and Medicaid participation standards, JCAHO's status is not dependent upon HCFA's assessment of its accreditation standards and compliance assessment methods.

4 HCFA has a comparable program in place for health plans participating in Medicare+Choice.

5 The term "long-term care facility" refers to skilled nursing facilities (subject to Medicare program certification) as well as to nursing facilities and intermediate care facilities for persons with mental retardation (subject to Medicaid program certification).

rehabilitation agencies, clinics, and public health agencies operating as providers of outpatient physical therapy or speech pathology services; independent laboratories; renal dialysis facilities; rural health clinics; portable X-ray services suppliers; ambulatory surgical centers; critical access hospitals; organ procurement organizations; and religious nonmedical health care institutions. Other agencies within the federal Department of Health and Human Services also play roles in promoting the quality of the nation's health services. For example, the Food and Drug Administration (FDA) establishes and enforces compliance with quality standards for mammography facilities and, with HCFA, administers oversight of clinical laboratories.

States also play a role in Medicare's QA process. Under contract to HCFA, state survey agencies conduct Medicare and Medicaid certification surveys to assess compliance with program standards. Because these agencies can conduct Medicare and Medicaid certification inspections in conjunction with those required by state licensure requirements, this contractual relationship serves to minimize duplicative oversight.

Private accreditation entities also contribute to Medicare's QA system by conducting compliance assessments for certain types of providers in lieu of the state survey agencies. Providers accredited by federally approved bodies are considered to have met Medicare participation requirements.[6] Under the initial Medicare legislation, the Congress granted the Joint Commission on Accreditation of Healthcare Organizations (JCAHO, then called the Joint Commission on Accreditation of Hospitals or JCAH) "deeming authority" for Medicare certification, meaning that hospitals accredited by JCAHO were certified to participate in Medicare.[7] In 1984, the Congress expanded HCFA's authority to rely on private accreditation groups to review compliance with Medicare quality standards for providers other than hospitals as part of their accreditation activities. HCFA is now required to grant this "deeming" authority to any national organization that accredits certain types of Medicare providers, if that entity can show that its accreditation requirements meet or exceed those contained in title XVIII.[8] The agency is allowed, but not required, to grant deemed status to accrediting entities for LTC facilities. It is not authorized to grant deemed status to organizations that accredit renal dialysis facilities or durable medical equipment suppliers.

The role of the state survey agencies and designated private accreditation bodies is comparable, but not identical. State agencies have the authority to require corrections of identified problems and can recommend sanctions for providers that fail to correct problems. Because private accreditation is voluntary, accrediting bodies cannot sanction providers. They can recommend corrections and revoke accreditation or otherwise change accreditation status if providers fail to implement recommended changes. A provider that loses its accredited status is also referred to HCFA for a survey to evaluate compliance with program requirements.

Beneficiaries are also involved in the QA process, although at present they are more affected parties than active participants. Because their interests in QA are diffuse, it is unlikely that their views are adequately represented in the development of Medicare's QA standards. In addition, they have a limited role in compliance determination and the oversight process. State survey agencies consider beneficiary complaints to some extent when making program recertification decisions. Only long-term care facilities and home health agencies have beneficiary interviews built into the survey process. Finally, little information about the QA process and its results is currently available to beneficiaries. Again, long-term care serves as an exception, in that HCFA makes available on its Web site some comparative information about deficiencies cited in such facilities (HCFA 2000).

Considerations in changing roles

One of the issues MedPAC addressed was whether changes in current roles would benefit the program. The Commission specifically considered which participants ought to be responsible for setting, and for assessing and enforcing compliance with, QA standards, and whether and how the role of the beneficiary could be strengthened.

Public-sector responsibility to set and enforce minimal standards

MedPAC believes that developing and enforcing compliance with minimum quality standards is a responsibility that should continue to be borne by a public-sector entity. The views of multiple stakeholders need to be taken into account in developing such standards and a strong patient or consumer focus is particularly needed. Public-sector bodies can ensure opportunities for participating in standard-setting efforts and can provide other public safeguards. Moreover, government traditionally sets regulatory quality and safety standards in many industries, including transportation, drugs, and food. Compared with the private sector, the public sector offers more effective channels for enforcing compliance with minimum standards.

6 Similarly, many states allow hospitals or other providers to demonstrate compliance with licensure requirements by attaining accreditation from an approved private oversight body.

7 Some say that JCAH was written into the original Medicare legislation in an effort to encourage the participation of hospitals and physicians, who were comfortable with the JCAH accreditation program. Reliance on private accreditation was also a way to keep the program from being seen as inappropriately intruding into the practice of medicine or hospital management. Finally, the Congress indicated in the legislative history to the original Medicare legislation that it did not want to supplant the hospital industry's quality assurance activities, but to support private efforts to improve quality of care in hospitals (Kinney 1994).

8 This change was effectuated under sections 2345 and 2346 of the Deficit Reduction Act of 1984 (P.L. 98-369) and section 6019 of the Omnibus Budget Reconciliation Act of 1989 (P.L.101-239), which amended section 1865(a) of the Social Security Act.

HCFA is not the only potential public-sector source for setting and enforcing national patient health and safety standards, however. Other possible public-sector approaches would entail developing new venues for oversight—through one or more Public Health Service agencies, such as the FDA, for example. This approach would reduce the responsibilities borne by HCFA, potentially freeing resources to meet direct program administration functions. This approach also would better reflect the nature of any benefits from QA, which accrue to all patients and are not targeted exclusively to Medicare and Medicaid beneficiaries. However, this approach could entail considerable expense and might not result in notable differences from the existing system in terms of effectiveness or other outcomes.

Heavier reliance on states to oversee health care quality is another option MedPAC considered. This approach would strengthen states' traditional role of protecting public health and safety. Some states have undertaken innovative approaches to set and enforce health quality standards that exceed federal requirements (OIG 2000b). For example, New York uses hospital mortality data to assess hospital performance, and Utah Health Department officials participate in the on-site surveys of hospitals conducted by JCAHO. If policymakers decided to rely more on states for undertaking QA responsibilities, however, state licensing would arguably need to be strengthened (at the very least, in funding).

Several factors detract from the appeal of strengthening state oversight responsibilities. At present, licensure requirements vary by state in terms of which providers are required to be licensed, how stringent standards are, and how compliance is determined and enforced. Federal standards, as currently provided by the Medicare certification program, ensure that nearly all health care providers (those that participate in Medicare or Medicaid) meet a common set of core requirements. Further, some types of providers—renal dialysis facilities, for example—do not widely use private-sector accreditation services at present and are not licensed by all states.[9] For some of these providers, Medicare's certification process serves as the only existing form of external oversight, thereby offering potential benefit not only to program beneficiaries, but also to all patients using Medicare-certified providers.

MedPAC believes that Medicare and Medicaid, as large national health insurance programs, together provide an appropriate vehicle for accomplishing the public-sector responsibility of establishing and enforcing minimal standards, absent another federal body charged with doing so. The programs should continue to use their authority as purchasers to ensure that the health care they buy meets appropriate minimum safety and quality standards. In implementing and enforcing quality standards, regulators must coordinate their standards and oversight procedures to ensure that federal and state QA programs do not conflict.[10]

Private-sector role in assessing compliance and promoting excellence

The Commission also continues to see a strong role for accrediting organizations in QA. MedPAC believes it is desirable and appropriate for private entities to establish voluntary quality standards that surpass Medicare's in stringency. Such accreditation programs offer providers a means to distinguish themselves among their competitors. MedPAC also supports continued reliance on accrediting organizations to assess compliance with Medicare's quality standards. This reliance greatly reduces the burdens on state agencies and health care providers. However, it is important that accreditation continue to provide a QA function by identifying providers whose performance is substandard so that action may be taken to protect beneficiaries while problems are remedied.

MedPAC considered whether the role of the private sector in setting minimal standards should be strengthened. This could be accomplished by requiring participating providers to attain accreditation. Moving more QA responsibilities to these groups could address concerns that government entities are not "light enough on their feet" to accommodate the changing needs of the rapidly evolving health care industry and that government rulemaking processes are likely to yield standards that are beneath the state of the art or less stringent than those demanded by other health care purchasers (health plans and employers). However, strengthening the role of the private sector in this way could decrease public input and oversight, which could result in ineffective standard-setting or policing of compliance. In addition, national accrediting organizations may have more difficulty becoming familiar with the particular characteristics of local health care delivery than state-based survey agencies have.

Strengthening the role of the beneficiary

MedPAC also considered whether Medicare beneficiaries could and should play a larger role in helping to determine whether providers are meeting minimal standards. This could be accomplished by surveying beneficiaries about the delivery of health care services by specific providers.[11] Medicare's quality assurance process does not formally collect

9 At present, renal dialysis facilities have little incentive to seek private accreditation because HCFA lacks the authority to deem accredited centers as compliant with Medicare standards. Because Medicare is the predominant payer for renal dialysis services, health plans or other purchasers can exercise little market power to favor accredited centers.

10 The National Quality Forum, a private-sector body formed on the basis of recommendations by the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry, may provide a vehicle for coordinating standards and quality measures across purchasers, regulators, and other interested parties. Both HCFA and the Agency for Healthcare Research and Quality play roles in the National Quality Forum.

11 Some have also suggested increasing the formal use of information derived from beneficiaries' complaints in the survey process. This might be accomplished by undertaking analysis of complaints data to identify patterns in the nature and extent of problems reported by beneficiaries.

beneficiary evaluations in determining providers' compliance with the COPs, primarily because of the program's reliance on structural measures, which have few components and attributes that might be evaluated by beneficiaries.[12] As HCFA modifies the COPs to include process of care measures, the merits of collecting and using beneficiaries' evaluations in the oversight process need to be carefully considered. To this end, HCFA and the Agency for Healthcare Research and Quality are examining the feasibility of designing a survey instrument—similar to that used in the Consumer Assessment of Health Plans Survey—for residents of skilled nursing facilities. Such a survey would provide state survey inspectors with information about the delivery of health care services.

The Commission encourages the Secretary to continue studying the feasibility of using beneficiaries' formal evaluations of compliance determination in the oversight process. HCFA must address the reliability and validity of beneficiary evaluations of the technical components and attributes of care. Researchers are still evaluating the extent to which patients can evaluate the technical aspects of health care delivery. The agency will also need to address other issues, including biases that might affect beneficiary evaluations (such as how different levels of cognitive impairment affect responses), the use of proxies, the design of survey instruments, and sampling procedures.

The changing context for quality assurance

Two important changes have occurred in the Medicare program and the larger health system context that potentially affect Medicare's QA system.

TABLE 4-1

Characteristics of quality assurance and quality improvement models of external oversight, as applied in health care

Characteristic	Quality assurance	Quality improvement
Objective	To identify problems	To improve average performance
Focus	Individual accountability	System redesign
Approach	Regulatory	Collegial, cooperative
Scope	Comprehensive	Specific quality issues
Means	Requirements	Improvement goals
	Compliance assessments	Outcome and process measurement
	Corrective action plans	Education and outreach
	Sanctions	Technical assistance

One change is the rise of quality improvement (QI) as an approach for addressing quality of care. This approach—also known as continuous quality improvement or total quality management—has been adopted for use in many industries and has recently begun to influence health care industry practices (Shortell et al. 1998). Medicare policymakers face questions about the appropriate role for QI in the program and how best to address the tension between the QA and QI approaches.

A second critical development is the increasing availability of facility-specific measures of health care quality and other aspects of performance. Medicare's ongoing implementation of facility performance measurement systems provides opportunities for making important changes in the COPs and the means for determining compliance with them.

Rise of quality improvement

Quality assurance and quality improvement represent two approaches for influencing the quality of care (Table 4-1). Quality improvement reflects the notion that improving the average quality of care furnished by providers is an important goal that can be attained only in a blame-free environment in which providers are encouraged and assisted to assess their performances, make changes, reassess quality, and strive for continuous improvements. In this model, the regulatory mindset of rooting out poor performers and holding them accountable through a punitive process is considered ineffective and counterproductive. As the QI approach increases in prevalence and influence, Medicare policymakers must determine the appropriate role for QI in Medicare and the relationship between QA and QI.

Appropriate emphasis on quality improvement

One important policy question is the extent to which Medicare should emphasize QA (setting minimum standards and enforcing compliance) as opposed to QI (facilitating and requiring improvement). MedPAC believes that a QA system is essential and must be strengthened, but that the appropriate level of emphasis on QA versus QI could vary.

12 Some information about patient perceptions is currently obtained during inspections of long-term care facilities and home health agencies. This information is gathered informally, however, without the use of survey forms or formal procedures. For example, as a part of the inspection process for nursing facilities, surveyors are required to tour a facility for about three hours and to converse with residents, family members/significant others, and facility staff to develop an overall picture of the types and patterns of care delivered within the facility (42 CFR §488.110). Surveyors are required to meet with resident council representatives and randomly selected residents to gather information from the consumer perspective about the delivery of services in the facility, including strengths and shortcomings. In the standard survey of home health agencies, Medicare requires surveyors to visit the homes of a case-mix stratified sample of patients who received services from the agency, but does not require surveyors to conduct home visits of patients served by agencies' branch offices (GAO 1997).

Medicare's survey and certification process continues to have a strong QA orientation, both in the nature of the requirements and in the oversight process undertaken by state survey agencies. Some stakeholders have called for HCFA to adopt a more collegial, improvement-oriented approach in its regulatory oversight of providers, as certain private accrediting bodies have done (AHCA 1998). However, the Office of Inspector General (OIG) of the Department of Health and Human Services has criticized this approach as one that potentially undermines the existing system of patient protections afforded by certification practices (OIG 1999a).

Although the survey and certification process remains firmly rooted in the QA approach, Medicare has begun to employ the QI approach in other facets of program operations. Most notably, it has changed the function of the peer review organizations (PROs), which now refer to themselves as quality improvement organizations, although they are still known as PROs in statute and regulation.[13] The PROs originally focused on reviewing individual cases, based on a sample of hospital discharges, to uncover instances of substandard care.[14] However, the functions of these organizations have changed with each successive three-year contract and they now do very little case review. Instead, they focus on developing and conducting voluntary "quality improvement projects," in which quality is measured, interventions (such as provider education or beneficiary outreach) are conducted, and quality is reassessed. The QI projects focus primarily on inpatient hospital care, although PROs are required under their current contract to conduct one QI project on care provided in another setting. Although physicians and other providers are not required to participate in these projects and are not held accountable for achieving improvements, Medicare has begun to hold the PROs contractually responsible for improving average statewide performance on specific quality measures.

Some might question whether the expansion of QI programs in Medicare obviates the need for QA, but MedPAC believes that the two approaches can complement one another and that QA continues to be essential. Quality improvement activities usually focus on a particular quality concern, such as care for patients admitted with acute myocardial infarction, as opposed to the comprehensive focus of QA. In addition, at least when employed as an external oversight mechanism, QI generally relies on pooled data to evaluate average performance, whereas QA focuses on an individual provider's performance. Without some effort to review providers' capacities and achievements comprehensively, there is a danger that QI activities could proceed successfully while certain providers failed to take basic safety precautions, thus putting patients at risk.

Despite a continued need for QA, the same balance of QA and QI may not be appropriate for all providers. MedPAC believes Medicare policy should emphasize QA for certain institutional providers, such as:

- those with poor track records in ensuring quality of care,
- those that furnish care that is particularly subject to safety risks,
- those that serve disproportionately vulnerable populations, and
- those that lack the capacity to undertake sophisticated internal quality assessment, assurance, and improvement activities.

For example, focus on QA in the LTC arena could be justified by the vulnerability of the patients these facilities serve. These patients are disproportionately cognitively impaired, lacking in social or familial supports, and otherwise less likely to recognize or report substandard care. Quality assurance could be emphasized by strengthening standards, increasing efforts to evaluate compliance, and taking stronger actions against poor performers.

For other providers, increased emphasis on setting and addressing QI goals might be appropriate. Emphasis on QA for these providers might be decreased by reducing the frequency or scope of site inspections and relying on performance data submission to monitor compliance, while strengthening requirements relating to internal QI programs or participation in QI activities sponsored by outside organizations.

Medicare's standards for participating health plans, newly revised with the creation of the Medicare+Choice program, provide an example of how QA and QI requirements might be combined. Medicare continues to set, monitor, and enforce minimum structural requirements for plans, as it has traditionally. However, HCFA now also requires coordinated care plans participating in the Medicare+Choice program to measure and report on processes and outcomes of care, using measures from the Health Plan Employer Data and Information Set (HEDIS).[15] These measures, many of which evaluate the extent to which appropriate care is underused, are to be incorporated into the review process, and

13 The end-stage renal disease network organizations perform a parallel function for renal dialysis facilities.

14 According to HCFA officials, the case-review approach was de-emphasized because research showed the approach to have only modest reliability, PRO action based on such reviews tended to lead to acrimonious disagreements, and review of quality on a case basis did not lend itself to quantitative measurement of quality (Jencks and Wilensky 1992).

15 Under the Balanced Budget Refinement Act of 1999, the Congress exempted preferred provider organizations from these quality requirements and mandated MedPAC to study the appropriateness of various quality standards for different types of health plans and providers participating in Medicare.

HCFA plans to define minimum standards for performance on HEDIS measures. Plans will be required to meet these standards to remain in compliance. In addition, new requirements call for coordinated care plans to maintain their own internal quality improvement programs and to achieve demonstrable improvements in health care outcomes using those programs. Health plans may draw upon the resources of Medicare's PROs to assist in meeting these requirements, although they are not required to do so.

Separation of quality assurance and quality improvement functions

A second important policy question is whether it is both desirable and possible to separate QA and QI functions. Many experts believe that quality assurance and quality improvement must be separate activities, because those responsible for policing quality of care and provider adherence to standards cannot provide the blame-free environment necessary for quality improvement. They note that providers will be reluctant to share information if they believe it may be used against them punitively. However, interaction between QA and QI may be inevitable in a system with goals to accomplish both. In addition, some collaboration, through data sharing or other means, may be desired to improve the effectiveness of each.

MedPAC believes it is important for Medicare to strengthen quality assurance and promote quality improvement simultaneously. The challenge will be to create an environment in which useful cross-fertilization can take place without compromising either objective. To the extent possible, separate entities should be responsible for QA and QI functions. Data sharing and other types of collaboration should be encouraged and facilitated, although sharing information that allows for identification of individual patients or practitioners should be prohibited.

Medicare's QA and QI systems increasingly overlap. For example, the PROs, which now operate primarily as vehicles for promoting and facilitating QI, retain a limited vestige of quality assurance responsibilities, in that they are responsible for investigating beneficiary complaints regarding specific instances of potentially substandard quality of care and for conducting case review in a few other limited instances. In addition, PROs were recently assigned the controversial responsibility of managing a new payment error prevention program, designed to uncover billing mistakes. Some are concerned that this program could reactivate the former adversarial relationship between providers and PROs, and that it might detract the organizations from their priority focus on quality of care.

As policymakers consider expanding the role of the PROs with respect to the sensitive area of errors in health care delivery, it is particularly important that the organizations retain the provider trust they have worked to achieve.[16] In the past, PROs have not focused on health care error reduction, but their experience and the confidentiality protections afforded by the Peer Review Act make them a possible candidate for work in this area. They could serve as a repository for information on errors, a mechanism for analysis and feedback of information about root causes of errors, and a resource for improving systems to avert future errors.[17]

Another example of mixing QA and QI is the quality medical review pilot project for skilled nursing facility (SNF) care, in which five state survey agencies are working in conjunction with PROs and fiscal intermediaries (FIs) to identify facilities that require enhanced oversight or QI interventions. One of the questions to be addressed through the project is whether program integrity, quality of care, and medical review contractor roles can be improved by coordinating their activities. In this particular case, the risk appears to be that the policing functions of the FIs and the state agencies are compromised by their roles in QI activities, rather than that the PROs lose providers' trust by cooperating with entities that have regulatory functions. This is because PROs' QI role continues to be largely confined to inpatient hospital care and the PROs have not established themselves as a QI resource for SNF care.

At present, most data sharing across state survey agencies, accreditation bodies, PROs, end-stage renal disease (ESRD) network organizations, and other organizations that play roles in Medicare QA or QI appears to occur primarily on an ad hoc basis. For example, in her testimony before MedPAC in October 1999, Kathleen Smail, Oregon's manager of health care licensure and certification, stated that her agency had developed a strong cooperative relationship with the state PRO, but had been unable to develop the same relationship with the ESRD network organization (Smail 1999). Speaking on behalf of JCAHO, Margaret VanAmringe noted that informal data sharing occurs, but that better data systems need to be created to systematically share complaint data, survey findings, and other information of interest to multiple parties (VanAmringe 1999).

Development of performance measures

Medicare's QA system has focused on assessing providers' capacities to provide safe care of good quality, because judging the actual quality of health care furnished by particular providers was infeasible until recently. However, new tools for measuring quality and performance are increasingly available and are beginning to be harnessed in performance measurement systems to generate information on a routine basis.

16 According to a February 22 release by the White House, HCFA will develop a pilot project within 6 months to establish medical error reporting systems in up to 100 hospitals. The pilot system will be mandatory, confidential, and penalty free. The PROs will maintain and analyze the data generated through the system.

17 MedPAC considered this option in its chapter on Medicare's role in addressing health care errors and patient safety in its June 1999 Report to the Congress.

These performance measurement systems represent significant opportunities for Medicare QA. Medicare could incorporate such measures into the COPs by requiring providers to report standardized indicators, attain specified performance levels, or improve specified aspects of performance. The program could also use such measures as part of its oversight efforts by considering provider performance on standardized measures when determining the appropriate frequency of site inspections, using relative performance levels to target specific issues or quality concerns in the course of a particular inspection, or monitoring facilities between inspections.

RECOMMENDATION 4A

The Secretary should require providers participating in Medicare to report a minimum, core set of data needed to generate standardized, evidence-based measures of quality and other dimensions of facility performance.

Incorporating facility performance measures in Medicare QA remains highly challenging. It requires two important conditions.

First, Medicare must identify appropriate measures of health care quality and other relevant aspects of provider performance. Such measures must be able to generate meaningful information that is reliable at the individual facility level. Of interest are process measures (such as measures of underuse, overuse, or misuse of services) that are strong determinants of outcomes, and outcome measures known to be strongly influenced by factors within the control of the provider. Outcome measures likely to be influenced by factors associated with patient mix must include risk adjusters or should be used in QI programs, rather than in QA programs designed to attain accountability for performance. To ensure efficient use of resources and minimize the burden on providers associated with meeting unnecessarily divergent requirements, HCFA should work with other public and private-sector groups with interests in this area to identify appropriate quality measures. The National Quality Forum may provide a vehicle for identifying core quality measures and coordinating the public reporting of information on quality.

Second, Medicare must obtain current, reliable data by which to measure quality. Such data must be consistently reported by all facilities using common definitions and metrics. An important issue to consider is whether the performance measures should be based on data that would not otherwise be collected for payment or other purposes. Using a measure that requires new data to be collected may potentially be burdensome for providers. At the same time, few measures of health care quality can be generated from many data collected for payment purposes. Information from patient medical records, patient assessments, or survey data often must be used instead.

Medicare is now implementing setting-specific systems for measuring health care quality and other aspects of facility performance. For a few provider types (such as LTC facilities and home health agencies), systems to measure health care outcomes and processes of care at the facility level are now operational. For a few other types of providers (such as renal dialysis facilities), such performance measurement systems are now in development. For most other providers (notably hospitals), Medicare has not yet established standardized systems for quality measurement and reporting.

As HCFA moves to implement facility performance measurement systems, it must work to obtain buy-in from health care providers and to minimize the data reporting burden associated with these new systems. Provider organizations' reactions to Medicare's performance measures initiatives have been mixed. In general, providers seem to support the notion of accountability for performance compared with the alternative: structural requirements, which are seen as more prescriptive and constraining. However, providers also object to the burden associated with collecting and reporting data not required either for payment or for care planning or management. To ease this burden, HCFA has made available in the public domain software designed to assist in standardized data collection and reporting for the Minimum Data Set, used in determining payments and measuring quality of nursing facility care, and the Outcome and Assessment Information Set, used in determining payments and measuring quality of home health care. In its March report to the Congress, MedPAC recommended that HCFA take other steps to make the collection of data needed for quality measurement more rational (MedPAC 2000).

Addressing problems with Medicare's quality assurance system

A strong system of quality assurance is essential, but problems with Medicare's QA system diminish the likelihood that it achieves its intended effects. In this section, we review problems with:

- the participation standards,
- the process for certifying compliance with those standards,
- the ability to enforce compliance,
- Medicare's deeming arrangements, and
- the limited information available to consumers on certification findings.

Recommendations are provided to address many of the identified problems.

Problems with the standards

Medicare's participation requirements are actually broad quality precepts, composed of factors that demonstrate an entity's compliance with the condition.

Conditions of participation are developed by HCFA, with comments from interested parties.[18] HCFA determines when COPs require revisions by maintaining ongoing contact with outside groups and monitoring a range of indicators. The update process can be triggered by specific survey results, changes in payment systems, patient deaths or other serious quality events, congressional mandate, or the identification of loopholes or other problems with the current COPs.

Regulations containing the COPs are drafted through a collaborative process among relevant HCFA divisions and departmental contacts. Agency staff, in turn, maintain contacts with outside interested parties to gain their input. Town hall meetings have also been used to facilitate the standards development process and to keep HCFA up to date on the current direction of the industry. Due to legal constraints, HCFA cannot carry on informal discussions with interested parties about the specifics of regulations during the notice and comment process.

Limited evidence basis of standards

With the exception of the COPs for LTC facilities, program participation requirements tend to focus on structural and process factors thought to be required to deliver quality care.[19] These standards were largely established through professional consensus. HCFA has said there is little evidence to demonstrate a connection between these structural and process requirements and positive patient outcomes (HCFA 1997a).

RECOMMENDATION 4B

To strengthen the evidence basis of Medicare's conditions of participation, the Secretary should support additional research on the relationship between health care outcomes and both structural characteristics and processes of care.

The need to substantiate the connection between quality standards, such as the COPs, and quality of care has been highlighted in research (Brook et al. 1996). Moreover, standards that cannot be shown to improve quality may do no more than add an additional burden to already overburdened providers. Employing evidence-based standards in Medicare would be consistent with the current movement in health care that promotes the practice of evidence-based medicine.

Some research is being done in this area, but more is needed. HCFA has sponsored an assessment of staffing ratio requirements in nursing homes to determine whether such mandates are effective. This study will focus on whether increased staffing ratios improve care, whether minimum nurse staffing ratio requirements are appropriate, and the potential cost and budgetary implications of minimum ratio requirements (Fredeking 1999). A report on the first phase of this study is expected to be issued this summer.

Research alone will not improve the Medicare QA system; the process for updating the program's quality standards must also be improved. Without such a change, Medicare beneficiaries will not realize the full benefit of investment in research to strengthen the standards' evidence basis.

Lack of information on quality and performance

Although most participation requirements relate to structural characteristics of health care organization and delivery, HCFA is updating the COPs for many types of providers to replace such requirements with ones more focused on patient care outcomes. Doing so has a number of advantages; a major one is that desired outcomes are less subject to change over time, whereas processes and structures tend to change as medical practice and technology change.

To assist in setting patient care outcome standards, HCFA intends to move toward performance data collection requirements for some types of participating providers. It has already instituted new performance data reporting requirements in the COPs for home health agencies and LTC facilities. In the proposed revisions to the COPs for hospitals, HCFA invited comments on the possibility of developing similar performance data collection and reporting requirements.

Minimum performance levels

Because of challenges associated with defining minimum acceptable performance levels, MedPAC urges the Secretary to be cautious in defining such levels in Medicare's COPs. Even without setting minimum performance standards, the measures could be used to create accountability for performance, either by making the information publicly available or by using it to inform the survey process.

The Commission believes that in many instances, it will be prudent to require standardized measurement and reporting of certain aspects of performance without establishing specific performance

18 For example, in developing HCFA's proposed hospital COPs, the agency solicited comments from organizations representing hospitals, practitioners, patients, and states (HCFA 1997a). HCFA also distributed a preliminary draft of the proposal to 70 interested groups and used their comments to develop the proposed rule. In revising the home health agency COPs, HCFA collected comments through national meetings of providers, practitioners, beneficiary representatives, and state survey agencies (HCFA 1997b).

19 Pursuant to a contract with the Commission, Abt Associates Inc. reviewed the Medicare COPs for hospitals, long-term care facilities, home health agencies, rural health clinics, ambulatory surgical centers, and renal dialysis facilities. Abt assigned each of these facility COPs to one of 16 identified categories, which included utilization/quality review and assurance, patient/resident rights, medical records/release of patient information, patient/resident plan of care, clinical measures of quality, and patient/resident assessment.

requirements in COPs. Taking the latter step requires determining what constitutes "acceptable performance," not an easy task for many measures. Performance on many measures can fall along a wide spectrum; although for most measures, more or higher can be judged as better than less or lower, it is difficult to identify a particular cut-off point below which performance can be judged unacceptable. Setting minimum performance levels also requires identifying levels equally applicable to all providers of a particular type, including, for example, hospitals that are large, small, rural, urban, teaching, and nonteaching.

At present, Medicare has established particular outcome standards only for LTC facilities. Specified outcome measures include activities of daily living, pressure sores, incontinence, nutritional status, and medication errors. The standards specify that facilities are responsible for ensuring that residents do not develop new conditions or experience worsening of existing conditions, unless the patient's clinical condition makes such changes unavoidable.

In pending revisions to the COPs, HCFA also proposed moving toward outcomes standards for hospitals, including requiring an overall medication error rate of no greater than 2 percent overall and 0 percent for "significant" medication errors. Given the early state of developing and instituting systems and processes for reducing errors, MedPAC opposes these proposed standards and comparable ones now in effect for LTC facilities (MedPAC 1999). However, the Commission recognizes the significance of and need for further development of measures and methods addressing health care outcomes.

Requiring performance improvement

Because of these challenges in defining minimum performance levels, requiring improvement in performance may be a more appropriate way to incorporate performance requirements into Medicare participation requirements. However, this approach also presents challenges. Rather than considering comparative performance, it requires providers to improve their own baseline levels of performance. Its use in Medicare raises questions about creating a fair playing field, given that providers with performances vastly exceeding those of their peers may find it more resource-intensive to improve performance, compared with those who begin at a lower baseline. It also raises questions about whether it is desirable or appropriate for HCFA to move beyond defining minimal standards for safety and quality in the QA program.

In proposed COPs for several types of providers, HCFA is attempting to update standards that require providers to have their own internal systems to address quality of care. The COPs for most institutional providers currently include requirements that each maintain an internal QA program to identify quality problems and to develop and carry out plans for remedying them. In proposed rules revising COPs for hospitals and home health agencies, HCFA would require providers to operate QI programs in which they must measure quality, take steps to improve it, and demonstrate improvements.[20]

Infrequent updating of standards

The COPs for most facility types date back to the 1980s, and a few date to the 1970s and earlier. Table 4-2 lists the facility types and the dates of the most recent comprehensive regulatory revisions to the relevant COPs. The mere fact that such long periods have elapsed since the development of COPs leads some to argue that the standards are out of date and do not reflect current health care practices (McGeary 1990).

Revisions to the COPs for some types of facilities are in various stages of the regulatory process, but have yet to be

TABLE 4-2

Date of last comprehensive revision to facility conditions of participation

Facility type	Date
Hospitals	Jun. 1986
Long-term care facilities	Feb. 1989
Home health agencies	Aug. 1989
Comprehensive outpatient rehabilitation facilities	Dec. 1982
Hospices	Dec. 1983
Rehabilitation agencies, clinics, and public health agencies operating as providers of outpatient physical therapy or speech pathology services	May 1976
Renal dialysis facilities	Jun. 1976
Rural health clinics	Mar. 1978
Portable X-ray services suppliers	Jan. 1969
Ambulatory surgical centers	Aug. 1982

Note: Additional significant but less-than-comprehensive revisions were issued after these dates to several of the facility conditions of participation listed.

Source: MedPAC review of the Code of Federal Regulations and the Federal Register.

20 Current standards for coordinated care plans participating in Medicare include this requirement.

made final. For example, comprehensive revisions to the home health COPs were proposed in March 1997 but have not yet been issued as a final rule (HCFA 1997b, HCFA 1997c).[21] Proposed hospital COPs are pending, having been issued in December 1997. Revisions to the COPs for renal dialysis facilities, hospices, ambulatory surgical centers, and rural health clinics are in the planning stages, but have not yet been formally issued as proposed rules (DHHS 1999).

RECOMMENDATION 4C

The Congress should mandate the Secretary to review and update the conditions of participation on a specific periodic basis and should require the use of negotiated rulemaking to do so.

Two factors may explain the extensive time needed to revise the various COPs: the regulatory process is complicated, and HCFA has limited resources to carry out its mission.

Complications arise from a variety of sources. In promulgating regulations, HCFA must abide by the Administrative Procedures Act, which applies to all regulatory agencies and mandates that they follow certain processes in making rules or adjudicating disputes. Rulemaking must be done through a public process consisting of publishing a proposed rule in the Federal Register, providing an opportunity for public comment or participation, and publishing the final rule. Controversy surrounds the requirements facilities must meet to participate in Medicare, and proposed changes to those requirements raise many political issues. The regulatory process is further constrained by executive orders and other statutory mandates that require certain additional agency actions when promulgating regulations.[22] These laws and executive orders aim to protect the public interest but often slow the regulatory process.

The evolution of the hospital COPs exemplifies the complexities that arise in revising quality regulations. The initial COPs were sent to hospitals in January 1966, six months after enactment of the Medicare law, and published as final rules later that year. HCFA made several unsuccessful attempts to revise the COPs during the 1970s, publishing a proposed rule with opportunity for comment in 1977. More than 2,000 comments were submitted and reviewed when HCFA published revised proposed COPs in 1980. These, however, were withdrawn by the Reagan administration in January 1981. Revised hospital COPs were again published as a proposed rule in 1983 and then as a final rule in 1986. A comprehensive revision was proposed in December 1997 but has not yet been issued as a final binding rule (HCFA 1997a, HCFA 1998d).[23] HCFA received approximately 60,000 public comments in response to this proposed revision (HCFA 1999). The most recent revisions to the hospital COPs and those for other facilities stem not only from developments in quality efforts in the private sector, but also from HCFA's efforts to eliminate unnecessary procedural requirements.

Updating the COPs must also compete for attention and resources with other agency priorities. Unless the changes are mandated by the Congress, revisions and updates to the COPs are done under HCFA's general authority to promulgate regulations. However, HCFA must address many other issues as a result of congressional directives, including a range of program and payment system changes—such as establishing prospective payment systems for a number of different provider types—contained in the Balanced Budget Act of 1997 and the Balanced Budget Refinement Act of 1999. When it sets priorities, HCFA must place mandates before discretionary issues.

MedPAC is concerned and disheartened by the infrequency with which HCFA has been able to update the Medicare COPs. This failure leaves the Medicare program without the benefits of the many advancements in quality measurement and clinical practice that have been made in the past decade, and, for some facility types, in the past three decades. It is the Commission's hope that a statutory mandate for periodic review of the COPs, perhaps no less frequently than every five years, would compel both the agency and the Congress to make this a priority. Rejuvenation of the standards could benefit the provider community by removing potentially outdated requirements and fully reflecting changes in the industry. It also could help beneficiaries by assuring their providers are held to current quality standards.

The Commission further believes that the periodic review and update of the COPs should be done through the negotiated rulemaking process.[24] The negotiated rulemaking process requires the participation of interested parties and the use of a convener to help the parties reach consensus. Use of negotiated rulemaking

21 Later that year, however, the Balanced Budget Act of 1997 required that payment for home health agencies be moved to a prospective system. In light of the complications surrounding this shift in payment systems, HCFA chose to implement only those revisions to the COPs that provided needed information for the new prospective payment system, in an effort to not overburden the industry. The remainder of the proposed revisions will be implemented later.

22 For example, under relevant executive orders and congressional mandates, agencies must include a regulatory impact statement with all proposed rules. This statement can include: an assessment of the costs and benefits of regulatory alternatives; a regulatory impact analysis of all rules that will have "significant economic effects"; an assessment of anticipated costs and benefits for rules that have large impact on state, local, or tribal governments, or the private sector; an analysis of options for regulatory relief for small businesses; and an analysis of the impact on the operations of small rural hospitals.

23 Two sections of the proposed COPs were carved out and implemented on an accelerated time frame. These amendments were related to patient's rights and organ, tissue, and eye procurement, which were both seen as pressing needs. (HCFA 1998c, HCFA 1999).

24 Under the Negotiated Rulemaking Act (5 U.S.C. §§ 561-570), federal agencies may develop proposed rules through negotiation with interested parties. The Act aims to enable agencies to use innovative methods to enhance the rulemaking process.

could facilitate and consolidate the process of gaining public input, allowing interested parties to meet and discuss controversial aspects of a regulatory system. Moreover, negotiated rulemaking would give participants active voices in the process, allowing for a level of buy-in lacking in the current, more traditional method. In addition to facilitating the development and revision of the COPs, the negotiated rulemaking process might also facilitate the development of effective sanctions to assure provider compliance with quality standards.

HCFA has used a negotiated rulemaking process under mandate from the Congress to create regulations in several controversial areas in the recent past, including solvency standards for provider sponsored organizations, the ambulance fee schedule, and Medicare coverage policies for clinical laboratory services.

Some would argue, however, that the extended process through which COPs are implemented has a positive rather than a negative effect on the outcome. They believe that the current process allows for careful contemplation of the various options and needs of the program, and that the opportunity for continuous input is afforded through agency contacts with the public.

The Commission had some hesitation in mandating the use of negotiated rulemaking in all cases, concerned that HCFA needed flexibility in this arena. However, the Commission feels a strong statement is needed, given concerns about the inadequacy of the current process and its inability to keep up with industry changes. HCFA should ensure representation of all interested parties, including industry, practitioners, beneficiaries, and states. Special steps may be necessary to ensure adequate beneficiary representation. It is also important to note that HCFA will require significant additional resources to comply with any mandate to periodically update the COPs.

Problems with certifying compliance

The original Medicare legislation required HCFA to contract with states to conduct Medicare certification surveys, enabling the Medicare program to benefit from the expertise and structure of state licensing agencies.[25] However, a number of problems arise from this arrangement and how it is currently funded. Surveys for many types of facilities are performed on an infrequent basis, for reasons including inadequate funding levels and a problematic process for garnering funds. The process and its results can be inconsistent and can fail to identify poor performers because of a lack of information on actual performance.

Insufficient frequency of surveys

Under current funding and legal requirements, most facilities are surveyed on an increasingly infrequent basis. HCFA directs state survey agencies to conduct yearly certification surveys on approximately 15 percent of non-hospital, non-LTC facilities, which means an individual facility is surveyed once every 7.5 years (MacTaggart 1999).[26] Only LTC facilities and home health agencies are surveyed on a more regular basis, due to a legal mandate that requires LTC facility surveys every year and home health agency surveys every three years. Surveys of other types of facilities are not on any legally mandated schedule.

RECOMMENDATION 4D

The Congress should require that the Secretary annually survey at least one-third of each facility type to certify compliance with the conditions of participation. The Secretary should also monitor facilities' compliance with conditions of participation on an ongoing basis.

In the recent past, the total number of participating facilities has grown while the overall number of surveys conducted by state survey agencies has dropped. Table 4-3 shows trends in the number of Medicare participating facilities. The number of participating facilities grew 20 percent between 1995 and 1999. The amounts appropriated for survey and certification activities during this period also grew by 20 percent.[27] However, during this same period, the number of initial and recertification surveys done by states dropped by 17 percentage points, from 65 to 48 percent.

The Commission is concerned with the infrequency with which most providers are surveyed, and considered recommending mandatory periodic surveys for all facilities. At the same time, we would like to allow HCFA and the states the flexibility to target at-risk facilities and to reduce the burden on providers with good track records.

By recommending an annual survey of at least one-third of each facility type, HCFA and the states can target those facilities determined to be at risk for quality problems, thus maximizing the funds expended on this activity. HCFA should also have a mechanism for monitoring quality on an ongoing basis, perhaps incorporating a less comprehensive survey or non survey-based approach, to help it identify poor-performing facilities to target for full surveys. As a safeguard, however, the

25 Technically, a state agency's certification that a provider or supplier meets Medicare conditions of participation represents a recommendation made to the Secretary. Only the Secretary has the authority to make the "initial determination" as to whether Medicare program requirements are met.

26 These facilities include psychiatric hospitals, renal dialysis facilities, hospices, ambulatory surgical centers, rural health clinics, physical therapy providers, portable X-ray providers, and comprehensive outpatient rehabilitation facilities (HCFA 1998b).

27 Despite the coincidence of a 20 percent growth in facilities and a 20 percent growth in appropriations, it is important to note that the increased funding still supported only infrequent surveys of facilities.

TABLE 4-3

Numbers of facilities participating in Medicare, fiscal years 1995–2001

Facility type	Fiscal year 1995	1996	1997	1998	1999	2000	2001
LTC facilities	13,302	14,114	14,741	15,025	14,996	16,249	16,310
HHAs	9,090	9,816	10,689	9,386	9,011	9,500	10,153
Non-accredited hospitals	1,409	1,422	1,412	1,426	1,431	1,450	1,310
Accredited hospitals	4,980	4,858	4,780	4,732	4,737	4,587	4,552
Dialysis facilities	NA*	NA*	NA*	NA*	3,583	3,981	3,930
Other non-LTC facilities	13,302*	13,931*	16,931*	17,455*	12,771	14,876	14,778
Totals	42,083	44,141	48,553	48,024	46,529	50,643	51,033

Note: LTC (long-term care), HHAs (home health agencies), NA (not available). Numbers for fiscal years 2000 and 2001 are projections.
*For fiscal years 1995–1998, dialysis facilities are included in "Other non-LTC" category.

Source: Health Care Financing Administration.

Congress should mandate that every facility undergo a full survey at least every five years or within some other reasonable time frame.

The current legal mandate for periodic surveys of home health agencies and LTC facilities arose from the Congress' concern with quality problems. The Congress could consider allowing flexibility in the mandated survey schedule for these providers if ongoing quality monitoring proves successful.

Inadequate funding levels

Many believe that funding for state survey and certification responsibilities has been inadequate for years (Morris 1999). Such funding is garnered through the yearly appropriations process, which is subject to a range of political pressures. Appropriations have increased with the increase in participating providers, but still only support infrequent surveys of certain provider types (Table 4-4). Greater funding levels are required to support more frequent surveys.

RECOMMENDATION 4E

The Secretary should request, and the Congress should appropriate, adequate levels of funding for survey and certification activities to enable HCFA and state survey agencies to increase the frequency of inspections and take other steps to strengthen the quality oversight process.

Appropriation of more funding is the most straightforward way to assure greater survey frequency. Other changes also could lead to higher funding levels. The method of funding could be switched to one that is less politically charged than the appropriations process—direct funding through the Medicare trust funds.[28] HCFA has also suggested—but the Congress has not adopted—allowing the agency to collect user fees from entities seeking Medicare certification.[29]

The Commission strongly believes that HCFA and the Congress should take responsibility for adequately funding survey and certification activities through the normal appropriations process. Switching the funding method for these responsibilities merely avoids addressing the issue; in addition, MedPAC does not believe that direct funding is an appropriate response to the problem of inadequate funding. MedPAC also sees no benefit to providers in assessing user fees for quality oversight activities.

While MedPAC acknowledges that funding levels are problematic, it remains concerned that the underlying substance of the standards, and the process for applying those standards, are flawed. Additional funds may be useful but will not necessarily repair those flaws. Moreover, it is difficult to state what an adequate funding level would be for such activities. HCFA is only now in the process of conducting a focused assessment of the necessary costs associated with surveys of the various facility types (Pelovitz 2000).

Increased funding is not the sole answer. For example, problems in nursing facilities persist, despite recent increases in funding and stepped up oversight activities (Table 4-5) (Meyers 1999, Miller 1999, Edelman 1999). This increased focus is likely due to several factors, including the attention given in the press to poor nursing home conditions, the fact that LTC facilities make up the bulk of Medicare participating facilities, and the congressional mandate for yearly surveys of these entities. Some complain

28 The Professional Standards and Review Organization program experienced similar funding problems during its tenure and was unable to achieve adequate results due to low funding levels. When that program was legislatively revamped in the early 1980s into the Peer Review Organization program, the funding method was switched from congressional appropriation to direct funding through the trust funds to assure a constant and reliable funding level.

