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**REPORT TO THE CONGRESS**

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# Medicare Payment Policy



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](http://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 Centers for Medicare & Medicaid Services (CMS), 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. This volume fulfills MedPAC’s requirement to submit an annual report on Medicare payment policy. In addition to annual reports and occasional reports on subjects requested by the Congress, MedPAC advises the Congress through other avenues, including comments on reports and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff.

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# Medicare Payment Policy

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## **Executive summary**

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## Executive summary

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The Congress has charged the Medicare Payment Advisory Commission (MedPAC) with reviewing Medicare's payment policies and making recommendations concerning them annually in March. In this report we first highlight the important elements of Medicare's payment systems and key policy issues. Our review takes as its objective ensuring that Medicare beneficiaries continue to have access to high-quality care. To accomplish that objective, the Commission seeks to ensure that Medicare's payment rates cover the costs that efficient providers would incur in furnishing beneficiaries' care. On the one hand, if payments are set too low, providers will not want to participate in the program and access to care will suffer. On the other hand, if payments are set too high, taxpayers and beneficiaries will bear too large a burden.

Are Medicare payments to providers adequate—that is, neither obviously too high nor too low—and if so, how should they be updated to address expected changes in providers' costs in 2003? These seemingly simple questions frame the Commission's challenge and the structure of our recommendations in this report. Judging payment adequacy involves substantial uncertainty; for many settings, the available data are not current, indicators are often ambiguous, and the health care industry continues to change rapidly. Moreover, even if payments in most settings are adequate overall, they may not be distributed appropriately among providers or the markets in which they operate. We find that for most care settings, payments in 2002 to providers appear to be adequate; that is, we have no compelling evidence that payments are too high or too low. Therefore, payment updates for 2003 need only recognize expected changes in factors that affect efficient providers' costs, primarily changing input prices.

Medicare's payment systems also raise other important issues beyond payment adequacy and updates. In this report we address two of them: paying for new technologies in the outpatient prospective payment system (PPS) and reforming the payment system used in the Medicare+Choice program.

### How Medicare pays for services: an overview

Understanding Medicare's many payment systems, including their common characteristics and distinct issues, is crucial to determine adequacy and appropriate updates. Medicare's 40 million beneficiaries use thousands of different health care products and services furnished by over 1 million providers in hundreds of markets nationwide. Medicare sets prices administratively and pays for these services using 15 payment systems that are generally organized by delivery setting. These payment systems address the full range of health care services covered in the traditional fee-for-service (FFS) program—hospital inpatient and outpatient acute care, physicians' services, skilled nursing facility (SNF) care, and laboratory services, for example—and care furnished by private health plans in the Medicare+Choice program.

Because they have similar objectives, most payment systems have similar design elements that are tailored to accommodate the specific products Medicare is buying in each setting, the market circumstances that affect providers' costs, and in some cases the characteristics of the providers that produce them. In Chapter 1, we describe these design elements—such as product and service definitions, relative values, base payment amounts, or adjustments for local market conditions—and summarize related policy issues in each service setting.

## Assessing payment adequacy and updating payments in traditional Medicare

MedPAC's approach for updating Medicare's FFS payment rates has two parts: assessing the adequacy of current payments and accounting for anticipated increases in efficient providers' costs in the coming year. In Chapter 2, we explain this approach and the update recommendations that result from its use. The approach focuses initially on the broad question of whether current aggregate spending in each setting—the amount of money in the system—is sufficient to ensure beneficiaries' access to high-quality care without being overly generous. In making payment adequacy judgments we look at a number of indicators—as data permit—that might suggest that payment rates are either too high or too low. For instance, we examine changes in the volume of services and in the quality of care and access to care. We also examine trends in providers' financial performance, their access to capital, and market entry or exit.

The second part of our approach focuses on changes in efficient providers' costs in the coming year. Barring compelling evidence that the net effect of factors such as productivity growth and improvements in medical science and technology will significantly increase or decrease costs, we begin with the forecasted increase in the appropriate measure of input price inflation. (This measure is often referred to as a market basket index.) Our approach heightens the need for accurate measures of changes in input prices; accordingly, we recommend that the Secretary use the wage and benefit proxies that most closely match the training and skill requirements of health care occupations in all input price indexes used for updating payments. In determining index weights, measures specific to the health sector and to occupation categories in which health care plays a major role should be emphasized.