29 In each of its budget requests for the past few years, HCFA has requested authority to charge user fees to offset the costs incurred in conducting survey and certification activities. With congressional authority, the Secretary currently assesses user fees on clinical laboratories and suppliers of screening mammography services to cover the costs of inspections and other oversight. The Secretary also has authority to collect user fees from Medicare+Choice organizations to cover costs relating to enrollment and dissemination of information and certain counseling and assistance programs for beneficiaries. In its June 1999 report, MedPAC recommended against collecting user fees from Medicare+Choice organizations for these purposes. It should also be noted that facilities gaining Medicare certification through deemed accreditation organizations must pay fees to the accrediting body.

TABLE 4-4

Survey and certification funding levels, fiscal years 1995–2001 (in thousands of dollars)

Fiscal year	Requested	Appropriated	Direct survey costs
1995	$145,800	$145,800	$141,086
1996	162,100	145,800	139,649
1997	173,800	158,000	142,274
1998	158,000	154,000	146,912
1999	104,700	175,000	167,230
2000	204,347	204,674	194,000
2001	234,147	NA	NA

Note: NA (not available). Appropriated amounts and direct survey costs for fiscal years 1999 and 2000 include amounts targeted to the Administration's Nursing Home Initiative.

Source: Health Care Financing Administration.

that oversight of LTC facilities occurs only at the expense of other types of facilities (Morris 1999).

Poor timing of funding process

The timing of the federal process for garnering funds for survey activities raises problems for states from a process perspective. As stated above, state survey agencies are dependent upon HCFA for most of their funding. Federal funds support state survey and certification activities for Medicare and Medicaid. In contrast to the Congress, many state legislatures meet less than annually, making it difficult for states to assure adequate funding levels to meet federal policy initiatives.

RECOMMENDATION 4F

The Congress should assure that the federal appropriations process does not impede states' abilities to fund Medicare and Medicaid survey and certification activities.

Federal funding levels for states' Medicare and Medicaid survey and certification activities is set upon passage of the yearly budget act. Inevitably, the federal budget process extends into the beginning of the relevant federal fiscal year. State survey agencies have complained that it is difficult to coordinate the resources and staff needed to meet HCFA priorities for a fiscal year without advance knowledge of funding levels (Morris 1999). Moreover, even if adequate funding levels are provided, hiring and training staff takes time, rendering it difficult for states to quickly respond to HCFA initiatives.

State funds support the survey agencies' state-only activities, such as licensing, and a portion of Medicaid survey and certification costs. A large percentage of state survey agency activities relate to Medicaid; LTC facilities make up the largest number of participating facilities, and most LTC facilities participate in both Medicare and Medicaid (Table 4-3). This phenomenon is financially significant for the survey agencies, not only because of the large numbers of such facilities they must oversee, but also because federal law requires that these entities be surveyed on an annual basis. State funds are garnered through state appropriations processes, which for many states occurs only biennially.

The biennial or other less-than-annual schedule of state appropriations can make it difficult for survey agencies to make full use of federal Medicaid funds directed at survey activities. Federal Medicaid funds are provided to states only as the "federal match" of state funds expended.[30] As such, the states must know what level of federal Medicaid funding to expect to correspond their state requests to make full use of available federal matching funds. If the Congress decided to provide each state with additional funds to target certain quality activities, the states would have to know about this extra money at the time they submit their state appropriations requests to get sufficient state funds to qualify for the additional federal match. If the federal funds are made available during a year when a state's legislature does not meet, then the

TABLE 4-5

Spending on survey and certification activities for long-term care and other facilities, fiscal years 1993–1999 (in thousands of dollars)

Fiscal year	Long-term care	Non long-term care	Total
1993	$82,300	$50,900	$133,200
1994	80,900	57,700	138,600
1995	93,400	47,700	141,100
1996	87,900	51,700	139,600
1997	98,000	44,700	142,700
1998	102,000	45,100	147,100
1999	119,200	48,000	167,200

Note: Fiscal years 1993-1995 amounts are direct survey costs; fiscal years 1996-1997 amounts are amounts awarded to states; fiscal years 1998-99 amounts are not yet final.

Source: Health Care Financing Administration.

30 The Medicaid program is a joint state-federal program, funded by state expenditures that qualify states for federal matching funds. A state must spend its own monies to qualify for the federal match.

state survey agency cannot use that extra money, as there is no mechanism for revisiting its state budget until the next legislative session.

Inconsistency in certification process

Another frequent complaint about the survey process is the lack of consistency within and across state survey agencies. Surveyors vary in assessing facility compliance with the COPs and determining appropriate sanctions. Even LTC surveys vary, although surveyors use a deficiency matrix to guide the application of sanctions. In addition, there is variation in approach among HCFA regional offices, the contact points between HCFA's central office and the state survey agencies.

HCFA is pursuing a number of strategies to improve the consistency among surveyors and between state survey agencies and the Commission supports these efforts. One method to improve quality is the State Agency Quality Improvement Program (SAQIP). The SAQIP aims to evaluate the quality of survey and certification activities being performed by the survey agencies, using standards developed jointly by state agencies and HCFA regional offices (HCFA 1998a). The SAQIP is part of a larger effort aimed at achieving a consistent, accountable survey and certification process. Other pieces of this effort include federal oversight and monitoring surveys, review of the Online Survey, Certification, and Reporting system (OSCAR) data, individual reviews of certification actions, and improvements in the budget process.

In addition, HCFA is considering increasing the amount of training required of state surveyors. At present, individuals are merely required to complete an initial certification training course; HCFA is exploring the possibility of requiring surveyors to undergo recertification along with interim training efforts. The Commission also commends these efforts by HCFA.

Limited ability to identify poor performers

Because Medicare's current survey process focuses on a provider's status at one point in time, it may not be able to assess important aspects of the facility's usual operations. Measures of health care quality and measures designed to assess other aspects of providers' performance, such as their adherence to patient rights' requirements, can strengthen the oversight process. MedPAC recommends their use in three complementary ways.

RECOMMENDATION 4G

State survey agencies should use health care quality measures and other measures of facility performance to:

- **determine which facilities to survey more and less frequently,**
- **target specific issues or quality concerns for focused attention in the survey process, and**
- **monitor facility performance between inspections.**

Until recently, HCFA had limited ability to identify and target poor-quality providers for inspection. As discussed above, for providers other than home health agencies and LTC facilities, the current survey process focuses on structural elements thought to be related to the capability to furnish care of adequate quality, and can respond to poor quality only through the limited standard survey or reports of poor quality or adverse incidents. The system is not structured to monitor a provider's performance between inspections. In addition, survey agencies generally do not receive information about a provider's processes of care and outcomes before an inspection, which may hinder their ability to effectively use their limited resources to focus the inspection on problems specific to that provider.

MedPAC believes that performance measures should be used to select which facilities should be surveyed more and less frequently. Determining frequency according to relative performance may be especially useful in improving oversight of providers with no statutory requirement for a regular inspection. Ultimately, using performance measures to identify poor-performing providers could change HCFA's inspection strategy by dedicating increased resources to surveying outlier providers more frequently, decreasing the resources dedicated to inspecting better-performing providers.

MedPAC also calls for the use of performance measures to help state survey agencies understand and engage providers in dialogues about their treatment practices during the inspection, rather than to assess only the capacity to furnish care. The short duration of an inspection limits the ability of even the best surveyor; such visits inevitably consist of brief, tightly scheduled sessions not amenable to taking a broad view of patterns and processes of care within the facility. Use of these measures may be one way to capture information more representative of a provider's usual processes of care and patient outcomes.

Finally, MedPAC recommends the use of performance measures to monitor providers' performance levels between inspections, which could potentially permit survey agencies to detect poor-quality care before a serious deficiency develops and to more effectively determine survey frequency and scope.

Problems with enforcement and sanctions

Medicare's sanctioning process is an important component of its quality assurance system because it is HCFA's primary vehicle for enforcing its COPs. The sanctioning process is limited in two important respects, however.

First, HCFA's available sanctions generally do not match the severity and scope of the cited deficiency, nor do they consider providers' inspection histories or their ownership and ability to pay. Consequently, federal sanctions have limited effectiveness to deter future

Using performance measures in Medicare certification

To improve its ability to ensure the quality of care, the Health Care Financing Administration (HCFA) is beginning to integrate performance measures into the survey and certification process for some types of providers. The agency currently uses such measures in surveys of long-term care facilities and home health agencies and is in the process of developing measures for use in surveying renal dialysis facilities.

For long-term care facilities and home health agencies, information from the Minimum Data Set and the Outcome and Assessment Information Set is being used to focus onsite inspections by identifying potential quality concerns and opportunities to improve care. Data from these reports will also be used to monitor provider performance between inspections.

Performance measures for renal dialysis facilities will be based on data from existing collection efforts, including HCFA's annual facility survey; cost reports; death notification forms; medical evidence forms; the Online Survey, Certification, and Reporting database; and administrative claims databases.

HCFA is considering the development of similar performance measures for use in targeting and structuring state inspections of hospitals. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is developing a series of 25 performance measures for acute-care hospitals that will be used to monitor provider performance between surveys and to focus on-site survey evaluative activities. JCAHO will conduct a pilot test using a subset in five states during 2000–2001, will require all hospitals to collect data on a subset of the measures by 2002, and by 2003 will require hospitals to collect data on all of the measures within the selected sets to obtain JCAHO accreditation. ■

noncompliance with HCFA's COPs. MedPAC offers one recommendation to develop intermediate sanctions that may promote long-term adherence to COPs.

Second, certain procedures limit HCFA's ability to impose sanctions, including its lack of authority to impose sanctions on an immediate basis without a grace period, the referral process for deficiencies discovered during complaint investigations, and the current backlog in the appeals process. The Commission encourages the Secretary to study ways to improve the process of imposing sanctions, including improving the management information systems that will support new initiatives to strengthen the effectiveness of the enforcement process.

Limited range of sanctions available

HCFA's available sanctions provide few incentives to ensure providers' long-term compliance with COPs because available remedies do not generally reflect the scope and severity of the deficiency or take into account previously cited deficiencies and sanctions. The Secretary can terminate from Medicare any institutional provider not in substantial compliance with its COPs.[31] However, intermediate remedies—including imposing civil money penalties, suspending payments, and appointing temporary management—are available to sanction only certain institutional providers, such as home health agencies and LTC facilities.

RECOMMENDATION 4H

The Congress should authorize the Secretary to develop intermediate sanctions specific to each institutional provider type that reflect the scope and severity of the deficiency and to consider a provider's past performance in levying sanctions.

Because of the lack of intermediate remedies for most institutional providers, compliance with Medicare's COPs is often contingent upon the threat of Medicare termination. The threat of Medicare termination is an ineffective means of ensuring future compliance with HCFA's COPs, however, because only those providers with serious and life-threatening deficiencies can be terminated from the Medicare program. Indeed, only a few institutional providers lose Medicare certification; for example, only 4 skilled nursing facilities and 10 home health agencies were terminated from Medicare for the most recent 12-month period available (Feb. 1999 through Jan. 2000) (OIG 2000a). No hospitals or renal dialysis facilities were terminated during this period.

Among all institutional providers, the sanctions for LTC facilities offer the most flexibility in matching the deficiency with the sanction because they are based on the severity and scope of the deficiency.[32] Required and optional sanctions are assigned based on the deficiency's severity category (actual or potential for death/serious injury, other actual harm, potential for more than minimal harm, potential for minimal harm) and scope (isolated, pattern, and widespread). No other provider type has sanctions defined in this way.

31 Specific sanctions that can be imposed upon some providers are set forth in the Social Security Act. Additionally, if a PRO submits a report to the Secretary documenting a provider's poor-quality care, the Secretary has the option to either impose civil monetary penalties or terminate the provider from Medicare (Soc. Sec. Act §1156).

32 The Omnibus Budget Reconciliation Act of 1987 gave the Secretary authority to specify criteria on when and how each sanction for long-term care facilities should be applied.

We recommend that HCFA develop intermediate sanctions for other institutional providers that match the scope and severity of the deficiency. For certain types of hospitals and renal dialysis facilities, HCFA is proposing intermediate sanctions—such as denial of payment—as alternatives to terminating coverage when the deficiencies do not pose immediate jeopardy to patient health or safety. These proposed intermediate sanctions represent a step in the right direction, providing HCFA with increased flexibility to sanction providers. However, their effectiveness may still be limited because they do not consider the scope and severity of the deficiencies. In addition, provider characteristics, such as ability to pay, may cause intermediate sanctions to affect providers differently.

Currently, HCFA considers past performance only in assessing LTC facilities, designating a facility as a "poor performer" if they meet the required criteria of past deficiencies. For other institutional providers, past performance is generally not considered, even among those that have been repeatedly cited for deficiencies. Additionally, even among providers terminated from the Medicare program, there is no requirement to consider their deficiency histories once they re-enter the Medicare program.[33]

We call upon HCFA to consider a provider's past performance in levying sanctions because past performance often predicts future adherence to HCFA's COPs. Among nursing homes cited for severe deficiencies, 40 percent were cited for deficiencies at the same or a higher level of severity during subsequent inspections (GAO 1999). The current enforcement process neither rewards providers for substantially improving performance, nor imposes more severe remedies for providers with consistent deficiencies. Because past performance is not considered, there are no incentives in the enforcement process to ensure long-term compliance with Medicare's COPs.

Finally, Medicare needs to address whether rewarding certain providers' performances would improve long-term compliance with its COPs. These providers include those who consistently meet and exceed the COPs and providers who significantly improve their adherence to the COPs. Possible incentives include designating excellent providers in comparative materials provided to help beneficiaries make selection decisions and linking Medicare payments to quality findings through a performance-based payment system. The program also might find a way to relieve exceptional performers from some of the burden of demonstrating compliance, perhaps by reducing the frequency or scope of recertification surveys.

Unwieldy process of imposing sanctions

In addition to the limited scope of available sanctions, certain procedures limit HCFA's ability to impose sanctions and the effectiveness of sanctions. These include HCFA's lack of authority to impose sanctions on an immediate basis without a grace period, the referral process for deficiencies discovered during complaint investigations, and the current backlog in the appeals process.

Because a grace period (usually 30 to 60 days) is given to most providers with histories of deficiencies, the enforcement system provides few incentives for long-term adherence with HCFA's COPs.[34] With the exception of LTC facilities, HCFA is required by statute to impose a sanction for most deficiencies only after a grace period, even for providers with a history of deficiencies. Even using intermediate sanctions cannot ensure long-term adherence if providers with a history of deficiencies are able to use a grace period to rectify deficiencies. In a study of nursing home quality assurance methods, the GAO concluded that although the threat and use of sanctions—even intermediate sanctions—achieve temporary corrective action, they do not ensure long-term compliance with COPs (GAO 1999). In its study of home health quality assurance methods, the GAO noted that home health agencies subvert the termination process by taking temporary corrective action (GAO 1998).

Medicare needs to address the problem that HCFA cannot impose sanctions without the benefit of a grace period for institutional providers with histories of deficiencies. This would require developing the necessary criteria to classify "poor performers" that can be sanctioned without the benefit of a grace period. Eliminating grace periods for providers with histories of deficiencies may help encourage sustained compliance because these providers are more likely to be affected by penalties. Ultimately, this action would strengthen the effectiveness of the enforcement process and encourage all providers to adhere to Medicare's COPs over the long term.

Another way to strengthen the sanctioning process is to consider sanctioning for deficiencies originally cited during complaint investigations; currently, such deficiencies that are rectified by the time of the investigation are usually considered "past noncompliance" and are not referred for immediate sanction.[35] The GAO found examples where serious life-threatening deficiencies in nursing homes were not cited as such because they were resolved by the time of the investigation (GAO 1999).

33 Generally, a provider that is terminated from the Medicare program can apply for reinstatement if it corrects its deficiencies.

34 In general, providers that do not meet one or more conditions of participation may submit a plan of correction and address the cited deficiencies during a grace period (usually a 30- to 60-day period) (42 CFR§488.28). Survey agencies do not refer providers for sanction unless they fail to correct their deficiencies within the grace period.

35 Beneficiaries may submit complaints to state survey agencies, the PROs, and the ESRD networks. In investigating complaints, the PROs and the networks do not assess providers' compliance with Medicare's COPs, but determine whether they are furnishing care that is medically necessary, appropriate, and of adequate quality. The PROs and networks can recommend that deficient providers adopt a corrective action plan. The PROs and the networks are only required to submit to the Secretary sanction recommendations on providers with substantial violations in a number of cases or a gross and flagrant violation in one or more cases.

The current large backlog of provider appeals may impede HCFA's ability to impose sanctions. Once the OIG imposes a sanction, providers may appeal the decision first to a Department of Health and Human Services (HHS) administrative law judge, then to the HHS Departmental Appeals Board, and finally to the federal district court. The GAO suggested that this process undermines the effectiveness of sanctions by pressuring HCFA to resolve the appeal by negotiating settlements (GAO 1999). Medicare needs to develop ways to allow due process without stripping sanctions of their effectiveness.

Finally, the current management information system needs to be improved to support key HCFA quality assurance initiatives. Successful implementation of MedPAC's recommendation on considering providers' histories of deficiencies and characteristics in sanctioning is dependent upon an information system that can track deficiencies and sanctions over time, as well as track providers' ownership statuses. The GAO has found three major deficiencies in HCFA's management information system: its inability to track enforcement actions centrally, the lack of needed data on the results of complaint investigations, and the inability to identify facilities under common ownership (GAO 1999). Initiatives to improve and strengthen the sanction process cannot be effectively imposed until these problems are rectified.

Problems with Medicare deeming

A number of facility types can be deemed to meet Medicare certification standards through private accrediting entities. Table 4-6 lists facility types that currently can gain Medicare certification through accreditation, and the private organizations endowed with that deeming authority. Deeming authority is generally granted by HCFA, although JCAHO's deeming authority was statutorily granted by the Congress. This reliance on accrediting organizations allows HCFA to take advantage of outside expertise and potentially lessens the cost to Medicare of conducting quality assessment. However, private accreditation has moved in large part toward QI rather than QA, and may be neglecting the baseline assurances to be gained from Medicare's certification system. The Commission believes that HCFA must maintain ongoing oversight of and involvement with private entities, to ensure they are holding facilities to Medicare's baseline quality standards.

RECOMMENDATION 41

The Secretary should take additional steps to ensure that private accrediting organizations with Medicare deeming authority are, in fact, ensuring that facilities meet Medicare certification standards.

Reliance on private accrediting organizations to certify facilities' compliance with Medicare certification

TABLE 4-6

National accrediting organizations with Medicare deeming authority

Facility type	Entities with deeming authority	Date(s) authority was granted or renewed
Hospitals	Joint Commission on Accreditation of Healthcare Organizations (JCAHO)	Jul. 1965
	The American Osteopathic Association (AOA)	1966, Feb. 2000
Home health agencies	Community Health Accreditation Program (CHAP)	May 1992
	JCAHO	Jun. 1993
Clinical laboratories	Committee on Laboratory Accreditation	Dec. 1993, May 1997
	JCAHO	Jan. 1995, Apr. 1998
	The American Association of Blood Banks	Jul. 1995, Apr. 1998
	AOA	Jul. 1995, Apr. 1998
	The American Society for Histocompatibility and Immunogenetics	Oct. 1994
	College of American Pathologists	Feb. 1995
Hospices	JCAHO	Jun. 1999
	CHAP	Apr. 1999
Ambulatory surgical centers	JCAHO	Dec. 1996
	Accreditation Association for Ambulatory Health Care	Dec. 1996
	American Association for the Accreditation of Ambulatory Surgery Facilities, Inc.	Dec. 1998

Source: MedPAC review of Federal Register issuances.

standards has great appeal, from both the government and the private industry perspectives. It prevents duplication of efforts by private and public entities, lessening their burden. However, many have criticized HCFA's lack of oversight of these organizations' Medicare survey activities. Much of this has focused on HCFA's oversight of JCAHO's program for accrediting hospitals (Dame and Wolfe 1996, Jost 1994, OIG 1999a-d).

One of the most serious criticisms raised by the OIG was the congenial nature of the relationship between JCAHO and the hospitals (OIG 1999b). This criticism could apply equally to other accrediting entities that see themselves more as QI organizations than as QA mechanisms, and thus encourage a congenial relationship with the facilities they survey. The Community Health Accreditation Program (CHAP), which has deeming authority for home health agencies and hospices, describes itself as "the leader in improving quality of care in the home care industry" and identifies its goal as helping home care to not only prosper, but also gain strength in the overall health care industry. To achieve this, CHAP states that it is devoted to providing consultation of the highest caliber (CHAP 2000). Other deemed status organizations make similar statements about their focus on QI, not QA. The Accreditation Association for Ambulatory Health Care (AAAHC), which has deemed status for accreditation of ambulatory surgical facilities, emphasizes its cooperative, consultative role in the certification process, stating that it emphasizes "constructive consultation and education," not "finding fault" (AAAHC 2000). Although these organizations participate in the QA process, their educational focuses do not necessarily reflect the regulatory approach that has been the basis of QA.

HCFA has only limited mechanisms to oversee the activities of deemed organizations. When it grants deemed status, HCFA assesses the standards and processes used by an accrediting body to determine that they are at least equivalent to the Medicare standards and assessment methods. HCFA then has state survey agencies conduct limited validation surveys to ensure adequate performance. Deemed organizations' standards and processes are reviewed by HCFA every six years to ensure equivalence with Medicare.

In contrast, JCAHO's status as a deeming organization for hospitals is statutorily mandated. Therefore, HCFA cannot revoke JCAHO's authority. However, the agency can stay informed of JCAHO standards and use its influence to focus public attention on any concerns. In fact, JCAHO standards and HCFA standards have diverged in focus and approach over the years, with JCAHO moving more toward outcomes measurement rather than structure and process assessment.[36] For example, HCFA recently amended the hospital COPs to add a provision on the use of patient restraints. JCAHO, however, expressed reservations about adding this provision to its standards. Given the public interest in such patient rights issues, HCFA and JCAHO are negotiating how to address this divergence.

The Commission believes that HCFA should make additional efforts to monitor the activities of private accrediting bodies. Increasing use of validations surveys is one approach for doing so. Limited validation surveys are conducted to assess JCAHO's performance in this area, but only 5 percent of the more than 4,500 accredited hospitals participating in Medicare will undergo such a survey during fiscal year 2000. However, state survey agencies are already dealing with a variety of burdens and may not be able to fully respond to increased levels of validation surveys. Another approach HCFA could take would be to pursue informal contacts and meetings with accrediting entities to keep current on the status of developing standards and survey processes.

Problems with the availability of consumer information about Medicare's survey and certification process

At issue is the extent to which HCFA should make available to consumers information about Medicare's survey and certification process. Currently, Medicare provides consumer-based information on: the costs, benefits and quality of care in traditional Medicare and specific Medicare+Choice plans, and the structural characteristics of specific nursing homes, selected medical characteristics of their residents, and selected results of their most recent survey inspection.

RECOMMENDATION 4J

The Secretary should make more information about the results of the survey and certification process available to beneficiaries.

There is a clear trend to promote more active consumer participation in health decisions. Consumers are interested in having access to information about health care providers, and proponents believe that this information facilitates more informed health care choices. Consumer-based information can facilitate active involvement of consumers in their own health care and the health care system and can, in particular, support decisions about providers, facilities, or types of setting. Ultimately, the availability and use of such data may lead to consumers having greater confidence in the health care system overall, and poor-performing providers either improving or leaving the market.

Consumer-oriented information about the nursing home quality assurance process is available from an interactive Web site known as "Nursing Home Compare" (HCFA 2000). The site provides facility-specific information, derived from the OSCAR system, about the total number of deficiencies the facility reported by state inspectors during the most recent

36 This raises potential problems. In her testimony before MedPAC, Oregon's manager of health care licensure and certification told of hospitals that, while undergoing Medicare validation surveys, expressed the belief that they did not need to meet Medicare's COPs because they were accredited by JCAHO.

inspection, a description of each deficiency, the date the deficiency was corrected, and the scope and severity of the problem. The nursing home web site, however, does not include information about a facility's deficiencies cited in prior inspections, which prevents consumers from being able to assess a facility's performance over time, nor does it provide information on whether and how a facility was sanctioned for cited deficiencies or whether a facility has ever been terminated from the Medicare program under its current owner.

MedPAC recommends that the Secretary provide beneficiaries with more information about the results of the survey and certification process for individual providers. For the nursing home web site, the Secretary should provide information on facilities' previous inspection results as well as current and previous sanctions levied on facilities, including whether the facility was ever terminated from the Medicare program under its current ownership.

HCFA has plans to develop web sites with information about other types of providers, including home health agencies and renal dialysis facilities. The proposed measures for the renal dialysis facility web site would not require that information about any aspect of the survey and certification process other than the date of the most recent survey inspection be provided, however. As the agency develops these web sites to provide beneficiary information about home health agencies and renal dialysis facilities, similar information about providers' current and past deficiencies and sanctions should be included to the extent possible. ■

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CHAPTER 5

Financial performance and payment update for hospitals covered by prospective payment

RECOMMENDATION

5A For fiscal year 2001, the Congress should increase the operating and capital payment rates for prospective payment system inpatient services by the rate of increase in the combined market basket plus 0.6 to 1.1 percentage points. If the current operating and capital market basket estimates hold, that level would result in an update of between 3.5 percent and 4.0 percent.

CHAPTER 5

Financial performance and payment update for hospitals covered by prospective payment

In this chapter

- Overview of the payment system and policy changes
- Financial performance and modeling of payment changes
- Updating operating and capital payments

Hospitals' financial status has deteriorated significantly over the past two years. The aggregate total margin for hospitals covered by Medicare's inpatient prospective payment system is estimated at 2.7 percent for 1999, less than half of its 1997 level. Although shrinking payments in the private sector (relative to the cost of care) were responsible for the majority of the drop in total margin, reduced Medicare payments also played a role. MedPAC's new Medicare margin, covering hospitals' five largest lines of Medicare service, dropped from 9.8 percent in 1997 to 6.5 percent in 1998, reflecting hospitals' first year of operation under the provisions of the Balanced Budget Act of 1997. The inpatient margin fell the least and remains high by historical standards, but margins declined substantially for the outpatient, inpatient rehabilitation and psychiatric, home health, and skilled nursing services that hospitals covered by the inpatient prospective payment system provide. The Commission recommends a range for the update to inpatient payments in fiscal year 2001 that extends about two percentage points beyond the current law increase. Our recommendation reflects the cost-increasing effects of new drugs and other technological advances, as well as a documented decline in hospitals' overcoding of diagnosis related groups. We believe that payments should still be reduced to account for shifts of care from the latter days of inpatient stays to post-acute settings; however, to avoid exacerbating the current level of financial stress in the industry, we are recommending a one-year hiatus in phasing in this reduction.

Overview of the payment system and policy changes

Under the inpatient prospective payment system (PPS), a hospital receives prospectively determined operating and capital payments for each Medicare discharge.[1] Operating payments, including those for graduate medical education programs for physicians and approved training programs for other health professionals, totaled $66.0 billion in 1999. They are intended to cover all costs that hospitals incur in furnishing acute inpatient services for Medicare beneficiaries, except those for capital. Capital payments, which account for another $6.8 billion, cover building and equipment costs (principally interest and depreciation) allocated to Medicare's inpatient services (CBO 2000).

Operating and capital payment policies

For inpatient care under the PPS, hospitals' operating and capital payments are determined in similar ways. Each payment system consists of three main components:

- the per-case base payment rate
- the case weight
- special adjustments

The base payment rate reflects the average costliness of Medicare cases nationwide, adjusted for the relative level of input prices in the hospital's local area. The labor-related portion of the base operating payment rate is adjusted by a wage index that reflects the relative level of wages and salaries of hospital workers in each metropolitan or statewide rural area. A similar index, called the geographic adjustment factor, is used to adjust the base capital payment rate.[2] Medicare capital PPS is being phased in over 10 years, from 1992–2001. In fiscal year 2001, all hospitals will be paid on the basis of national prospective rates and in 2002 special policies in place during the transition will no longer be in effect.

The second component of PPS payment is a weight that accounts for the relative costliness of each case compared with the national average Medicare case. A separate weight is defined for each of 499 diagnosis related groups (DRGs), and the same DRG definitions and weights are used for both operating and capital payments. The product of the hospital's base payment rate and the relative weight for the DRG to which the patient is assigned is the provider's DRG payment rate for the case. Consequently, a facility's DRG operating and capital payments under PPS automatically reflect its mix of Medicare patients among DRGs, reflected by the average weight of the DRGs used to pay for their care. This average weight is the facility's PPS case-mix index.

The third PPS payment component includes additional amounts that may be paid for unusual cases or to hospitals with certain characteristics. These factors were included in the payment system to account for certain differences in the costs of treating patients or to accomplish broader policy objectives. Extremely costly cases can qualify for outlier payments, which are added to the DRG payment rate. An indirect medical education (IME) adjustment accounts for the higher patient-care costs of teaching facilities, and hospitals that treat a disproportionate share of low-income patients receive the disproportionate share (DSH) adjustment. Finally, special payment provisions apply to rural hospitals designated as sole community providers, referral centers, or small Medicare-dependent hospitals.[3]

Changes resulting from recent legislation

The Balanced Budget Act of 1997 (BBA) included several provisions that affected inpatient and outpatient payments to PPS hospitals. The Balanced Budget Refinement Act of 1999 (BBRA) slowed or reversed some of these changes, eliminating some of the cost savings resulting from the BBA.

Inpatient hospital services

Under previous law, the update to PPS operating payments for fiscal year (FY) 1998 and beyond was equal to the forecasted increase in the PPS hospital market basket. However, since the inpatient PPS was introduced, the actual update generally has been below the increase in the hospital market basket. Action by the Secretary of Health and Human Services or the Congress led to updates averaging 2.1 percent below market basket from the third year of the PPS (1986) through 1996. The BBA continued this pattern by freezing rates in 1998, followed by updates 1.9 percent and 1.8 percent below market basket in 1999 and 2000, respectively, 1.1 percent below market basket in 2001 and 2002, and equal to market basket thereafter. The update for capital payments is established by the Secretary of Health and Human Services through regulation before the beginning of each fiscal year, rather than being set by statute.

The BBA sharply cut PPS capital payments for FY 1998 such that these payments would better reflect Medicare-allowable capital costs. The Health Care Financing Administration (HCFA)

1 For Medicare beneficiaries enrolled in Medicare+Choice, services covered by the inpatient PPS usually will be paid under terms negotiated between the hospital and health plan.

2 Hospitals in Alaska and Hawaii also receive cost-of-living adjustments for the nonlabor portion of the base operating rate and for the federal capital payment rate.

3 A sole community provider is designated by Medicare as the only provider of hospital care in a market area. A rural referral center is generally a large rural hospital designated by Medicare as serving patients referred by other hospitals or by physicians who are not members of its medical staff. A small rural Medicare-dependent hospital is located in a rural area, has 100 or fewer beds, is not classified as a sole community provider, and has at least 60 percent of its inpatient days or discharges attributable to Medicare.

overestimated capital cost growth in the early 1990s, and therefore set high annual updates to capital payment rates. Because actual payments were held equal to 90 percent of estimated capital costs in FY 1992–1995, the updated payment rates did not result in increased payments. When budget neutrality expired in 1996, actual payments increased to equal updated rates, resulting in a 22.6 percent increase in rates. The BBA permanently reduced capital payment rates by 15.7 percent and, for FY 1998–2002, by an additional 2.1 percent. This largely reversed the increase caused by the end of budget neutrality.

Effective in FY 1999, the BBA defines certain cases as transfers and pays for these cases using a modified payment formula. The cases must be in 10 DRGs selected by the Secretary and be discharged to PPS-excluded hospitals or units, skilled nursing facilities or, in some cases, home health care. Hospitals transferring patients are paid an average per diem amount for the days before transfer (twice the per diem rate for the first day) up to the full DRG rate. The Secretary identified the applicable DRGs based on high volume and above-average use of post-acute care, and estimated that the provision would reduce PPS payments by 0.6 percent.

The BBA cut DSH payments during FY 1998–2002, with reductions implemented in one-percentage-point increments that reached 5 percent in 2002. In addition, the BBA required that HCFA recommend a new payment formula for DSH adjustment, that the new formula treat all hospitals equally, and that the low-income share measure continue to reflect both Medicaid patients and Medicare patients eligible for Supplemental Security Income.

The BBRA increased IME and DSH payments, relative to the BBA provisions, and made other changes to reduce geographic disparity in graduate medical education payments. In addition, the Secretary was directed to collect the uncompensated care data needed to reform the distribution of DSH payments.

Outpatient hospital services

The BBA enacted major changes in Medicare's payments for services provided in hospital outpatient departments. It eliminated the so-called formula-driven overpayment—under which Medicare's payments did not correctly account for beneficiaries's cost sharing—for certain services and extended the reduction in payments for outpatient capital and for services paid on a cost basis. The law also directed the Secretary to establish a PPS for services paid at least partially on the basis of incurred costs. The BBRA eased the transition to a PPS by setting payment floors effective through 2003, adding an outlier policy to compensate for extremely high-cost cases, and allowing cost reimbursement for certain drugs and supplies for three years. It also clarified how HCFA should calculate aggregate payments to hospitals in the first year of the PPS to mitigate the effect on hospitals. The legislation also limited beneficiary cost sharing for an outpatient service to the Part A deductible after the PPS is implemented.

Financial performance and modeling of payment changes

The nation's health care system has undergone major changes affecting the mix and scope of services in the last decade. Nonetheless, the hospital sector is still the largest single category of spending, accounting for more than $382 billion in 1998 and about 33 percent of personal health care spending (Levit et al. 2000). The financial performance and general productivity of the hospital industry are important for the nation's well being.

The financial status of the hospital industry depends on the volume of care provided, the per unit costs of providing that care, and the payments that private and public purchasers agree to make. Hospitals have been under financial pressure from purchasers for most of the past decade, first from public and later from private purchasers. In recent years pressure has developed from both sides. As a result, hospitals have taken successful action to constrain cost growth, which initially improved financial performance. Increased pressure from Medicare, however, has led to significant deterioration recently, which is of concern if it limits access to and quality of hospital care available to Medicare beneficiaries.

This section reviews hospital financial performance under Medicare, and then addresses all payers for hospital care, patient and non-patient revenue, and total hospital margins.

Financial performance under Medicare

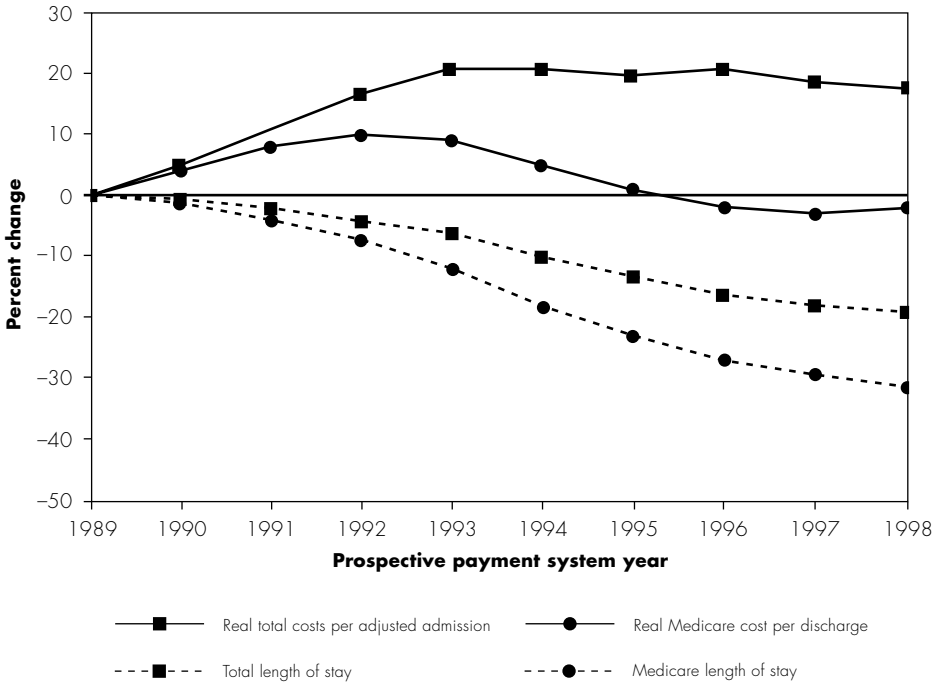
Medicare accounts for about 39 percent of spending on hospital care; private payers account for 42 percent. Our discussion of hospitals' Medicare financial performance begins with the trend in cost per case—a direct measure of the resources used in producing inpatient care—and the trend in length of stay, a key determinant of inpatient cost growth. We then compare the trends in inpatient costs and payments to understand how changes in Medicare payment policies, as well as those of other public and private payers, affect hospital financial performance. We present the Commission's PPS inpatient margin through 1998, but have also gone beyond the inpatient sector to develop margins for Medicare outpatient services and for hospitals' five largest lines of Medicare business. In addition, we have modeled the impact of BBA and BBRA provisions on the PPS inpatient margin through 2002.

Length of stay and cost per case

MedPAC examined length of stay and cost per case for both Medicare beneficiaries and patients of all payers. Since 1989, reductions in length of stay have been associated with slower growth or actual decline in real cost per case for patients of Medicare and those of other payers (Figure 5-1). The Medicare Cost Report provides information on inpatient care for Medicare beneficiaries, while American Hospital Association (AHA) data give information on care to all

FIGURE 5-1

Cumulative changes in Medicare and all-payer real costs per case and length of stay, 1989–1998



Note: Total costs per adjusted admission and total length of stay data (from the American Hospital Association) are based on community hospitals (which include some facilities excluded from prospective payment) and federal fiscal years. The Medicare inpatient costs per discharge and Medicare length of stay data (from HCFA) are based only on hospitals paid under prospective payment and on prospective payment system years. Real costs are calculated using the GDP implicit price deflator.

Additional data are shown in Appendix Table C-1.

Source: American Hospital Association National Hospital Panel Survey and Medicare Cost Report data from HCFA.

patients, including expenses per adjusted admission, a measure encompassing both inpatient and outpatient care.

We also examined data from a new survey of hospitals to understand length of stay and total expenses per adjusted admission for FY 1998 and 1999. The National Health Indicators Survey is being conducted by The Lewin Group under contract to the AHA, with financial support from MedPAC and HCFA. The Indicators Survey examines hospital utilization and finances based on data from a nationally representative panel of about 500 hospitals (The Lewin Group 2000).

MedPAC's analysis of Medicare Cost Report data indicates that PPS length of stay declined over FY 1990–1997 at an average rate of 4.7 percent per year. The decline continued at 2.7 percent in FY 1998, affecting hospitals of all types and in all regions. Both urban and rural hospital length of stay declined by 2.7 percent. Major teaching hospitals experienced a 3.8 percent drop, other teaching hospitals 2.8 percent, and nonteaching hospitals 2.3 percent.[4] The Health Indicators Survey indicates that in FY 1999, Medicare length of stay declined 4.5 percent, while length of stay for all payers declined 1.8 percent.

Medicare real cost per discharge increased 2.1 percent annually from 1990–1993, then decreased at an average rate of 3.2 percent a year through 1996. It was down 1.1 percent in 1997 and up 0.2 percent in 1998. Real total expenses per adjusted admission, which measures costs of both inpatient and outpatient care for Medicare and all other patients, decreased 0.2 percent from 1998 to 1999.

From 1989–1998, more rapid declines in length of stay have been accompanied by slower growth or reductions in cost per case. Medicare length of stay has fallen more (31 percent) than has length of stay for all payers (19 percent), contributing to a cumulative decline in Medicare real cost per discharge of 2 percent, while real total expenses per adjusted admission for all payers increased 18 percent.

Medicare inpatient margin through 1998

The Medicare inpatient margin is an important measure of the adequacy of Medicare payments to hospitals. This margin compares the payments hospitals receive from Medicare for inpatient services with their Medicare-allowable costs for these services, and is therefore determined by trends in both payments and costs.[5] The inpatient margin has fluctuated—in the early 1990s, the inpatient margin was low and often negative, but as hospitals contained their costs the inpatient margin grew steadily from 1992 through 1997. In 1998 the inpatient margin fell, due mostly to the impact of BBA provisions and possibly also to hospital concerns with fraud and abuse enforcement and investigations by the Inspector General. These margin reductions indicate that the effects of the

4 Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25.

5 The inpatient margin is calculated (in percentage terms) as the difference between inpatient payments and Medicare allowable costs (as derived from costs reported on the cost report each hospital submits to HCFA) divided by inpatient payments. The same general approach is used for the other hospital Medicare margins discussed later in the chapter.

Analysis of changes in hospital readmission rates

From 1991–1997, as inpatient length of stay (LOS) in prospective payment system (PPS) hospitals decreased by approximately 30 percent, the readmission rate increased.[6] Because there is a concern that shorter LOS and increases in readmission rates may be indicators of poorer quality of care, we investigated whether there has been an association between the rate of change in these two variables that might indicate the need for some payment response. We found none.

Table 5-1 shows the increase in the rate of readmission within 3, 7, and 30 days of discharge from the initial admission. Particularly interesting is the 0.5 percentage point change, or 30 percent increase, in the rate for three-day readmissions, which might be linked to shorter LOS.

We related the decrease in LOS to the increase in readmission rates for the 195 DRGs (of 499) with the highest volumes of initial admissions in 1997. The data show a significant decrease in LOS from 1991–1997. The average decrease was three days (or 32 percent), and only one DRG showed an increase. These DRGs showed an average increase in the three-day readmission rate of 0.4 percent, with 80 percent of the DRGs increasing. We did not find a correlation, however, between the change in LOS and the change in readmission rate.

We also investigated possible associations between hospital characteristics and changes in readmission rates. In general, all hospital types showed increases in readmission rates during 1991–1997, and the ordering of the hospital types remained substantially the same.

We compared the change in hospital LOS to change in readmission rate by dividing the hospitals into quintiles by change in LOS, from largest to smallest decrease. There was little change by quintile and it was not consistent in direction; the first and last showed larger increases in readmission rates than the middle three. We conclude, therefore, that there is no correlation between change in LOS and change in readmission rate at the hospital level.

Our analysis suggests that the increase in readmission rate and the decrease in LOS are independent phenomena. The increase in readmission rate may be caused by changes in patterns of scheduled admissions, increased severity of patients' conditions or some other factor. Other studies of readmissions show that the best predictor for readmission within a DRG is an unusually long LOS (D'Agostino et al. 1999, Lahey et al. 1998, Castells et al. 1996). The patients who initially stay the longest are the ones with complications and comorbidities, and tend to be the ones readmitted. This pattern could also be affecting our results. ■

TABLE 5-1

Changes in readmission rates, 1991–1997

	Year		
Readmission within	**1991**	**1997**	**Percentage point change**
3 days	2.0%	2.5%	0.5%
7 days	4.4	5.3	0.9
30 days	13.3	14.6	1.3
Initial admissions with live discharges	7.3 million	7.6 million	

Source: MedPAC analysis of 1991 and 1997 Medicare Provider Analysis and Review files data from HCFA.

6 A readmission is an admission to a PPS hospital following a discharge from a PPS hospital within a specific time, such as 7 or 30 days. It does not include transfers from one PPS hospital to another. The readmission rate is the number of readmissions in a specific time period per 10,000 initial admissions with live discharges.

BBA and more stringent government oversight of payment policy have begun to reduce Medicare payment growth.

Payment growth for inpatient services is heavily influenced by Medicare payment rates, which are updated each year. The update factor for PPS operating payment rates is generally set in relation to the forecast increase in the PPS hospital market basket, which measures the prices of inputs (goods and services) used by hospitals. The update factor reflects the notion that, as the cost of providing inpatient care rises more slowly or more rapidly, payment rates should be adjusted correspondingly. The update factor is legislated as the market basket plus or

minus a percentage amount to account for other factors. In FY 1998–2000 (the first three years of the BBA), update factors for the PPS operating payment rates were the lowest since prospective payment began (0 percent, 0.5 percent and 1.1 percent, respectively). Focusing solely on the update factor to gauge the adequacy of Medicare reimbursement, however, is misleading; hospitals have been successful in containing cost growth during this period, as discussed in the previous section. Because hospital costs were largely reduced due to declines in length of stay, there was not a

Treatment of non-allowable costs

Our Medicare margins have always related payments to costs that Medicare defines as "allowable." MedPAC and HCFA have been working together to develop a margin that encompasses as much as possible of the revenue that hospitals receive from Medicare. The goal is a single measure that all federal policymakers can use in assessing the adequacy of Medicare payments (for annual update decisions as well as a potential rebasing of payments) and in measuring the impact of changes in Medicare policy. As part of this larger effort, the two organizations are systematically reviewing the non-allowable cost elements to determine whether some should be added back in calculating margins. Table 5-2 lists examples of non-allowable costs.

The role of allowable costs

In 1966, the decision was made that Medicare would pay its share of hospitals' "reasonable costs." Hospitals were immediately required to submit cost reports that presented full costs (per their own financial statements) and then display a series of subtractions to isolate allowable costs. An involved allocation process then determines Medicare's share of the costs by category of service (inpatient, outpatient, hospital-based home health, and so forth). This basic structure of the cost report has never changed.

Under cost-based payment, the determination of allowable costs plays a direct role in assuring that Medicare's payments are appropriate. This role also extends to determining the base payment for a prospective payment system. Once prospective payment is in place, allowable costs play an important indirect role in determining the costs that go into the Medicare margins used for monitoring financial performance and supporting policy decisions.

Identifying non-allowable cost elements to add back

Two categories of subtractions from providers' full costs on the cost report clearly should not be added back. These are:

- costs of non-covered services (such as private-duty nursing, patient television and telephone use, and research), and
- otherwise allowable costs that are offset, partly or fully, by cash payments (such as employee cafeterias or parking, the sale of medical records, and nursing school tuition).

For items in these categories, funding is typically provided by entities other than insurers—often patients, but also students, employees, guests, and outside organizations. Some cost elements are categorically excluded (the non-covered services) while others are simply reduced. Excluding these costs generally has not been controversial.

The remaining non-allowable costs generally fall into two groups:

- costs in generally allowable categories considered unreasonable or excessive (such as costs in excess of compensation limits for contract therapists and physicians providing administrative services), and
- cost elements considered insufficiently related to the care of Medicare patients (such as direct advertising costs, lobbying expenses or political donations, and fundraising expenses).

Some costs in the first category—those exceeding the so-called standards of reasonableness—might be appropriate for a Medicare margin. Given the financial pressure on hospitals, it seems reasonable to believe that no hospital would spend more than necessary in areas such as contract therapy and medical administration services. The services in the second category—those HCFA considers unrelated to the care of Medicare patients—are more problematic. Allocating a share of such costs to Medicare in a margin calculation would strongly imply that Medicare's payments should be high enough to cover them. However, many specific cost elements differ from one another in subtle ways, and there are also considerations of consistency in the treatment of costs between hospitals and other facility-based providers. Thus, there appears to be no shortcut to reviewing the appropriateness of each currently non-allowable cost element one by one, which HCFA and MedPAC will do in the coming months.

(Continued next page)

Treatment of non-allowable costs (continued)

TABLE 5-2

Examples of non-allowable costs under Medicare payment policy

Direct advertising expenses (although normal "public relations" costs are allowed)
Interest expense on borrowing, to the extent offset by interest income*
Excessive payments to physicians for services relating to administration (payment limited to "reasonable compensation equivalents" (RCEs) established by HCFA)
Payments to contract therapists beyond similar limits established by HCFA
Availability payments for physicians: • Allowed for emergency rooms subject to the above RCE limits • Not allowed for any other service
Charitable or political donations
Lobbying expenses, including the portion of dues to professional associations attributable to lobbying (although costs of contacts with government agencies for technical discussions of payment policy are allowed)
Fundraising expenses
Patient telephone expenses
Patient televison expenses (other than in common areas, such as waiting rooms)
Certain entertainment costs (such as alcohol, musicians, and tickets to sporting events)
Employee travel costs unrelated to patient care
Excessive costs for management meals (such as costs of separate dining facilities or gourmet menus)
Research costs (other than certain patient care costs incurred as part of research projects)
Costs attributable to the failure to take advantage of available cash, trade or quantity discounts
Costs of fines or other penalties for violations of laws
Legal fees for defending alleged civil fraud or criminal indictment
Costs of educational benefits for anyone other than employees (spouses, dependents, and so forth)
Payments to reserve post-acute care beds
Dues to a social organization with no direct or indirect relationship to patient care
Expenses incurred to influence unionization votes (although normal "labor relations" costs are allowed)
Cost of private-duty nurses
Portion of the cost of employee meals covered by cash payments
Portion of the cost of parking for employees covered by cash payments
Portion of the cost of a nursing school covered by tuition

Note: * All liquid resources beyond a reasonable level needed to meet operating cash needs are deemed to be available to the provider, such that additional borrowing would not be needed.

Source: MedPAC summary of information provided by HCFA.

Profit margins from other data sources

Outside of analyses based on Medicare Cost Report data, attempts to calculate profit margins by payer or product line typically reflect an allocation of all costs to one service or another. Constructing payment-to-cost ratios by payer based on American Hospital Association data, for example (which a number of organizations, including MedPAC, have done) involves allocating hospitals' total expenses among payers and non-patient care services. The two cost bases for calculating a Medicare margin—Medicare's share of all costs or its share of Medicare-allowable costs only—produce different results and inevitable confusion.

Developing a Medicare margin that adds back all non-allowable costs (other than non-covered services and cash offsets) would reduce this confusion by adopting the same theoretical construct for the federal government's margin measurements that is typically used in the private sector. However, that consideration must be played off against the policy relevance of a margin that matches payments to the best estimate possible of the costs for which Medicare should be paying. In that regard, continuing to exclude cost elements that policymakers believe are categorically inapplicable to Medicare patients must be a priority. Ultimately, our treatment of non-allowable costs may produce margins lower than those we currently publish, but the margins will remain above the levels that would result from allocating all costs proportionately among payers. ■

commensurate decline in the hospital market basket.

Through 1997, growth in Medicare payments per case has exceeded the update factor every year since prospective payment began (Figure 5-2). Based on Medicare Cost Report data, PPS payments per case have increased by a cumulative 49 percent between 1989 and 1998, while the cumulative payment updates during this period were 27 percent. Although much of this difference reflects a rise in the Medicare case-mix index (CMI) in the late 1980s through the mid-1990s, the CMI fell in 1998, which helped close the distance between growth in payments per case and the update factor.[7] There are early indications that the CMI declined again in 1999. The market basket, meanwhile, increased a cumulative 39 percent between 1989 and 1998.

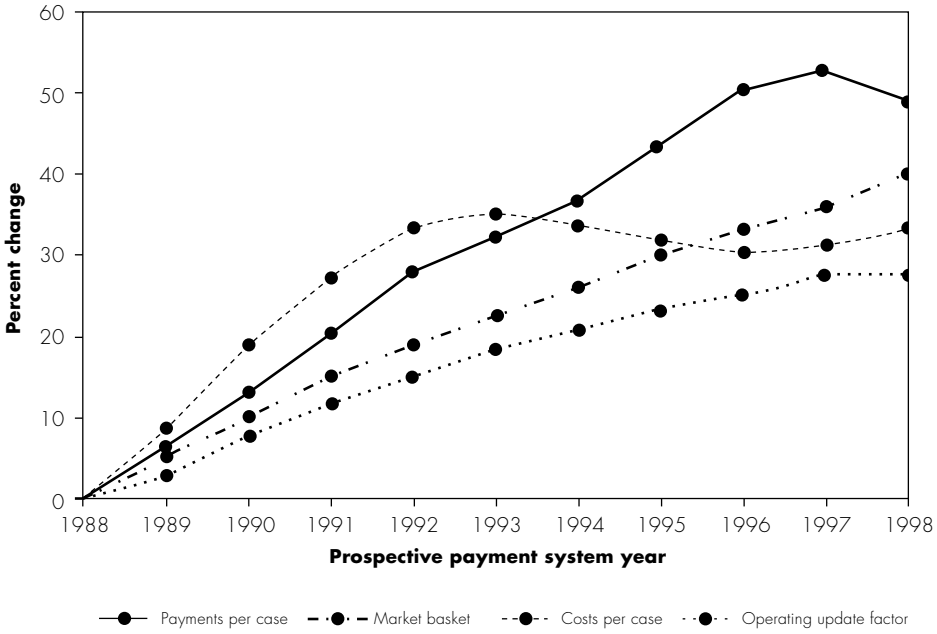
Growth in Medicare costs per case relative to the update factor has also varied over time. Costs per case grew faster than the update factor in the early 1990s, but the relationship between them has changed in recent years. Between 1993 and 1997, the update factor exceeded the increase in costs per case, due mostly to decreased length of stay. Reduced length of stay has also influenced the relationship between payments per case and costs per case. During the late 1980s, hospital cost growth significantly exceeded payment per case growth, but in the early 1990s hospitals reduced cost growth, primarily through decreased length of stay, while payment growth continued apace.

The trend in the Medicare inpatient PPS margin reflects the pattern in cost growth over time, and the impact of the BBA in 1998 (Figure 5-3). The PPS inpatient margin was negative in the early 1990s, and reached a low of –2.4 percent in 1991, primarily due to cost growth that far exceeded the update factor. Hospital cost containment through the mid- to late-1990s allowed the PPS margin to increase, reaching a high of 17.0 percent in 1997. Although the BBA went into effect mostly in 1998, certain policies (such as the capital update) began to affect hospitals in 1997, but did not slow the growth in inpatient margins.[8]

The inpatient margin fell to 14.4 percent in 1998, as the BBA was more fully implemented.[9] The reduction in 1998 of approximately 2.5 percentage points is smaller than might be expected, considering the breadth of BBA cuts—in 1998, hospitals received a zero update to Medicare operating payments, while the market basket was 2.9 percent, and IME, DSH, and Medicare bad debt payments were all reduced. In addition, the CMI also fell in 1998 by approximately 0.5 percent, which would also contribute to low payment growth. The potential impact

FIGURE 5-2

Cumulative changes in Medicare hospital inpatient payments, costs per case, operating update factor, and market basket, 1988–1998



Note: Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The operating update factor applies to operating payments, which account for approximately 92 percent of Medicare payments. Capital payments make up the remaining 8 percent.

Additional data are shown in Appendix Table C-1.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

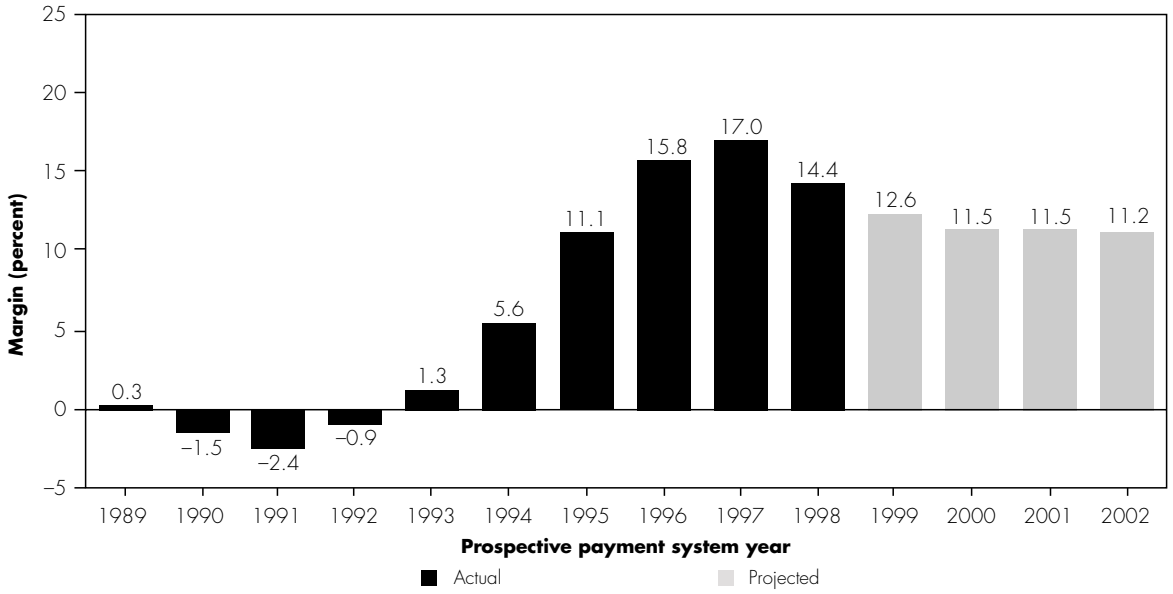
7 The CMI is the average payment weight; an increase in the CMI automatically raises payments by the same proportion.

8 The BBA reduced capital rates by 17.8 percent for discharges occurring after October 1, 1997, which allowed some of the impact of this provision to appear in 1997 cost reports.

9 The 1998 hospital data set used for this analysis includes 56 percent of PPS hospitals. The sample has been weighted to account for under-representation of teaching hospitals. Both costs and payments at the national level are weighted by the 1997 share of major teaching, other teaching and nonteaching Medicare inpatient hospital costs.

FIGURE 5-3

Trend in Medicare hospital inpatient margin, excluding graduate medical education, 1989–1998 and projected for 1999–2002



Note: Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. Data for 1998 have been weighted by teaching status to improve predictive accuracy. Margins for all years are based on Medicare-allowable costs, excluding graduate medical education.

Additional date are shown in Appendix Tables C-3 and C-5.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

of the BBA, however, must be interpreted in light of continued modest cost growth for hospitals through 1998, and the prior trend of rapidly increasing inpatient margins. These factors probably offset a portion of the BBA's impact.

As PPS inpatient margins increased in the early 1990s, the number of hospitals with negative PPS margins decreased in each year from 1991 through 1996, and remained constant in 1997 (Figure 5-4). This trend reversed in 1998, when the proportion of hospitals with negative PPS margins jumped to 29 percent from a low of 23 percent in 1996 and 1997. The steep increase in the number of hospitals with negative inpatient margins does not bode well for hospitals, as inpatient payments generally offset hospital losses on other lines of Medicare services.

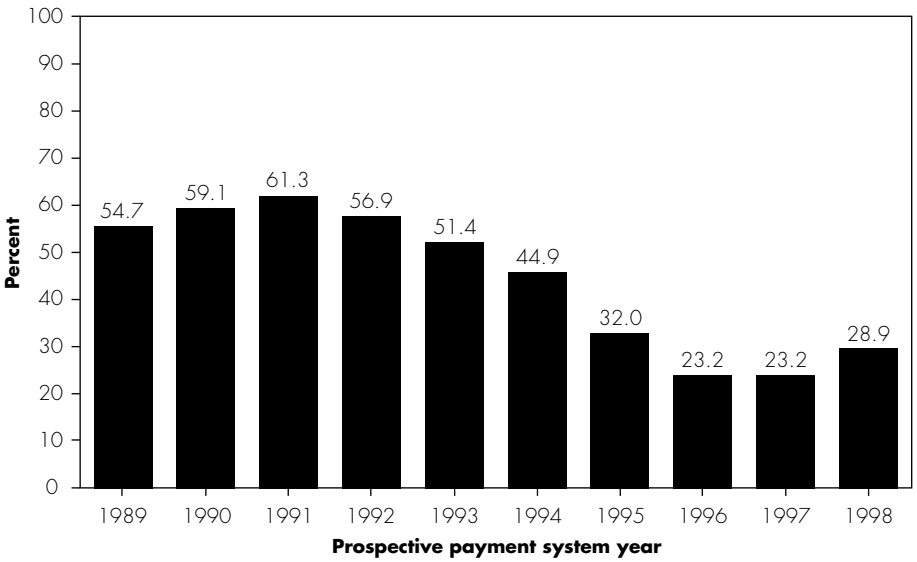
Inpatient margins for all hospitals were reduced in 1998, but the extent of the reduction varied among groups such as teaching and non-teaching hospitals, or urban and rural hospitals. Medicare payments to hospitals are adjusted for a variety of factors, including degree of teaching intensity, location in a large urban area (relative to a smaller urban or rural area), and treatment of low-income patients. Teaching hospitals—those employing residents—receive increased Medicare payments in an effort to compensate for the added costs of providing training and education, and tend to have higher Medicare inpatient margins than do nonteaching hospitals. Academic medical centers and other major teaching hospitals had consistently higher Medicare inpatient margins over the last 10 years (Figure 5-5).

Major teaching hospitals' Medicare inpatient margins fell in 1998 to a greater extent than those of other teaching and nonteaching hospitals. Major teaching hospitals fall into two groups: academic medical centers (AMCs) and non-AMC major teaching hospitals. AMCs' inpatient margins fell 4 percentage points (from 28.6 percent in 1997 to 24.6 percent in 1998), while non-AMC major teaching hospitals' Medicare inpatient margins declined 2 percentage points (from 28.2 percent to 26.2 percent). Other teaching and nonteaching hospital inpatient margins fell 2.4 and 3.0 percentage points, respectively. Despite the large reduction for AMCs, both major teaching hospital groups had 1998 inpatient margins near their highest levels since the PPS was enacted.

Rural hospitals tend to have lower Medicare inpatient margins than urban hospitals because of several factors, including a lesser concentration of teaching and DSH payments. From 1992–1997, the gap widened between urban and rural hospital Medicare inpatient margins, although both hospital

FIGURE 5-4

Percent of hospitals with negative Medicare inpatient margins, excluding graduate medical education, 1989–1998



Note: Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. Data for 1998 have been weighted by teaching status to improve predictive accuracy.

Additional data are shown in Appendix Table C-4.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

groups had increased margins in each year through 1996 (Figure 5-6). In 1997, before the BBA, rural hospital margins fell slightly, while urban margins continued to increase. Rural hospitals were also disproportionately affected by the BBA. In 1998, rural hospital inpatient margins dropped more than 4 percentage points to 5.2 percent, compared with a 2.3 percentage-point drop to 15.8 percent for urban hospitals.

Although BBA provisions (such as IME and DSH reductions) were targeted to urban hospitals, cost trends also played a role in the difference between urban and rural inpatient margins. In 1997 and 1998, rural hospital costs increased at a greater rate than did those of urban hospitals. In 1997, cost growth was more than four times greater for rural hospitals than for urban hospitals. In 1998, rural hospital cost growth was approximately 50 percent greater than was urban hospital cost growth.[10]

In contrast, major teaching hospital costs grew at a lesser rate than costs for non-teaching and other teaching hospitals. Major teaching hospitals were the only hospital group with negative cost per case growth in 1997 (–0.1 percent), compared with a 0.7 percent increase for other teaching hospitals and 0.8 percent increase for nonteaching hospitals. In 1998, the cost increase for nonteaching and other teaching hospitals was more than a percentage point higher than the cost increase for major teaching hospitals.[11] These trends for teaching hospitals and urban versus rural hospitals are not unrelated; major teaching hospitals are located predominantly in large urban areas, while rural areas have predominantly nonteaching hospitals.

The impact of inpatient policy changes beyond 1998

The inpatient Medicare margin, as well as the comprehensive Medicare margin discussed later in this chapter, provide a contextual understanding of hospital viability through 1998, the first year of the BBA. However, these margin measures do not incorporate some of the major components of the BBA that will affect Medicare payments to hospitals from 1999 through 2002. MedPAC has constructed a model to estimate the combined impact of the BBA and the BBRA on hospital Medicare inpatient margins during these years. The BBRA offsets some of the impact of the BBA, but was not in effect in 1998.[12] In terms of inpatient payments, the significant changes in the BBRA apply to DSH and IME payments.

Although the BBA affected Medicare payments for all five service components of our Medicare margin (discussed in a later section), MedPAC modeled the impact of the BBA and BBRA only on inpatient payments. We chose to use inpatient margins to gauge the overall impact of the BBA and BBRA for two reasons. First, Medicare inpatient payments represent by far the largest component of hospital Medicare margins, and although they are the only positive component of the Medicare margin in 1998 (the first year of the BBA), they keep the overall margin well above zero. Second, the most significant future provisions of the BBA affect inpatient

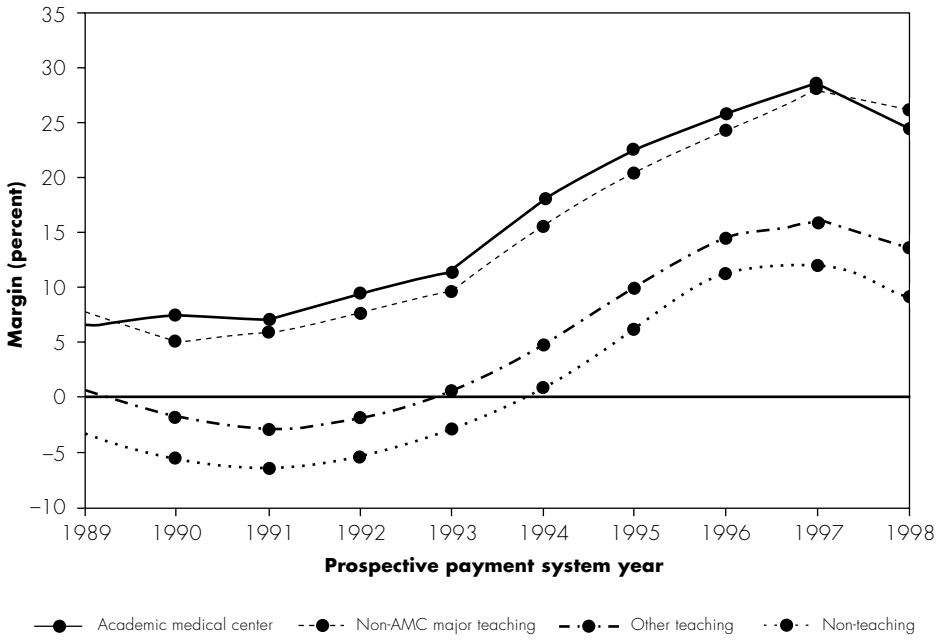
10 In 1997, the percent change in cost per case was 0.4 percent for urban hospitals and 1.9 percent for rural hospitals; in 1998, the percent changes were 1.5 percent and 2.2 percent, respectively.

11 In 1998, the percent change in cost per case was 0.6 percent for major teaching hospitals and 1.7 percent for nonteaching and other teaching hospitals.

12 The BBRA reduced or delayed several provisions of the BBA designed to reduce Medicare payments to hospitals and served to offset some of the negative impact of the BBA. Some of the provisions of the BBRA benefited certain groups of hospitals; others helped most hospitals.

FIGURE 5-5

Trend in Medicare hospital inpatient margin, excluding graduate medical education, by teaching status, 1989–1998



Note: AMC (academic medical center). Data for 1998 are preliminary, based on 56 percent of all hospitals coverec by prospective payment.

Additional data can be found in Appendix Table C-3.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

payments, while the negative effects of the BBA on outpatient, home health, and skilled nursing facility services occur largely in 1998. Although these decreases continue through 2002, there are no additional reductions, except a possible cut in the home health base rate in 2002; the essential effect of the BBA on the other components of the Medicare margin is revealed in the 1998 Medicare Cost Report data. In fact, the outpatient PPS (discussed later in this chapter) is projected to increase the aggregate outpatient margin slightly, as will provisions in the BBRA that increase skilled nursing facility PPS payments. A PPS for home health services will be implemented that could affect home health margins, but the interim payment system in place in 1998 has already had a significant negative impact, and the intent of the PPS is to be distributive.

The estimate of Medicare inpatient margins for 1999–2002 is based on Medicare inpatient payments and costs from the 1998 Medicare Cost Report database. The 1998 cost report data reveal the impacts of many inpatient provisions of the BBA, such as the entire capital payment reduction, the zero update, and the largest of several incremental cuts in IME and bad debt payments. Data for 1998 provide the advantage of building on a base that incorporates many of the provisions and transitions scheduled to occur under the BBA.

The inpatient margin projection requires estimating both payments and costs for Medicare inpatient services. Payments for 1999–2002 are calculated with the aid of MedPAC's case-level PPS payment model. MedPAC staff maintain and update the PPS payment model to aid in simulating the effects of various payment policy changes that have been implemented or are under consideration. The model calculates standard operating and capital payments and all adjustments (geographic reclassification, teaching status, sole community hospitals, DSH payments, outlier adjustments, and so forth) for each hospital subject to the inpatient PPS. The model was adjusted to incorporate the key inpatient policy provisions of the BBA and BBRA. In addition, early indications from HCFA show that the CMI will drop again in 1999 by approximately 0.5 percent. This reduction in the CMI was incorporated for the 1999 payment estimate; we then assumed a stable CMI for the remaining years.

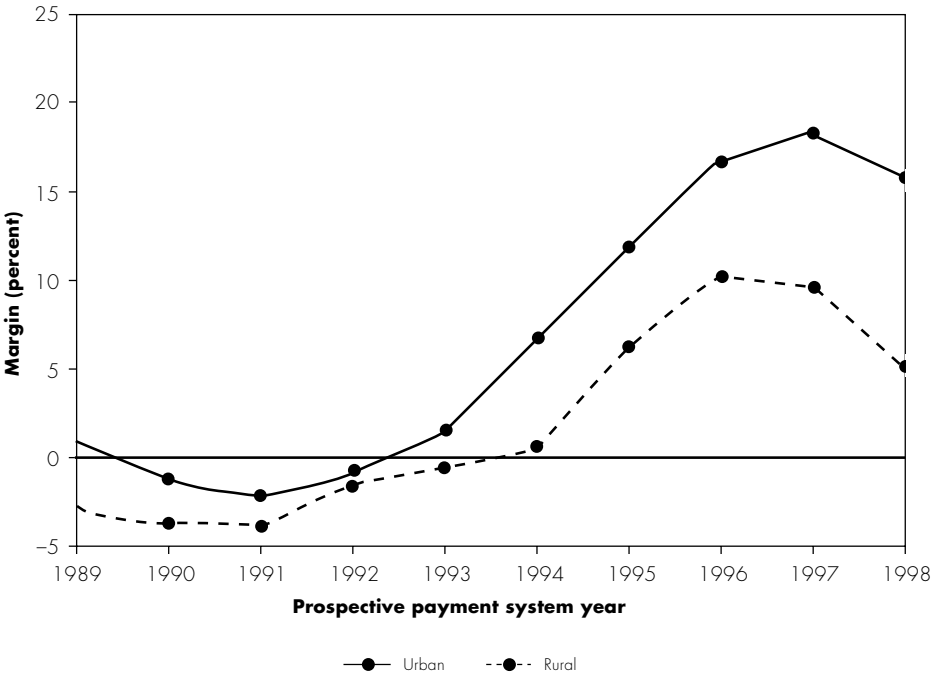
The 1998 base costs for inpatient services are adjusted each year for anticipated cost growth. Cost growth in 1999 is estimated by the National Hospital Indicators Survey as the market basket minus 1.1 percentage points; for 2000–2002, we estimate that costs for all hospitals will grow at a rate of market basket minus 1.0 percentage point. Because our analyses have shown that cost growth is heavily influenced by length of stay, we were prepared to assume gradually higher annual increases in costs per case if evidence indicated that the reduction in length of stay was leveling off. The 1999 Health Indicators Survey suggested, however, that length of stay may not yet be stabilizing.

A number of other assumptions underlie the BBA/BBRA impact analysis. For a comprehensive discussion of the methodology for this model and these assumptions, see Appendix D.

The combined effect of the BBA and BBRA will continue to reduce hospital Medicare inpatient margins, due to reductions in the update factor, DSH payments, bad debt payments, and other provisions such as the expanded transfer policy. We estimate that the inpatient margin for all hospitals will decline from 14.4 percent to 12.6 percent in 1999, due mostly to the introduction of the expanded

FIGURE 5-6

Trend in Medicare inpatient hospital margin, excluding graduate medical education, by urban and rural location, 1989–1998



Note: Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. Data for 1998 have been weighted by teaching status to improve predictive accuracy.

Additional data are shown in Appendix Table C-3.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

transfer policy (part of the BBA), and the case-mix reduction (not part of the BBA). The inpatient margin will then decline more than 1 percentage point to 11.5 percent in 2000 before essentially leveling off through 2002, reaching a low of 11.2 percent. The reductions in 1999 and 2000 are moderate, relative to the 2.6 percentage point reduction in 1998, and in 2001 and 2002, the impact of the BBA on Medicare inpatient margins will be negligible.

The BBA and BBRA will tend to affect urban and rural hospitals differently, but have relatively equal impacts on teaching and nonteaching hospitals (Table C-5, Appendix C). In 1999, our model suggests that urban hospital inpatient margins will fall 2.5 percentage points, while rural hospital inpatient margins will fall only 0.5 percentage points. In 2001, urban hospital margins will fall more than 1 percentage point, while rural hospital inpatient margins will fall less than 0.5 percentage points. Teaching and nonteaching hospitals will each have reductions of approximately 3 percentage points in 1999, and 2 percentage points in 2000.

These estimates assume modest cost growth; if cost growth is higher than anticipated (which most likely would occur if length of stay stabilized), margins would be lower. As noted, our model assumed equal cost growth rates for all hospital groups, whether urban or rural and teaching or nonteaching, but cost trends could differ among these groups in the future as they have in the past. The margins produced for the BBA and BBRA analysis do not include graduate medical education (GME), which would tend to reduce the inpatient margin because GME costs exceed GME payments. In 1998, GME reduced the inpatient margin from 14.4 percent to 13.7 percent. A proportional effect in 2002 would reduce the margin from 11.2 percent to approximately 10.7 percent.

Medicare outpatient margin through 1998

Although Medicare payments for inpatient services have tended in recent years to exceed associated costs, payments for outpatient services have not. MedPAC has calculated the hospital Medicare outpatient margin based on Medicare Cost Report data. This margin compares the payments hospitals receive from Medicare for outpatient services with their Medicare-allowable costs for these services. Although many outpatient services under Medicare are currently paid on a cost basis, Medicare outpatient payments do not cover costs due to payment discounts—Medicare currently pays 94.2 percent of operating costs and 90 percent of capital costs.

Though not an explicit policy of the Medicare program, excess payments for inpatient services under Medicare have implicitly subsidized the shortfall from outpatient services and other lines of service. However, in preparing their Medicare Cost Reports, providers have had a strong incentive to disproportionately allocate overhead and ancillary costs to services for which payments were made on a cost basis (primarily outpatient, home health care, and skilled nursing facility services), rather than by a PPS. A 1993 study by the Prospective Payment Assessment Commission found that outpatient costs were overstated by at least 8 percent, and a 1994 study for HCFA suggested that these costs may be overstated by more than 15 percent (ProPAC 1993, CHPS Consulting 1994).[13] Thus, the disparity in

13 The final report of HCFA's study contains a series of DRG-specific values, rather than an aggregate national figure for outpatient cost overstatement. However, the study's principal investigator has estimated that the national figure is between 15 percent and 20 percent.

margin between inpatient and outpatient services is not nearly as great as nominal values would suggest.

One reason to support the subsidy system, to the extent that it exists, is comparability of payment rates among settings. Because ambulatory surgical centers and physician practices can often provide comparable services at lower cost (lower, at least, than the cost estimates reflecting overallocation of overhead and ancillary costs), increased outpatient payments could create an incentive for the place of service to be determined by economic rather than clinical reasons.

The outpatient margin for 1996–1998 suggests two distinct trends: first, discounted cost-based payments produced negative margins in 1996 and 1997, and second, the effect of the BBA caused outpatient margins to fall dramatically, from –7.4 in 1997 to –15.9 percent in 1998 (Table 5-3). The outpatient margin reduction in 1998 was due primarily to the formula-driven overpayment (FDO) provision of the BBA, intended to reduce overpayments for certain outpatient services. The FDO provision had at least a small effect in 1997 as well, but outpatient margins actually improved slightly in that year, perhaps due to improved cost control.

The proportion of hospitals with negative outpatient margins approached 99 percent in 1998, increasing from 92 percent in 1997 and 96 percent in 1996. In contrast to Medicare inpatient margins, there is a high degree of consistency in outpatient margins between urban and rural hospitals—each group had comparable negative margins in 1996 and 1997, and the implementation of the BBA in 1998 essentially doubled the gap from full cost payment.

From 1996–1998, academic medical centers and non-AMC major teaching hospitals had outpatient margins 3 to 4 percentage points lower than those of nonteaching and other teaching hospitals. This relationship held after the implementation of the BBA; the outpatient margins of large teaching hospitals fell below –19 percent in 1998, while other teaching and nonteaching hospitals' margins fell to approximately –15 percent. Although the cuts in IME and DSH payments hit teaching hospitals harder than nonteaching institutions, teaching hospitals responded with lower cost growth in 1998.

The impact of outpatient policy changes beyond 1998

Hospitals face implementation of the new outpatient PPS on July 1, 2000.[14] After that date, payments for outpatient services will no longer be made on a mixture of reasonable cost, fee schedule, and blended methods, but will be consolidated into a single fee schedule. The new payment system was designed to provide total payments to hospitals at least equal to payments under the previous system, assuming a similar volume and mix of services. In addition, transitional policies and special treatment for cancer and small rural hospitals will increase total payments to hospitals for outpatient services. HCFA estimates that outpatient payments to hospitals as a whole will be 4.6 percent higher in 2001 than they would have been if the PPS were not implemented.

Collectively, then, hospitals should not see decreased payments under the outpatient PPS, but the impact of implementing a new payment system on individual hospitals, and classes of hospitals, depends on the variation in cost and charge structures among hospitals. Hospitals' abilities to adapt to the new payment system—for example, by increasing efficiency and improving coding—will also influence the impact of the outpatient PPS.

Some hospitals can be expected to fare better under the PPS than under previous payment policy. Those that do worse will benefit from transitional corridors that limit hospitals' financial losses through 2003. Including the transitional corridor payments, HCFA estimates that all hospital types will do better under the PPS than under previous payment policy.

TABLE 5-3

Trend in Medicare hospital outpatient margin, excluding graduate medical education, by location and teaching status, 1996–1998

Hospital group	1996	1997	1998
All hospitals	−8.0%	−7.4%	−15.9%
Urban	−8.1	−7.4	−15.9
Rural	−7.3	−7.1	−15.7
Academic medical centers	−10.4	−10.4	−19.4
Non-AMC major teaching	−10.8	−9.7	−19.4
Other teaching	−7.3	−7.1	−14.6
Nonteaching	−7.4	−6.7	−15.5
Percent of hospitals with negative outpatient margins	96.2	91.8	98.8

Note: AMC (academic medical center). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The "all hospitals" group, as well as the urban and rural groups, have been weighted by teaching status for 1998 to improve predictive accuracy.

Additional data are shown in Appendix Tables C-6 and C-7.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

14 See Chapter 2 for a discussion of the outpatient PPS.

However, major teaching hospitals are expected to fare less well than nonteaching or other teaching hospitals, experiencing a 2.6 percent increase in payments, compared with 5.0 percent for the others. Small rural hospitals are held harmless from financial losses under the outpatient PPS through 2003. A similar hold-harmless provision permanently protects cancer hospitals. These hospitals will operate under the PPS, but receive additional payments if the PPS amounts are less than they would have been under prior payment policy.[15]

Medicare margin

The Medicare margin provides a comprehensive analysis of Medicare payments to hospitals, and associated costs, for the five largest lines of Medicare service. This margin was created by MedPAC, in conjunction with HCFA, to provide a more representative analysis of hospital Medicare payments and costs. Although the inpatient and outpatient margins are useful tools for analyzing Medicare payment policy, they do not provide a comprehensive picture of Medicare's impact on hospitals. A significant proportion of Medicare payments to hospitals fall outside these categories; some hospitals operate units that are exempt from the PPS system, and many PPS hospitals furnish other lines of service paid by Medicare, such as home health and skilled nursing. Recent policy changes, such as the introduction of new payment systems for post-acute care, have increased the policy relevance of these other Medicare services that hospitals provide.

The Medicare margin includes payments and costs to hospitals covered by the inpatient PPS. These payments and costs include PPS inpatient, outpatient, home health, skilled nursing, PPS-exempt units and GME, and incorporate more than 90 percent of Medicare payments to these hospitals. The measure also reflects reimbursement for Medicare bad debts.

The Medicare margin is calculated using Medicare-allowable costs reported on the Medicare Cost Report each hospital submits to HCFA. In future iterations of this margin, HCFA and MedPAC hope to include other elements of the Medicare program that affect hospitals, including payments and costs for care in comprehensive outpatient rehabilitation facilities, fee-based outpatient services (such as durable medical equipment and laboratory services), and hospice and ambulance services.

The Medicare margin allows policymakers to compare Medicare margins among service lines (including the previously unreported home health and skilled nursing facility components), and to gauge the contributions of each component to the Medicare margin and the hospital's overall financial condition.

In 1998, the Medicare margin was 6.5 percent, down from 9.8 percent in 1997 and 9.0 percent in 1996 (Table 5-4).[16] The 1998 reduction of almost 3 percentage points is evidence that the BBA effectively reduced Medicare payments to hospitals. Hospital-based home health and skilled nursing margins fell to extremely low levels in 1998, though the proportion of hospital Medicare payments for each of these service components is relatively small. Reductions in home health margins were the most dramatic: they fell more than 21 percentage points, from –4.6 percent in 1997 to –25.9 percent in 1998. This drop is due mostly to the interim payment system put in place under the BBA, but could also be due to enforcement of fraud and abuse rules by the Inspector General. The impact of the BBA on skilled nursing units, though less severe, was also large. Skilled nursing facility (SNF) unit margins fell more than 6 percentage points, from –16.0 percent in 1997 to –22.4 percent in 1998, due primarily to implementation of the SNF PPS that began under the BBA. PPS-exempt units fell more than 4 percentage points, to –1.7 percent in 1998.[17] The

TABLE 5-4

Trends in hospital Medicare margins, including graduate medical education, 1996–1998

Component	1996	1997	1998	1998 cost share	1998 payment share
Inpatient	14.5%	15.9%	13.7%	68.4%	74.7%
Outpatient	−8.0	−7.8	−15.2	17.3	13.8
Home health	−4.6	−4.6	−25.9	4.7	3.4
Skilled nursing	−12.8	−16.0	−22.4	4.0	3.0
PPS-exempt	2.4	2.4	−1.7	5.5	5.0
Total	9.0	9.8	6.5	100.0*	100.0*

Note: PPS (prospective payment system). Data are based on Medicare-allowable costs from the Medicare Cost Report. Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment, and have been weighted by teaching status to improve predictive accuracy.
* Totals may not sum to 100 due to rounding.

Source: HCFA Office of the Actuary and MedPAC analysis of Medicare Cost Report data.

15 Table 2-2 shows the impact of the PPS by hospital group. Additional payments are based on a comparison of PPS payments actually received to current-year reasonable costs, multiplied by a payment-to-cost ratio derived for 1996. The 1996 payment-to-cost ratio is calculated to exclude formula-driven overpayments. A similar approach is used to calculate payments under the transitional corridors. See Chapter 2 for more detail.

16 The inclusion of GME in the Medicare margin tends to drive down the measured margin because GME costs are generally higher than payments; therefore, the margins for inpatient and outpatient Medicare are lower in this analysis than the margins presented in earlier sections. GME affects inpatient services to the greatest extent and all other services to a lesser extent. The relationship of GME payments and costs does not change to any extent under the BBA.

margins for home health agencies and SNFs in the Medicare margin are calculated for hospital-based units and may not be comparable to freestanding facilities.

Similar to the outpatient margin, negative margins for cost-based reimbursed services such as home health, SNF, and PPS-exempt units are at least somewhat due to the over-allocation of costs to these services by providers. The incentive to allocate overhead and ancillary costs to areas other than the inpatient services covered by PPS is as strong for these other services as it is for outpatient services, although no information is available on the extent of the reporting bias.

Despite the fairly large reduction in each component of Medicare payments besides inpatient services, and the fact that all components besides inpatient (including GME) had negative margins in 1998, the overall Medicare margin remained well above zero. This is because the relative payment and cost shares of the components of the Medicare margin are dominated by inpatient services. The PPS inpatient cost share was 68.4 percent in 1998; the outpatient cost share was 17.3 percent and the other three components sum to less than 15 percent (Table 5-4). The payment share is also dominated by inpatient services. In 1998, nearly 75 percent of the payments were for inpatient, less than 14 percent were for outpatient, and approximately 11 percent were for home health, skilled nursing and PPS-exempt units combined. The higher payment share relative to cost share for inpatient services underscores the large inpatient margin, while margins for all other service lines were negative in 1998.

The BBA could continue to reduce margins on all hospital service components, especially if costs begin to rise at a faster rate than in recent years (for instance, if length of stay leveled off or began to increase). MedPAC has estimated that the BBA will reduce inpatient margins to 11.2 percent in 2002. Whether the inpatient surplus will be sufficient to offset continued losses in other service lines, and potential behavioral responses of hospitals, remains to be seen. However, it is not clear whether hospitals will actually suffer under the new PPS systems for outpatient, skilled nursing and home health services. HCFA estimates that the outpatient PPS will increase payments by almost 5 percent, and the BBRA increases SNF payments by 4 percent, in addition to the legislated updates that apply to these sectors.

Financial performance of Medicare and other payers

MedPAC monitors the overall financial health of hospitals because we are concerned that hospitals remain able to provide care to Medicare beneficiaries and other patients. A significant decline in financial health could impair this ability and create problems of access.

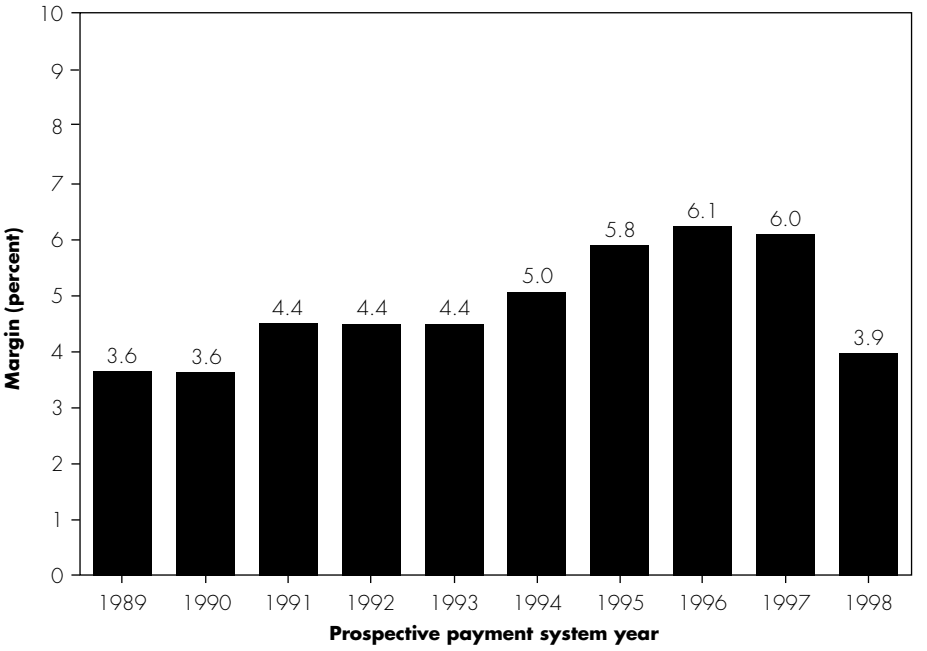
Total margin

The most comprehensive measure of hospital financial performance is the total margin, calculated as net income from all sources (including payments for patient care from all payers and non-patient revenue) divided by total hospital revenues. The total margin for PPS hospitals in FY 1998 was 3.9 percent, down substantially from 6.0 percent in 1997 (Figure 5-7). However, the total margin averaged 5.2 percent from 1991–1996 and 4.6 percent in the early years of the PPS (1984–1990). For historical perspective, the AHA reported total margins of less than 1 percent or negative in seven years during 1971–1980.

In 1999, data from the Health Indicators Survey suggest that total margins again declined significantly (Table 5-5). The 1999 estimate from this source is 2.7

FIGURE 5-7

Trend in hospital total margin, 1989–1998



Note: Additional data are shown in Appendix Table C-8.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

17 For a discussion of BBA provisions that effect exempt units and facilities, please see Chapter 6.

TABLE 5-5

Trend in hospital total margin, 1997–1999

Year	Data source: Medicare Cost Report	Data source: AHA Annual Survey	Data source: Health Indicators Survey
1997	6.0%	6.7%	NA
1998	3.9	5.8	4.3%
1999	NA	NA	2.7

Note: AHA (American Hospital Association), NA (not available).

Source: MedPAC analysis of data from HCFA and the American Hospital Association.

percent, less than half the cost report value for 1997 of 6.0 percent.