We apply our updating model in recommending changes in Medicare's payments for hospital inpatient and outpatient acute care, physician services, skilled nursing facility care, home health care, and outpatient dialysis services.

**Hospital inpatient services** The base payments for inpatient services appear adequate, judging from our estimated overall hospital Medicare margin of 3.8 percent for 2002, volume increases over the last few years, modest net hospital closures, and other factors. However, because the base payment rate for hospitals located in large urban areas differs from that for hospitals located in other areas, Medicare's hospital inpatient payments are too high for some hospitals and too low for others. We recommend that the Congress gradually eliminate the differential in the base payment rates. To begin this process, we recommend that the Congress adopt different updates for the base payment rates for these two hospital groups in fiscal year 2003: the forecasted increase in the hospital market basket index minus 0.55 percent for hospitals located in large urban areas, and the forecasted increase in the market basket index for hospitals in other areas. These recommendations build on those in our June 2001 report to the Congress, which also addressed distributional issues and focused on rural hospitals.

**Hospital outpatient services** The prospective payment system for outpatient services is new and we have little systematic data on hospital performance under the new system. However, given the data on overall hospital performance under Medicare, the base payment rate for outpatient services is probably adequate and we recommend that for calendar year 2003 the Secretary increase this rate by the hospital market basket forecast.

**Physician services** As we have recommended previously, the current physician payment update formula, known as the sustainable growth rate (SGR) system, should be repealed. It causes large swings in updates from year to year that are unrelated to changes



in the cost of furnishing physician services. Although annual input price increases have been in the 2–3 percent range for the past few years, the SGR has produced payment updates of +5.4 percent, +4.5 percent and –5.4 percent for 2000, 2001 and 2002. We recommend developing payment updates for this sector as we do those for other sectors, making them account for expected cost increases if current base payments are adequate. Accordingly, we recommend that the Congress repeal the SGR and instead require the Secretary to update payments for physician services based on the projected change in input prices for the coming year, less an adjustment for growth in overall productivity.

Although we do not generally subtract productivity growth from the projected increase in input prices in most settings, it should be subtracted for physician services. In most other settings, the savings from productivity growth usually are offset by cost-increasing changes in medical science and technology that are not otherwise accounted for by the payment system. Because the unit of payment for physician services is the individual service, frequent revisions in billing codes distinguish new services as they arise, capturing cost-increasing changes in science and technology as changes in service mix. Savings from projected growth in productivity must be subtracted from the payment update because they are not automatically offset by other costs. We also recommend that the Secretary revise the productivity adjustment for physician services to make it a multifactor instead of a labor-only adjustment to take account of other inputs used in this sector, such as medical equipment and supplies. Taking into account current estimates for input prices and productivity, we thus recommend that the Congress update payments for physician services by 2.5 percent for 2003.

MedPAC recognizes that one payment mechanism cannot simultaneously set individual prices accurately and control total spending on physician services delivered to Medicare beneficiaries. The SGR attempted to do so and failed. As in every other sector, our recommended approach for setting the price Medicare pays for individual physician services attempts to set prices accurately, not control total spending. If total spending needs to be limited, it may be better to look outside the payment update mechanism, achieving appropriate use of services through outcomes and effectiveness research for example, as we suggested in our March 2001 report to the Congress.

**Skilled nursing facility services** Medicare’s payment policy for skilled nursing facility services has been caught in an action-reaction cycle over the past several years. Reacting to large increases in spending, the Congress mandated that the Centers for Medicare & Medicaid Services (CMS) implement a PPS for SNFs, which started in 1998. In reaction to problems with the new PPS, the Congress enacted three temporary payment rate increases. The classification system upon which the PPS is based is inadequate and some temporary rate increases are scheduled to expire soon. As a first step, we recommend that the Secretary develop a new classification system for care in SNFs. Refinements to the current system will not be enough to make it a reasonable basis for payment. Under current law, if CMS merely refines the classification system for care in skilled nursing facilities, one of the temporary payment increases previously implemented to allow time for refinement will end. We recommend that the Congress retain this money in the base payment rate to maintain adequate payments for SNF services overall.