Total margins from the AHA Annual Survey have tended to run slightly higher than those from the Medicare Cost Reports. In 1998, the AHA figure was 5.8 percent, compared with 3.9 percent from the cost report data. We believe the greater-than-usual discrepancy between the two is largely explained by timing. Both data sources reflect hospital reporting periods, which vary among hospitals. The distribution of the Annual Survey file most closely aligns with the federal fiscal year, while the distribution of the cost report file bridges two federal fiscal years. Thus, the 1998 total margin based on cost report data actually reflects considerable 1999 influence, when margin values were known to be lower.

The decline in total margins was accompanied by an increase in the proportion of hospitals with negative margins. These hospitals had higher expenses for all purposes than revenue from all sources. In 1989, 31.9 percent of hospitals had negative total margins (Figure 5-8). As total margins increased, the proportion fell to 20.7 percent in 1995. The share with negative margins increased slightly in 1996, more in 1997, and then to 34.2 percent in 1998.

The decline in total margins affected all hospitals. Major teaching hospital total margins fell from 5.1 percent in 1997 to 2.3 percent in 1998 (Figure 5-9). This group's total margin has long been lower than those of other teaching and nonteaching facilities, despite relatively high PPS margins (see previous section). The low total margins for major teaching hospitals reflect, in part, the high burden of uncompensated care provided by these hospitals and may also reflect mission-related costs not covered by Medicare or research funding.

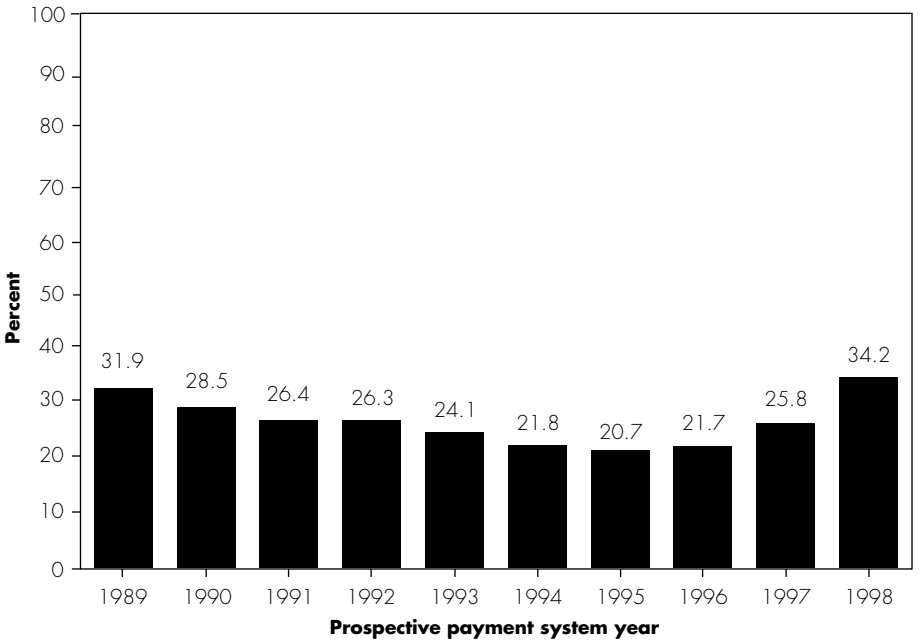
Since 1989, urban hospitals have consistently had lower total margins than rural hospitals, despite generally higher PPS margins (Figure 5-10). Both urban and rural facilities experienced significant drops in total margins in 1998.

Comparison of payers

The adequacy of Medicare's payments can be compared with that of other payer groups, both public and private, by calculating each payer's payments as a percentage of the costs of treating its patient load. In 1998, the payments of both Medicare and private payers fell relative to costs, but the drop in private payer payments contributed much more than did the drop in Medicare payments to hospitals' deteriorating financial performance.

FIGURE 5-8

Percent of hospitals with negative total margins, 1989–1998

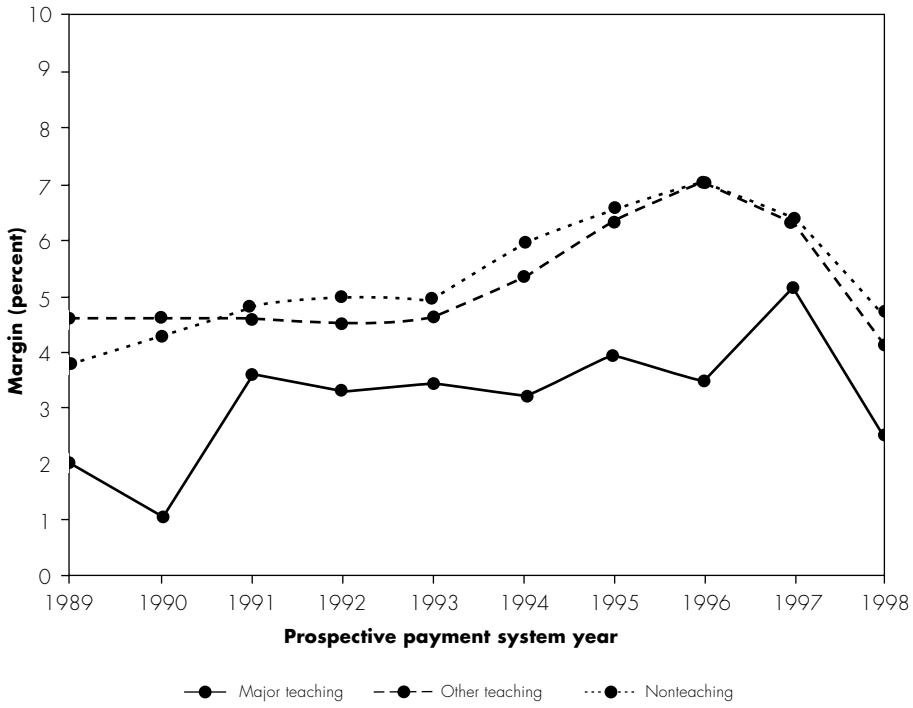


Note: Additional data are shown in Appendix Table C-8.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

FIGURE 5-9

Trend in hospital total margin, by teaching status, 1989–1998



Note: Additional data are shown in Appendix Table C-8.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

Through the late 1980s and into the 1990s, hospital cost increases were far higher than Medicare's payment increases, such that Medicare's payment-to-cost ratio fell significantly, to 88 percent in 1991 (Figure 5-11). Hospitals recouped the lost revenue by raising prices to private payers in what became known as "cost shifting." The private payer payment-to-cost ratio consequently rose to a peak of 131 percent in 1992.

About that time, health maintenance organizations (HMOs) and other private payers began to demand lower prices. Hospitals responded by slowing their cost growth, but private payer payments fell sharply relative to costs, reaching 118 percent in 1997. Meanwhile, Medicare's annual payment increases were not much different in the early 1990s than they had been in the 1980s. Steady payment growth coupled with hospitals' markedly lower cost increases resulted in the Medicare payment-to-cost ratio rising from its low of 88 percent to 104 percent in 1997.[18]

As discussed earlier in the chapter, key BBA provisions (most notably the zero update for PPS payments) reduced Medicare's payment-to-cost ratio from 104 percent to about 103 percent in 1998. Private payer payments continued their steep decline, however, from 118 percent to 114 percent. This marks the first time in the history of the program that Medicare and private payers have exerted substantial downward pressure on hospital revenues simultaneously.

Medicare and private payers are nearly equal in size (responsible for 39 and 42 percent of hospital costs, respectively). Using these cost shares to weight the decrease in payment-to-cost ratios reveals that gains from private payers fell by 1.2 percentage points, while gains from Medicare dropped only 0.4 percentage points (Figure 5-12).[19] Thus, private payers contributed roughly three times as much as Medicare did to the 1998 drop in total margin.

In the American Hospital Association data used for this analysis, however, most revenue from Medicare and Medicaid managed care is booked as private payer revenue. Medicare has no direct control over the level of payments that Medicare HMOs negotiate with hospitals, but shrinking payments made on behalf of Medicare beneficiaries enrolled in managed care has likely contributed to the steep drop in private payer payments relative to costs.

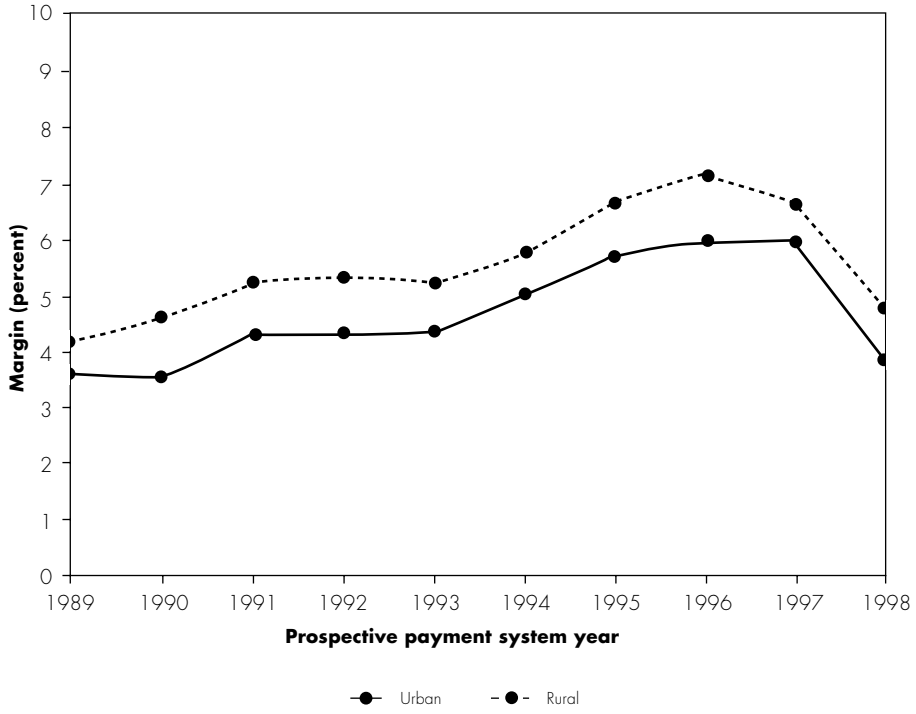
Although this data set is not available beyond 1998, we can deduce from the available data on total margin and our projection of the Medicare inpatient margin (discussed earlier) that the private payer payment-to-cost ratio probably continued to fall in 1999. In late 1999 and into 2000, however, industry analysts suggest that hospitals have been successful in negotiating higher rates in the private sector (Moody's Investors Service, Inc. 2000, Jaklevic 2000, Legg Mason 1999). It is too early to tell, however, whether this will raise the private payer payment-to-cost ratio (the first increase since 1992) or stanch the downward trend in hospital total margin.

18 Medicare's 1997 payment-to-cost ratio of 103.6 percent is equivalent to a margin of 3.5 percent. This margin differs from the 1997 most-of-Medicare margin, 9.8 percent, in three ways: (1) it encompasses all costs rather than Medicare-allowable costs, (2) it reflects all Medicare services that hospitals provide, rather than the five largest services (which comprise more than 90 percent of the total), and (3) it is based on a crude allocation of costs between Medicare and other payers, in contrast to the involved cost allocation process of the Medicare Cost Report.

19 "Gains" in this context are revenues from a payer minus the costs of treating its patients, divided by total (all-payer) expenses.

FIGURE 5-10

Trend in hospital total margin, by urban and rural location, 1989–1998



Note: Additional data are shown in Appendix Table C-8.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

Updating operating and capital payments

The Commission develops recommendations each year for updates to operating and capital payment rates for PPS inpatient services. We present a recommendation for a *combined* operating and capital payment update for 2001. With the end of the transition to fully prospective capital payment, both operating and capital prospective payments will be made using standard federal rates adjusted for individual hospital circumstances. Separate operating and capital payments are a relic of the era of cost reimbursement of health care. MedPAC has recommended that Congress implement a single, combined payment rate (MedPAC 2000).

We evaluate our update recommendation in light of its probable impact on beneficiary access to quality care and in light of the financial performance of the hospital industry. However, financial performance is never our primary consideration in setting the update.

The Commission's update recommendation

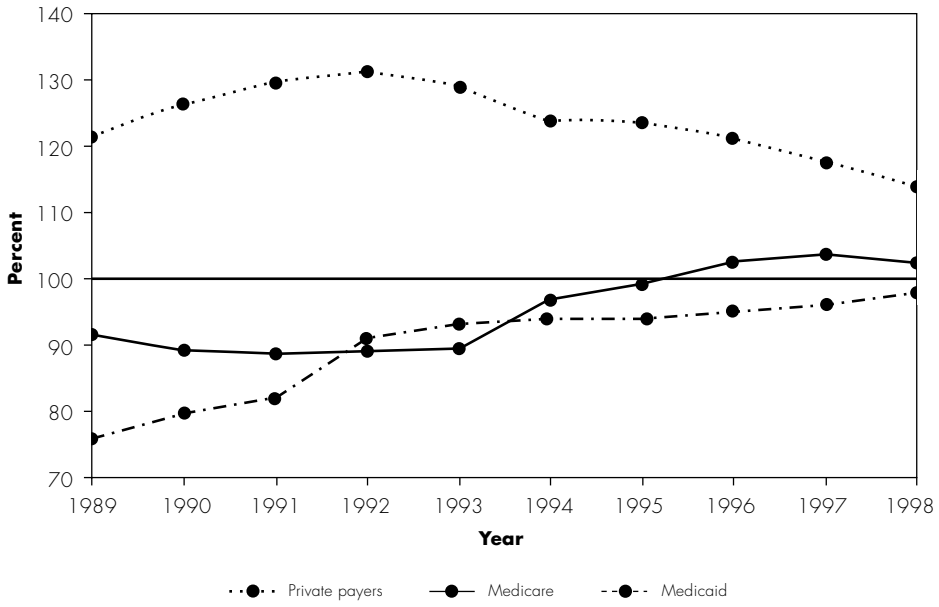
In developing the update recommendation, MedPAC (like ProPAC before it) uses a framework to consider individual factors that affect costs or payments (Table 5-6). The framework begins with a weighted average of HCFA's forecasts of the operating and capital market baskets. We then adjust for any error in the market basket forecast on a two-year lagged basis. We identify new technologies that are expected to increase costs but are not reflected in the market baskets, and we require a modest improvement in hospital productivity to generate savings to offset some of these costs. We therefore calculate the scientific and technological advances adjustment by subtracting a standard for productivity growth from the estimated cost impact of new technologies. When applicable, we include adjustments to reflect one-time factors increasing costs and reductions of costs due to shifting of care to other settings. A case-mix index adjustment increases or decreases the update to the extent that changes in DRG coding have decreased or increased payments with no real change in patient care costs.

The PPS operating update is set in law and the PPS capital update is set at the discretion of the Secretary of Health and Human Services. Policymakers need to know the combination of operating and capital updates to be consistent with an analytically informed judgement about how much rates should be increased each year to ensure beneficiaries' access to safe and effective inpatient hospital care. For FY 2001, the BBA set the operating update at 1.1 percent below the rate of increase of the market basket, which would result in a 2.0 percent increase in rates if the current market basket forecast holds. If the capital update were set by the Secretary at the rate of increase of the HCFA capital market basket, it would equal 0.9 percent. This would suggest an increase to the combined rate of 1.9 percent in 2001.

MedPAC recommends an update for inpatient hospital payments of 3.5 percent to 4.0 percent for FY 2001. This is 0.6 percent to 1.1 percent greater than the increase in a combined operating and capital market basket. It is attributable to a positive adjustment of 0.1 percent for market basket forecast error in FY 1999, an adjustment of 0.0 percent to 0.5 percent for the costs of new drugs and other scientific and technological advances (net of productivity improvement), and a positive adjustment for DRG coding change of 0.5 percent.

RECOMMENDATION 5A

FIGURE 5-11 **Hospital payment-to-cost ratios by payer, 1989–1998**



Note: Payment-to-cost ratios cannot be used to compare payment levels because the mix of services and cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating that payer's patients. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (about 35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

Additional data are shown in Appendix Table C-12.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

For fiscal year 2001, the Congress should increase the operating and capital payment rates for prospective payment system inpatient services by the rate of increase in the combined market basket plus 0.6 to 1.1 percentage points. If the current operating and capital market basket estimates hold, that level would result in an update of between 3.5 percent and 4.0 percent.

Changes in input prices

The Commission develops estimates of annual increases in hospital input prices using HCFA's market baskets for operating costs and capital costs. The operating market basket estimates changes in the prices of hospital operating inputs such as staff, medical supplies, and pharmaceuticals. The capital market basket estimates changes in hospital capital costs, including depreciation, interest, and insurance. We combine the market baskets to develop an estimate of change in overall operating and capital prices. Operating costs represent about 92 percent of total hospital costs and capital costs the remaining 8 percent.[20] We therefore calculate a combined market basket forecast by weighting the operating forecast by 0.92 and the capital forecast by 0.08.

For FY 2001, the HCFA operating market basket is forecast to increase by 3.1 percent and the HCFA capital market basket by 0.9 percent. The combined market basket is therefore estimated to increase by 2.9 percent.

The increase is then adjusted for any error in the market basket forecasts used to set payment in 1999. This adjustment is determined by comparing the forecasts of the HCFA operating market basket (the PPS input price index) and capital market basket (the capital input price index) with actual increases. A forecast of 2.4 percent was used for the operating update implemented in FY 1999; the actual increase was 2.5 percent. In 1998, the HCFA capital market basket was forecast to increase by 0.7 percent in 1999; it actually increased by 0.7 percent. This implies a combined HCFA forecast for 1999 of 2.2 percent and an actual value of 2.3 percent. Thus, the FY 2001 update is increased by 0.1 percent for forecast error.

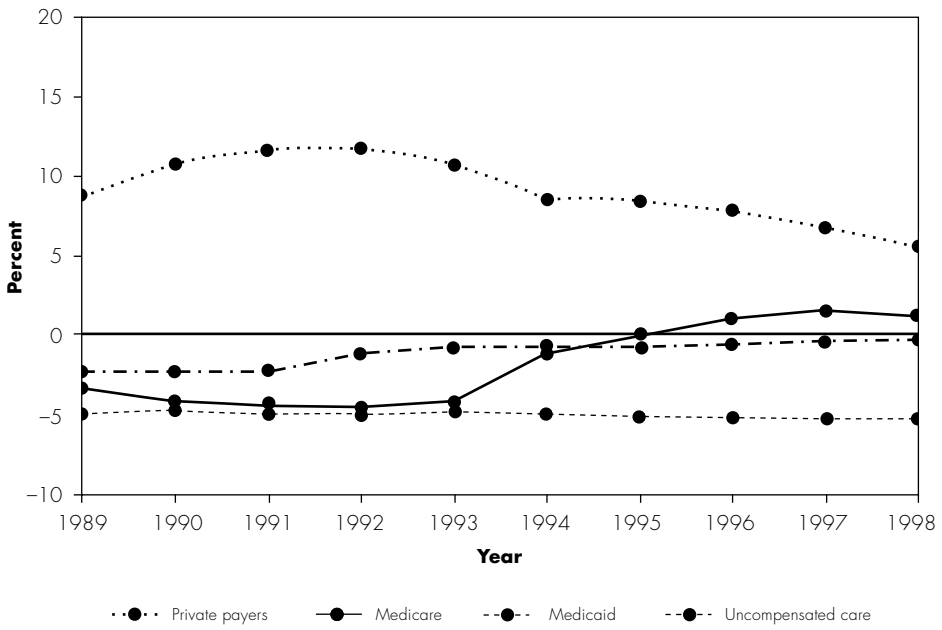
Scientific and technological advances net of productivity growth

MedPAC believes that the costs associated with scientific and technological advances should be financed at least in part through improvements in hospital productivity. This tends to occur in other sectors of the economy as well. However, the Commission has not been able to develop a single measure of productivity that we believe captures all aspects of input usage, measures a constant output over time, and is not contaminated by unrelated factors. For this reason, we offset our scientific and technological advances allowance with a fixed standard for expected productivity growth. For the 2001 update the Commission set a standard of 0.5 percent. We annually review anticipated changes in hospital technology to determine whether they include cost-increasing, quality-enhancing technological developments with aggregate costs that will exceed expected productivity improvements.

20 These figures were reached through an analysis of National Hospital Panel Survey data on total depreciation, total interest, and total expenses, FY 1994–1998.

FIGURE 5-12

Gains or losses as a percent of total hospital costs, by payer, 1989–1998



Note: Gains or losses are the difference between the cost of proving care and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (about 35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

Additional data are shown in Appendix Table C-13.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

The Commission has sought to continuously improve our information about hospital productivity growth. The Bureau of Labor Statistics has not developed productivity measures for the hospital industry or for any other medical care service industry. It has produced estimates of labor productivity for 14 finance and service industries, but the results range from −1.8 percent to 4.4 percent for 1987–1997 (Duke and Usher 1998, BLS 1999b). No individual industry studied is a good proxy for the hospital industry.

The Commission believes that a combined measure of labor and capital productivity growth in the general economy is an appropriate standard for the hospital industry. Multifactor productivity measures output per unit of combined labor and capital input. Growth in multifactor productivity in the private nonfarm business sector of the economy is the most comprehensive measure of productivity growth for that sector. The Bureau of Labor Statistics reports that this measure increased at an annual rate of 0.4 percent during 1990–1996 and 1996–1997 (BLS 1999a).[21]

The allowance for scientific and technological advances is a future-oriented policy statement designed to account for uses of emerging technologies that enhance quality but increase costs. It represents MedPAC's best estimate of the incremental increase in costs for a given fiscal year resulting from the adoption of new technologies or new applications of existing technologies (beyond that automatically reflected in the payments hospitals receive). This allowance is intended to encourage facilities to appropriately adopt such new technologies.

The allowance for scientific and technological advances considers only new technologies that have progressed beyond the initial stage of use but are not yet fully diffused into the inpatient hospital setting. The allowance does not include the costs of investigational technologies (because Medicare does not generally cover them) or fully diffused technologies (because these costs are reflected in the annual recalibration of the DRGs). The allowance does not attempt to identify all cost-increasing technologies, but focuses on the most significant ones from the perspective of cost and diffusion. An overview of the technologies that staff have identified is provided in Appendix E.

MedPAC is concerned that advances in pharmaceutical technology offer improved treatment options for Medicare beneficiaries but impose considerable costs on hospitals. Spending on drugs has increased rapidly in recent years, in large part due to the introduction of new drugs (see Chapter 1). In combination with information system costs, the appearance and diffusion of new drugs will significantly increase hospital costs in FY 2001. The Commission recommends an allowance for scientific and technological advances of 0.5 percent to 1.0 percent. With a productivity offset of 0.5 percent, this implies a net allowance for scientific and technological advances of 0.0 percent to 0.5 percent for FY 2001.

Adjustment for one-time factors

In addition to incurring costs by adopting technological innovations, hospitals also incur significant costs for unusual,

21 Data on multifactor productivity were not available from the Bureau of Labor Statistics for 1998, 1999, or 2000 at the time of writing. Labor productivity growth for the nonfarm business sector in 1998 and 1999 was greater than the 1990—1997 average, suggesting that multifactor productivity growth in those years was higher than the 1990–1997 average.

TABLE 5-6

Update framework for combined inpatient hospital payment rates, fiscal year 2001

Component	Percent
FY 2001 combined market basket forecast	2.9%
Correction for FY 1999 market basket forecast error	0.1
Net allowance for scientific and technological advances	0.0 to 0.5
Adjustment for one-time factors	0.0
Adjustment for unbundling of payment unit	0.0
Adjustment for case mix change:	
DRG coding change	0.5
Within-DRG case complexity change	0.0
Sum of components	3.5 to 4.0 (combined MB+0.6 to combined MB+1.1)

Note: FY (fiscal year), DRG (diagnosis related group). MB (market basket index). FY 2001 combined market basket forecast is based on HCFA operating market basket forecast (weight 92 percent) and capital market basket forecast (weight 8 percent). Applies only to services covered by Medicare's inpatient PPS.

Source: HCFA Office of the Actuary and MedPAC analysis.

nonrecurring events. In FY 1999 and 2000, hospitals faced the costs of year 2000 ("Y2K") computer problems. In FY 2001, they may face costs of major new regulatory requirements. MedPAC's update framework has not explicitly considered such costs in the past, but the Commission believes Medicare should help hospitals deal with one-time costs when they are systematic and substantial and when incurring them will improve care for Medicare beneficiaries. Consequently, we have decided to include an allowance in our hospital update framework that explicitly addresses the costs of one-time events. We will exercise discretion in making this allowance.

In its FY 2000 update, MedPAC did not include an adjustment for one-time factors in our update framework. We considered the costs of year 2000 improvements by explicitly increasing the allowance for scientific and technological advances by 0.5 percent. Since the first of the year, the Commission has monitored events related to year 2000 improvements and concludes that hospitals will not incur any additional significant costs to address these problems. Therefore, the Commission is not recommending any additional allowance for year 2000 improvements for the FY 2001 update.

Several current regulatory developments could significantly affect hospital costs. However, reliable information on the costs associated with them is not yet available. Some of the key regulations have not been issued and their effective dates are unknown. Therefore, for the FY 2001 update we have decided against making an adjustment for regulatory impact.

The costs incurred in complying with new laws and regulations differ from the costs of adopting new patient care technologies in two important respects. First, hospitals may only need to revise existing management practices to comply with new laws and regulations. The allowance for scientific and technological advances, in contrast, is specifically designed to consider the costs of adopting new technologies or new uses of existing technologies. Second, the portion of the hospital budget devoted to addressing one-time events may approach zero once the necessary changes are made. The adoption of new technological advancements typically results in a sustained increase in hospitals' operating and capital budgets.

MedPAC is beginning to study the effects of new regulatory requirements on hospital costs, both within the hospital update analysis and in its upcoming BBRA-mandated study about the complexity of the Medicare program and the burdens placed on providers through federal regulations. As an initial step, MedPAC identified several recent regulations issued by the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the Department of Health and Human Services (HHS) that may potentially result in increasing hospital costs:

- Hepatitis C lookback: FDA released guidance in March 1998 on identifying and contacting individuals who received blood transfusions or blood products between 1988 and 1992.
- Patients' rights in hospitals: HCFA released an interim final rule in July 1999 that modifies hospitals' conditions of participation by setting forth six standards ensuring minimum protections of each patient's physical and emotional health and safety. These provisions became effective August 2, 1999, and HCFA's final rule is expected by the end of 2000.
- Reuse of single-use medical devices: FDA released draft guidance in February 2000, setting priorities for its enforcement of premarket requirements for reprocessed single-use devices. The comment period for this guidance closed April 11, 2000.
- Ergonomics: OSHA issued a proposed standard in November 1999 that addresses the risk of work-related musculoskeletal disorders. The comment period for this standard closed March 2, 2000.
- Occupational exposure to bloodborne pathogens: OSHA issued a directive in November 1999 that establishes

policies and provides clarification to ensure that uniform procedures are followed when conducting inspections to enforce the occupational exposure to bloodborne pathogens standard.

- Emergency Medical Treatment and Active Labor Act (EMTALA) of 1986: This statute requires hospitals to admit patients in dire medical condition and treat them at least until they are stabilized. In 1999, HHS issued advisories and regulations that greatly increased EMTALA's scope.

- Health Insurance Portability and Accountability Act of 1996: HHS published five proposed regulations in November 1999 establishing standards for the movement and uses of health care information. The expected final rule publication date for the first proposed regulation is June 2000. HHS has not yet announced final rule dates for the other four proposed regulations. Once each final regulation is issued, most health care entities have two years to implement the standards.

Unbundling of the payment unit

It is likely that some of the reduction in Medicare length of stay discussed earlier reflects reduced costs of inpatient stays. This reduction in costs was accompanied by increased costs in other settings—such as SNFs, rehabilitation hospitals and units, hospital outpatient departments, physicians' offices, and home health agencies—as care was shifted to those settings. Medicare must pay for care in other settings (by reimbursement of costs or prospective payment), at least partially offsetting the savings resulting from reduced length of stay in the acute inpatient setting.

The decline in average length of stay of all hospital patients from 1989–1998 (discussed earlier), combined with early results of the Health Indicators Survey, indicate a total decline in length of stay of 20.3 percent from 1989–1999. The effect of this decline on costs is less, however, because some cost elements (such as those connected with surgery) are fixed, and days of care at the end of the stay have lower-than-average costs (ProPAC 1990, MedPAC 1999). We estimate that this 20 percent drop in length of stay led to about a 14 percent drop in aggregate costs per case.

Other evidence supports the belief that care for Medicare beneficiaries has shifted out of the inpatient setting in the last 10 years. Medicare length of stay has consistently fallen more rapidly than has length of stay for other payers. Also, the use of post-acute care by Medicare beneficiaries has increased more rapidly than that of patients covered by other payers. These findings are consistent with the incentives facing hospitals under the PPS and under the payment systems used by other payers. Medicare pays hospitals a prospectively determined amount per discharge, which encourages hospitals to shift costs to other settings because the change will not reduce their payments. By contrast, other payers often pay on a discounted charge, or flat per diem, basis for hospital care. These payment methods reduce payments to match cost reductions, eliminating the incentive to shift costs. Although shifting costs may maintain—if not improve—quality of care for Medicare beneficiaries, it leads to inappropriately high payments, thus reducing resources available to pay for services to other Medicare beneficiaries.

MedPAC and ProPAC, one of our predecessor commissions, have identified other indirect evidence suggesting a shift of care out of the inpatient setting. First, the use of post-acute care services has expanded greatly since 1989, as Medicare length of stay declined. Second, ProPAC found that length of stay has fallen most in those DRGs where use of post-acute care is the greatest. Finally, hospitals that operate hospital-based, post-acute care services have seen the greatest drops in length of stay for inpatient acute care.

The Commission notes that not all of the length of stay decline is due to shifts of care out of the hospital setting. Some may be due to changes in technology and practice patterns that allow patients to undergo tests and procedures that require less acute recovery time, permitting discharge to home with relatively little follow-up care. Such developments represent changes that benefit both beneficiaries and hospitals. Medicare should not leave the impression that its payment decisions penalize such actions.

These considerations lead us to conclude that cost reductions of 10 percent (of the total of 14 percent resulting from the length of stay decline) are due to site-of-care substitution, or unbundling of the payment unit. Of this, more than 6 percent has already been taken into account (Table 5-7).

ProPAC began to address the shift of care out of the inpatient setting in its FY 1998 update recommendation. MedPAC continued this with its 1999 and 2000 recommendations. Starting in FY 1998, we compare the actual update with that implied by all components of the update framework, other than the unbundling adjustment. The difference between the two is the implied adjustment for unbundling included in the actual updates. Total implied adjustments were more than 5 percent for FY 1998, 1999, and 2000.

The expanded transfer policy provides a partial payment for cases in which patients are discharged to select post-acute settings after a short length of stay (MedPAC 2000). As implemented, it has reduced total payments by an estimated 0.7 percent, thereby contributing to the response to unbundling. The implied adjustments for unbundling in the actual 1998, 1999, and 2000 updates, plus the reduction in payments due to the expanded transfer policy, sum to 6.2 percent. This is the total response to date.

With a 10 percent cost reduction due to unbundling and a 6 percent payment adjustment to date, 4 percent remains for future adjustments. The Commission believes that completing the cumulative adjustment to account for the shift of care out of the inpatient setting remains important. Furthermore, the 4 percent remaining amount for the future will be adjusted upward if the drop in length of stay continues.

TABLE 5-7

Implied adjustments to date for unbundling of the payment unit

Provisions affecting unbundling	Commission update recommendation without unbundling adjustment	Actual update	Implied adjustment for unbundling
FY 1998 update	MB−0.4%	0.0%	−2.3%
FY 1999 update	MB−0.8	MB−1.9	−1.1
FY 2000 update	MB+0.2	MB−1.8	−2.0
Expanded transfer policy	NA	NA	−0.7
Total			−6.2

Note: FY (fiscal year), MB (operating market basket index), NA (not applicable). Components do not sum to total due to rounding.

Source: Balanced Budget Act of 1997 and MedPAC analysis.

In the past two years, we have recommended phasing in the negative adjustment for unbundling of the payment unit in annual increments between 1 and 3 percentage points. In light of the extreme financial pressures on the hospital industry during FY 1998–1999, however, we recommend a one-year hiatus in phasing in the adjustment. This pressure is seen in the two-year drop in total margins of more than 3 percentage points and the drop in the Medicare margin of more than 3 percentage points in the first year of the BBA alone. We anticipate continuing to phase in the remaining portion of the aggregate unbundling adjustment for the 2002 and later updates.

Changes in case mix

The case-mix adjustment is intended to ensure that payments reflect the real resource requirements of patients. The complexity of cases treated in acute hospitals generally increases at least a small amount from year to year. Under Medicare, case complexity is measured by the CMI: the average DRG weight for all cases paid under the PPS. The CMI reflects the distribution of cases among DRGs; increases in the CMI reflect shifts in the distribution of cases toward more highly weighted DRGs, producing proportionate increases in Medicare PPS capital and operating payments.

An increase in the CMI is appropriate if it reflects real changes in patient resource requirements. However, changes in coding practices can increase or decrease the CMI without real changes in resource use. At the same time, an increase in the complexity of cases within a DRG can increase resource use without a commensurate rise in payments. When such changes occur, payments should be adjusted for their effects. The Commission's case-mix adjustment modifies the next year's payment rates to account for the effects of this year's changes in coding practices and within-DRG case complexity.

CMI growth continues to be moderate. Growth has decelerated sharply in the last several years, with an actual decline of 0.5 percent for FY 1998. HCFA analysts expect that, when more complete data become available, FY 1999 will show a further decline of approximately 0.5 percent.

Past Commission analyses have found a relationship between hospital coding of cases and CMI growth. In 1988 and 1991, Medicare made major changes in the DRG system, and these changes were followed by increased CMI growth. There have been no major changes in the DRGs since 1991, however, and CMI growth appears to be much slower. The Commission believes that hospital coding behavior is not increasing the CMI.

New MedPAC research indicates that hospitals became more conservative in coding in 1998. The Commission conducted an analysis of approximately 120,000 medical records of Medicare beneficiary hospital stays in FY 1996–1999. Each year had more than 27,000 records except for 1999, for which data were available through March of the year (on less than 7,000 stays). These records were reabstracted by a HCFA contractor that employed independent, impartial coders to assign DRG codes to cases, independent of codes assigned by hospitals.

In 1996 and 1997, hospitals on average assigned slightly higher-weighted DRGs than appropriate to Medicare cases. In 1998 they shifted to more cautious coding, which contributed to slower CMI growth in the sample of cases (Table 5-8). The decline in CMI begins in 1998 in HCFA data on all cases and in 1999 in this sample. Thus, the average change from 1996–1999 is identical in the sample reabstracted data and in actual and estimated HCFA data on all cases. MedPAC will continue studying case-mix change. As more data become available for 1999, the analysis should provide a fuller understanding of current patterns in coding and their implications for Medicare payment.

Our analysis indicates that coding change reduced CMI growth (a practice that could be described as downcoding) in 1998, possibly in response to federal scrutiny. MedPAC and ProPAC recommended negative adjustments when DRG coding change led to CMI increase; in fact, we recommended negative adjustments for 10 straight years through 1998, which summed to more than 6 percentage points. MedPAC believes that it is now appropriate to include a positive adjustment for DRG coding change in the FY 2001 update and recommends an increment of 0.5 percent.

TABLE 5-8

Case-mix index change, hospital coded data and reabstracted data, fiscal years 1997–1999

Fiscal year	Case-mix index change		
	Hospital coded	Reabstracter coded	Upcoding/ downcoding
1997	0.0%	0.0%	0.0%
1998	0.6	1.1	−0.5
1999	−1.0	−1.0	0.0

Source: MedPAC analysis of data from HCFA's Clinical Data Abstraction Centers.

In past years, MedPAC has included an adjustment for increased case complexity not captured by the DRG classification system. In its first two years (updates for FY 1999 and FY 2000) MedPAC recommended adjustments for within-DRG case complexity change of 0.0 to 0.2 percent. In its update recommendations for FY 1996 and FY 1997, ProPAC recommended adjustments of 0.2 percent and 0.0 to 0.2 percent, respectively. The Commission recognizes that as the DRG classification system matures, it should account for more of the variation in costs by DRG assignment, leaving less within-DRG variation in case complexity and costliness. In light of this consideration and the low adjustments in four of the past five updates, MedPAC has decided on a zero adjustment for FY 2001. ■

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CHAPTER 6

Financial performance and payment update for facilities exempt from prospective payment

RECOMMENDATION

6A The Secretary should increase the target amount update formula for fiscal year 2001 by up to 0.3 percentage points above the market basket amount.

CHAPTER 6

Financial performance and payment update for facilities exempt from prospective payment

In this chapter

- Overview of the payment system and policy changes
- Financial performance under Medicare
- Updates to target amounts

The Medicare operating margins of inpatient facilities exempt from prospective payment dropped sharply in 1998 in response to the Balanced Budget Act of 1997. For the largest groups of these facilities (long-term, psychiatric, and rehabilitation providers), declines ranged from 4 to 7 percentage points. In contrast, before implementation of the Balanced Budget Act, substantial drops in length of stay, along with less restrictive conditions for new facilities entering the system than for older facilities, produced large increases in exempt facilities' margins from 1990–1997. The provisions of the Balanced Budget Act not only recouped some of the financial gain resulting from falling lengths of stay, but also narrowed the gap in margins between new and old facilities. The Commission recommends a range for the payment update for facilities exempt from prospective payment that extends modestly beyond the expected rate of inflation in hospital input prices, reflecting an increment for cost-increasing drugs and other technological advances.

Facilities exempt from prospective payment make up a diverse group of providers. However, they are treated similarly under Medicare payment policy because the Health Care Financing Administration (HCFA) implemented the prospective payment system (PPS) for inpatient care before researchers were able to develop case-mix classification systems that accounted for the differences in these facilities. The three largest PPS-exempt providers are slated to move to prospective payment by FY 2003.

To provide a context for discussing the target amount update for PPS-exempt facilities for FY 2001, this chapter describes selected characteristics of PPS-exempt facilities, payment policy before the Balanced Budget Act of 1997 (BBA), payment changes enacted by the BBA and Balanced Budget Refinement Act of 1999 (BBRA), and pre- and post-BBA financial performance of PPS-exempt facilities. The chapter then presents the Commission's recommendation on the FY 2001 update.

Provider characteristics

Approximately 2,100 psychiatric, 1,100 rehabilitation, 200 long-term, 70 children's, and 10 cancer facilities now qualify for exemption from the prospective payment system (PPS) for inpatient care. The majority of Medicare payments to PPS-exempt providers are dispersed to psychiatric, rehabilitation, and long-term facilities. Table 6-1 describes the criteria for the different categories of PPS-exempt facilities.

The classes of PPS-exempt providers differ on a variety of measures, including length of stay and Medicare costs per discharge and per day (Table 6-2). Medicare length of stay has been the longest and costs per discharge the highest for long-term hospitals, compared with the other types of PPS-exempt facilities. In 1998, length of stay in a long-term hospital was 28 days and costs per discharge were $16,957. That same year, costs per discharge were $6,127 for psychiatric facilities—the lowest costs of the five types of PPS-exempt facilities. Although costs per discharge were higher for long-term hospitals than for rehabilitation facilities, costs per day were about the same for the two groups. Costs per day in children's and cancer hospitals' were $1,366 and $1,000, respectively, in 1998. This was substantially higher than costs per day for the other PPS-exempt facilities; however, cancer and children's hospitals have shorter lengths of stay.

The classes of facilities also vary in size; cancer hospitals are the largest and rehabilitation facilities the smallest. With the exception of rehabilitation facilities, average facility size shrank during the 1990s. From 1990–1998, average bed size for cancer hospitals decreased from 233 to 218 beds per facility, children's hospitals from 139 to 115 beds, long-term hospitals from 121 to 75 beds, and psychiatric facilities from 71 to 45 beds. Bed size remained relatively constant for rehabilitation facilities, at about 32 beds per facility. During this same period, occupancy rates declined for long-term, psychiatric, and rehabilitation facilities, but increased for cancer and children's hospitals.

In addition, PPS-exempt providers differ in terms of their Medicare share of discharges. From 1990–1998, Medicare penetration increased for all of the PPS-exempt providers except children's hospitals. During this period, Medicare discharges increased from about 60 percent to 68 percent of the total for rehabilitation facilities and from 40 percent to 67 percent for long-term hospitals. Medicare's share of patients at psychiatric facilities grew from 24 percent in 1990 to 39 percent in 1998, with the most pronounced growth in psychiatric units of acute care hospitals. Medicare's share of patients in the 10 PPS-exempt cancer hospitals increased from 20 percent in 1990 to 31 percent in 1998. Children's hospitals' share of Medicare discharges has never been greater than 1 percent. ■

Overview of the payment system and policy changes

From Medicare's inception until 1983, all hospitals that treated Medicare patients were reimbursed for their Medicare-allowable costs on a retrospective basis. The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) modified retrospective reimbursement by setting limits on payment per discharge and providing penalties or rewards depending on whether cost per discharge was above or below, respectively, the facility's limit or target. Congress initially intended for TEFRA payment policy to remain in effect for three years. However, the Social Security Amendments of 1983 modified and extended TEFRA while creating a PPS for acute inpatient care. During the phase-in of the PPS, the hospitals covered by it received a blend of prospective payment and modified TEFRA rates. Certain classes of facilities were excluded from the PPS, however, because the types of cases they treated did not allow for accurate prediction of resource costs. These PPS-exempt facilities continued to be reimbursed according to the modified TEFRA rates.

Original payment system

Medicare provides payments for both operating and capital costs. Until HCFA implemented the BBA, PPS-exempt facilities received a base operating payment for each discharge, equal to the lesser of current operating costs or

TABLE 6-1 **Criteria for exemption from the acute-care prospective payment system, by facility type**

Facility	Criteria
Psychiatric hospitals and units	• Patients have psychiatric principal diagnoses and require treatment that can be provided only in an inpatient setting. • The facility is under the supervision of a board-certified or board-eligible psychiatrist and has a director of psychiatric nursing services. • The facility provides psychological, social, and therapeutic services commensurate with patient needs. • Procedures exist for ongoing patient assessment and treatment plan evaluation.
Rehabilitation hospitals and units	• At least 75 percent of the inpatient population requires intensive rehabilitation for 1 or more of 10 specified classes of neurological conditions, muskuloskeletal conditions, or burn injuries. • Multidisciplinary staff are on site. • Procedures exist for preadmission screening and ongoing patient evaluations.
Long-term hospitals	• The average length of stay is longer than 25 days.
Children's hospitals	• The majority of inpatients are younger than 18.
Cancer hospitals	• The facility was recognized by the National Cancer Institute as a comprehensive cancer center or clinical cancer research center as of April 20, 1983. • The facility was recognized by HCFA as a cancer hospital on or before December 31, 1990. • The facility is organized primarily for cancer research or treatment, and at least 50 percent of total discharges have a principal diagnosis of neoplastic disease.

Note: HCFA (Health Care Financing Administration).

Source: MedPAC review of HCFA Provider Reimbursement Manual, Part I.

historical operating costs trended forward by an inflation factor. Each facility's historical operating cost amount—its target—is established during that facility's base year. A hospital's base year is designated as its second full cost-reporting period as an exempt facility, while the base year of a distinct-part unit (for example, a psychiatric unit of an acute-care hospital) is its first cost-reporting period. Target amounts are updated annually. In addition to base payments per discharge, PPS-exempt facilities receive bonus payments if their operating costs are less than their targets and relief payments if their operating costs are more than 110 percent of their targets. Capital payments have not been subject to limits.

Changes resulting from recent legislation

The BBA and BBRA made major changes in the way Medicare pays facilities exempt from prospective payment. These changes include linking updates to financial performance for all PPS-exempt facilities, capping target amounts, and mandating conversion to prospective payment for rehabilitation, psychiatric, and long-term facilities.

The BBA legislation set the FY 1998 update for all PPS-exempt facilities at zero, and linked payment to financial performance for FY 1999–2002 by specifying a formula to update the PPS-exempt target amounts. The primary intent of this linking was to address payment inequities between older and newer facilities. The formula provides a smaller update for facilities with costs less than their targets, and a larger update to facilities with costs greater than their targets. If a facility's costs are less than 66 percent of its limit, it will receive an update of zero. If its costs are between 66 percent and 100 percent of its ceiling, the facility will receive an update equal to the market basket minus 2.5 percentage points. Given the current market basket forecast of 3.1 percent for PPS-exempt providers in FY 2001, a facility in this category would receive an update of 0.6 percent. The update for a facility with costs exceeding its target by less than 10 percent will be the market basket minus 0.25 percent for each percentage point that costs are less than 10 percent above the limit. If a facility's costs exceed its ceiling by 10 percent or more, it will receive an increase equal to the market basket (Figure 6-1).

The BBA introduced several other significant changes to the TEFRA system. First, it established caps for target amounts for psychiatric, rehabilitation, and long-term facilities. Payments to these facilities are now based on the least of a facility's actual costs, target amount, or cap. National caps were set at the 75th percentile target amount for each class of provider for FY 1996, inflated to the current year. Children's and cancer hospitals were excluded from the caps; they continue to be paid the lesser of their current costs or historical costs trended forward by an inflation factor. Second, limits for facilities receiving their first Medicare payment on or after October 1, 1997, for each of their first two cost-reporting periods, were set at 110 percent of the 50th percentile payments for established facilities in each provider class in FY 1996, adjusted each year for inflation. Third, the BBA required HCFA

TABLE 6-2

Selected characteristics of facilities exempt from the acute-care prospective payment system, fiscal year 1998

Type of facility	Number of facilities	Average bed size	Medicare share of discharge	Medicare length of stay (days)	Medicare costs per discharge	Medicare costs per day
Psychiatric	2,119	45	39%	12.5	$6,127	$490
Rehabilitation	1,097	32	68	15.3	9,358	612
Long-term	207	75	67	27.9	16,957	607
Children's	71	115	0*	7.2	9,852	1,366
Cancer	10	218	31	7.3	7,255	1,000

Note: 1998 cost report data are about 50 percent complete. Data presented here are in aggregate form (weighted by facility revenue). In prior years, MedPAC reported mean values (each hospital weighted equally).
* Children's hospitals' share of Medicare discharges is less than 0.5 percent.

Source: Number of facilities is based on December 1998 HCFA survey and certification data. All other figures are based on MedPAC analysis of Medicare Cost Report data from HCFA.

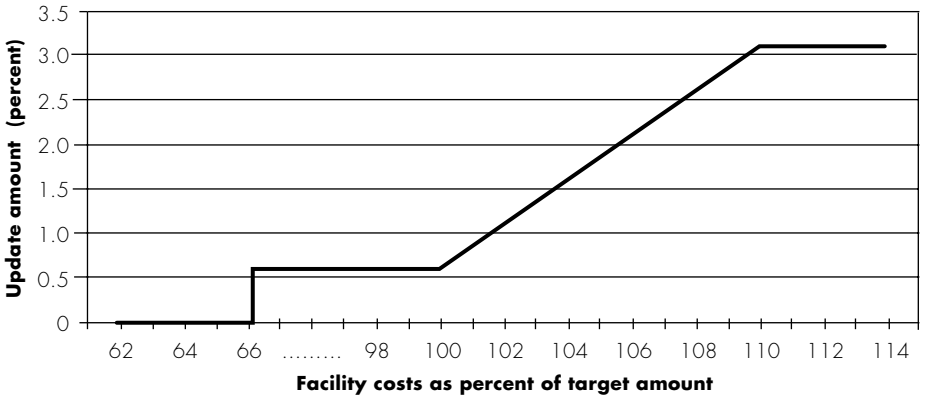
to implement a PPS for rehabilitation facilities by October 1, 2000, and to develop a proposal for a PPS for long-term hospitals.[1] In addition, capital payments to rehabilitation, psychiatric, and long-term hospitals and psychiatric and rehabilitation units were cut by 15 percent.

The BBA also changed the bonus system to include two possible payments to facilities for which costs are less than targets. The first is equal to 15 percent of the amount by which a facility's target exceeds its costs, up to a maximum of 2 percent of its limit. The second, called the continuous improvement payment, rewards improved productivity. It is equal to the lesser of 1 percent of the target amount or one-half the amount by which a facility's current costs are less than its prior year costs, after adjustment for inflation. The continuous improvement payment cannot exceed 1 percent of the facility's limit.

Legislative provisions of the BBRA mitigated some of the effects of the BBA. For example, the BBRA increased the maximum amount of the continuous bonus payments to long-term and psychiatric facilities to 1.5 percent of a facility's limit in FY 2000 and 2 percent in FY 2001. Two additional provisions reflect Commission recommendations from March 1999. First, the BBRA requires an adjustment to the labor-related portion of the 75 percent national cap on payments to TEFRA facilities. This adjustment reflects differences between the wage-related costs in the hospital's area and the national average of such costs within the same class of hospitals for cost-reporting periods beginning on or after October 1, 1999. Second, the BBRA requires the Secretary to report on a per-diem based PPS for psychiatric facilities and, by October 1, 2002, to implement this system. The BBRA also requires a discharge-based PPS for long-term hospitals by October 1, 2002, although HCFA predicts that prospective payment for psychiatric and long-term facilities will not be implemented before 2004.

FIGURE 6-1

Target amount update formula, fiscal years 1999–2002



Note: Beginning in FY 2001, rehabilitation facilities will be paid a blend of the PPS and PPS-exempt rates.

Source: MedPAC analysis of update formula in the Balanced Budget Act of 1997, assuming a market basket of 3.1 percent.

1 The Commission's recommendation for updating target amounts will only affect rehabilitation facilities during the two-year phase-in of a new case-mix adjusted PPS, beginning October 1, 2000. During the phase-in, facilities will be paid a blend of PPS and PPS-exempt rates.

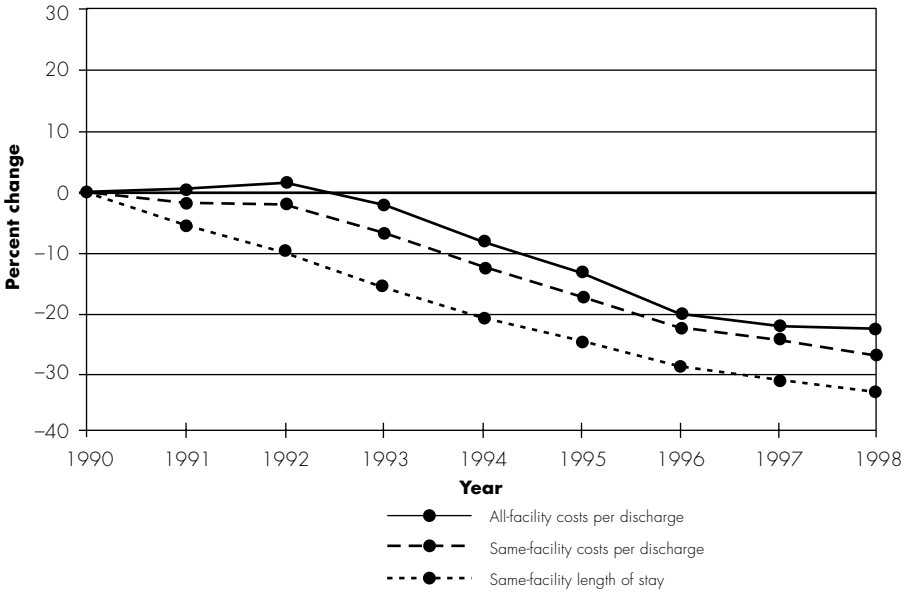
Financial performance under Medicare

Performance information provides context for the Commission's update decision. Two important indicators of financial performance—costs per discharge and Medicare margins—reveal that the BBA and BBRA changes in Medicare payment policy had greater effects on rehabilitation, psychiatric, and long-term facilities, compared with cancer and children's hospitals. This differential effect is reflected in the operating margins of these three classes of facilities, which declined precipitously in 1998. Before 1998, operating margins increased substantially due to declining lengths of stay and the entry of new facilities, which the TEFRA payment system treated more favorably than it did older facilities.

Given that most of Medicare's payments to PPS-exempt facilities are to rehabilitation, psychiatric, and long-term facilities, the Commission's discussion of financial performance for PPS-exempt facilities focuses on these groups. Additional trend and distribution data (10^{th}, 25^{th}, 50^{th}, 75^{th}, and 90^{th} percentiles) for all five classes of PPS-exempt facilities are included in Appendix C.

FIGURE 6-2

Cumulative change from 1990 in Medicare length of stay and real costs per discharge, rehabilitation hospitals and units, fiscal years 1990–1998



Note: 1998 cost report data are about 50 percent complete. Same-facility analysis (same facilities compared for 1990 and 1991, 1991 and 1992, and so forth) eliminates the effect of the entry of new facilities on the measured annual changes in length of stay and cost per discharge. Analysis of all facilities, in contrast, accounts for the cost-increasing effect of the entry of new facilities each year. Medicare costs per discharge are adjusted for inflation using the GDP implicit price deflator.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

Costs per discharge

Real costs per discharge over a series of two-year periods—for example, 1990–1991, 1991–1992, and so on—declined markedly from 1990–1998.[2] A key determinant of this trend was declining lengths of stay. Furthermore, when analysis was not limited to two-year cohorts, thereby accounting for the entry of new facilities each year, real costs were higher. We developed an analysis to highlight the effects of these two factors separately (Figures 6-2, 6-3, and 6-4).

Same-facility analyses, based on a series of two-year periods, suggest that the decline in real costs per discharge for psychiatric, rehabilitation, and long-term facilities that occurred during the 1990s has been driven primarily by large declines in length of stay. Although the decline in length of stay was slightly greater for psychiatric than rehabilitation facilities, real costs per discharge decreased more for rehabilitation providers. Psychiatric facilities' lengths of stay plummeted by 33 percent and costs per case fell by 20 percent during 1990–1997, while length of stay and costs per discharge declined by 31 percent and 24 percent, respectively, for rehabilitation facilities. Real costs per discharge and length of stay both declined less for long-term facilities, compared with the other two groups. One possible explanation for this is that a long-term hospital loses its designation if its average length of stay falls below 25 days. Lengths of stay declined by 27 percent and costs per discharge fell by 11 percent for these providers.

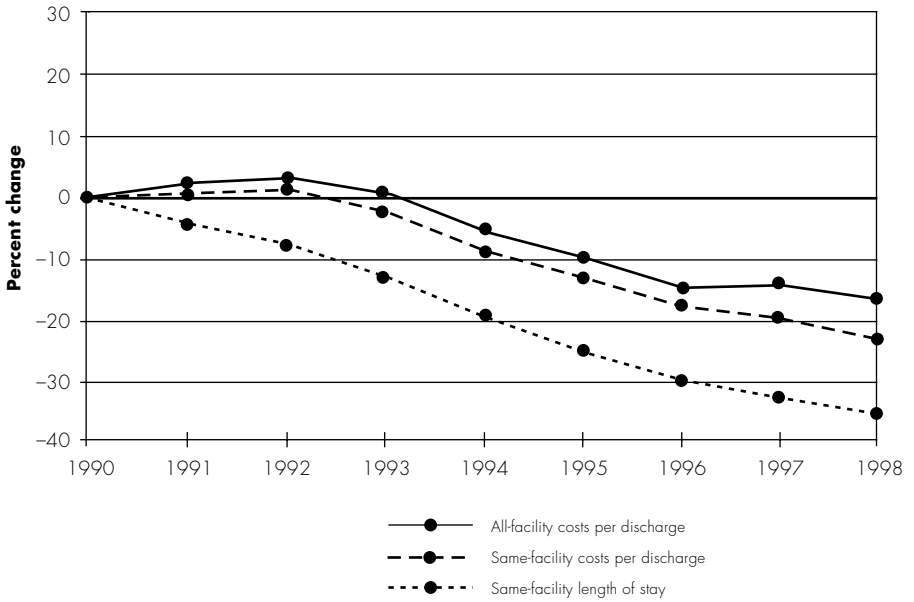
During 1998, the first post-BBA year, real costs per discharge continued the trend, declining between 2 and 3 percent for the three major PPS-exempt providers. Although lengths of stay declined at about the same rate as costs per discharge for both psychiatric and rehabilitation facilities from 1997–1998, lengths of stay remained constant for long-term facilities.

The entrance of new facilities raised cost growth from 1990–1998 beyond what it would otherwise have been, because a new facility establishes high costs during its base year. Comparing the rate of growth in real costs per case on a same-facility basis with the rate for all facilities

2 Costs per discharge were adjusted for inflation using the gross domestic product (GDP) implicit price deflator.

FIGURE 6-3

Cumulative change from 1990 in Medicare length of stay and real costs per discharge, psychiatric hospitals and units, fiscal years 1990–1998



Note: 1998 cost report data are about 50 percent complete. Same-facility analysis (same facilities compared for 1990 and 1991, 1991 and 1992, and so forth) eliminates the effect of the entry of new facilities on the measured annual changes in length of stay and costs per discharge. Analysis of all facilities, in contrast, accounts for the cost-increasing effect of new entry of the facilities each year. Medicare costs per discharge are adjusted for inflation using the GDP implicit price deflator.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

isolates the cost-increasing effect of facilities in the first year of operation. By 1998, the additional cost growth attributed to first-year facilities was 5 percent for rehabilitation facilities, 7 percent for psychiatric facilities, and 20 percent for long-term hospitals.

Medicare inpatient margin

Margins—payments minus costs, divided by payments—for the three major PPS-exempt providers increased substantially before the BBA, from large losses in 1990 to moderate gains in 1997 (Figure 6-5). The margin also increased dramatically for children's hospitals, but not cancer hospitals. However, children's hospitals' margins were negative from 1990 to 1997, and were extremely low from 1990 to 1993, ranging from -16.8 to -24.4 percent. Cancer hospitals' margins increased less than did those of any other PPS-exempt group and were negative from 1990 to 1997 except for 1996, when the margin was 0.1 percent (Figure 6-6).

The BBA reversed the trend in rising Medicare operating margins of rehabilitation, psychiatric, and long-term facilities that had occurred from 1990 to 1997. Cancer and children's hospitals' margins do not seem to have been affected by the BBA to the same extent as the other three classes of facilities.

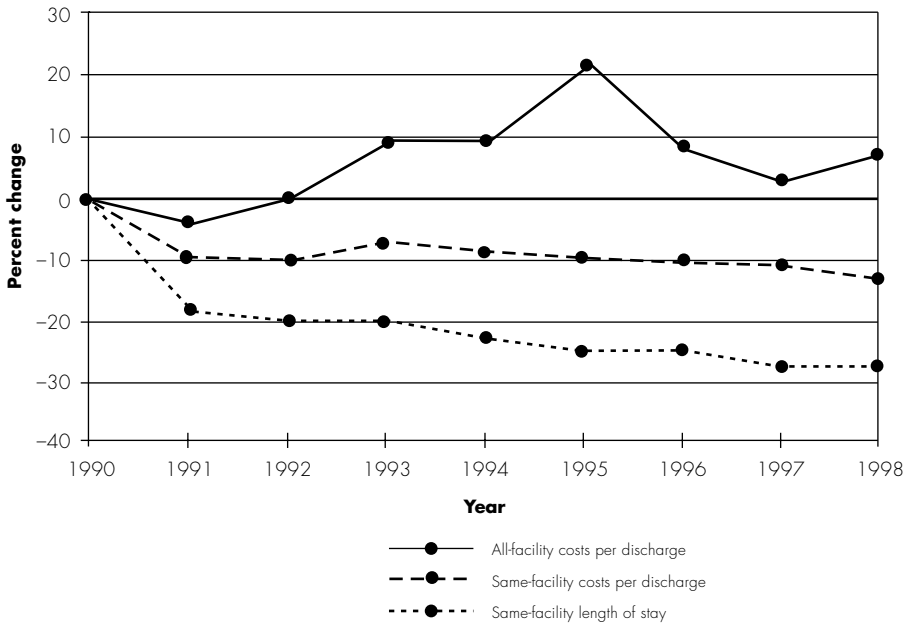
There are at least two reasons why margins increased so rapidly from 1990 to 1997 for PPS-exempt providers. First, differences in margin growth between older and newer facilities may have contributed to differences in overall margin growth. Newer facilities received more generous payments than older facilities because of inequities created by TEFRA. BBA provisions designed to address these inequities were implemented in FY 1998. Before HCFA implemented the BBA, newer facilities had an incentive to accrue higher baseline-year costs and therefore receive higher base payments. Furthermore, because they start from a higher base rate, newer facilities generally have been able to hold their cost-per-discharge increases below those of older facilities. This reduces the probability that newer facilities will exceed their facility-specific targets, thereby further increasing their margins over time.

Second, the rapid declines in lengths of stay in rehabilitation, psychiatric, and long-term facilities lead to low growth in costs per case; if payments per case continue to increase at a higher rate, margins will rise. In the cost-based TEFRA payment system, lower growth in costs resulting from drops in lengths of stay produces correspondingly lower payments. However, annual increases in payment limits were greater than the growth in costs per case, suggesting that the effects of declining lengths of stay were not being taken into account in updates to the limits. Therefore, fewer facilities were affected by the limits and more facilities were receiving bonus payments from 1990 to 1997.

The trend of declining lengths of stay would not be problematic for the Medicare program if it were due to changes in the mix of patients treated or to treatment innovations that allowed patients to reach the same level of functioning earlier in an episode of care. However, if decreased lengths of stay were due to site-of-care substitution, facilities would be shifting costs to other settings. Although the declines in lengths of stay for PPS-exempt facilities were about the same as those for PPS facilities, the rise in margins was less for PPS-exempt facilities because of the cost-based

FIGURE 6-4

Cumulative change from 1990 in Medicare length of stay and real costs per discharge, long-term hospitals, fiscal years 1990–1998



Note: 1998 cost report data are about 50 percent complete. Same-facility analysis (same facilities compared for 1990 and 1991, 1991 and 1992, and so forth) eliminates the effect of the entry of new facilities on the measured annual changes in length of stay and costs per discharge. Analysis of all facilities, in contrast, accounts for the cost-increasing effect of the entry of new facilities each year. Medicare costs per discharge are adjusted for inflation using the GDP implicit price deflator.

Source: MedPAC analysis of Medicare Cost Report data from HCFA

system. In the PPS-exempt payment system, the cost savings resulting from a decline in lengths of stay produce a corresponding drop in payments, except for the partial offset of bonus payments. In contrast, facilities paid prospectively realize the full savings resulting from shorter stays.

Medicare margins declined substantially for rehabilitation, psychiatric, and long-term facilities during FY 1998, the first post-BBA year (Figure 6-5). From 1997 to 1998, the aggregate margin decreased from 6.3 percent to 1.8 percent for rehabilitation facilities, from 2.6 percent to -2.3 percent for psychiatric facilities, and from 4.9 percent to -1.8 percent for long-term hospitals. In contrast, cancer hospitals' Medicare margin was relatively constant from 1997 to 1998, and the margin increased for children's hospitals from -2.7 percent to -0.8 percent (Figure 6-6). These two classes of facilities were exempt from the BBA-mandated payment caps.

The BBA provisions were also successful in narrowing the margin gap between older and newer facilities for the three major PPS-exempt providers and children's hospitals (Table 6-3). The difference in margins between older and newer rehabilitation facilities was small in both 1997 and 1998. For psychiatric facilities, the difference narrowed from 2.5 percent in 1997 to 1.9 percent in 1998. The difference for long-term hospitals established before and after 1990 dropped from 3.1 percent in 1997 to 1.3 percent in 1998. For children's hospitals, the gap declined from 6.2 percent in 1997 to 3.2 percent in 1998. Nine of the 10 cancer hospitals were exempt before 1990, so the margin gap is less relevant for this class of providers.

Updates to target amounts

The Commission's update framework for PPS-exempt facilities includes three components. Market basket forecast accounts for annual changes in the prices of goods and services used by PPS-exempt providers. Forecast error corrects for prior inaccuracies in the market basket projection. The Commission also considers the effect of the industry's adoption of treatment advances on the cost of providing care.

RECOMMENDATION 6A

The Secretary should increase the target amount update formula for fiscal year 2001 by up to 0.3 percentage points above the market basket amount.

The components of the Commission's update framework for PPS-exempt facilities are similar to those used in the PPS update, with two major exceptions. First, the framework does not include a productivity adjustment because PPS-exempt facilities are paid on a cost basis. In contrast to prospectively paid facilities, if PPS-exempt facilities reduce costs by improving productivity, payments usually also decrease. Prospectively paid hospitals receive the full benefit of productivity gains, while the benefit for PPS-exempt facilities is limited to the possibility of receiving a bonus payment.

Second, the update for PPS-exempt facilities does not take into account changes in case mix. Originally, difficulty with predicting resource costs according to a patient classification system caused the so-called "TEFRA facilities" to be excluded from the PPS system. However,

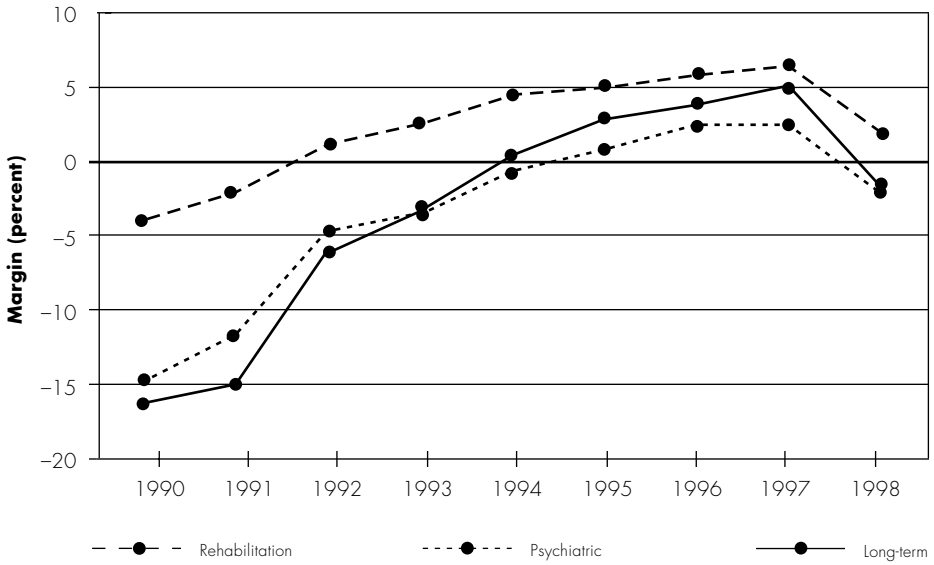
changes in case mix will be accounted for when the three major PPS-exempt providers move to prospective payment.

Literature review provided no evidence of major new scientific and technological advances put into widespread use at PPS-exempt facilities during the past year. However, the Commission proposes a 0–0.3 percent adjustment range to account for unmeasured advances that undoubtedly have had some effects on delivery of care at PPS-exempt facilities: for example, new drugs to treat bacterial infections, depression, clotting problems, and Parkinson's disease. This range is lower than that proposed for PPS facilities because treatment at PPS-exempt facilities tends to be less technology intensive.

The FY 2001 market basket forecast for exempt facilities is 3.1 percent, with no correction for FY 1999 forecast error. Including an adjustment for scientific and technological advances, the sum of the components for the update framework for facility target amounts to PPS-exempt facilities would be equal to the market basket increase plus 0–0.3 percent (Table 6-4). ■

FIGURE 6-5

Medicare operating margins for long-term hospitals and rehabilitation and psychiatric hospitals and units, fiscal years 1990–1998

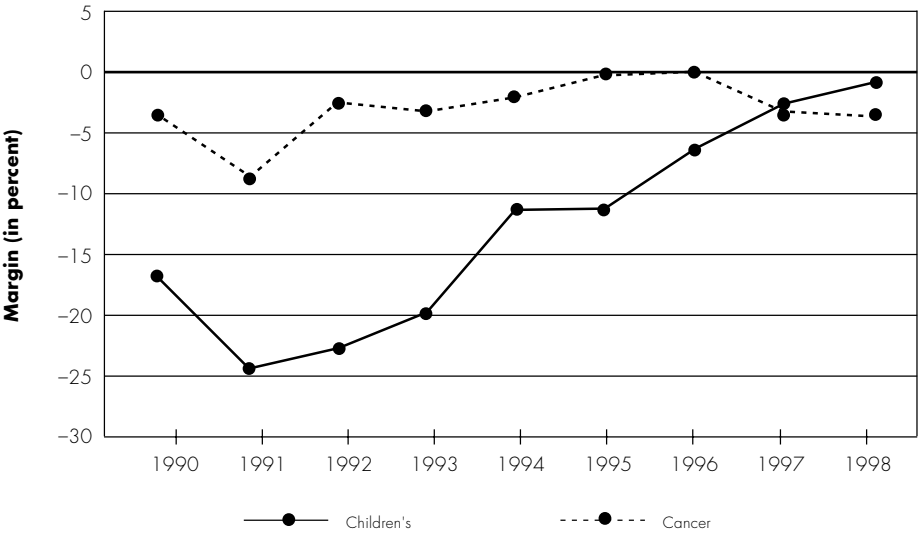


Note: 1998 cost report data are about 50 percent complete. Margin is a facility's payments minus costs, divided by payments.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

FIGURE 6-6

Medicare operating margins for children's and cancer hospitals, fiscal years 1990–1998



Note: 1998 cost report data are approximately 50 percent complete. Margin is a facility's payments minus costs, divided by payments.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE 6-3

Medicare operating margins, by year first subject to exemption from prospective payment, fiscal years 1997 and 1998

	1997 margins		1998 margins	
Facility type	**Exempt 1990 or earlier**	**Exempt after 1990**	**Exempt 1990 or earlier**	**Exempt after 1990**
Rehabilitation facilities	6.3%	6.0%	1.8%	1.9%
Psychiatric facilities	1.8	4.3	−1.7	−3.6
Long-term hospitals	2.9	6.0	−2.7	−1.4
Children's hospitals	−3.3	2.9	−1.1	2.1
Cancer hospitals	−3.1	N/A	−3.5	N/A

Note: N/A (not applicable). Cost report data for 1998 are about 50 percent complete. Nine of the 10 PPS-exempt cancer hospitals were exempt before 1990.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE 6-4

Update framework for facility target amounts, fiscal year 2001

Component	**Percent**
FY 2001 market basket forecast	3.1%
Correction for FY 1999 forecast error	0.0
Allowance for scientific and technological advances	0.0 to 0.3
Sum of components	MB+0.0 to MB+0.3
Basis of update formula in legislation	MB

Note: FY (fiscal year), MB (market basket). Market basket values and forecasts supplied by HCFA as of April 2000.

Source: HCFA Office of the Actuary and MedPAC analysis.

CHAPTER 7

Reviewing the estimated payment update for physician services

RECOMMENDATION

7A When preparing the final 2001 update to the physician fee schedule's conversion factor, the Secretary should review the data and methods used to project growth in enrollment in traditional Medicare and explain the methods used to project that growth.

CHAPTER 7

Reviewing the estimated payment update for physician services

In this chapter

- Background on physician payment
- Estimate of the sustainable growth rate and update for 2001

Medicare payments for physician services are updated annually based on a formula designed to control overall spending while accounting for factors that affect the cost of providing care. As required by the Balanced Budget Refinement Act of 1999, the Health Care Financing Administration (HCFA) recently released a preliminary estimate of the update for payments to physicians in 2001. The Medicare Payment Advisory Commission (MedPAC) has reviewed the preliminary update and believes it is based on an underestimate of growth in traditional Medicare enrollment. If HCFA continues to underestimate growth in traditional Medicare enrollment in this way, the final update, to be implemented in January 2001, will be lower than is warranted. We urge HCFA to review the data and methods used to make the estimate and to explain how this and other estimates are prepared as part of the release of future estimates.

To calculate the physician payment update, HCFA must estimate a number of factors, including traditional Medicare enrollment, actual spending for physician services, and changes in the cost of providing those services. In releasing its preliminary update, HCFA emphasized that early estimates may not be good predictors of the final update the agency will use to make payments in 2001 (Berenson 2000). However, release of a preliminary update was recommended by MedPAC to give the Commission and others an opportunity for review and comment before the final update is issued.[1] Reviewing the preliminary update, and the estimates upon which it is based, permits us to assess the magnitude of the estimates and gives us an opportunity to review the methods used to develop those estimates.

This chapter first provides some background on Medicare's payments to physicians and then presents our comments and a recommendation on HCFA's preliminary estimate of the physician payment update.

Background on physician payment

Medicare's payments for physician services are made according to a fee schedule. Under the fee schedule, services are given relative weights, reflecting resource requirements. These weights are adjusted for geographic differences in practice costs and are multiplied by a dollar amount—the conversion factor—to determine payments. The conversion factor is updated annually, based on a formula designed to control overall spending over time while accounting for factors that affect the cost of providing the care covered under the program.

Calculating the update for the conversion factor is a two-step process. First, HCFA must estimate the sustainable growth rate (SGR). The SGR is the target rate of growth in spending for physician services and is based on a formula defined in law. It is a function of the percentage changes in:

- input prices for physician services,[2]
- traditional Medicare enrollment,

How the Balanced Budget Refinement Act modified the sustainable growth rate system

In its March 1999 report to the Congress, the Commission recommended a number of improvements to the sustainable growth rate (SGR) system (MedPAC 1999). First, we recommended revising the SGR to include measures of changes in the composition of traditional Medicare enrollment. Second, we recommended revising the SGR to include a factor of growth in real gross domestic product per capita plus an allowance for cost increases due to improvements in medical capabilities and advancements in scientific technology. Third, we recommended that the Secretary of Health and Human and Services publish an estimate of conversion factor updates by March 31 of the year before their implementation. Fourth, we recommended calculating the SGR and the update adjustment factor on a calendar-year basis. Finally, we recommended that the Secretary be required to correct estimates used in SGR system calculations every year.

In the Balanced Budget Refinement Act of 1999 (BBRA), the Congress acted on all five of the Commission's recommendations. The BBRA requires the Secretary, acting through the administrator of the Agency for Healthcare Research and Quality, to submit a report to the Congress by November 2002 on the use of physician services by Medicare beneficiaries. MedPAC will then have six months to analyze and evaluate the report and submit its own report to the Congress. The BBRA specifies consideration of three factors addressed by the Commission's recommendations—improvements in medical capabilities, advancements in scientific technology, and demographic changes in the types of beneficiaries receiving benefits under Medicare.

The BBRA also requires the Secretary to make publicly available, by March 1 of each year, an estimate of the SGR and conversion factor for the succeeding year. Finally, the BBRA changes how the SGR is calculated. It requires the Secretary to correct previously issued SGRs with the best available data.[3] This SGR correction requirement applies to the SGRs for fiscal year 2000 and later time periods. It also includes provisions intended to reduce the volatility of conversion factor updates by moving calculations to a calendar-year basis and changing the calculation of the update adjustment factor.[4] ■

3 The requirement that the Secretary correct previously issued SGRs applies to SGRs only and not to previously implemented conversion factor updates.

4 The BBRA altered the calculation of the update adjustment factor by separating its two components: a prior-year adjustment and a cumulative adjustment. Weights are then applied to each of these components. The prior-year weight is 0.75, and the cumulative weight is 0.33. This set of weights was developed by HCFA actuaries after conducting a series of simulations to find weights that would minimize the volatility of conversion factor updates and minimize the time necessary to align actual spending with the SGR target.

1 The Balanced Budget Refinement Act of 1999 requires publication of the final update by November 1.

2 For purposes of the SGR, physician services include services commonly performed by a physician or performed in a physician's office. They include services paid for under the physician fee schedule and other services, such as diagnostic laboratory tests and outpatient therapy services.

- real gross domestic product (GDP) per capita, and
- spending attributable to changes in law and regulation.

Second, HCFA calculates the update to the conversion factor. This update is a function of:

- the change in input prices for physician services,[5]
- a legislative adjustment required by the Balanced Budget Refinement Act of 1999 (BBRA),
- an adjustment to account for expected changes in physician behavior in response to payment changes, and
- an update adjustment factor that increases or decreases the update as needed to align actual spending with the SGR target.

Estimate of the sustainable growth rate and update for 2001

HCFA's preliminary estimate of the SGR for 2001 is 2.8 percent, which is predicted to yield an update to the conversion factor of 1.8 percent when combined with the other factors that determine the update. As noted by HCFA, the final update is likely to differ from this estimate due to availability of more complete data. Nonetheless, the Commission is concerned that HCFA's estimates of an SGR factor—traditional Medicare enrollment—are too low. If HCFA continues to underestimate growth in traditional Medicare enrollment in this way, conversion factor updates will be too low.

RECOMMENDATION 7A

When preparing the final 2001 update to the physician fee schedule's conversion factor, the Secretary should review the data and methods used to project growth in enrollment in traditional Medicare and explain the methods used to project that growth.

HCFA's preliminary SGR for 2001 includes a change in input prices for physician services of 1.5 percent, a change in traditional Medicare enrollment of −0.6 percent, a change in real GDP per capita of 1.9 percent, and no change in spending due to law and regulation (Table 7-1). The estimated changes in three of these factors appear reasonable. The change in input prices is based primarily on the Medicare Economic Index (MEI), which has always been an accepted component of updates of physician fee schedule payments; the change in real GDP per capita is based on estimates from an accepted source—the Bureau of Economic Analysis; and, assuming no changes in the Medicare benefit package later this year, no increases in spending are expected due to changes in law and implementing regulations.

TABLE 7-1 **HCFA estimate of the 2001 sustainable growth rate**

Factor	Percentage
Change in input prices	1.5%
Change in traditional Medicare enrollment	−0.6
Change in real GDP per capita	1.9
Change due to law and regulations	0.0
Estimated SGR	2.8

Note: GDP (gross domestic product), SGR (sustainable growth rate).

Source: Berenson 2000.

HCFA's estimate of the change in traditional Medicare enrollment in 2001 appears too low, however, because the agency's estimate of the change in Medicare+Choice (M+C) is too high. If growth in total Medicare Part B enrollment, including the traditional program and M+C, is 1.1 percent per year, as expected, a −0.6 percent reduction in traditional Medicare enrollment means M+C enrollment would have to grow by 9.6 percent.[6]

Recent experience suggests that growth in M+C enrollment could be much lower than HCFA's estimates. M+C enrollment growth slowed to 5 percent in 1999 from a high of more than 35 percent in 1995 (MedPAC 2000).[7] This year, M+C enrollment growth has remained low: for the year ending March 1, 2000, it was less than 3 percent. The M+C program has experienced this low rate of growth despite provisions in the BBRA intended to help expand choices for beneficiaries.[8]

HCFA acknowledges that projecting changes in enrollment has been difficult in recent years despite efforts of the agency's actuaries (HCFA 2000). When making SGR revisions for release this fall, the actuaries will be able to improve their projections with more complete data.

The Commission believes that the problem with HCFA's enrollment estimates goes beyond data issues, however. Given the difference between recent experience with M+C enrollment and HCFA's projections, the Commission recommends that HCFA review the data

5 For purposes of the update, physician services include only those services paid for under the physician fee schedule.

6 In addition to the estimate for 2001, HCFA's estimate of the change in traditional Medicare enrollment for 2000 also appears to be too low. That estimate is the same as the estimate for 2001: −0.6 percent. The estimate for 2000 assumes an increase in Medicare+Choice enrollment of 8.9 percent (HCFA 2000).

7 MedPAC's calculations of M+C enrollment growth are based on enrollment during the last month of each year. HCFA's calculations are based on average enrollment during each year.

8 The BBRA provisions affecting the M+C program are discussed in MedPAC's March report to the Congress (MedPAC 2000).

TABLE 7-2 **HCFA estimate of the 2001 conversion factor update**

Component	Percentage
Medicare Economic Index	1.7%
Update adjustment factor	0.5
Legislative adjustment	−0.2
Volume and intensity adjustment	−0.2
Update	1.8

Note: The legislative adjustment is a requirement of the BBRA. The volume and intensity adjustment is based on a HCFA assumption that physicians will increase the volume of services to offset a portion of revenue reductions associated with implementation of resource-based practice expense relative value units.

Source: Berenson 2000.

and methods used to make the projections when preparing the final update. We further recommend that the Secretary provide an explanation of the methods used to develop estimates of changes in enrollment growth as part of the release of those estimates. To date, the Secretary has identified her enrollment estimates as actuarial estimates. She has not, however, described the methods used to prepare these estimates or others that are part of the SGR, such as the estimated change in spending due to law and regulations. An explanation of these methods would permit MedPAC and others to conduct an informed review of the estimates.

Based partly on the preliminary SGR for 2001, HCFA's estimate of the physician payment update for 2001 is 1.8 percent. It includes an estimated change in the Medicare Economic Index (MEI) of 1.7 percent and an estimate of the update adjustment factor of 0.5 percent (Table 7-2). It also includes a legislative adjustment of −0.2 percent, required by the BBRA, and a volume and intensity adjustment of −0.2 percent.

The Commission has no comments on three of the four components of the update. As noted earlier, the MEI has always been a component of conversion factor updates. The legislative adjustment is a requirement of the BBRA to maintain the budget neutrality of the change in the calculation of the update adjustment factor. The volume and intensity adjustment is based on a HCFA assumption that physicians will increase the volume of services to offset a portion of revenue reductions associated with implementation of resource-based practice expense payments to physicians.

The Commission believes, however, that the update adjustment factor is too low, making the update estimate too low. The update adjustment factor is determined partly by the SGR for 2001 and earlier time periods. As explained earlier, MedPAC believes HCFA's SGR estimates are too low because its estimates of growth in traditional Medicare enrollment appear to be too low.

Whether higher SGRs will lead to a higher update this fall is unclear, however. The update adjustment factor adjusts for the difference between allowed spending for physician services, as determined by the SGR, and actual spending for those services. HCFA had no data on actual spending during 2000 when making the preliminary estimate of the update.[9] Before HCFA issues the final update this fall, data will be available on spending for physician services during the second quarter (and possibly the third) of 2000. Those data will permit a more accurate estimate of actual spending in 2000 which could be higher or lower than the estimate used to calculate the preliminary update. ■

9 To estimate the update, HCFA projected actual spending in 2000 to be $54.8 billion, or $13.7 billion per quarter. Spending at that level would be 7.6 percent higher than average spending during the first three quarters of 1999. Factors HCFA considered when making this projection included an increase in spending due to a new prostate screening benefit, growth in the volume and intensity of services, and the 2000 physician payment update (5.5 percent).

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APPENDIX A

Elements of the prospective payment system for hospital outpatient services

APPENDIX A

Elements of the prospective payment system for hospital outpatient services

In Chapter 2, we discuss the design and impact of the new payment system for outpatient departments (OPDs), which begins July 1, 2000. Like most prospective payment systems (PPSs), the outpatient PPS classifies covered services and determines payment. This appendix reviews the components of these functions.

Classifying covered services

The outpatient PPS covers a specified scope of services, determines a unit of payment for those services, and institutes a classification system by which to group them. Defining the scope of services determines the services paid for under the outpatient PPS. Defining the unit of payment allows the Health Care Financing Administration (HCFA) to determine which services will be paid for separately and which will be included in a "bundled" payment. Finally, a classification scheme allows HCFA to categorize services that are similar clinically and with respect to resource use.

Included services

The Balanced Budget Act of 1997 (BBA) gave the Secretary discretion to determine the services included in the PPS. However, HCFA was not permitted to include services already paid under separate fee schedules.[1] The PPS includes outpatient services such as surgical procedures, certain preventive services, diagnostic tests, clinic and emergency department visits, chemotherapy services for cancer patients, and radiology services. The Secretary was also required to include partial hospitalization services provided by community mental health centers, as well as psychiatric services provided in an OPD. HCFA has expanded the number and type of services covered by the outpatient PPS to include a number of services traditionally provided in the inpatient setting. Future migration of services from the inpatient to the outpatient setting will be evaluated by HCFA in consultation with professional organizations and an external advisory panel.

Unit of payment

Medicare pays for outpatient services based on the individual service or procedure provided, as identified by a HCFA Common Procedure Coding System (HCPCS) code. The payment to hospitals covers institutional or facility costs; physician and other professional costs are paid separately. HCFA bundles integral services and items into the costs of the primary service.[2] For example, bundled services include operating and recovery room charges, most pharmaceuticals, anesthesia, and surgical and medical supplies.

In deciding which services to bundle and which to pay separately, HCFA made efforts to consider comments from various interests. In response to these comments—specifically regarding cost variation concerns—HCFA unbundled certain items. For example, HCFA separated corneal tissue acquisition, maintenance, and distribution from services requiring corneal tissue use. Similarly, HCFA separated payments

[1] Ambulance services and physical, occupational, and speech therapies are paid under separate fee schedules. Chronic renal dialysis is paid under the composite rate for end-stage renal disease beneficiaries. Clinical diagnostic laboratory services and nonimplantable durable medical equipment (DME), prosthetics, orthotics, and supplies are paid under their respective fee schedules. Implantable prosthetics, implantable DME, and implantable items used during certain diagnostic procedures are no longer covered under a separate fee schedule but under the OPD PPS.

[2] Bundled services usually can be thought of as those services that a patient would not enter an OPD just to obtain; for example, one would not go to an OPD just to receive anesthesia. HCFA uses the term "packaged" to describe the set of inputs covered by the payment for a service; MedPAC uses the term "bundled."

under the PPS for casts and splints. Additionally, in response to the Balanced Budget Refinement Act of 1999 (BBRA), HCFA also unbundled blood, blood products, and plasma-based and recombinant therapies.

Unlike all other services included in the outpatient PPS—for which the unit of payment is the service or procedure provided—partial hospitalization services for psychiatric services will be paid on a per diem basis. These intensive outpatient psychiatric services may be provided by an OPD or by a community mental health center, and the per diem payment rate represents facility costs associated in providing a day of care.[3]

Classification system

To group services for payment, the Secretary developed the Ambulatory Payment Classification (APC) system, which includes 451 groups. The APC groups classify the full range of ambulatory services—including procedures represented by more than 5,000 HCPCS codes—based on similarity of resource use, clinical similarities, the number of providers who make the services available, and the volume of services. Additionally, the agency strived to minimize opportunities for upcoding (coding for a service that may be clinically similar but which has higher payment than the service actually provided) by grouping clinically similar services in the same APC group.

The BBRA limited the variation of service costs within an APC group to a factor of two. To accommodate this requirement, the Secretary recalibrated the APC system, increasing the number of APC groups, combining certain groups, and dividing others.[4]

HCFA also created "new technology" APCs. HCFA will classify new technology services that do not qualify for transitional pass-through payments (special payments provided for certain new technologies by the BBRA) into these groups. These groups are similar in terms of costs or resource use but, unlike other APCs, do not necessarily represent clinically similar services. The payment rate for all the services or items within a particular group will be the midpoint of that group. To qualify for classification within a new technology APC, the services must be covered by Medicare, be underrepresented in the 1996 data used to set payment rates, have a HCPCS code, and be deemed a reasonable and necessary service for treating an illness or improving an impaired function. HCFA will group qualifying new technologies or services within new technology APC groups for at least two but no more than three years, before assigning these services to existing or new groups. This mechanism should allow HCFA to pay for new technologies shortly after they arrive on the market and qualify for Medicare outpatient payments. It will also allow HCFA to collect clinical and cost data and further refine, expand, and update the APC classification system.

Determining payment

The outpatient PPS establishes mechanisms to determine payments to hospitals, rate adjustments, beneficiary copayments, and periodic updates. Each of these components allows HCFA to reimburse facilities for outpatient services while maintaining a predictable level of payment for the Medicare program, hospitals, and beneficiaries. Adjustment and update mechanisms are intended to allow the PPS to adjust for regional, facility-level, service-specific, and inflationary costs.

Payment rates

HCFA pays the same rate for all services in an APC group. The prospective payment rate for each APC group is the product of the relative weight for each APC group and the conversion factor, a constant that converts the relative weight into a payment rate. To determine individual payment rates, relative weights must be established.

Relative weighting is intended to capture variation in cost among APC groups. To calculate relative weights for each APC group, HCFA first determined the costs for each outpatient service. The agency aggregated the costs of inputs to be bundled with the payment for the primary procedure or medical visit. By adjusting 60 percent of the resulting unit cost by the hospital wage adjustment factor, HCFA accounted for local input prices. Each procedure, taken from 1996 claims data, was matched to the corresponding APC group. The median cost for each APC group was weighted by the volume of services in each group. To arrive at the relative weight, the median cost for each group was divided by the median cost for a mid-level clinical visit (APC 0601, with a weight of 1.0).

To calculate the conversion factor, total payments to hospitals are divided by the sum (over all APC groups) of the volume of services multiplied by the relative weight for each APC group. The conversion factor was adjusted to account for budget-neutral provisions of the BBRA, making it $48.49 in 2000.

As stipulated by law, HCFA calculated the total payment to equal program payments plus beneficiary copayments actually charged in 1996, minus the formula-driven overpayments (payments resulting from anomalies in the payment calculation methods for certain surgical, radiological, and diagnostic services).

[3] Payments for clinical social workers, occupational therapists, and support staff whose services are considered to be partial hospitalization services are also included in the per diem rate.

[4] HCFA was permitted to make exceptions to this provision if deemed appropriate. Exceptions were made for certain categories of services, such as the simpler levels of casting, splinting, or strapping; ventilation initiation and management; and non-coronary angioplasty. These groups were considered exceptions because they contained low-volume procedures or suspect or incomplete cost data, or presented concerns about inaccurate coding or clinical considerations.

Rate adjustments

Payment rates under the outpatient PPS will be adjusted for local wage differentials and outliers. Cancer hospitals and rural hospitals with up to 100 beds are held harmless from financial losses under the outpatient PPS. In addition, adjustments called transitional pass-through payments will be made for new and innovative technology services.

To adjust for local wage differentials, the agency applied the fiscal year 2000 inpatient PPS wage index to 60 percent of the national median for each APC group. HCFA will annually update this adjustment with the updates of the inpatient PPS wage index.

Outlier adjustments in the outpatient setting are made for those services or procedures with extraordinarily high costs, compared with the payment rates for the same APC group. Outliers are defined as those that exceed the PPS payment rate by a factor of 2.5. Hospitals will be reimbursed 75 percent of the differential. Total funds for outlier payments are limited to 2.5 percent of total program payments for all covered services through 2003, and 3 percent thereafter.

The BBRA mandated that cancer hospitals and outpatient departments of small rural hospitals (less than 100 beds) be held harmless from financial losses under the PPS.[5] These hospitals will be paid according to the PPS payment rates, but will be retrospectively reimbursed based on costs if PPS payments are below what they would have been under previous payment policies. Additionally, they will also receive interim payments on a quarterly basis. Cancer hospitals will be permanently held harmless; small rural hospitals are held harmless through 2003. HCFA intends to analyze the costs and payment differentials among classes of hospitals to propose and determine potential payment adjustments.

Transitional pass-through payments

New and innovative medical services, drugs, and biologicals will receive additional pass-through payments for at least two but no more than three years, as mandated by the BBRA. These payments will be made to account for technological advances. Total payments under this provision are limited to 2.5 percent of total program payments through 2003, and 2 percent thereafter. If these limits are exceeded, all pass-through payments will be reduced. Total payments must remain budget neutral. The BBRA specified the items and services that qualify for additional pass-through payments:

- current drugs, biologicals, and brachytherapy[6] used in cancer therapy,
- current orphan drugs,[7]
- current radiopharmaceutical drugs and biological products used in diagnostic, monitoring, and therapeutic nuclear medicine procedures, and
- new medical devices,[8] drugs, and biologicals[9] first paid as outpatient services after 1996.

"Current" technologies are those that will be paid for as of July 1, 2000, with the implementation of the OPD PPS.

In order to define which items qualify for transitional pass-through payments, HCFA determined that cost must be "not insignificant" in relation to the portion of the APC payment rate associated with the technology. This cost criterion was established to ensure that reimbursement is provided for only those new technologies that are substantially more expensive than the existing payment rate—so expensive that hospitals face incentives to make these services unavailable to beneficiaries. Additionally, HCFA sought to ensure that the administrative costs of making additional payments would not be greater than the applicable fee schedule amount. For example, the cost of the technology must exceed 25 percent of the relevant APC payment rate.

As required by the BBRA, pass-through payments for each drug, biological, and radiopharmaceutical will be based on the difference between 95 percent of its average wholesale price and its payment rate under the PPS as determined by the Secretary. To the extent possible, HCFA will use OPD claims data to determine the payment rates under the PPS.

Pass-through payments for qualifying devices are based on the difference between the hospitals' charges (adjusted to costs, using each hospital's cost-to-charge ratio) and the portion of the payment rates under the OPD PPS associated with the device, as determined by the Secretary.

Beneficiary copayments

The BBA changed the way in which beneficiary copayments would be calculated. The law enacted a buy-down

[5] Other hospitals do not come under the OPD PPS, including certain Maryland hospitals (covered under the state's payment system) and critical access hospitals (paid under a reasonable cost-based system required by the BBA).

[6] Brachytherapy is radiotherapy in which the radiation source is placed within the body.

[7] Orphan drugs are products used to treat diseases that affect fewer than 200,000 people in the United States.

[8] The following types of medical devices do not qualify for transitional pass-through payements: equipment, instruments, implements, and items used for diagnostic or therapeutic purposes; devices that are not implanted; and those items used on more than one patient. Because these materials are included within capital expenses, HCFA maintains they are reflected in the APC payments.

[9] Biologicals include items such as blood products, hormones, and antibodies.

method that froze the copayment rate at 20 percent of the national median of charges until annual updates bring the payment rate to a level at which the copayment amount equals 20 percent of the payment rate. The BBRA limited beneficiary copayments to an amount equal to the inpatient hospital deductible, which is $776 for calendar year 2000. MedPAC's analysis of the copayment amounts by APC group indicates that when the outpatient PPS is first implemented, beneficiary coinsurance will represent, on average, 47 percent of the payment rate for a service. According to MedPAC estimates (see Chapter 2), reducing the coinsurance to 20 percent is projected to take an average of 45 years, assuming an annual update of 1.9 percent.

Payment updates and volume control methods

HCFA will update payment rates annually using the hospital market basket index minus 1 percent for each year through 2002. Update methods beyond 2002 have not been determined.

The BBA mandated the Secretary to examine and institute a mechanism to curtail unnecessary growth in the use of outpatient services, if such a mechanism was deemed appropriate. However, HCFA has decided to postpone its decision on this topic and to delay implementing a volume control mechanism. The Secretary will continue to study the issue and publish a proposal seeking public comment before making a final decision. ■

APPENDIX B

Distributional impacts of options for case-mix refinement and teaching hospital payment

APPENDIX B

Distributional impacts of options for case-mix refinement and teaching hospital payment

This appendix provides additional information from our analyses in Chapter 3 on improving Medicare's payments for inpatient care and for teaching hospitals. These tables show the distributions for hospitals within each provider group of the estimated effects of the case-mix refinement and teaching hospital payment options examined in the chapter. The distribution estimates reflect the policy options' effects on:

- payment accuracy measured by the gain or loss per case—the average difference between case-level payments and costs,
- Medicare inpatient payments,
- total revenues, and
- financial performance measured by providers' Medicare inpatient and total margins.

Tables B-1 and B-2 show distributional information on the effects of the case-mix refinement and outlier financing policy options. The next six tables (B-3 through B-8) show the distributional impacts of the three teaching hospital payment policies. The final three tables (B-9 through B-11) show additional data on the combined impacts of the case-mix refinement and teaching hospital payment policies we are recommending.

The distributional information provides a broad picture of how our policy recommendations would affect individual providers. In Table B-1 under option A, for instance, the value at the 10th percentile indicates that 10 percent of hospitals would see payments fall by at least 8.3 percent; the value at the 90th percentile shows that another 10 percent would see payments rise by at least 4.4 percent. Under option B, payments would decline somewhat less at the 10th percentile (6.7 percent).

The distribution tables show how hospitals rank on the variables we examined. In Table B-1, hospitals were ranked by the percentage change in Medicare inpatient payments. The percentiles (10th, 25th, and so on) show the proportions of hospitals at or below the displayed values. Because the various policy options will have different effects for individual hospitals, the set of providers ranked at or below a given percentile of the distribution may differ among policy options. Consequently, the percentile values under different policy options describe how the distribution of values would change, rather than what might happen for any individual hospital.

TABLE B-1

Variation among hospitals in percentage change in inpatient payments under alternative policies

Hospital type and option	Percentage change in inpatient payments compared with current policy at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Option A	−8.3%	−4.8%	−1.4%	1.6%	4.4%
Option B	−6.7	−3.6	−0.6	2.1	4.7
Geographic location:					
Large urban					
Option A	−5.1	−2.1	0.5	3.2	6.2
Option B	−4.0	−1.7	0.7	3.2	5.5
Other urban					
Option A	−6.4	−3.6	−1.0	1.7	4.3
Option B	−5.1	−2.5	−0.1	2.3	4.6
All rural					
Option A	−9.9	−6.9	−3.4	−0.1	2.8
Option B	−8.2	−5.2	−2.2	0.9	3.6
Rural referral					
Option A	−5.9	−3.8	−1.4	1.3	3.2
Option B	−5.2	−3.0	−0.8	1.5	3.3
Sole community					
Option A	−10.2	−7.1	−3.5	0.2	3.2
Option B	−10.1	−6.9	−3.2	0.0	3.3
Other rural					
Option A	−10.2	−7.1	−3.9	−0.6	2.3
Option B	−7.6	−4.8	−1.9	1.1	3.7
Teaching status:					
Academic medical center					
Option A	−3.2	−1.4	0.8	3.0	5.4
Option B	−3.4	−2.2	−0.1	1.3	3.9
Other teaching 51-100 residents					
Option A	−3.6	−1.8	0.2	2.6	4.6
Option B	−3.3	−2.0	0.5	2.5	4.9
Other teaching 10-50 residents					
Option A	−4.6	−2.1	0.7	3.2	6.4
Option B	−4.1	−4.6	0.7	3.1	5.3
Nonteaching					
Option A	−9.0	−5.6	−2.2	1.1	4.0
Option B	−7.3	−4.1	−1.0	1.8	4.5
Outlier prevalence:					
High outlier (top decile)					
Option A	−4.2	−1.7	0.9	3.5	6.8
Option B	−4.2	−1.7	0.7	2.9	5.8
Other (lower nine deciles)					
Option A	−8.5	−5.1	−1.7	1.3	4.2
Option B	−6.8	−3.7	−0.7	1.9	4.5

Note: Inpatient payments equal the sum of PPS payments plus inpatient direct graduate medical education payments for all cases in each hospital group. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of 1997 data from Medicare hospital inpatient claims and hospitals' cost reports.

TABLE B-2

Variation among hospitals in Medicare inpatient margins under alternative policies

Hospital type and option	Medicare inpatient margin value at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Current policy	−10.7%	0.5%	10.6%	20.3%	29.8%
Option A	−13.2	−1.4	8.9	19.2	28.3
Option B	−11.7	−0.4	9.8	19.7	28.6
Geographic location:					
Large urban					
Current policy	−6.9	3.9	13.5	22.9	32.0
Option A	−6.4	3.8	13.6	23.1	32.9
Option B	−5.9	4.4	14.0	23.1	32.4
Other urban					
Current policy	−10.5	−0.1	8.8	17.3	26.8
Option A	−11.5	−0.2	8.0	16.6	25.3
Option B	−9.9	0.3	8.9	17.2	26.0
Rural referral					
Current policy	−5.0	1.8	10.3	18.5	24.9
Option A	−6.6	0.5	8.8	16.6	24.7
Option B	−5.2	0.9	9.4	17.2	24.7
Sole community					
Current policy	−11.5	−0.4	9.7	21.9	32.4
Option A	−16.3	−4.2	7.1	18.9	28.9
Option B	−16.3	−4.2	7.1	19.4	29.9
Other rural					
Current policy	−15.2	−2.3	9.3	20.4	30.3
Option A	−20.7	−6.0	5.2	17.2	26.4
Option B	−18.0	−4.3	7.3	18.9	27.8
Teaching status:					
Academic medical center					
Current policy	10.4	15.9	20.9	29.2	34.3
Option A	10.9	15.9	20.7	28.5	35.4
Option B	10.1	15.7	19.9	27.7	34.2
Other teaching 51-100 residents					
Current policy	3.1	9.7	15.3	22.0	27.5
Option A	3.3	9.9	15.0	21.8	29.4
Option B	3.6	9.7	15.5	21.7	28.2
Other teaching 10-50 residents					
Current policy	−3.5	4.4	12.7	19.8	26.9
Option A	−3.7	4.5	12.3	19.5	28.3
Option B	−2.6	4.4	12.6	19.6	27.9
Nonteaching					
Current policy	−12.5	−1.4	9.4	19.8	29.7
Option A	−15.9	−3.5	7.3	17.9	27.4
Option B	−14.4	−2.6	8.3	18.8	28.1
Outlier prevalence:					
High outlier (top decile)					
Current policy	−24.1	−7.9	5.2	17.2	26.5
Option A	−22.9	−7.9	6.3	17.5	28.4
Option B	−22.2	−7.8	5.6	17.4	27.2
Other (lower nine deciles)					
Current policy	−9.1	1.2	10.9	20.6	30.1
Option A	−12.0	−0.6	9.2	19.3	28.3
Option B	−10.2	0.4	10.1	20.0	28.9

Note: Medicare inpatient margins equal Medicare inpatient revenues minus inpatient costs as a percentage of Medicare inpatient revenues. Margins reflect payments and costs for both PPS and inpatient direct graduate medical education programs. Current policy: DRGs and weights calculated by conventional methods. Option A: refined DRGs and relative value weights. Option B: option A plus DRG-specific outlier offsets.

Source: MedPAC analysis of 1997 data from Medicare hospital inpatient claims and hospitals' cost reports.

TABLE B-3

Variation among hospitals in per case gain or loss under current policy and alternative payments to teaching hospitals

Hospital type and option	Per case gain or loss at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Current policy	−$1,023	−$334	$313	$941	$1,656
Option 1	−1,031	341	308	936	1,651
Option 2	−946	−277	369	977	1,668
Option 3	−1,038	−349	295	904	1,558
Geographic location:					
Large urban					
Current policy	−1,111	−277	529	1,448	2,669
Option 1	−1,110	−296	525	1,403	2,644
Option 2	−991	−168	624	1,469	2,575
Option 3	−1,151	−312	463	1,327	2,377
Other urban					
Current policy	−1,128	−436	265	888	1,587
Option 1	−1,100	−439	270	886	1,596
Option 2	−1,074	−393	306	904	1,543
Option 3	−1,141	−462	252	847	1,471
Rural					
Current policy	−902	−317	244	742	1,189
Option 1	−896	−314	244	743	1,189
Option 2	−852	−263	289	784	1,232
Option 3	−889	−307	251	751	1,198
Teaching status:					
Academic medical center					
Current policy	360	1,305	1,972	3,240	4,115
Option 1	479	1,267	2,049	3,369	4,556
Option 2	−379	659	1,467	2,762	3,727
Option 3	−546	407	1,329	2,518	3,508
Other teaching >100 residents					
Current policy	−299	632	1,582	2,708	3,975
Option 1	−373	529	1,466	2,552	3,468
Option 2	−490	271	1,190	2,100	3,211
Option 3	−749	169	1,002	1,903	2,961
Other teaching 51-100 residents					
Current policy	−216	496	1,077	1,861	2,886
Option 1	−336	421	1,002	1,862	2,815
Option 2	−471	302	904	1,728	2,564
Option 3	−590	127	751	1,564	2,430
Other teaching 10-50 residents					
Current policy	−1,002	−241	449	1,233	2,001
Option 1	−1,057	−322	375	1,194	2,017
Option 2	−1,040	−312	425	1,213	2,037
Option 3	−1,143	−414	299	1,058	1,941
Other teaching <10 residents					
Current policy	−1,122	−455	285	1,013	1,980
Option 1	−1,100	−458	261	995	1,968
Option 2	−1,060	−386	328	1,063	2,105
Option 3	−1,152	−497	233	989	1,977
Nonteaching					
Current policy	−1,071	−383	238	796	1,318
Option 1	−1,064	−377	241	796	1,320
Option 2	−961	−305	316	868	1,421
Option 3	−1,043	−367	256	810	1,347

Note: Gains refers to the difference between payments and costs. Costs include inpatient direct graduate medical education (GME) costs for residents. Current policy reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

TABLE B-4

Variation among hospitals in change in per case payments under alternative payments to teaching hospitals

Hospital type and option	Change in per case payments compared with current policy at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Option 1	−$25	$0	$2	$7	$16
Option 2	−52	34	53	101	193
Option 3	−167	−2	11	19	45
Geographic location:					
Large urban					
Option 1	−169	0	5	12	53
Option 2	−318	51	168	203	244
Option 3	−545	−113	39	48	58
Other urban					
Option 1	−49	0	5	10	26
Option 2	−137	38	60	76	90
Option 3	−214	−9	13	16	20
Rural					
Option 1	0	0	1	3	6
Option 2	−3	32	43	53	65
Option 3	−5	4	10	12	14
Teaching status:					
Academic medical center					
Option 1	−617	−294	19	443	1,066
Option 2	−1,202	−828	−538	−260	26
Option 3	−1,436	−1,027	−782	−481	−155
Other teaching >100 residents					
Option 1	−620	−266	−59	80	301
Option 2	−979	−605	−307	−137	20
Option 3	−1,221	−845	−507	−290	−168
Other teaching 51-100 residents					
Option 1	−342	−173	−74	43	201
Option 2	−473	−316	−178	−74	77
Option 3	−640	−473	−320	−196	−101
Other teaching 10-50 residents					
Option 1	−271	−121	−29	40	98
Option 2	−318	−149	−21	76	156
Option 3	−430	−268	−120	−44	5
Other teaching <10 residents					
Option 1	−73	−20	2	17	40
Option 2	−31	40	79	179	227
Option 3	−112	−24	5	27	47
Nonteaching					
Option 1	0	0	3	6	10
Option 2	18	41	56	110	194
Option 3	2	9	12	25	47

Note: Change in payments is relative to a current policy that reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct graduate medical education (GME) expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

TABLE B-5

Variation among hospitals in percentage change in Medicare inpatient payments under alternative payments to teaching hospitals

	Percentage change in Medicare inpatient payments compared with current policy at percentile				
Hospital type and option	**10th**	**25th**	**50th**	**75th**	**90th**
All hospitals					
Option 1	−0.3%	0.0%	0.0%	0.1%	0.2%
Option 2	−0.7	0.7	1.2	1.4	3.0
Option 3	−2.1	0.0	0.3	0.3	0.7
Geographic location:					
Large urban					
Option 1	−1.8	0.0	0.1	0.2	0.6
Option 2	−3.0	0.6	2.9	3.0	3.0
Option 3	−5.1	−1.5	0.7	0.7	0.7
Other urban					
Option 1	−0.7	0.0	0.1	0.2	0.4
Option 2	−1.8	0.7	1.2	1.2	1.3
Option 3	−2.7	−0.1	0.3	0.3	0.3
Rural					
Option 1	0.0	0.0	0.0	0.1	0.1
Option 2	−0.1	1.0	1.1	1.2	1.2
Option 3	−0.1	0.1	0.3	0.3	0.3
Rural referral					
Option 1	0.0	0.0	0.1	0.1	0.2
Option 2	−0.1	1.1	1.2	1.2	1.3
Option 3	−0.3	0.2	0.3	0.3	0.3
Sole community					
Option 1	0.0	0.0	0.0	0.0	0.1
Option 2	−0.1	−0.1	0.8	1.1	1.
Option 3	−0.1	−0.1	0.0	0.3	0.3
Other rural					
Option 1	0.0	0.0	0.0	0.1	0.1
Option 2	0.5	1.1	1.1	1.2	1.3
Option 3	0.1	0.3	0.3	0.3	0.3
Teaching status:					
Academic medical center					
Option 1	−4.3	−2.2	0.2	3.3	7.7
Option 2	−7.9	−6.2	−4.4	−2.0	0.2
Option 3	−9.7	−7.6	−6.2	−3.6	−1.3
Other teaching >100 residents					
Option 1	−4.6	−2.4	−0.5	0.7	2.5
Option 2	−7.4	−5.2	−2.8	−1.3	0.2
Option 3	−9.4	−7.1	−4.6	−3.1	−1.7
Other teaching 51-100 residents					
Option 1	−3.7	−1.8	−0.8	0.5	2.1
Option 2	−5.5	−3.5	−1.9	−0.8	0.8
Option 3	−7.4	−4.9	−3.8	−2.3	−1.0
Other teaching 10-50 residents					
Option 1	−3.7	−1.6	−0.4	0.5	1.2
Option 2	−4.3	−1.9	−0.3	0.9	2.0
Option 3	−5.5	−3.6	−1.6	−0.6	0.1
Other teaching <10 residents					
Option 1	−1.2	−0.3	0.0	0.2	0.5
Option 2	−0.6	0.6	1.2	2.6	2.9
Option 3	−1.7	−0.4	0.1	0.4	0.7
Nonteaching					
Option 1	0.0	0.0	0.0	0.1	0.2
Option 2	0.5	1.1	1.2	2.1	3.0
Option 3	0.1	0.3	0.3	0.4	0.7

Note: Payment changes made relative to current policy that reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct graduate medical education (GME) expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims data.

TABLE B-6

Variation among hospitals in percentage change in total revenue under alternative payments to teaching hospitals

Hospital type and option	Percentage change in total revenue compared with current policy at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Option 1	−0.1%	0.0%	0.0%	0.0%	0.1%
Option 2	−0.1	0.1	0.3	0.4	0.7
Option 3	−0.4	0.0	0.1	0.1	0.2
Geographic location:					
Large urban					
Option 1	−0.4	0.0	0.0	0.0	0.1
Option 2	−0.6	0.1	0.6	0.8	1.0
Option 3	−1.1	−0.3	0.1	0.2	0.2
Other urban					
Option 1	−0.1	0.0	0.0	0.0	0.1
Option 2	−0.4	0.1	0.2	0.3	0.4
Option 3	−0.6	0.0	0.0	0.1	0.1
Rural					
Option 1	0.0	0.0	0.0	0.0	0.0
Option 2	0.0	0.1	0.2	0.3	0.4
Option 3	0.0	0.0	0.0	0.1	0.1
Teaching status:					
Academic medical center					
Option 1	−1.0	−0.5	0.0	0.8	1.4
Option 2	−1.8	−1.3	−0.7	−0.3	0.1
Option 3	−2.1	−1.6	−1.0	−0.6	−0.3
Other teaching >100 residents					
Option 1	−1.0	−0.4	−0.1	0.2	0.7
Option 2	−1.8	−1.1	−0.6	−0.2	0.0
Option 3	−2.4	−1.6	−1.0	−0.6	−0.3
Other teaching 51-100 residents					
Option 1	−0.7	−0.4	−0.1	0.1	0.5
Option 2	−1.2	−0.8	−0.4	−0.1	0.2
Option 3	−1.7	−1.2	−0.8	−0.5	−0.2
Other teaching 10-50 residents					
Option 1	−0.8	−0.3	−0.1	0.1	0.3
Option 2	−0.8	−0.4	0.0	0.2	0.4
Option 3	−1.2	−0.7	−0.4	−0.2	0.0
Other teaching <10 residents					
Option 1	−0.2	−0.1	0.0	0.0	0.1
Option 2	−0.1	0.1	0.3	0.6	0.8
Option 3	−0.3	−0.1	0.0	0.1	0.2
Nonteaching					
Option 1	0.0	0.0	0.0	0.0	0.0
Option 2	0.0	0.2	0.3	0.4	0.8
Option 3	0.0	0.0	0.1	0.1	0.2

Note: Payment changes made relative to current policy that reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct graduate medical education (GME) expenses for residents. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

TABLE B-7

Variation among hospitals in Medicare inpatient margins under current policy and alternative payments to teaching hospitals

Hospital type and option	Medicare inpatient margin at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Current policy	−10.7%	0.5%	10.6%	20.3%	29.8%
Option 1	−10.8	0.5	10.6	20.2	29.7
Option 2	−9.3	1.6	11.4	21.0	30.2
Option 3	−10.7	0.4	10.3	20.0	29.3
Geographic location:					
Large urban					
Current policy	−6.9	3.9	13.5	22.9	32.0
Option 1	−7.0	3.6	13.3	22.5	31.6
Option 2	−4.8	5.6	14.7	23.1	32.5
Option 3	−7.2	3.2	12.9	21.6	31.0
Other urban					
Current policy	−10.5	−0.1	8.8	17.3	26.8
Option 1	−10.3	0.0	8.6	17.4	26.8
Option 2	−9.5	0.3	9.2	17.5	26.7
Option 3	−10.6	−0.7	8.4	16.8	26.3
Rural					
Current policy	−13.3	−1.5	9.3	20.2	30.0
Option 1	−13.3	−1.5	9.3	20.3	30.0
Option 2	−12.3	−0.5	9.9	20.9	30.6
Option 3	−13.3	−1.3	9.3	20.4	30.1
Teaching status:					
Academic medical center					
Current policy	10.4	15.9	20.9	29.2	34.3
Option 1	11.1	16.8	20.5	28.3	34.6
Option 2	6.8	12.0	17.8	24.4	32.6
Option 3	6.0	10.5	16.3	23.6	31.3
Other teaching >100 residents					
Current policy	4.7	12.8	21.1	29.2	38.0
Option 1	3.9	12.3	20.8	27.5	37.3
Option 2	2.4	9.6	17.9	25.5	35.1
Option 3	0.7	7.8	16.8	24.3	33.7
Other teaching 51-100 residents					
Current policy	3.1	9.7	15.3	22.0	27.5
Option 1	2.3	7.9	14.9	21.4	27.4
Option 2	1.4	6.8	14.3	19.7	26.5
Option 3	−0.7	5.4	12.6	18.6	24.9
Other teaching 10-50 residents					
Current policy	−3.5	4.4	12.7	19.8	26.9
Option 1	−5.2	3.9	11.7	19.4	26.2
Option 2	−4.4	3.9	11.7	20.0	26.2
Option 3	−6.7	2.6	10.4	18.6	25.1
Other teaching <10 residents					
Current policy	−7.8	2.3	9.4	18.5	27.4
Option 1	−7.8	2.1	9.2	18.2	27.1
Option 2	−6.5	3.2	10.4	19.7	28.2
Option 3	−8.3	1.9	9.3	18.1	27.4
Nonteaching					
Current policy	−12.5	−1.4	9.4	19.8	29.7
Option 1	−12.4	−1.3	9.5	19.8	29.7
Option 2	−11.0	0.0	10.8	20.9	30.6
Option 3	−12.2	−1.0	9.8	20.1	29.8

Note: Estimated inpatient margins reflect both payments and costs under PPS for indpatient direct graduate medical education (GME) programs. Current policy: Hospital payment under long-run BBA teaching and DSH policies. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

TABLE B-8

Variation among hospitals in total margins under current policy and alternative payments to teaching hospitals

Hospital type and option	Total margin at percentile				
	10th	25th	50th	75th	90th
All hospitals					
Current policy	−7.1%	−0.4%	4.2%	8.8%	14.1%
Option 1	−7.3	−0.5	4.2	8.9	14.1
Option 2	−7.0	−0.3	4.5	9.1	14.4
Option 3	−7.3	−0.6	4.2	8.8	14.1
Geographic location:					
Large urban					
Current policy	−9.0	−1.3	3.3	8.2	14.0
Option 1	−9.0	−1.4	3.3	8.2	14.0
Option 2	−8.6	−1.3	3.7	8.5	14.5
Option 3	−9.3	−1.9	3.2	8.1	14.0
Other urban					
Current policy	−6.6	0.0	4.9	9.6	14.5
Option 1	−6.8	0.0	5.0	9.7	14.7
Option 2	−6.5	0.0	5.1	9.8	14.8
Option 3	−6.8	−0.2	4.8	9.6	14.5
Rural					
Current policy	−6.4	−0.1	4.5	9.1	13.8
Option 1	−6.3	−0.1	4.5	9.1	13.8
Option 2	−6.2	0.1	4.6	9.3	14.0
Option 3	−6.3	−0.1	4.5	9.1	13.9
Teaching status:					
Academic medical center					
Current policy	−3.7	−1.0	2.4	7.4	9.7
Option 1	−3.8	−1.3	2.0	7.5	10.5
Option 2	−4.7	−2.3	1.0	6.3	9.5
Option 3	−4.9	−2.4	0.6	5.9	8.8
Other teaching >100 residents					
Current policy	−4.5	−0.3	2.3	6.4	10.7
Option 1	−4.6	−0.8	2.3	6.0	11.4
Option 2	−5.0	−1.3	1.7	5.4	10.6
Option 3	−5.6	−1.8	1.4	4.9	10.4
Other teaching 51-100 residents					
Current policy	−5.8	0.0	4.0	8.3	12.7
Option 1	−5.8	−0.5	3.8	8.4	12.3
Option 2	−6.2	−1.3	3.4	7.9	12.1
Option 3	−6.5	−1.9	3.1	7.7	11.9
Other teaching 10-50 residents					
Current policy	−5.0	0.0	4.5	8.7	13.9
Option 1	−5.4	−0.5	4.4	8.4	13.8
Option 2	−5.0	−0.4	4.4	8.7	13.8
Option 3	−5.6	−0.6	4.0	8.3	13.3
Other teaching <10 residents					
Current policy	−9.4	−0.3	4.8	9.0	14.2
Option 1	−10.0	−0.3	5.0	9.0	14.2
Option 2	−9.2	−0.1	5.1	9.3	14.4
Option 3	−9.9	−0.3	4.8	9.0	14.2
Nonteaching					
Current policy	−7.4	−0.4	4.3	9.1	14.2
Option 1	−7.4	−0.4	4.3	9.1	14.3
Option 2	−7.0	−0.1	4.6	9.3	14.7
Option 3	−7.3	−0.3	4.4	9.1	14.4

Note: Estimated total hospital margins adjusted to reflect long-run BBA payment policy changes for Medicare DSH and IME payments. Current policy: Total inpatient margin under long-run BBA teaching and DSH policies. Option 1: Inpatient direct graduate medical education (GME) costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option 2: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments constant and with the teaching hospital subsidy redistributed across all hospitals. Option 3: Inpatient direct GME costs folded into PPS payment rates with no constraint on aggregate payments and no teaching hospital subsidy.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

TABLE B-9

Average per case gain or loss under current policy and selected options

Hospital type	Number of hospitals	Average gain or loss per case: Current policy	Option B	Option 1	Option B1
All hospitals	4,720	$481	$492	$484	$495
Geographic location:					
Large urban	1,481	739	779	736	782
Other urban	1,133	319	318	330	327
Rural	2,106	185	152	189	145
Rural referral	222	229	222	233	218
Sole community	619	11	−3	16	−8
Other rural	1,203	235	171	237	163
Teaching status:					
Academic medical center	113	1,924	1,853	2,097	2,072
Other teaching >100 residents	127	1,278	1,327	1,201	1,272
Other teaching 51-100 residents	120	1,016	1,046	986	1,023
Other teaching 10-50 residents	366	386	434	367	414
Other teaching <10 residents	380	237	248	239	245
Nonteaching	3,614	191	193	198	191

Note: Gain or loss refers to the difference between payments and costs. Costs include inpatient direct graduate medical education (GME) costs for residents. Current policy reflects long-run BBA policies for Medicare DSH and IME payments and includes payments for inpatient direct GME expenses for residents. Option B: Payments based on APR-DRGs, hospital relative value weights, and DRG-specific outlier offsets. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option B1: Combines option B and option 1.

Source: MedPAC analysis of a 40 percent sample of 1997 Medicare claims data.

TABLE B-10

Medicare inpatient margins under current policy and selected options

Hospital type	Number of hospitals	Average Medicare inpatient margin: Current policy	Option B	Option 1	Option B1
All hospitals	4,173	13.3%	13.3%	13.3%	13.3%
Geographic location:					
Large urban	1,272	15.8	16.2	15.8	16.2
Other urban	988	10.8	10.8	11.0	10.9
Rural	1,913	10.1	8.7	10.1	8.5
Rural referral	198	10.9	10.2	10.9	10.2
Sole community	568	10.6	8.1	10.6	7.8
Other rural	1,093	9.2	7.7	9.3	7.5
Teaching status:					
Academic medical center	98	20.8	20.5	21.6	21.5
Other teaching >100 residents	105	18.9	19.2	18.4	18.7
Other teaching 51-100 residents	101	14.3	14.5	14.0	14.2
Other teaching 10-50 residents	317	12.2	12.6	12.0	12.3
Other teaching <10 residents	331	10.5	10.6	10.6	10.5
Nonteaching	3,221	10.6	10.5	10.7	10.5

Note: Estimated inpatient margins reflect Medicare payments and costs under PPS and for inpatient direct graduate medical education (GME) programs. Current policy: Hospital payment under long-run BBA teaching and DSH policies. Option B: Payments based on APR-DRGs, hospital relative value weights, and DRG-specific outlier offsets. Option 1: Inpatient direct GME costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option B1: Combines option B and option 1.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

TABLE B-11

Total margins under current policy and selected options

Hospital type	Number of hospitals	Total margin: Current policy	Option B	Option 1	Option B1
All hospitals	4,173	5.4%	5.4%	5.4%	5.4%
Geographic location:					
Large urban	1,272	4.3	4.4	4.3	4.4
Other urban	988	6.5	6.5	6.5	6.5
Rural	1,913	6.9	6.5	6.9	6.5
Rural referral	198	9.7	9.6	9.7	9.5
Sole community	568	5.9	5.3	5.9	5.2
Other rural	1,093	5.1	4.7	5.1	4.7
Teaching status:					
Academic medical center	98	3.6	3.5	3.8	3.8
Other teaching >100 residents	105	4.9	4.9	4.7	4.8
Other teaching 51-100 residents	101	5.6	5.7	5.5	5.6
Other teaching 10-50 residents	317	5.9	6.0	5.9	5.9
Other teaching <10 residents	331	4.9	4.9	4.9	4.9
Nonteaching	3,221	6.0	6.0	6.0	6.0

Note: Estimated total margins adjusted to reflect long-run BBA payment policy changes for Medicare DSH and IME payments. Current policy: Hospital payment under long-run BBA teaching and DSH policies. Option B: Payments based on APR-DRGs, hospital relative value weights, and DRG-specific outlier offsets. Option 1: Inpatient direct graduate medical education costs folded into PPS payment rates, holding aggregate payments and special payments to teaching hospitals constant. Option B1: Combines option B and option 1.

Source: MedPAC analysis of 1997 Medicare claims and cost report data.

APPENDIX C

A data book on hospital financial performance

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A data book on hospital financial performance

This appendix provides detail on Chapter 5, which covers financial performance for hospitals covered by prospective payment, and Chapter 6, which covers financial performance for hospitals exempt from prospective payment. The analyses and data in this section were used to support our update recommendation for inpatient prospective payment system (PPS) payments and other MedPAC recommendations.

Most tables in this data book provide variables by hospital group and are presented for 10 years (1989-1998). Hospitals are grouped by several attributes, including location (urban and rural), teaching status (major, other, and nonteaching), receipt of disproportionate share payments, census region, and ownership status. All measures are national aggregates, not the averages of individual facility values; this provides an overview of the industry as a whole. Definitions of the variables included in these tables are found in table notes or in the "Terms" section of this report.

The data book starts with case-level variables (based on data from the Medicare Cost Report).

- Table C-1 shows trends in hospital payment per case, costs per case and length of stay.
- Table C-2 shows the trend in Medicare costs per discharge.

Further tables present data on a number of margin measures for PPS hospitals, based on Medicare Cost Report data. The margins presented are Medicare inpatient, Medicare outpatient, and the total hospital margin. The Medicare margin presented in Chapter 5 (which incorporates payments and costs for inpatient and outpatient services, along with home health, skilled nursing and PPS-exempt units) is not available by hospital group, and thus is not included in the data book (in future iterations of the Medicare margin, hospital group data will be available). Medicare inpatient margins are projected for 1999–2002 to measure the impact of the Balanced Budget Act of 1997 and the Balanced Budget Refinement Act of 1999 (for a discussion of the model and our findings, see Chapter 5. For a summary of the model methodology, see Appendix D). Seven tables have PPS-hospital margins data.

- Table C-3 shows the trend in Medicare inpatient margin for 1989–1998.
- Table C-4 shows the distribution of Medicare inpatient margins for 1998.
- Table C-5 shows the Medicare inpatient margin for 1997–1998 and projected for 1999–2002.
- Table C-6 shows the trend in Medicare outpatient margin for 1996–1998.
- Table C-7 shows the distribution of Medicare outpatient margins for 1998.
- Table C-8 shows the trend in hospital total margin for 1989–1998.
- Table C-9 shows the distribution of hospital total margins for 1998.

The next set of tables contains data for PPS-exempt facilities. These facilities, which include rehabilitation and psychiatric hospitals and units and long-term, cancer, and children's hospitals, are reimbursed on a cost basis, subject to facility-specific limits. Total margin data are not available for exempt facilities because these facilities are not required to include such data in their Medicare Cost Reports. Two tables have PPS-exempt hospital data.

- Table C-10 shows trends in length of stay, costs per case, and Medicare operating margin.
- Table C-11 shows the distribution of inpatient operating margins.

The analysis is then expanded from Medicare and total facility performance to comparative tables among payers, both by group and by state. These tables contain aggregate values for all short-term non-federal hospitals, a group that includes all PPS hospitals and most PPS-exempt facilities. These tables are based on data

from the American Hospital Association Annual Survey of Hospitals.

- Table C-12 shows the trend in payment-to-cost ratio by payer for 1989–1998.
- Table C-13 shows the trend in gains or losses by payer for 1989–1998.
- Table C-14 shows the trend in gains or losses for the public and private sectors for 1989–1998.
- Table C-15 shows the payment-to-cost ratio by payer and hospital group, 1998.
- Table C-16 shows costs shares by payer and hospital group for 1998.
- Table C-17 shows gains and losses by payer and hospital group for 1998.
- Table C-18 shows payment-to-cost ratios by payer and state for 1998.
- Table C-19 shows gains and losses by payer and state for 1998.

TABLE C-1

Change in hospital payment, cost, and length of stay indicators, 1989–1998

Year	Medicare operating update	Market basket	Medicare payments per case	Medicare costs per case	Medicare length of stay	Total length of stay	Costs per adjusted admission	Implicit price deflator
1989	3.3%	5.5%	6.8%	9.5%	1.0%	0.1%	9.4%	3.9%
1990	4.7	4.5	6.1	8.1	−1.4	−1.0	9.1	3.8
1991	3.4	4.4	6.1	7.0	−2.7	−1.3	9.4	3.7
1992	3.0	3.2	6.2	4.6	−3.3	−1.6	8.1	2.3
1993	2.7	3.1	3.5	1.2	−5.5	−2.3	6.0	2.5
1994	2.0	2.6	3.1	−1.1	−6.0	−3.8	2.2	2.3
1995	2.0	3.2	4.9	−1.2	−6.3	−4.3	1.6	2.1
1996	1.5	2.4	4.6	−1.1	−5.5	−3.5	2.3	1.9
1997	2.0	2.0	1.7	0.5	−3.4	−1.9	0.2	1.3
1998	0.0	2.9	−2.3	1.5	−2.7	−0.9	0.3	1.4

Note: Implicit price deflator base fiscal year 1988 = 100. Calculated from quarterly data.

Source: MedPAC analysis of Medicare Cost Report data from HCFA and Bureau of Economic Analysis data.

TABLE C-2

Change in Medicare inpatient costs per discharge, 1989–1998

Hospital group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
All hospitals	9.5%	8.1%	7.0%	4.6%	1.2%	−1.1%	−1.2%	−1.1%	0.5%	1.5%
Urban	9.7	7.7	6.7	4.4	1.1	−1.5	−1.4	−1.4	0.4	1.5
Rural	7.9	9.9	8.7	5.9	2.1	0.8	0.1	0.9	1.9	2.2
Large urban	9.5	7.2	6.1	3.4	1.3	−2.0	−1.5	−1.4	0.3	1.7
Other urban	10.1	8.4	7.6	6.1	0.8	−0.6	−1.2	−1.2	0.6	1.2
Rural referral	9.5	9.2	8.7	5.6	2.1	0.2	−0.4	−0.3	1.1	2.1
Sole community	7.0	9.1	8.6	4.8	2.6	1.1	1.6	1.6	2.1	2.0
Small rural Medicare-dependent	3.3	10.9	9.2	4.7	1.8	1.5	−2.5	4.3	1.8	1.4
Other rural <50 beds	6.9	13.7	6.8	6.3	2.2	2.3	2.1	2.9	1.3	4.7
Other rural ≥50 beds	8.1	9.3	8.7	7.0	1.5	0.8	−0.3	0.3	3.0	1.8
Major teaching	11.4	7.4	6.9	3.7	2.0	−2.5	−1.1	−0.7	−0.1	0.6
Other teaching	9.1	8.3	6.7	4.5	0.8	−1.2	−0.8	−1.5	0.7	1.7
Nonteaching	9.1	8.0	7.2	4.8	1.1	−0.7	−1.8	−1.0	0.8	1.7
Major teaching										
Public	11.8	3.6	7.3	5.6	0.3	−2.9	−1.9	1.1	−0.5	2.1
Private	11.4	8.3	6.8	3.3	2.3	−2.4	−0.9	−1.1	−0.1	0.3
Other teaching										
Public	10.0	9.4	8.6	5.2	0.4	−1.1	−1.9	−2.7	0.8	3.2
Private	9.0	8.3	6.6	4.5	0.9	−1.2	−0.7	−1.4	0.7	1.6
Nonteaching										
Public	7.9	9.5	9.0	5.6	2.1	0.8	−1.0	0.8	1.4	2.5
Private	9.2	7.7	6.8	4.7	0.9	−1.0	−1.9	−1.3	0.7	1.6
DSH										
Large urban	10.0	7.0	6.2	3.0	0.9	−2.1	−1.4	−1.5	0.7	1.4
Other urban	10.0	8.4	7.9	6.5	0.8	−0.4	−1.4	−1.2	0.9	1.1
Rural	8.5	9.8	9.4	7.1	2.3	0.0	−1.4	0.0	2.4	2.6
Non-DSH	9.1	8.6	7.1	4.8	1.5	−0.9	−0.9	−0.8	0.3	1.7
Teaching and DSH	10.0	7.9	7.0	4.3	0.9	−1.7	−1.0	−1.1	0.6	1.4
Teaching and non-DSH	9.3	8.6	6.5	4.5	2.2	−1.4	−0.6	−1.6	−0.2	1.3
Nonteaching and DSH	9.4	7.4	7.0	4.8	0.8	−0.8	−2.4	−2.0	1.1	1.3
Nonteaching and non-DSH	8.9	8.4	7.4	4.9	1.2	−0.6	−1.3	−0.3	0.6	1.9
New England	10.7	6.6	2.7	4.3	2.6	0.9	−0.5	−2.1	−0.6	−0.1
Middle Atlantic	11.8	8.4	6.7	4.7	2.2	−0.7	0.1	−1.4	0.8	0.7
South Atlantic	11.0	9.2	6.8	4.6	1.0	−1.8	−2.1	−1.4	0.5	3.8
East North Central	7.7	7.8	7.5	5.0	1.0	−0.6	−0.2	−1.0	−0.6	1.3
East South Central	9.3	10.4	10.2	7.3	0.1	−3.2	−1.9	0.6	1.2	2.5
West North Central	6.9	10.8	6.3	4.9	1.4	0.1	−0.6	2.4	2.9	0.7
West South Central	9.5	7.8	8.5	3.9	1.9	−1.6	−3.4	−2.7	0.2	0.8
Mountain	8.9	7.7	6.4	5.4	−0.3	0.4	−1.4	−0.6	0.6	3.9
Pacific	9.2	5.0	6.9	3.0	0.2	−1.7	−1.5	−0.7	2.4	1.2
Voluntary	9.4	8.2	6.9	4.6	1.4	−1.0	−0.9	−0.9	0.4	1.5
Proprietary	9.9	7.7	6.2	3.6	−0.7	−3.0	−3.6	−4.2	1.5	0.7
Urban government	10.7	6.3	7.9	5.5	0.8	−1.4	−2.0	−0.4	−0.1	2.2
Rural government	6.3	10.7	9.5	6.3	3.1	2.0	0.1	1.9	2.0	2.6

Note: DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-3

Hospital Medicare inpatient margin, excluding graduate medical education, by hospital group, 1989–1998

Hospital group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
All hospitals	0.3%	−1.5%	−2.4%	−0.9%	1.3%	5.6%	11.1%	15.8%	17.0%	14.4%
Urban	0.8	−1.2	−2.2	−0.8	1.6	6.4	11.8	16.6	18.1	15.8
Rural	−3.0	−3.7	−3.7	−1.4	−0.5	0.6	6.1	10.2	9.5	5.2
Large urban	0.6	−0.9	−1.6	0.4	3.0	8.6	13.9	18.7	20.5	18.1
Other urban	1.2	−1.7	−3.3	−2.9	−0.8	2.7	8.3	13.4	14.5	11.8
Rural referral	−1.4	−3.6	−3.7	−1.0	−1.1	0.0	5.8	10.2	10.3	6.1
Sole community	−2.8	−0.9	−0.9	2.1	4.1	5.2	8.6	12.2	10.3	5.7
Small rural Medicare-dependent	−4.3	−1.2	1.2	3.3	2.4	−0.6	6.7	9.2	10.3	3.2
Other rural <50 beds	−1.4	−3.9	−5.4	−4.2	−1.2	−0.8	4.5	9.7	7.9	9.3
Other rural ≥50 beds	−5.5	−6.8	−7.1	−5.7	−3.8	−1.8	4.6	8.7	7.8	2.6
Academic medical center	6.8	7.6	7.4	9.6	11.7	17.7	22.4	26.0	28.6	24.6
Major teaching (non-AMC)	8.0	5.3	6.1	7.9	10.1	15.8	20.5	24.1	28.2	26.2
Other teaching	1.0	−1.5	−2.8	−1.7	0.7	4.8	10.0	14.7	16.2	13.8
Nonteaching	−3.3	−5.2	−6.4	−5.0	−3.0	0.6	6.6	11.7	12.3	9.3
Major teaching										
Public	10.6	10.7	10.8	11.4	14.4	21.0	26.1	27.9	31.1	26.4
Private	6.8	5.6	5.9	8.2	10.1	15.8	20.3	24.3	27. 8	25.3
Other teaching										
Public	0.4	−0.6	−1.5	−0.4	1.9	4.9	10.4	14.9	17.7	13.6
Private	−3.2	−1.5	−2.9	−1.7	0.7	4.8	10.1	14.9	16.1	13.9
Nonteaching										
Public	−3.2	−4.5	−6.3	−5.1	−3.5	−2.0	3.9	8.0	7.8	4.0
Private	−3.3	−5.3	−6.4	−4.9	−2.9	1.0	7.1	12.3	13.1	10.2
DSH										
Large urban	3.0	2.3	2.2	4.6	7.7	13.6	18.5	22.8	24.4	22.3
Other urban	2.0	0.2	−1.4	−0.9	1.2	4.8	10.7	15.6	16.6	13.6
Rural	−3.1	−3.0	−2.7	−1.1	−0.4	0.1	7.3	12.4	11.7	7.7
Non-DSH	−2.7	−5.5	−6.7	−5.4	−3.9	−0.4	5.2	10.4	11.8	8.7
Teaching and DSH	4.9	3.7	3.1	4.7	7.4	12.5	17.3	21.3	23.0	20.7
Teaching and non-DSH	−0.2	−3.7	−4.6	−3.2	−1.8	2.2	7.7	13.3	15.6	12.6
Nonteaching and DSH	−2.0	−3.3	−4.2	−2.5	−0.1	3.9	10.3	15.7	15.9	13.2
Nonteaching and non-DSH	−4.4	−6.8	−8.1	−7.0	−5.3	−2.2	3.5	8.3	9.2	5.8
New England	−7.9	−5.7	−2.1	0.0	1.3	5.3	10.0	16.6	18.6	16.3
Middle Atlantic	4.5	1.7	1.1	2.3	4.5	8.9	12.7	17.7	20.0	18.3
South Atlantic	−5.3	−6.9	−5.9	−4.3	−2.3	2.7	9.5	14.2	15.6	10.7
East North Central	−0.5	−2.5	−5.1	−3.4	−1.2	2.2	7.1	12.0	13.9	9.7
East South Central	0.5	−1.3	−3.7	−4.4	−1.9	4.0	11.2	15.8	15.3	13.1
West North Central	1.7	−1.2	−3.0	−2.7	−1.2	2.4	7.1	10.7	11.1	7.1
West South Central	−0.2	−2.8	−4.5	−2.3	−0.6	4.0	11.4	17.6	17.5	14.3
Mountain	2.7	2.2	1.7	3.4	6.5	8.4	13.1	16.8	17.0	13.6
Pacific	4.0	2.9	1.4	4.3	7.9	13.2	18.9	22.7	22.0	19.8
Voluntary	0.8	−1.3	−2.4	−1.0	1.0	5.1	10.1	14.8	16.4	14.2
Proprietary	−3.5	−5.4	−4.7	−2.4	1.2	7.8	15.5	21.5	21.2	18.6
Urban government	3.7	2.7	1.5	2.5	5.3	1.3	16.1	19.5	20.8	16.1
Rural government	−3.8	−4.1	−4.6	−3.1	−2.2	−2.7	3.0	7.0	6.2	1.8

Note: AMC (academic medical center), DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The 1998 data have been weighted by teaching status to improve predictive accuracy.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-4

Distribution of hospital Medicare inpatient margins, excluding graduate medical education, by hospital group, 1998

Hospital group	Percentile					Percent with negative margin
	10th	25th	50th	75th	90th	
All hospitals	−14.4%	−2.1%	8.8%	19.3%	28.7%	28.9%
Urban	−7.4	1.8	11.8	21.3	30.7	20.6
Rural	−21.6	−7.0	4.3	16.3	25.7	39.4
Large urban	−6.6	3.7	14.3	23.7	34.0	17.8
Other urban	−8.4	0.1	8.3	17.6	26.2	24.6
Rural referral	−8.4	−3.8	4.3	11.6	23.2	31.7
Sole community	−19.7	−6.1	6.1	18.7	28.2	36.6
Small rural Medicare-dependent	−26.0	−6.7	6.6	19.3	26.7	35.2
Other rural <50 beds	−29.4	−14.5	1.8	14.7	25.5	46.3
Other rural ≥50 beds	−17.6	−7.2	1.9	14.2	21.7	43.2
Academic medical center	15.3	19.0	24.1	33.7	39.4	0.0
Major teaching (non-AMC)	8.1	17.7	26.7	35.0	42.8	3.3
Other teaching	−2.8	4.4	13.1	20.0	29.8	15.1
Nonteaching	−17.6	−4.5	6.4	17.6	26.5	33.5
Major teaching						
Public	15.3	19.5	30.9	37.2	41.9	3.0
Private	9.2	17.6	25.9	33.2	40.5	1.8
Other teaching						
Public	−6.1	2.1	11.0	20.5	27.0	22.5
Private	−2.6	4.6	13.3	20.1	30.5	14.3
Nonteaching						
Public	−24.8	−8.3	2.5	13.5	23.7	42.7
Private	−13.7	−2.5	8.2	18.9	27.4	29.5
DSH						
Large urban	−0.2	10.5	20.3	29.6	38.4	10.2
Other urban	−3.6	3.1	12.5	20.2	27.8	16.3
Rural	−11.9	−3.3	8.4	19.2	30.3	30.2
Non-DSH	−19.4	−5.5	4.9	15.4	23.6	36.4
Teaching and DSH	1.0	10.6	19.3	29.1	38.3	8.2
Teaching and non-DSH	−5.5	3.0	9.9	18.2	24.6	18.7
Nonteaching and DSH	−8.0	1.2	12.2	22.3	31.0	22.0
Nonteaching and non-DSH	−21.1	−6.6	4.0	14.4	23.6	38.8
New England	−22.2	−8.2	5.6	17.7	29.4	37.6
Middle Atlantic	−8.1	1.2	11.8	21.5	31.7	23.1
South Atlantic	−11.9	−3.2	7.3	17.0	25.5	31.3
East North Central	−17.8	−6.3	3.1	13.1	21.9	38.9
East South Central	−6.7	2.5	12.8	22.0	32.4	18.8
West North Central	−25.4	−8.1	2.1	13.7	22.9	42.4
West South Central	−15.5	−0.2	10.7	21.5	29.4	25.6
Mountain	−16.7	−4.0	9.8	20.8	31.5	27.7
Pacific	−5.0	5.2	15.5	25.6	34.5	15.9
Voluntary	−11.8	−1.2	9.1	18.8	27.7	27.3
Proprietary	−3.7	5.7	16.7	25.8	34.1	15.0
Urban government	−11.9	0.3	9.2	20.2	32.0	23.7
Rural government	−26.0	−9.2	2.0	13.5	23.7	45.7

Note: AMC (academic medical center), DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The 1998 data have been weighted by teaching status to improve predictive accuracy.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-5

Medicare inpatient margin, excluding graduate medical education, by urban and rural location and teaching status, 1997–1998 actual and 1999–2002 projected

Hospital group	1997	1998	1999	2000	2001	2002
All hospitals	17.0%	14.4%	12.6%	11.5%	11.5%	11.2%
Urban	18.1	15.8	13.3	12.0	11.9	11.4
Rural	9.5	5.2	4.7	4.1	4.1	4.0
Major teaching	28.5	25.5	23.0	21.9	21.5	20.0
Urban	28.5	25.5	23.0	21.9	21.5	20.0
Rural	27.6	24.4	24.4	22.7	22.1	20.6
Other teaching	16.2	13.8	11.4	10.0	10.0	9.6
Urban	16.4	14.2	11.7	10.2	10.2	9.8
Rural	10.2	4.8	4.5	4.0	4.0	3.7
Nonteaching	12.3	9.3	7.4	6.2	6.3	6.3
Urban	13.5	10.9	8.6	7.1	7.3	7.4
Rural	9.0	4.8	4.2	3.7	3.7	3.6

Note: Values for 1999 to 2002 are based on payments and costs from actual 1998 data. The "all hospitals" group, as well as the urban and rural groups, are weighted by teaching status to improve predictive accuracy.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-6

Hospital Medicare outpatient margin, excluding graduate medical education, by hospital group, 1996–1998

Hospital group	1996	1997	1998
All hospitals	−8.0%	−7.4%	−15.9%
Urban	−8.1	−7.4	−15.9
Rural	−7.3	−7.1	−15.7
Large urban	−8.4	−7.6	−16.2
Other urban	−7.7	−7.3	−15.5
Rural referral	−6.0	−6.2	−14.4
Sole community	−4.9	−4.9	−13.6
Small rural Medicare-dependent	−8.5	−7.9	−17.0
Other rural <50 beds	−11.2	−10.0	−19.1
Other rural ≥50 beds	−11.1	−10.5	−18.6
Academic medical center	−10.4	−10.4	−19.4
Major teaching (non-AMC)	−10.8	−9.7	−19.4
Other teaching	−7.3	−7.1	−14.6
Nonteaching	−7.4	−6.7	−15.5
Major teaching			
Public	−12.4	−12.2	−24.7
Private	−10.2	−9.5	−18.4
Other teaching			
Public	−8.2	−7.5	−12.7
Private	−7.3	−7.1	−14.8
Nonteaching			
Public	−7.8	−8.1	−16.2
Private	−7.3	−6.4	−15.2
DSH			
Large urban	−8.9	−8.2	−16.5
Other urban	−7.9	−7.6	−15.7
Rural	−6.1	−5.7	−13.8
Non-DSH	−7.6	−7.0	−15.8
Teaching and DSH	−9.2	−8.7	−16.9
Teaching and non-DSH	−7.3	−6.9	−15.2
Nonteaching and DSH	−6.8	−6.1	−14.5
Nonteaching and non-DSH	−7.7	−7.0	−16.1
New England	−8.2	−7.5	−12.8
Middle Atlantic	−10.8	−10.1	−18.1
South Atlantic	−6.7	−6.1	−14.5
East North Central	−7.8	−8.0	−16.9
East South Central	−6.9	−7.3	−15.0
West North Central	−7.5	−6.3	−15.1
West South Central	−7.6	−5.9	−14.5
Mountain	−6.5	−4.8	−14.0
Pacific	−8.1	−7.3	−15.2
Voluntary	−7.9	−7.3	−15.8
Proprietary	−6.8	−5.6	−14.2
Urban government	−9.8	−9.5	−18.0
Rural government	−7.9	−8.4	−16.1

Note: AMC (academic medical center), DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The 1998 data have been weighted by teaching status to improve predictive accuracy.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-7

Distribution of hospital Medicare outpatient margins, excluding graduate medical education, by hospital group, 1998

Hospital group	Percentile					Percent with negative margin
	10th	25th	50th	75th	90th	
All hospitals	−27.1%	−21.2%	−16.3%	−11.8%	−8.2%	98.8%
Urban	−26.7	−20.8	−15.9	−11.5	−8.0	98.3
Rural	−27.4	−21.6	−16.6	−12.3	−8.3	99.4
Large urban	−27.6	−20.7	−15.4	−11.2	−7.5	98.1
Other urban	−26.2	−21.0	−16.4	−11.9	−8.4	98.5
Rural referral	−23.9	−18.5	−14.8	−9.1	−7.1	97.5
Sole community	−25.5	−19.6	−14.0	−9.5	−6.2	99.7
Small rural Medicare-dependent	−26.3	−20.7	−17.1	−13.3	−9.8	100.0
Other rural <50 beds	−30.0	−22.9	−18.2	−14.8	−11.8	99.4
Other rural ≥50 beds	−29.7	−23.1	−18.8	−14.3	−11.1	99.2
Academic medical center	−35.0	−24.8	−17.8	−13.1	−9.7	100.0
Major teaching (non-AMC)	−30.8	−24.4	−18.8	−13.1	−7.4	96.8
Other teaching	−25.3	−19.8	−14.6	−11.0	−7.2	98.3
Nonteaching	−27.0	−21.3	−16.4	−11.9	−8.2	98.9
Major teaching						
Public	−37.1	−28.1	−19.8	−13.5	−8.7	100.0
Private	−29.9	−24.0	−18.0	−12.7	−8.8	97.3
Other teaching						
Public	−28.5	−20.4	−14.4	−11.1	−4.5	97.4
Private	−25.3	−19.8	−14.8	−11.0	−7.3	98.4
Nonteaching						
Public	−28.0	−22.2	−17.1	−12.9	−8.7	99.2
Private	−26.2	−20.7	−16.0	−11.7	−8.1	98.8
DSH						
Large urban	−28.1	−20.8	−15.0	−11.2	−7.9	97.6
Other urban	−25.2	−20.5	−15.9	−11.8	−8.7	98.1
Rural	−24.6	−19.0	−14.2	−10.0	−6.9	98.8
Non-DSH	−27.6	−21.8	−16.7	−12.4	−8.3	99.3
Teaching and DSH	−27.2	−21.2	−15.7	−11.7	−8.5	97.5
Teaching and non-DSH	−27.6	−20.0	−15.1	−10.7	−6.9	99.5
Nonteaching and DSH	−25.5	−19.5	−14.8	−10.7	−7.6	98.3
Nonteaching and non-DSH	−27.6	−21.9	−16.9	−12.7	−8.7	99.2
New England	−24.3	−18.0	−14.2	−10.5	−7.0	100.0
Middle Atlantic	−29.5	−22.2	−16.9	−12.2	−8.3	98.7
South Atlantic	−26.0	−19.9	−15.7	−11.8	−8.0	97.9
East North Central	−26.4	−21.7	−17.2	−13.2	−10.5	100.0
East South Central	−27.6	−19.1	−14.5	−11.1	−8.4	98.6
West North Central	−27.1	−21.5	−17.2	−13.3	−9.9	99.6
West South Central	−27.6	−22.1	−15.3	−10.5	−7.2	98.3
Mountain	−26.2	−21.2	−15.8	−10.2	−7.3	99.0
Pacific	−27.4	−22.3	−16.2	−11.4	−7.7	97.7
Voluntary	−26.0	−20.7	−16.1	−11.8	−8.4	99.0
Proprietary	−27.8	−20.6	−14.6	−10.6	−6.9	97.3
Urban government	−29.6	−22.6	−17.0	−13.2	−9.3	99.0
Rural government	−28.5	−22.0	−17.1	−12.6	−8.2	99.2

Note: AMC (academic medical center), DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment. The 1998 data have been weighted by teaching status to improve predictive accuracy.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-8

Hospital total margin, by hospital group, 1989–1998

Hospital group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
All hospitals	3.6%	3.6%	4.4%	4.4%	4.4%	5.0%	5.8%	6.1%	6.0%	3.9%
Urban	3.6	3.5	4.3	4.3	4.3	4.9	5.6	5.9	5.9	3.8
Rural	4.2	4.6	5.2	5.3	5.2	5.6	6.6	7.1	6.6	4.7
Large urban	2.9	2.5	3.7	3.7	3.9	4.3	4.9	5.1	5.2	3.3
Other urban	4.7	5.2	5.5	5.2	5.2	6.0	6.9	7.3	7.1	4.7
Rural referral	6.3	6.4	6.7	6.9	6.3	6.8	8.4	9.2	9.5	7.4
Sole community	3.1	4.1	5.1	5.1	5.1	5.6	5.7	6.2	5.6	4.2
Small rural Medicare-dependent	2.3	3.7	3.1	2.4	3.9	3.3	3.9	4.0	3.4	1.1
Other rural <50 beds	1.5	1.4	2.2	2.3	2.5	2.1	2.8	3.8	2.4	0.4
Other rural ≥50 beds	3.6	4.0	4.5	4.8	4.7	5.6	6.7	6.9	6.0	4.2
Major teaching	2.0	1.1	3.6	3.3	3.4	3.2	3.9	3.4	5.1	2.3
Other teaching	4.6	4.6	4.6	4.5	4.6	5.3	6.3	7.0	6.3	4.1
Nonteaching	3.8	4.3	4.8	5.0	4.9	5.9	6.5	7.0	6.4	4.6
Major teaching										
Public	1.4	-0.6	4.5	4.2	4.5	2.8	3.1	2.5	4.6	0.6
Private	2.2	1.7	3.3	3.0	3.0	3.4	4.3	3.8	5.3	2.8
Other teaching										
Public	5.7	4.8	5.4	4.2	4.4	3.8	4.9	6.2	4.0	4 4
Private	4.5	4.5	4.6	4.5	4.7	5.5	6.4	7.1	6.5	4.1
Nonteaching										
Public	3.2	4.1	4.3	4.6	4.2	4.7	5.5	5.8	5.4	3 9
Private	3.9	4.3	4.8	5.0	5.1	6.1	6.7	7.3	6.5	4.7
DSH										
Large urban	2.2	1.7	3.2	3.4	3.6	3.9	4.4	4.3	4.8	2.5
Other urban	4.9	5.3	5.9	5.6	5.5	6.3	6.9	7.3	7.1	4.7
Rural	4.2	5.4	7.2	7.5	5.8	6.1	7.2	8.0	7.4	5.2
Non-DSH	4.3	4.5	4.6	4.5	4.6	5.3	6.3	6.9	6.4	4.7
Teaching and DSH	3.1	2.6	4.0	4.0	4.0	4.2	4.8	4.8	5.4	3.0
Teaching and non-DSH	4.7	4.5	4.9	4.0	4.5	4.9	6.5	7.1	6.7	4.4
Nonteaching and DSH	3.5	4.2	5.1	5.2	5.3	6.3	6.7	7.4	6.5	4.4
Nonteaching and non-DSH	4.1	4.4	4.5	4.7	4.6	5.5	6.2	6.7	6.3	4.8
New England	1.5	2.0	2.2	2.2	3.1	2.6	3.0	4.0	4.7	3.1
Middle Atlantic	0.7	0.3	1.4	0.9	1.9	2.6	3.0	3.0	3.8	0.9
South Atlantic	4.1	4.6	6.0	6.2	5.7	6.6	7.5	8.4	7.6	5.6
East North Central	4.7	4.7	4.8	4.8	4.8	5.6	6.3	6.3	7.3	5.5
East South Central	7.3	6.4	6.4	5.6	4.9	5.2	6.6	7.5	5.5	3.6
West North Central	4.8	5.0	4.9	4.5	4.7	6.6	7.3	7.3	7.6	4.7
West South Central	4.1	4.3	5.8	7.4	6.2	6.7	7.4	7.2	6.4	5.9
Mountain	4.3	5.3	5.5	5.4	7.0	7.4	7.7	8.1	4.7	6.2
Pacific	3.5	2.8	4.7	4.1	4.1	3.6	4.4	4.4	5.2	4.0
Voluntary	3.9	3.8	4.3	4.1	4.1	4.7	5.7	5.9	6.4	3.8
Proprietary	3.0	4.0	5.0	6.3	6.9	8.9	8.3	10.1	5. 6	6.5
Urban government	2.7	1.8	4.6	4.2	4.3	3.5	4.0	3.9	4.9	2.7
Rural government	3.2	3.8	4.6	5.0	4.5	4.7	5.8	6.0	4.8	3.5
Percent with negative margins	31.9	28.5	26.4	26.3	24.1	21.8	20.7	21.7	25.8	34.2

Note: DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-9

Distribution of hospital total margins, by hospital group, 1998

Hospital group	Percentile					Percent with negative margin
	10th	25th	50th	75th	90th	
All hospitals	−9.1%	−2.2%	2.7%	7.4%	12.6%	34.2%
Urban	−9.1	−1.9	3.0	7.9	13.5	32.1
Rural	−9.0	−2.6	2.3	6.9	11.6	36.8
Large urban	−10.7	−2.4	2.5	7.4	13.3	34.2
Other urban	−7.4	−1.3	3.7	8.5	13.8	29.2
Rural referral	−0.5	2.5	6.0	10.1	16.0	10.1
Sole community	−7.8	−2.1	2.4	7.3	12.4	36.2
Small rural Medicare-dependent	−12.0	−5.2	−0.4	4.5	8.1	52.0
Other rural <50 beds	−11.6	−5.3	0.8	5.2	9.0	44.4
Other rural ≥50 beds	−7.1	−1.5	3.0	7.4	12.6	31.4
Major teaching	−5.7	−2.1	1.0	5.6	11.2	42.5
Other teaching	−7.6	−1.6	2.8	7.6	12.1	29.6
Nonteaching	−9.4	−2.5	2.7	7.4	12.8	34.5
Major teaching						
Public	−4.9	−2.4	0.9	5.7	7.4	40.0
Private	−6.2	−2.1	1.1	5.5	11.5	43.3
Other teaching						
Public	−7.2	0.5	3.7	8.2	11.2	17.5
Private	−7.6	−1.7	2.7	7.5	12.3	30.9
Nonteaching						
Public	−8.9	−3.0	2.5	6.4	10.6	37.2
Private	−10.0	−2.2	2.9	8.0	13.7	33.3
DSH						
Large urban	−12.0	−2.9	1.5	6.4	11.9	38.4
Other urban	−6.2	−0.3	4.6	9.4	14.3	25.8
Rural	−8.2	−2.5	3.1	7.4	13.0	33.1
Non-DSH	−9.2	−2.2	2.5	7.2	12.4	34.8
Teaching and DSH	−8.0	−1.9	2.0	7.1	11.2	35.2
Teaching and non-DSH	−5.3	−0.9	3.9	8.1	12.8	28.2
Nonteaching and DSH	−9.0	−2.3	3.6	8.3	13.8	32.1
Nonteaching and non-DSH	−9.6	−2.5	2.4	7.1	12.4	35.6
New England	−4.4	−0.1	3.5	7.9	14.4	25.5
Middle Atlantic	−11.4	−4.2	0.3	3.3	6.8	46.3
South Atlantic	−11.0	−2.2	4.1	9.4	15.1	31.5
East North Central	−4.1	0.0	4.6	8.6	12.9	24.3
East South Central	−9.3	−3.6	2.1	5.7	9.6	39.6
West North Central	−8.7	−2.1	2.1	6.7	10.2	36.0
West South Central	−11.9	−3.1	3.3	8.1	14.8	34.7
Mountain	−5.7	−1.2	3.7	8.8	13.6	32.1
Pacific	−9.6	−2.1	2.7	7.5	13.0	33.3
Voluntary	−7.5	−1.7	2.7	7.1	11.5	32.7
Proprietary	−17.9	−6.4	3.8	13.0	20.3	36.6
Urban government	−5.4	−0.8	3.3	6.8	9.7	28.3
Rural government	−9.1	−3.6	1.8	6.3	11.1	39.4

Note: DSH (disproportionate share hospital). Data for 1998 are preliminary, based on 56 percent of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-10

Change in Medicare length of stay and real costs per discharge, percent of facilities above payment limit, and Medicare operating margin for facilities exempt from prospective payment, 1990–1998

Type of facility	1990	1991	1992	1993	1994	1995	1996	1997	1998
Subject to cap on target amount*									
Rehabilitation hospitals and units									
Change in length of stay**	—	−5.5%	−4.8%	−6.4%	−5.9%	−4.9%	−5.1%	−3.3%	−2.7%
Change in cost per discharge**	—	−1.8	−0.5	−4.7	−6.0	−5.5	−5.8	−2.8	−3.7
Percent of facilities cost > target	45.5%	36.1	29.8	24.9	18.0	14.4	12.2	9.8	9.5
Medicare margin	−4.1	−2.2	1.4	2.4	4.3	5.2	5.9	6.3	1.8
Psychiatric hospitals and units									
Change in length of stay**	—	−3.5	−3.7	−6.2	−7.5	−7.2	−6.0	−4.4	−3.8
Change in cost per discharge**	—	−6.9	−5.9	−8.6	−9.6	−9.1	−7.7	−6.0	−5.1
Percent of facilities cost > target	58.4	52.8	47.9	42.7	32.0	28.8	24.6	21.9	20.7
Medicare margin	−15.2	−11.6	−4.9	−3.3	−0.6	0.9	2.5	2.6	−2.3
Long-term hospitals									
Change in length of stay**	—	−18.0	−2.5	0.6	−3.7	−2.6	0.0	−3.3	0.0
Change in cost per discharge**	—	−9.2	−0.7	2.9	−1.6	−0.8	−1.4	0.0	−2.6
Percent of facilities cost > target	54.0	50.6	44.3	37.6	20.3	18.2	11.6	12.1	24.3
Medicare margin	−16.3	−15.1	−6.1	−3.5	0.3	2.8	3.9	4.9	−1.8
Not subject to cap on target amount*									
Children's hospitals									
Change in length of stay**	—	−1.4	7.6	−14.3	2.2	−0.3	11.4	−0.9	−3.4
Change in cost per discharge**	—	6.9	4.0	−5.1	−1.6	−1.4	0.1	−5.6	−3.7
Percent of facilities cost > target	46.7	57.5	47.1	48.1	42.9	37.5	27.1	28.1	11.5
Medicare margin	−16.8	−24.4	−22.8	−20.0	−11.4	−11.4	−6.3	−2.7	−0.8
Cancer hospitals									
Change in length of stay**	—	0.3	−5.4	−4.4	−3.6	−3.1	10.0	3.3	−0.1
Change in cost per discharge**	—	9.3	1.3	2.5	0.1	−4.1	−3.3	9.1	0.8
Percent of facilities cost > target	60.0	60.0	60.0	60.0	40.0	40.0	40.0	60.0	57.1
Medicare margin	−3.4	−8.6	−2.6	−3.2	−2.1	−0.1	0.1	−3.1	−3.5

Note: Data for 1998 are preliminary, based on approximately 50 percent of facilities.
* Rehabilitation, psychiatric, and long-term facilities will be subject to prospective payment systems in future years.
** Change in length of stay and costs per discharge are based on a series of two-year periods (same facilities compared for 1990 and 1991, 1991 and 1992, and so forth). Cost per discharge is adjusted for inflation using the gross domestic product implicit price deflator, base fiscal year 1988 = 100. See Table C-1 for deflator values.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-11

Distribution of inpatient operating margins, facilities exempt from prospective payment system, 1998

	Percentile				
Facility type	**10th**	**25th**	**50th**	**75th**	**90th**
Rehabilitation facilities	0.0%	2.3%	2.8%	3.4%	4.1%
Psychiatric facilities	−20.6	0.2	2.2	2.8	3.6
Long-term hospitals	−29.1	−8.6	1.9	2.5	3.5
Children's hospitals	−15.2	2.4	2.7	3.3	5.8
Cancer hospitals	−18.4	−15.1	−2.2	1.7	2.4

Note: Data for 1998 are preliminary, based on approximately 50 percent of facilities.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

TABLE C-12

Hospital payment-to-cost ratio, by payer, 1989–1998

Year	Medicare	Medicaid	Uncompensated care	Private payers
1989	91.4%	75.8%	19.3%	121.6%
1990	89.2	79.7	21.0	126.8
1991	88.4	81.6	19.6	129.7
1992	88.8	90.9	18.9	131.3
1993	89.4	93.1	19.5	129.3
1994	96.9	93.7	19.3	124.4
1995	99.3	93.8	18.0	123.9
1996	102.4	94.8	17.3	121.5
1997	103.6	95.9	14.1	117.6
1998	102.6	97.9	13.2	113.6

Note: Payment-to-cost ratios cannot be used to compare payment levels because the mix of services and cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (about 35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-13

Gains or losses by payer as a percent of total hospital costs, 1989–1998

Year	Medicare	Medicaid	Other government payers and subsidies	Uncompensated care	Private payers	Non-patient care	Total gains
1989	−3.3%	−2.5%	0.2%	−4.8%	8.9%	3.6%	1.9%
1990	−4.1	−2.3	0.4	−4.7	10.8	3.4	3.4
1991	−4.4	−2.3	0.4	−4.8	11.6	3.5	4.0
1992	−4.4	−1.2	0.2	−4.9	11.8	3.3	4.8
1993	−4.1	−0.9	0.2	−4.8	10.9	3.3	4.4
1994	−1.2	−0.9	0.2	−4.9	8.7	3.1	5.0
1995	−0.3	−0.9	−0.1	−5.0	8.5	3.7	6.0
1996	0.9	−0.7	−0.1	−5.1	7.9	4.3	7.2
1997	1.4	−0.5	−0.1	−5.2	6.7	4.9	7.2
1998	1.0	−0.2	0.0	−5.2	5.5	5.1	6.1

Note: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (about 35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category. Gains and losses from the sources shown sum to total gains (except due to rounding).

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-14

Patient care gains and losses as a percent of total hospital costs, public sector and private payers, 1989–1998

Years	Public sector	Private payers	Total patient care gains
1989	−10.5%	8.9%	−1.7%
1990	−10.7	10.8	0.1
1991	−11.1	11.6	0.5
1992	−10.3	11.8	1.5
1993	−9.7	10.9	1.1
1994	−6.9	8.7	1.9
1995	−6.3	8.5	2.3
1996	−5.0	7.9	3.0
1997	−4.4	6.7	2.2
1998	−4.5	5.5	1.0

Note: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. The public sector column includes Medicare, Medicaid, other government payers, uncompensated care, and operating subsidies from state and local governments. Totals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category. Gains and losses from the sources shown sum to total patient care gains or losses (except due to rounding).

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-15

Hospital payment-to-cost ratio, by payer and hospital group, 1998

Hospital group	Medicare	Medicaid	Uncompensated care	Private payers
All hospitals	102.6%	97.9%	13.2%	113.6%
Urban	101.9	94.7	14.5	115.0
Rural	93.6	90.1	7.7	134.5
Large urban	103.9	96.6	15.0	110.3
Other urban	99.3	91.0	13.3	122.6
Rural referral	95.5	87.0	0.8	139.6
Sole community	93.6	92.8	15.7	130.2
Small rural Medicare-dependent	91.4	91.9	19.3	125.9
Other rural < 50 beds	88.9	96.1	19.2	125.6
Other rural ≥ 50 beds	94.0	87.8	4.2	134.8
Academic medical center	108.1	98.8	28.7	115.0
Major teaching (non-AMC)	104.8	100.7	13.8	105.3
Other teaching	100.1	91.3	6.9	116.2
Nonteaching	97.8	87.3	5.2	122.9
Major teaching				
Public	113.1	110.4	36.0	138.8
Private	104.3	89.3	2.8	103.2
Other teaching				
Public	101.6	107.8	25.1	128.8
Private	101.0	88.8	1.7	115.4
Nonteaching				
Public	94.5	91.9	18.6	126.7
Private	98.3	85.6	1.4	121.9
DSH				
Large urban	107.2	97.8	17.6	111.4
Other urban	101.2	93.4	15.8	123.7
Rural	95.7	94.5	6.2	144.0
Non-DSH	96.5	85.6	6.1	116.9
Teaching and DSH	105.1	98.8	19.5	114.2
Teaching and non-DSH	99.0	85.1	0.1	112.5
Nonteaching and DSH	101.2	87.8	5.2	126.1
Nonteaching and non-DSH	95.0	85.8	9.1	120.0
New England	99.9	82.5	1.1	103.2
Middle Atlantic	101.6	94.6	7.8	102.2
South Atlantic	102.3	94.5	13.8	126.2
East North Central	96.0	83.8	7.4	117.8
East South Central	105.2	91.7	13.6	121.2
West North Central	92.8	91.4	22.4	121.7
West South Central	102.8	103.6	28.2	127.6
Mountain	103.1	99.8	7.8	120.0
Pacific	105.3	94.6	7.4	117.1
Voluntary	99.7	86.8	2.0	113.9
Proprietary	107.8	97.2	0.1	130.2
Urban government	105.2	107.8	32.6	131.5
Rural government	92.3	92.8	19.6	131.6

Note: AMC (academic medical center), DSH (disproportionate share hospital). Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Totals for all hospitals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for under-representation of proprietary and public hospitals relative to voluntary institutions. Values for hospital groups reflect reported data only. Most Medicare and Medicaid managed care patients are included in the private payers category.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-16

Costs by payer as a percent of total hospital costs, by hospital group, 1998

Hospital group	Medicare	Medicaid	Other government payers	Uncompensated care	Private payers	Other operating
All hospitals	37.5%	11.6%	1.6%	6.0%	40.5%	2.8%
Urban	35.8	11.2	1.8	6.3	41.8	3.0
Rural	46.7	10.9	1.0	5.2	34.4	1.9
Large urban	33.1	12.0	1.8	6.6	43.1	3.5
Other urban	40.1	9.8	1.7	5.9	40.0	2.4
Rural referral	47.0	10.0	1.2	5.0	34.9	1.9
Sole community	44.4	11.9	1.3	5.4	34.9	2.0
Small rural Medicare-dependent	52.8	9.5	0.4	4.3	31.1	1.9
Other rural < 50 beds	46.0	11.3	0.7	5.3	34.7	2.1
Other rural ≥ 50 beds	46.5	11.2	1.0	5.4	34.4	1.6
Academic medical center	26.2	17.2	3.9	11.0	37.4	4.3
Major teaching (non-AMC)	32.5	12.7	1.8	6.3	42.0	4.7
Other teaching	38.5	9.4	1.3	5.0	42.9	2.8
Nonteaching	42.8	8.7	1.0	4.9	40.9	1.8
Major teaching						
Public	19.7	25.2	8.2	18.8	24.9	3.2
Private	32.3	12.3	1.0	5.1	44.1	5.2
Other teaching						
Public	34.8	15.9	4.7	10.7	31.1	2.7
Private	39.1	8.2	1.0	4.2	44.9	2.6
Nonteaching						
Public	43.8	11.0	1.0	6.3	36.2	1.7
Private	42.4	8.1	0.9	4.6	41.9	2.1
DSH						
Large urban	30.4	16.8	2.6	8.3	38.6	3.4
Other urban	38.7	11.7	2.2	6.8	38.3	2.4
Rural	45.9	15.0	1.6	6.7	29.2	1.6
Non-DSH	41.7	5.8	0.7	4.0	45.0	2.9
Teaching and DSH	31.4	16.0	2.8	8.4	38.0	3.4
Teaching and non-DSH	39.9	4.8	0.5	3.4	47.8	3.6
Nonteaching and DSH	41.9	11.6	1.2	5.8	37.8	1.6
Nonteaching and non-DSH	42.8	6.4	0.7	4.4	43.3	2.4
New England	34.9	7.7	0.8	4.6	45.8	6.2
Middle Atlantic	37.0	13.6	0.7	5.2	39.8	3.7
South Atlantic	38.9	10.8	2.5	7.6	38.1	2.2
East North Central	38.4	8.8	0.5	4.2	45.1	3.0
East South Central	41.8	11.3	1.2	6.6	37.4	1.8
West North Central	41.2	8.3	0.8	3.7	43.2	2.7
West South Central	36.5	12.0	1.9	10.6	36.4	2.4
Mountain	30.6	9.4	2.5	6.1	48.8	2.5
Pacific	27.3	19.5	4.8	6.0	39.9	2.5
Voluntary	38.9	9.0	0.9	4.6	43.4	3.1
Proprietary	39.6	9.9	1.1	4.2	44.2	1.0
Urban government	27.2	20.0	5.9	14.6	29.5	2.8
Rural government	46.5	11.8	1.1	5.8	33.1	1.7

Note: AMC (academic medical center), DSH (disproportionate share hospital). Data reflect inpatient and outpatient services for community hospitals. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Most Medicare and Medicaid managed care patients are included in the private payers category. Totals for all hospitals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for under representation of proprietary and public hospitals relative to voluntary institutions. Values for hospital groups reflect reported data only.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-17

Gains and losses by payer as a percent of total hospital costs, by hospital group, 1998

Hospital group	Medicare	Medicaid	Other government payers	Uncompensated care	Private payers	Other operating
All hospitals	1.0%	−0.2%	−0.2%	−5.2%	5.5%	2.2%
Urban	0.7	−0.6	−0.4	−5.4	6.3	2.3
Rural	−3.0	−1.1	0.1	−4.8	11.8	1.2
Large urban	1.3	−0.4	−0.5	−5.6	4.4	2.6
Other urban	−0.3	−0.9	−0.2	−5.1	9.1	1.8
Rural referral	−2.1	−1.3	0.1	−5.0	13.8	1.3
Sole community	−2.8	−0.9	0.1	−4.5	10.5	1.1
Small rural Medicare-dependent	−4.6	−0.8	0.0	−3.5	8.0	1.0
Other rural < 50 beds	−5.1	−0.4	0.1	−4.3	8.9	1.0
Other rural ≥ 50 beds	−2.8	−1.4	0.1	−5.2	12.0	1.1
Academic medical center	2.1	−0.2	−1.9	−7.8	5.6	2.7
Major teaching (non-AMC)	1.6	0.1	−0.6	−5.4	2.2	3.1
Other teaching	0.0	−0.8	−0.3	−4.6	7.0	2.1
Nonteaching	−1.0	−1.1	0.1	−4.6	9.4	1.6
Major teaching						
Public	2.6	2.6	−5.3	−12.0	9.7	1.9
Private	1.4	−1.3	0.1	−5.0	1.4	3.5
Other teaching						
Public	0.6	1.2	−2.3	−8.0	9.0	1.9
Private	0.4	−0.9	0.1	−4.2	6.9	2.1
Nonteaching						
Public	−2.4	−0.9	0.1	−5.1	9.7	1.2
Private	−0.7	−1.2	0.1	−4.5	9.2	1.7
DSH						
Large urban	2.2	−0.4	−0.9	−6.8	4.4	2.5
Other urban	0.4	−0.8	−0.3	−5.7	9.1	1.8
Rural	−2.0	−0.8	0.1	−6.3	12.9	1.2
Non-DSH	−1.5	−0.8	0.1	−3.7	7.6	2.1
Teaching and DSH	1.6	−0.2	−0.9	−6.7	5.4	2.4
Teaching and non-DSH	−0.4	−0.7	0.1	−3.4	6.0	2.6
Nonteaching and DSH	0.5	−1.4	0.1	−5.5	9.9	1.6
Nonteaching and non-DSH	−2.2	−0.9	0.1	−4.0	8.7	1.7
New England	−0.1	−1.3	0.1	−4.5	1.5	3.2
Middle Atlantic	0.6	−0.7	0.5	−4.8	0.9	2.6
South Atlantic	0.9	−0.6	−0.4	−6.5	10.0	1.6
East North Central	−1.5	−1.4	0.1	−3.9	8.0	2.0
East South Central	2.2	−0.9	−0.3	−5.7	7.9	1.7
West North Central	−3.0	−0.7	−0.1	−2.9	9.4	1.9
West South Central	1.0	0.4	−0.4	−7.6	10.1	2.0
Mountain	1.0	0.0	0.1	−5.6	9.7	2.0
Pacific	1.5	−1.1	−3.0	−5.6	6.8	2.5
Voluntary	−0.1	−1.2	0.1	−4.5	6.0	2.3
Proprietary	3.1	−0.3	0.2	−4.2	13.3	1.4
Urban government	1.4	1.6	−3.5	−9.8	9.3	1.8
Rural government	−3.6	−0.8	0.0	−4.7	10.4	1.0

Note: AMC (academic medical center), DSH (disproportionate share hospital). Gains or losses are the difference between the cost of providing care (or operating a non-patient service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Data reflect inpatient and outpatient services for community hospitals. Most Medicare and Medicaid managed care patients are included in the private payers category. Totals for all hospitals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for under representation of proprietary and public hospitals relative to voluntary institutions.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-18

Hospital payment-to-cost ratio, by payer and state, 1998

State	Medicaid	Uncompensated care	Private payers
U.S. total	97.9%	13.2%	113.6%
Alabama	90.5	21.5	111.5
Alaska	75.6	4.5	139.6
Arizona	97.9	0.3	107.5
Arkansas	77.9	4.2	135.5
California	95.6	5.1	120.8
Colorado	103.2	1.6	120.6
Connecticut	69.2	0.0	110.0
Delaware	86.8	0.0	119.7
Dist. of Columbia	100.7	58.7	104.4
Florida	86.2	23.7	123.2
Georgia	99.4	9.9	129.7
Hawaii	74.0	0.0	115.6
Idaho	89.7	4.7	136.8
Illinois	70.4	13.0	121.3
Indiana	91.6	0.3	130.5
Iowa	93.0	55.5	130.6
Kansas	82.1	5.7	127.3
Kentucky	95.7	5.0	116.9
Louisiana	99.9	0.8	149.8
Maine	115.1	11.0	136.2
Maryland	109.3	0.0	111.4
Massachusetts	77.2	0.0	93.2
Michigan	99.2	1.4	108.8
Minnesota	91.2	0.8	118.3
Mississippi	104.3	4.6	148.3
Missouri	92.5	23.2	112.8
Montana	81.4	3.2	135.7
Nebraska	98.8	3.9	131.7
Nevada	93.8	1.9	123.2
New Hampshire	77.4	1.3	121.1
New Jersey	97.9	13.2	109.7
New Mexico	123.9	36.5	129.2
New York	97.3	7.1	100.6
North Carolina	92.9	5.8	129.7
North Dakota	99.8	0.0	125.2
Ohio	92.6	9.7	114.4
Oklahoma	58.2	2.1	123.9
Oregon	88.2	19.3	107.3
Pennsylvania	77.5	0.0	100.5
Rhode Island	108.4	0.0	98.9
South Carolina	95.5	12.4	158.8
South Dakota	86.1	1.6	130.6
Tennessee	80.8	20.1	120.3
Texas	110.7	38.6	124.1
Utah	105.2	5.3	118.2
Vermont	91.3	1.6	135.1
Virginia	104.5	0.0	128.5
Washington	91.7	25.9	109.5
West Virginia	91.0	0.0	137.2
Wisconsin	78.4	0.0	123.7
Wyoming	91.2	23.8	141.2

Note: Operating subsidies from state and local governments are considered payment for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect both inpatient and outpatient services. Totals for all hospitals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Values for individual states reflect reported data only. Most Medicare and Medicaid managed care patients are included in the private payers category.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

TABLE C-19

Gains and losses by payer as a percent of total hospital costs, by state, 1998

State	Medicare	Medicaid	Uncompensated care	Private payers	All other*	Total gains
U.S. total	1.0%	−0.2%	−5.2%	5.5%	4.9%	6.1%
Alabama	2.9	−0.9	−6.0	4.0	5.4	5.4
Alaska	−4.1	−4.1	−5.3	16.8	5.1	8.3
Arizona	3.1	−0.2	−4.1	3.8	3.8	6.3
Arkansas	3.2	−2.6	−8.4	11.9	2.6	6.8
California	2.2	−1.0	−6.7	7.4	2.0	3.8
Colorado	1.6	0.3	−7.5	10.9	4.4	9.7
Connecticut	0.0	−2.3	−3.3	4.6	5.1	4.1
Delaware	−2.0	−0.7	−5.3	9.2	6.0	7.3
Dist. of Columbia	0.8	0.1	−4.1	1.9	5.8	4.4
Florida	1.1	−1.2	−6.4	9.5	3.6	6.6
Georgia	1.5	−0.1	−6.9	10.8	5.0	10.3
Hawaii	−6.6	−2.0	−2.5	7.6	4.1	0.5
Idaho	0.3	−1.0	−3.7	16.4	4.3	16.3
Illinois	−2.2	−3.5	−4.0	9.2	8.4	7.9
Indiana	−2.5	−0.6	−5.1	12.9	5.6	10.3
Iowa	−5.0	−0.5	−2.0	11.8	3.4	7.7
Kansas	−1.9	−1.3	−4.1	11.9	5.2	9.8
Kentucky	0.7	−0.5	−4.8	6.5	4.9	6.8
Louisiana	2.4	0.0	−13.6	15.5	1.8	6.0
Maine	−6.3	1.7	−4.2	13.1	4.6	8.9
Maryland	4.3	0.5	−7.2	5.2	2.3	5.1
Massachusetts	0.9	−1.7	−5.1	−3.2	8.8	−0.3
Michigan	0.2	−0.1	−2.6	4.3	5.6	7.4
Minnesota	−3.3	−0.9	−2.1	9.2	5.0	7.8
Mississippi	−1.4	0.6	−8.5	14.5	2.6	7.8
Missouri	−1.3	−0.6	−3.6	5.5	6.5	6.4
Montana	−3.4	−1.9	−4.4	12.1	7.8	10.2
Nebraska	−3.6	−0.1	−2.3	13.9	5.3	13.2
Nevada	0.5	−0.4	−5.5	11.9	3.2	9.8
New Hampshire	−2.0	−1.5	−5.1	9.7	5.9	6.9
New Jersey	−1.5	−0.1	−7.5	3.9	5.1	−0.1
New Mexico	2.6	3.0	−8.6	10.2	4.5	11.6
New York	1.1	−0.6	−5.2	0.2	5.7	1.2
North Carolina	0.4	−0.9	−5.4	10.6	6.1	10.7
North Dakota	−3.3	0.0	−2.4	9.6	5.2	9.1
Ohio	−1.2	−0.6	−5.0	6.6	5.7	5.5
Oklahoma	0.7	−3.3	−7.2	8.9	3.8	2.9
Oregon	0.4	−0.7	−2.5	4.3	4.8	6.4
Pennsylvania	1.0	−1.4	−2.6	0.3	6.1	3.4
Rhode Island	3.8	0.5	−4.0	−0.5	5.5	5.3
South Carolina	0.0	−0.8	−9.2	15.2	3.3	8.4
South Dakota	−6.7	−1.1	−2.4	11.8	4.8	6.4
Tennessee	5.1	−2.2	−4.4	8.1	3.7	10.3
Texas	0.6	1.3	−6.6	9.0	3.9	8.2
Utah	−0.5	0.4	−4.7	10.0	2.9	8.1
Vermont	−6.7	−1.1	−4.2	13.0	3.0	4.0
Virginia	0.7	0.4	−7.4	11.9	3.3	9.0
Washington	0.5	−1.0	−2.5	4.6	3.9	5.4
West Virginia	−1.8	−1.2	−5.3	10.0	4.4	6.1
Wisconsin	−3.1	−1.7	−2.7	10.3	4.5	7.4
Wyoming	−2.9	−0.9	−4.8	16.0	5.5	12.9

Note: Gains or losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payment for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers' category. Totals for all hospitals are calculated using reported as well as imputed data (about 35 percent of observations); the imputing process attempts to correct for under representation of proprietary and public hospitals relative to voluntary institutions. Values for individual states reflect reported data only.
*Includes other government payers and non-patient business.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals

APPENDIX D

Methods and data for modeling the impact of inpatient payment provisions

APPENDIX D

Methods and data for modeling the impact of inpatient payment provisions

In Chapter 5, MedPAC estimates the impact of the Balanced Budget Act of 1997 (BBA) and the Balanced Budget Refinement Act of 1999 (BBRA) on prospective payment system (PPS) hospital Medicare inpatient margins. A detailed analysis of the projected inpatient margin by hospital group is presented in Table C-5. This section outlines the methodological approach MedPAC used to estimate the impact of BBA and BBRA provisions. The study produced hospital Medicare inpatient margins for each year from 1999 through 2002, in total and for select hospital groups. The analysis produced payment and cost estimates for each year and calculated annual margins from these estimates.

The analysis involved four steps:

1. Project the change in inpatient payments from 1998 through 2002, based on BBA payment policy and other Medicare payment policies, using MedPAC's PPS payment model.
2. Project the change in inpatient costs from 1998 through 2002, based on market basket projections and other cost trends in the hospital industry.
3. Weight 1998 payments and costs to adjust for under-representation of teaching hospitals and align hospital-specific costs to fiscal year 1998 for consistency.
4. Apply percentage changes in payments from the payment model and costs for 1999 through 2002 to adjusted 1998 payments and costs from Medicare Cost Report data, and calculate inpatient margins for each year.

Each step is explained below.

Step 1: Estimate payments

Estimates of annual percent changes to payments were produced with our PPS payment model, which projects case-level data for PPS hospitals. MedPAC staff maintain and update the model to aid in simulating the effects of various payment policy changes that have been implemented or are under consideration. The model calculates standard operating and capital payments and all adjustments (geographic reclassification, sole community hospitals, disproportionate share (DSH), outlier, wage index, cost of living, indirect medical education (IME), and so forth) for each hospital subject to the inpatient PPS. The model was adjusted to incorporate the key inpatient policy provisions of the BBA and BBRA. These include:

1. The update factor, DSH payments, Medicare bad debt payments, and IME payments were reduced, as were payments due to the transfer policy and capital payments. For some of these provisions, such as the update factor and DSH reductions, the adjustment was a simple percentage point reduction. For other provisions, MedPAC calculated case-specific adjustment values. This was necessary for the operating IME adjustment by year and the expanded transfer policy.

   A. We applied the following values at the case level to estimate the reduction in operating IME payments:

   1998 $(1.72 \times ((1 + IRB)^{0.405} - 1))$

   1999 $(1.60 \times ((1 + IRB)^{0.405} - 1))$

   2000 $(1.60 \times ((1 + IRB)^{0.405} - 1))$

   2001 $(1.535 \times ((1 + IRB)^{0.405} - 1))$

   2002 $(1.35 \times ((1 + IRB)^{0.405} - 1))$

   IRB is the ratio of the number of interns and residents to the number of beds in the hospital.

B. The expanded transfer policy ultimately reduced inpatient payments by 0.72 percent each year from 1999 through 2002. Because the transfer policy affects hospital groups differently, however, MedPAC produced group-specific reduction factors as follows:

   Major teaching urban: -0.83%

   Major teaching rural: -0.71%

   Other teaching urban: -0.79%

   Other teaching rural: -0.44%

   Nonteaching urban: -0.41%

   Nonteaching rural: -0.49%

2. Certain hospital groups were treated differently in the model. The exception to update factor reductions granted to sole-community hospitals in the BBRA was applied, and critical access hospitals (which are paid on a cost basis) were excluded from the final hospital groups.

3. Payment growth in 1999–2002 was reduced to account for a drop in the case-mix index (CMI) of 0.5 percent in 1999, based on a preliminary HCFA estimate. We assume the CMI remained constant for the remaining years.

Step 2: Estimate cost growth

Inpatient costs were calculated independent of the PPS payment model, building from 1998 Medicare Cost Report data with an estimate of the anticipated annual change in costs. Certain key assumptions underlie the calculation of cost growth. Cost growth in 1999 is estimated as 1.1 percentage points below the market basket, based on the National Hospital Indicators Survey (NHIS). For 2000–2002, we estimated costs to increase at the latest projected market basket minus 1.0 percentage point. We were prepared to estimate greater cost growth if evidence suggested that length of stay was stabilizing; however, the latest NHIS data show a continued decline in length of stay.

After all adjustments, costs were predicted to increase by the following factors:

1999: 1.2%

2000: 1.8%

2001: 1.6%

2002: 1.7%

Step 3: Adjust 1998 Medicare Cost Report data

Using 1998 cost report data for the analysis had the advantage of projecting from a base that already reflected a significant portion of the BBA changes.[1] However, the 1998 data required adjustment to reflect the hospital universe in terms of teaching status and to align costs to fiscal year 1998.

The available sample of Medicare Cost Reports for 1998 includes 56 percent of PPS hospitals and is under-representative of teaching hospitals due to variations in hospital reporting cycles. An analysis based only on the available 1998 data could bias the true impact of the BBA (and possibly other policy changes). To control for this effect, we weighted by three teaching groups (major, other and nonteaching),[2] and differentiated between urban and rural hospitals, which created six groups. 1998 costs and payments were adjusted based on the distribution of Medicare inpatient costs from 1997 Medicare Cost Reports among these groups. The weight for each hospital group is the ratio of its 1997 proportion of aggregate inpatient costs to its 1998 proportion of inpatient costs.

We aligned the data from various hospital cost-reporting periods to fiscal year 1998, because most of the BBA policy changes go into effect at the beginning of the federal fiscal year. All hospitals with cost reporting periods beginning after October 1, 1998 had their 1998 costs adjusted backward by a monthly factor. The 1999 Indicators Survey suggested that Medicare costs per case increased by 1.2 percent from 1998 to 1999. Thus, a per month adjustment was applied to costs by dividing by the 12^{th} root of 1.012, or approximately 1.001.

Step 4: Apply percentage changes to payments and costs, and calculate inpatient margins

The percentage changes calculated in Steps 1 and 2 were applied to the adjusted 1998 payment and cost data from Step 3. The margins for each group were calculated for 1999–2002 by subtracting Medicare inpatient costs from Medicare inpatient payments and then dividing the difference by Medicare inpatient payments.

1 These payments and costs for inpatient services do not include graduate medical education payments or costs.

2 A "major teaching" hospital has a ratio of interns and residents to beds of greater than or equal to 0.25 and an "other teaching" hospital has a ratio greater than zero and less than 0.25.

APPENDIX E

Overview of new hospital technologies for fiscal year 2001

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Overview of new hospital technologies for fiscal year 2001

In recent years, the Commission has qualitatively estimated our allowance for scientific and technological advances by evaluating the changes in technologies identified in previous analyses, examining industry trends, having informal discussions with industry representatives, and reviewing the current medical literature to identify new advancements for this year's update. We began our review by evaluating the categories we identified as significant contributors to costs in the fiscal year (FY) 2000 update:

- information systems,
- cardiovascular drugs, devices, and techniques,
- biotechnology,
- radiology, imaging, and nuclear medicine, and
- other devices and technologies.

We used numerous data sources to identify new technological advancements, including peer-reviewed published literature, federal agencies and private organizations, and various periodicals.

Information systems

Hospital health care information systems play a significant role in the trend toward coordinated care delivery. They include financial, pharmacy, radiology, patient-care, and laboratory systems, and clinical data repositories and related enabling software. The Commission believes that information systems will continue to be an important source of increased costs in FY 2001, as they were in our FY 2000 assessment. This assessment is based on continued investment in new, quality-enhancing information systems, particularly telemedicine, clinical data repositories, and multisite integrated data networks. Hospitals are adopting these technologies in response to greater information needs in an increasingly competitive environment.

Telemedicine is becoming an important technology for rural hospitals. The Food and Drug Administration (FDA) has predicted that the use of telemedicine—the electronic delivery of health care information and services—will significantly increase over the next five years (Herman et al. 1998). The number of telemedicine programs nationwide rose from 132 in 1997 to about 160 in 1998 (BNA 1999). The Balanced Budget Act of 1997 (BBA) expanded the use of telemedicine by requiring Medicare to cover interactive telemedicine consultations in areas designated as health professional shortage areas.

Hospitals continue to develop clinical data repositories (also called electronic medical records), which capture data from many sources, store the information consistently, and present results in tabular and graphical formats. Hospitals are investing in systems that can standardize identification and aggregation of data. Hospitals are also continuing to invest in multisite networks that integrate their clinical and financial computer systems and permit transfer of data through secure connections across multiple providers within a health care system, as well as to parties outside the health care system, including Medicare. Transmitting Medicare claims to HCFA via the Internet is increasing, due to HCFA's reversal of its ban on this practice. Finally, with the publication of the Institute of Medicine's report on medical errors (IOM 2000), hospitals may increase investments in information systems—such as physician order entry and computer-assisted decisionmaking systems—that can detect medication errors and diagnostic inaccuracies.

Cardiovascular drugs, devices, and techniques

Advances in cardiovascular drugs, devices, and techniques continue.

MedPAC believes that the diffusion of these advances will have a modest impact on hospital costs in FY 2001. Specific advancements include:

- two platelet aggregation inhibitors to treat acute coronary syndrome,
- three antiarrhythmics to treat irregular heartbeat,
- a protease inhibitor to reduce perioperative blood loss in patients undergoing cardiopulmonary bypass,
- a quinolone derivative to treat intermittent claudication,
- an agent to treat acute deep-vein thrombosis,
- laser treatments to open tiny channels in the heart muscle, which helps restore blood flow in patients with severe angina,
- left ventricular assist devices that can support patients awaiting a heart transplant for at least one year,
- fibrin sealants, a new class of commercially available blood-derived products, that stop oozing from small blood vessels during cardiopulmonary bypass and colostomy operations,
- catheter-based devices that remove blood clots from blocked heart arteries or bypass grafts before angioplasty,
- endovascular devices that reinforce weakened, bulging sections of the abdominal aorta, and
- laser angioplasty that ablates arterial plaque, as an alternative or adjunct to other angioplasty procedures.

Biotechnology

Advances in molecular medicine continue, including genetic diagnostics, gene therapy, and biosensor technologies. Recent advancements include the use of monoclonal antibodies to treat various cancers, lymphomas, and Crohn's disease.

MedPAC believes that the diffusion of these advances will have a small impact on hospital costs in FY 2001. Specific biotechnology advancements include:

- an injectable sustained-release formulation to treat lymphomatous meningitis,
- a retinoid and a fusion protein to treat certain lymphomas,
- a genetically engineered protein that reduces the symptoms of moderate to severe rheumatoid arthritis,
- a recombinant thrombin inhibitor to treat anticoagulation in patients with heparin-induced thrombocytopenia,
- a synthetic plasma expander to treat hypovolemia (abnormally low blood volume during surgery), and
- a skin construct for treatment of venous leg ulcers.

Radiology, imaging, and nuclear medicine

The past three decades have seen enormous growth in the field of radiology, imaging, and nuclear medicine. During the upcoming fiscal year, we anticipate continued advances in this area, especially improvements and further applications for magnetic resonance imaging, positron emission tomography, ultrasound, and computed tomography. Nearly all hospitals are continuing to invest in ultrasound and computed tomography equipment (AHA 1999). MedPAC believes that the diffusion of these advances will have a modest impact on hospital costs in FY 2001. Specific advances in this area include:

- digital mammography and breast imaging devices for clarification of ambiguous mammograms,
- mini-magnetic resonance imaging to view internal body structures,
- handheld ultrasound devices,
- electron-beam computed tomography to detect blockages in arteries,
- functional anatomic mapping systems,
- positron emission tomography to diagnose certain cancers and lymphomas,
- radiosurgery devices that direct radiation to treat certain solid tumors, and
- new imaging agents to detect certain lung tumors and certain brain and spinal lesions.

Other devices and technologies

A variety of other devices and technologies have recently been developed, and MedPAC anticipates that these devices will have a collectively small impact on hospital costs in the coming fiscal year. These technologies include new drugs (antibiotics and anti-neoplastics), microprocessor-based intelligent devices, combination drug-devices, and robotic aides. Specific advancements include:

- four anti-infectives that treat infections caused by susceptible strains of gram-negative bacteria, drug-resistant bloodstream and skin infections, and certain acute bacterial infections,
- two cyclooxygenase-2 (cox-2) inhibitors for osteoarthritis and rheumatoid arthritis,
- an anticoagulant used to prevent the formation of clots after surgery,
- anti-neoplastics for certain cancers, and agents to reduce the side effects of some cancer therapies,
- three agents for surgical anesthesia and sedation,
- a fully automated blood testing system, and
- an electronic device for postoperative nausea.

Based on a review of the literature and the findings of an FDA expert panel, we also anticipate an escalating trend toward microprocessor-based intelligent devices used in hospitals. These technologies include cardiac and drug-delivery implants and robotics used during minimally invasive surgery. The Commission also anticipates continued advances in the development of devices designed for implanted delivery of drugs—including intelligent devices with biosensors to monitor concentrations in body fluids and make adjustments in delivery rates—and in the use of microchips in devices for various indications, including restoring vision in patients with diseases of the retina. Finally, the Commission anticipates advances in the development of robotic aides over the next 10 years. These advances may lead to diffusion of telesurgery and the use of nontraditional settings as surgical sites and in the development of prosthetic limbs for paralyzed patients. ■

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Acronyms and terms

Acronyms

AHA	American Hospital Association
AMC	academic medical center
AMP	average manufacturer's price
APC	ambulatory payment classification
APR-DRG	all patient refined diagnosis related group
ASC	ambulatory surgical center
AWP	average wholesale price
BBA	Balanced Budget Act of 1997
BBRA	Balanced Budget Refinement Act of 1999
BLS	Bureau of Labor Statistics
CAT	computerized automated tomography
CBO	Congressional Budget Office
CMI	case-mix index
COPs	conditions of participation
DRG	diagnosis related group
DSH	disproportionate share hospital
EMTALA	Emergency Medical Treatment and Active Labor Act
ESRD	end-stage renal disease
FCP	Federal Ceiling Price
FDA	Food and Drug Administration
FDO	formula-driven overpayment
FEHB	Federal Employees Health Benefits
FFS	fee-for-service
FI	fiscal intermediary
FSS	Federal Supply Schedule
FY	fiscal year
GAO	General Accounting Office
GDP	gross domestic product
GI	gastrointestinal
GME	graduate medical education
HCFA	Health Care Financing Administration
HCPCS	HCFA Common Procedure Coding System
HEDIS	Health Plan Employer Data and Information Set
HHS	Department of Health and Human Services
HMO	health maintenance organization
IME	indirect costs of medical education
IOL	intraocular lens
IRB	intern and resident to bed ratio
IRS	Internal Revenue Service
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LOS	length of stay
LTC	long-term care

M+C	Medicare+Choice
MB	market basket
MCCA	Medicare Catastrophic Coverage Act of 1988
MedPAC	Medicare Payment Advisory Commission
NAIC	National Association of Insurance Commissioners
OBRA	Omnibus Budget Reconciliation Act
OIG	Office of Inspector General
OPD	outpatient department
OSCAR	Online Survey, Certification, and Reporting system
OSHA	Occupational Safety and Health Administration
PACE	Program of All-Inclusive Care for the Elderly
PACENET	Pharmaceutical Assistance for the Elderly Needs Enhancement Tier
PBM	pharmacy benefit manager
PPS	prospective payment system
ProPAC	Prospective Payment Assessment Commission
PROs	peer review organizations
QA	quality assurance
QI	quality improvement
QMBs	Qualified Medicare Beneficiaries
R&D	research and development
SAQIP	State Agency Quality Improvement Program
SCHIP	State Children's Health Insurance Program
SGR	sustainable growth rate
SNF	skilled nursing facility
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
VA	Department of Veterans Affairs
VISN	Veterans Integrated Service Network

Terms

adjustments to payment rates
Payment systems usually include adjustments to the base payment rates designed to allow for differences in providers' circumstances that are expected to affect their costs of furnishing care. Payment rates may be adjusted, for instance, to accommodate differences in local prices for inputs, which may account for more than 50 percent of the observed variation in providers' costs for a given product or service. Other adjustments may be made to reflect unusual circumstances, such as delivery of specialized types of care or atypical characteristics of beneficiaries. (See base payment amount, indirect medical education adjustment outlier.)

base payment amount
The base payment amount in a payment system is the amount that a purchaser commits to pay providers for a standard unit of service or product furnished to a covered beneficiary. The base payment amount corresponds to a payment system's unit of payment, which may be individual services, bundles of services (such as hospital stays), episodes of care, or specified periods of time. Providers' payment rates for individual services or products are determined by applying two types of adjustments to the base payment amount. One is based on a relative weight designed to measure the expected relative costliness of each distinct service or product, compared with the cost of the average unit. The other is designed to reflect differences in providers' circumstances that are likely to affect their costs of furnishing care. The base payment amount (sometimes called a conversion factor) thus determines the level of the payment rates in the payment system. (See adjustments to payment rates, conversion factor, relative weights.)

capitation
A payment method in which a purchaser pays a health care entity or provider a fixed amount per person, per time period to supply covered health services to beneficiaries during the period. Contracting entities or providers take the risk that the costs of the covered services that beneficiaries use may exceed the capitation payment; if costs are less than the capitation amount, they keep the difference. Employers, government programs, or other purchasers may use capitation to pay health plans, or plans may use it to pay providers. (See fee-for-service, Medicare+Choice.)

case mix
The generic term used to describe the mix of services or products furnished by a provider or group of providers, such as physicians, hospitals, nursing homes, or home health agencies. Providers' case mix is usually summarized by measuring the average expected relative costliness of the services or products provided, which is based on two components. One is a service or product classification system—such as HCFA's Common Procedure Coding System; diagnosis related groups; Resource Utilization Groups, version III; or Home Health Resource Groups—used to identify distinct services or products providers may furnish. The second is a set of relative weights representing the expected relative costliness of services or products in each classification category, compared with the cost of the average service or product. (See case-mix index, classification system, relative weights.)

case-mix index
Measures the average expected relative costliness of the mix of services or products furnished by a provider or group of providers. The average is calculated by multiplying the number of units supplied in each classification category by the relative weight for the category, adding the results across all categories, and dividing by the total number of units across all categories. (See case mix, classification system, relative weights.)

classification system
Provides the foundation for payment systems by identifying distinct services or products that will be priced separately because they are expected to require different amounts of providers' resources. Each payment system has a classification system that corresponds to the payment system's unit of payment (services, episodes of care, and so on). Examples include the HCFA's Common Procedure Coding System used in the physician fee schedule and the diagnosis related groups patient classification system used in the hospital inpatient prospective payment system. (See case mix, case-mix index, relative weights.)

conversion factor
A dollar amount that is multiplied by a measure of relative resource use to determine a payment rate. Conversion factors, such as those used to pay physicians and hospital outpatient departments, serve the same purpose as the base payment amounts in other payment systems. (See base payment amount.)

cost-based reimbursement
The method Medicare initially used to pay health care facilities for services furnished to beneficiaries. Payment was based on providers' costs as reported on annual cost reports, which identified incurred costs by type of service, separated allowable costs reasonably related to the provision of patient care from those attributable to unrelated activities, and distinguished costs related to services furnished to Medicare patients from those incurred for others.

diagnosis related groups (DRGs)
A patient classification system used to identify distinct types of hospital inpatient cases that should be priced separately because they are expected to require different amounts or types of providers' resources. The DRGs are the foundation of Medicare's hospital inpatient prospective payment system. Each DRG is intended to distinguish patients with similar clinical conditions who are treated with common medical or surgical treatment strategies. For example, patients with blocked coronary arteries treated with coronary bypass surgery with cardiac catheterization are distinguished from those who do not have catheterization. (See classification system, case mix, case-mix index, relative weights.)

fee-for-service
A method of paying health care providers for individual medical services, as opposed to paying them salaries or capitated payments. Payments may be prospectively determined or based on providers' costs or charges. (See capitation.)

graduate medical education
The period of medical training that follows graduation from medical school; it is commonly referred to as internship, residency, and fellowship training. Medicare provides payments to hospitals to support its share of the direct costs related to these training programs and to support the higher patient care costs associated with the training of residents. (See indirect medical education adjustment.)

hospital insurance trust fund
The trust fund that finances services covered under Medicare Part A. Its primary source of income is payroll taxes paid by employees and employers. (See supplementary medical insurance trust fund.)

indirect medical education adjustment
An adjustment applied to payments under the prospective payment system for hospitals that operate approved graduate medical education programs. For operating costs, the adjustment is based on the hospital's ratio of interns and residents to the number of beds. For capital costs, it is based on the hospital's ratio of interns and residents to average daily occupancy. (See graduate medical education.)

margin
A measure of financial performance, defined as net revenue (revenue minus cost) divided by revenue. A margin can be calculated for all services that an organization provides or for specific service lines.

market basket index
A price index designed to measure prices for the typical mix of goods and services providers purchase to produce a specific product or set of products relative to a base year. Generally, these indexes contain three elements: a set of input categories, such as labor, supplies, and purchased services; a set of price proxies representing the price levels for the input categories; and a fixed set of weights (proportions) representing the relative importance of each input category in providers' input expenditures for the base year. The actual or projected values of the price proxies for a year are multiplied by the category weights and summed to obtain the overall market basket index value for the year. The rate of change in input prices can be calculated by comparing index values over time. HCFA computes separate market basket indexes for most facilities; it also calculates a similar measure, called the Medicare Economic Index, for physicians' office practices. (See update.)

Medicare
A health insurance program for people who are 65 or older, eligible for Social Security disability payments, or who need kidney dialysis or a kidney transplant. (See Medicare Part A, Medicare Part B.)

Medicare Part A
Also called hospital insurance. This part of the Medicare program covers the cost of hospital inpatient care and related post-hospital services, including some care provided by skilled nursing facilities and home health agencies. Eligibility is normally based on prior payment of payroll taxes. Beneficiaries are responsible for an initial hospital deductible per spell of illness and for copayments for some services.

Medicare Part B
Also called supplementary medical insurance. This part of the Medicare program covers the cost of physician services, outpatient laboratory and X-ray tests, durable medical equipment, outpatient hospital care, some home health care, and certain other services. The voluntary program requires payment of a monthly premium, which covers 25 percent of program costs, with general tax revenues covering the rest. Beneficiaries are responsible for an annual deductible and coinsurance payments for most covered services.

Medicare+Choice
A program created by the Balanced Budget Act of 1997 to replace the methods Medicare previously used to pay health maintenance organizations (HMOs). Beneficiaries have the choice to enroll in a Medicare+Choice plan or to remain in the traditional Medicare program. Medicare+Choice plans may include coordinated care plans (HMOs, preferred-provider organizations, or plans offered by provider-sponsored organizations), private fee-for-service plans, or high-deductible plans with medical savings accounts.

Medigap insurance
Privately purchased individual or group health insurance policies designed to supplement Medicare coverage. Benefits may include payment of Medicare deductibles and coinsurance, as well as payment for services not covered by Medicare. Medigap insurance policies must conform to 1 of 10 federally standardized benefit packages.

outlier
A service, case, or episode that is extraordinarily costly compared with the usual payment under a prospective payment system. Outlier payments are intended to help ensure beneficiaries' access to care by limiting the financial risks providers face when they encounter unusually costly patients.

productivity
Refers to the quantity of resources used to produce a unit of output. Productivity increases when an organization produces more output with the same resources or the same output with fewer resources.

prospective payment
A method of paying health care providers in which payments are based on predetermined rates and are unaffected by providers' incurred costs or posted charges. Examples include Medicare's per-discharge payments for inpatient hospital care and the program's per-service payments for physician services.

quality assurance
A process or system designed to identify problems in health care delivery, take action to address the problems, and assess the effectiveness of corrective actions.

quality improvement
A process or system designed to improve the processes of delivering health care so as to increase the likelihood of achieving desired outcomes.

relative weights
In payment systems, relative weights are used with product classification systems to adjust payment rates to reflect the expected relative costliness of each service or product, compared with the cost of the average service unit. In Medicare's hospital inpatient prospective payment system, hospitals' base payment amounts for cases in each diagnosis related group (DRG) are determined by multiplying their base per discharge payment amounts by the relative weight for the DRG. Relative weights may be based on providers' national average charges or costs for cases in each product category. When charge or cost data are unavailable, weights may be based on judgments by clinicians or other experts, as are the relative values for the professional component of the Medicare physician fee schedule. (See base payment amount, case mix, case-mix index, classification system.)

risk adjustment
The process used to adjust plan or provider payments to account for predictable differences in the cost of providing care to beneficiaries. Risk adjustment is based on the empirical relationship between the cost of providing care and beneficiaries' characteristics, including health status, use of services, and demographic characteristics.

risk score
A measure of the expected costliness of a beneficiary with specific characteristics, compared with the cost of caring for the average beneficiary. For example, if the average cost of caring for beneficiaries is represented by a risk score of 1, then a beneficiary with a risk score of 1.2 would be expected to cost 20 percent more than average. (See relative weights, risk adjustment.)

risk selection
Any situation in which health plans differ in the average health risk associated with their enrollees because of enrollment choices made by the plans or enrollees. When risk selection occurs, health plans' expected costs differ because of underlying differences in their enrolled populations.

standardization
A process of adjusting charges or costs for particular services or bundles of services to remove differences that result from geographic variation in price levels, demographic characteristics, beneficiary health risk, and other factors. Standardization is intended to make charges or costs more comparable among providers, plans, and geographic areas. (See adjustments to payment rates.)

supplementary medical insurance trust fund
Finances services covered under Medicare Part B. This trust fund is financed from general revenues and premiums paid by beneficiaries. The premium rate is derived annually, based on the projected costs of the program for the coming year. (See hospital insurance trust fund.)

teaching hospital
A hospital with an approved graduate medical education program. Teaching hospitals are often distinguished by the size of their residency programs or their relationships with medical schools. Major teaching hospitals have a ratio of residents to beds of 0.25 or greater; other teaching hospitals have a ratio of less than 0.25. Teaching hospitals that are owned, operated, or closely affiliated with medical schools are often called academic medical centers.

update
A periodic adjustment (usually annual) designed to raise or lower a base payment amount to account for the effects of changes in factors that are expected to affect efficient providers' costs of furnishing care. (See market basket index.)

uncompensated care
Care provided by hospitals or other providers that is not paid for directly (by the patient or by a government or private insurance program). It includes charity care, which is furnished without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment.

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Beatrice S. Braun, M.D., is a member of the board of directors of AARP. Dr. Braun is a member of the State Advisory Council for the Florida Department of Elder Affairs and serves on the board of directors for the Mid-Florida Area Agency on Aging. Dr. Braun founded and, until her retirement in 1989, directed a day treatment program at St. Vincent's Hospital in Harrison, New York, for people with severe and persistent mental illness. She is a past president of the American Association for Partial Hospitalization. She also had a private practice in psychiatry for 16 years and was named a fellow of the American Psychiatric Association. Before her psychiatric specialization, Dr. Braun served for 17 years as a family physician and missionary in South Korea.

Spencer Johnson is president of the Michigan Health and Hospital Association, which is the principal statewide advocate for hospitals, health systems, and other health care providers committed to improving community health status. Before assuming this position in early 1985, Mr. Johnson was executive vice president of the Hospital Association of New York State. Before that, he was involved in the development of federal health policy and legislation as associate director of the Domestic Council at the White House during the Ford Administration and as a professional staff member of the U.S. Senate and the House of Representatives. He has served on the Prospective Payment Assessment Commission and is a board member of both Blue Cross Blue Shield of Michigan and the MHA Insurance Company. Mr. Johnson holds a master's degree in public administration from Cornell University and a bachelor's degree in journalism from St. Bonaventure University.

Peter Kemper, Ph.D., Peter Kemper is vice president of the Center for Studying Health System Change and principal investigator of the HSC's Community Tracking Study. The CTS is a major national study of change in the health care system and its effect on health care delivery, access, cost and quality. He is also an adjunct professor at Georgetown University where he teaches health policy. Dr. Kemper has published widely on long term care of the elderly, including home care of elderly persons with chronic care needs and nursing home use and financing, and managed care, including its effects on care delivery and consumer assessments of care. Prior to coming to HSC, he was director of the Division of Long Term Care Studies at the Agency of Health Care Policy and Research where he directed studies of nursing home and home health care. Earlier in his career he was the director of the Madison Office of Mathematica Policy Research and an assistant professor at Swarthmore College. Dr. Kemper received his B.A. in mathematics from Oberlin College and his Ph.D. in economics from Yale University.

Judith Lave, Ph.D., is professor of health economics at the Graduate School of Public Health and codirector of the Center for Research on Health Care at the University of Pittsburgh. She holds secondary appointments in the Katz Graduate School of Business and in the departments of economics and psychiatry. Previously, she served on the Prospective Payment Assessment Commission. At the U.S. Department of Health and Human Services, she was the director of the Division of Economic and Quantitative Analysis in the Office of the Deputy Assistant Secretary and director of the Office of Research in the Health Care Financing Administration. Dr. Lave is currently on the editorial boards of *Health Affairs* and the *Journal of Health Politics, Policy, and Law* and a member of the Institute of Medicine and the National Academy of Social Insurance. She is past president of the Association for Health Services Research and the Foundation for Health Services Research. Dr. Lave chaired the technical panel on health and was a member of the expert panel on income and health care for the Advisory Council on Social Security. She served on the editorial board of the Health Administration Press. She received a B.A. and an honorary LL.D. from Queen's University, Canada, and a Ph.D. in

economics from Harvard University. She serves on the technical advisory group of the Pennsylvania Health Care Cost Containment Commission.

D. Ted Lewers, M.D., a nephrologist and internist, is on the staff at the Memorial Hospital in Easton, Maryland. Chair of the Board of Trustees, American Medical Association, Dr. Lewers also is chair of the board at the Medical Mutual Liability Insurance Company of Maryland and chair of the board of Health Enhancement Center, Inc. Previously, he served on the Physician Payment Review Commission. Long active in organized medicine, Dr. Lewers served as president of the Medical and Chirurgical Faculty of Maryland from 1985 to 1986 and as vice chair of the American Medical Association's Relative Value Scale Update Committee. Dr. Lewers received a B.A. from the University of Maryland and a medical degree from the University of Maryland School of Medicine. He completed an internship at the University of Maryland, Baltimore, a residency at Maryland General Hospital, and a fellowship in nephrology at Georgetown University Hospital.

Hugh W. Long, Ph.D., J.D., is professor of health systems management at the Tulane University School of Public Health and Tropical Medicine in New Orleans. He also holds appointments at Tulane's School of Law and its Freeman School of Business and is a member of Tulane's graduate faculty. Dr. Long is the founder and faculty director of Tulane's master of medical management degree program for physicians. Previously, he served on the Prospective Payment Assessment Commission. He has also taught at Yale, Stanford, San Jose State, and Ohio State universities. Dr. Long has served as an ad hoc adviser on health care financing to the Committee on Ways and Means of the U.S. House of Representatives and to the Committee on Finance of the U.S. Senate and has testified before these committees. He currently serves as the chairman of the Medicare Geographic Classification Review Board. He is the author of numerous articles on health care financing and management and is a member of the faculty of the American College of Physician Executives. Dr. Long received a B.A. from Ohio State University, an M.B.A. and a Ph.D. in business administration and finance from Stanford University, and a J.D. from Tulane University.

Floyd D. Loop, M.D., has served since 1989 as chief executive officer and chairman of the Board of Governors of The Cleveland Clinic Foundation. In the past 10 years, the Cleveland Clinic has developed a regional health care delivery system of clinics and acquired hospitals. Dr. Loop has practiced thoracic and cardiovascular surgery for 30 years and from 1975 to 1989 served as chairman of this department at the Cleveland Clinic. As a practicing surgeon, Dr. Loop and his colleagues have made numerous contributions to cardiac surgery, including extensive writings on internal thoracic artery grafting, reoperations, myocardial protection, and long-term results. He is a former editor of *Seminars in Thoracic and Cardiovascular Surgery* and has served on the editorial boards of 15 specialty journals in surgery and cardiology. Dr. Loop is the author of more than 300 articles on surgery. He chaired the Residency Review Committee for Thoracic Surgery and has been president of the American Association for Thoracic Surgery. He received a medical degree from George Washington University and completed surgical residencies at George Washington University and the Cleveland Clinic.

William A. MacBain is a founding principal of MacBain & MacBain, LLC, a management consulting firm that specializes in managed care. He was formerly senior vice president of health plan operations for Geisinger Health System and executive director of Penn State Geisinger Health Plan, Inc. (New York). Before joining Geisinger in 1988, Mr. MacBain was chief operating officer of HMO of Western Pennsylvania, a health plan and clinic network based on the Miners Clinic in New Kensington, Pennsylvania. Before that, he held senior operations and finance posts with health plans in Tulsa, Oklahoma, and Nassau County, New York. He began his career with Health Services Association, a primarily rural prepaid group practice plan and family health

center program north of Syracuse, New York. Mr. MacBain has served as a board member of the American Association of Health Plans, the Group Health Association of America, and the Managed Care Association of Pennsylvania. He chaired the Pennsylvania association for several years. He is also a past commissioner of the Prospective Payment Assessment Commission. He has a B.A. and a master's degree in hospital and health services administration, both from Cornell University.

Woodrow A. Myers Jr., M.D., is director of health care management for the Ford Motor Company, where he is responsible for health benefits for active and retired employees and their dependents, occupational health and safety services, and disability and workers' compensation programs. Previously, he was senior vice president and corporate medical director of The Associated Group (now Anthem Blue Cross Blue Shield). He was New York City Health Commissioner and served as Indiana State Health Commissioner and secretary to the Indiana State Board of Health. Before that, Dr. Myers was associate director of the medical-surgical intensive care unit and chairman of the quality assurance program at the San Francisco General Hospital and an assistant professor of medicine at the University of California, San Francisco. A past president of the Association of State and Territorial Health Officials and former adviser to the U.S. Senate Committee on Labor and Human Resources, Dr. Myers has taught at Cornell University, Indiana University, and the University of California, San Francisco. He is on the boards of Harvard University and UCSF/Stanford University Health Systems. He is also a fellow of the American College of Physician Executives; a member of the Institute of Medicine; and a master, American College of Physicians. Dr. Myers received a B.S. from Stanford University, a medical degree from Harvard Medical School, and an M.B.A. from Stanford University Graduate School of Business.

Joseph P. Newhouse, Ph.D., is vice chair of the Commission. He is the John D. MacArthur Professor of Health Policy and Management at Harvard University and director of Harvard's Division of Health Policy Research and Education. At Harvard since 1988, Dr. Newhouse was previously a senior corporate fellow and head of the economics department at RAND. He has conducted research in health care financing, economics, and policy, and was the principal investigator for the RAND Health Insurance Experiment. Recipient of several professional awards, he is a member of the Institute of Medicine, a former chair of the Prospective Payment Assessment Commission, and a former member of the Physician Payment Review Commission. He is also a past president of the Association for Health Services Research and has been elected to the American Academy of Arts and Sciences. Dr. Newhouse is editor of the *Journal of Health Economic*s. He received a B.A. from Harvard College and a Ph.D. in economics from Harvard University.

Janet G. Newport is corporate vice president of public policy for PacifiCare Health Systems (PHS), Inc. The Corporate Public Policy Department is responsible for PHS' policy development and strategic response on health care issues, support of the entity's Ethics and Integrity (Compliance) Program, and acts as the company liaison with key government agencies and the Congress. Ms. Newport serves on several American Association of Health Plans technical and advisory committees and is an industry representative on the Health Care Financing Administration's Medicare Council. She has also served as an industry representative on internal HCFA technical committees. She has more than 25 years of public affairs experience, including more than 10 years directing the Washington, D.C., office of another major Medicare risk contractor. Ms. Newport received a political science degree from American University.

Carol Raphael is president and chief executive officer of the Visiting Nurse Service (VNS) of New York, the largest voluntary home health care organization in the United States. Under Ms. Raphael's leadership, VNS created the Medicare Community Nursing Organization and VNS Choice, a New York State Medicaid Managed Long-Term Care

Program. Ms. Raphael also developed the VNS Center for Home Care Policy and Research, which conducts policy-relevant research focusing on the management, cost, quality, and outcomes of home- and community-based services. She co-edited *Home Based Care for a New Century* and authored numerous articles on long-term care. Before joining VNS, Ms. Raphael worked for nine years at the New York City Human Resources Administration, leaving as executive deputy commissioner of the Income and Medical Assistance Administration. Ms. Raphael has served on several Robert Wood Johnson Foundation advisory committees and New York state panels. She has a B.A. from City College of New York and a M.P.A. from Harvard University's John F. Kennedy School of Government.

Alice Rosenblatt, F.S.A., M.A.A.A., is chief actuary and senior vice president of Merger and Acquisition Integration at WellPoint Health Networks. Before joining WellPoint in 1996, she was a principal at Coopers & Lybrand LLP, where she consulted with insurers, health plans, providers, and employers. She is a former senior vice president and chief actuary of Blue Cross Blue Shield of Massachusetts and Blue Cross of California. Other positions include work for The New England and William M. Mercer, Inc. Ms. Rosenblatt has served on the Board of Governors of the Society of Actuaries and the American Academy of Actuaries. She previously chaired the academy's federal health committee and work group on risk adjustment. Ms. Rosenblatt has testified on risk adjustment before subcommittees of the Committee on Ways and Means and the Committee on Commerce of the U.S. House of Representatives. She has a B.S. and an M.A. in mathematics from City College of New York and the City University of New York, respectively.

John W. Rowe, M.D., is president and chief executive officer of Mount Sinai NYU Health. Prior to the Mount Sinai-NYU Medical Center merger, Dr. Rowe was president of the Mount Sinai Hospital and the Mount Sinai School of Medicine in New York City. He serves as a professor of medicine and geriatrics at the Mount Sinai School of Medicine. Before joining Mount Sinai in 1988, Dr. Rowe was a professor of medicine and the founding director of the Division on Aging at Harvard Medical School, and chief of gerontology at Boston's Beth Israel Hospital. He has authored more than 200 scientific publications, mostly on the physiology of the aging process, and a leading textbook on geriatric medicine. Dr. Rowe has received many honors and awards for his research and health policy efforts on care of the elderly. He was director of the MacArthur Foundation Research Network on Successful Aging and is co-author, with Robert Kahn, Ph.D., of *Successful Aging* (Pantheon 1998). He served on the Board of Governors of the American Board of Internal Medicine, as president of the Gerontological Society of America, and is a member of the Institute of Medicine.

Gerald M. Shea is currently assistant to the president for Government Affairs at the AFL-CIO. Mr. Shea was appointed to this position by John J. Sweeney when Mr. Sweeney was elected president of the AFL-CIO in October 1995. Mr. Shea held various positions at the AFL-CIO from August 1993 through October 1995, serving first as the director of the policy office with responsibility for health care and pensions and then in several executive staff positions. Before joining the AFL-CIO, Mr. Shea spent 21 years with the Service Employees International Union as an organizer and local union official in Massachusetts and later on the national union's staff. Mr. Shea was a member of the 1994–1996 Advisory Council on Social Security and also of the Social Security Advisory Board. He holds a seat on the Joint Commission on the Accreditation of Health Care Organizations, representing union and consumer interests. He is a member of the Institute of Medicine Quality Committee's Subcommittee on External Environment and the National Forum for Health Care Quality and Measurement. He also is a founding member of the Foundation for Accountability, a national coalition of organizations that work to help consumers make health care choices based on quality. Mr. Shea is a native of Massachusetts and a graduate of Boston College.

Mary K. Wakefield, PhD., R.N., has served since 1996 as professor and director of the center for Health Policy, Research, and Ethics at George Mason University, working on policy analysis, research, and educational initiatives. Dr. Wakefield held administrative and legislative staff positions at the U.S. Senate before assuming her current position. She has served on many public and private health-related advisory boards. From 1997 through 1998, she was on President Clinton's Advisory Commission on Consumer Protection and Quality in the Health Care Industry. In September 1998, Dr. Wakefield was appointed to the Institute of Medicine's Committee on Quality Health Care in America. She was a Kodak Fellow in the Program for Senior Managers in Government at the John F. Kennedy School of Government, Harvard University, and is a fellow in the American Academy of Nursing. Dr. Wakefield received her B.S. in nursing from the University of Mary, Bismarck, North Dakota, and her M.S. and Ph.D. from the University of Texas at Austin.

Gail R. Wilensky, Ph.D., is chair of the Commission. She is the John M. Olin Senior Fellow at Project HOPE, where she analyzes and develops policies relating to health care reform and ongoing changes in the medical marketplace. She also frequently advises members of the Congress and others on the policies and politics of health care reform. Former chair of the Physician Payment Review Commission, Dr. Wilensky has held several posts in the executive branch, most recently as deputy assistant to the President for policy development during the Bush Administration and, before that, as administrator of the Health Care Financing Administration. Recipient of numerous professional awards, she is a member of the Institute of Medicine, a trustee of the Combined Benefits Fund of the United Mine Workers of America, and a governor for the Research Triangle Institute. In addition to serving on many other professional committees and corporate boards, Dr. Wilensky is a well-known speaker who has published widely on health policy, economics, and financing. She received a B.A. in psychology and a Ph.D. in economics from the University of Michigan.

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