In addition, disparate financial performances between freestanding facilities and hospital-based facilities suggests that a distribution problem exists. To reduce that problem we recommend differential updates for 2003. We recommend that the Congress update payments to skilled nursing facilities as follows. For freestanding facilities, make no update. For hospital-based facilities, update payments by the forecast increase in the market basket index plus an additional 10 percent until a new and effective classification system is developed that recognizes the more complex patients treated in this setting.

**Home health services** This sector has seen massive swings in spending over the past few years. Although we do not yet have any cost data for the period since the PPS for home health was put in place, the absence of clear evidence from other indicators of disparity between payments and costs in the sector leads us to conclude that the payment base as of 2002 is adequate. To bring some stability to the sector, we recommend that the Congress eliminate the payment cut scheduled for October 2002 in current law, update home health payments by the increase in the market basket index for fiscal year 2003, and extend the 10 percent rural add-on payments for two years.

**Outpatient dialysis services** Medicare's current payments for outpatient dialysis services have two components, and while it appears that payments for one component—composite rate services—are too low relative to providers' costs, payments for the other component—separately billable medications—are too high. The sum of the payments appears to be appropriate relative to providers' costs. Evidence from several market indicators, including trends in the number of providers and their capacity to furnish dialysis, changes in the volume of separately billable drugs furnished to beneficiaries, beneficiaries' access to high-quality care, and providers' access to capital, reinforces that conclusion. Therefore, we conclude that Medicare's total payments for outpatient dialysis services appear to be adequate and we recommend no adjustment to the base rate for composite rate services. However, to account for expected changes in providers' costs in the coming year, we recommend that for calendar year 2003, the Congress update the composite rate payment by 2.4 percent.

### **Paying for new technology in the outpatient prospective payment system**

Medicare continues to struggle to find appropriate methods to pay for new technologies that ensure beneficiaries' access to new services but that do not place undue financial burdens on taxpayers and beneficiaries. Very few market data are available to set payment rates for new technologies, particularly for innovative products with patent protections. Recognizing that difficulty, the outpatient PPS used a new approach, pass-through payments, for ensuring beneficiaries' access to new technology. We discuss this approach in Chapter 3.

The pass-through system makes additional payments to hospitals for certain new technology items based on hospitals' reported costs and manufacturers' prices. The current mechanism creates incentives for manufacturers and hospitals to raise their prices and charges, and will eventually result in incorrect relative payments among all outpatient services when the reported costs are incorporated into payment rates. These flaws in the payment system have been highlighted because administrative and legislative actions dramatically increased the number of items entering the pass-through pool. In addition, the requirement that pass-through payments be made budget neutral has not been met, leading to excessive spending. While the number of pass-through items will decrease from over 1,000 this year to fewer than 50 next year, the consequences of the flawed system will continue.

To mitigate these problems, the Commission recommends several improvements to the current system that will limit but not eliminate some of the undesirable incentives for providers and manufacturers. First, we recommend that the Congress replace hospital-specific payments for pass-through devices with national rates and give the Secretary authority to consider alternatives to the average wholesale price when determining payments for pass-through drugs and biologicals. This will reduce the incentive for hospitals to overstate costs and enable CMS to set more realistic rates for drugs. However, CMS will still need to establish appropriate national rates for new items that have limited market data.

Second, to limit the universe of pass-through items, we recommend that the Secretary ensure that additional payments are made only for new or substantially improved technologies that are expensive in relation to the applicable ambulatory payment classification payment rate. We also recommend that he avoid basing national rates only on reported costs and that he use the same broad principles to guide payments for new technologies in the inpatient and outpatient payment systems. Together, these actions should help ensure beneficiaries' access to new technologies and also protect the Medicare program from excessive costs.

## **What next for Medicare+Choice?**

Recent years have not been kind to the Medicare+Choice (M+C) program. Since it started in 1998, the number of contracts peaked at 346 in December 1998 and dropped to 148 in January of 2002. The number of people enrolled has declined from about 6 million to 5 million and the value of the additional benefits they receive has eroded. Beneficiaries have had to switch plans and sometimes health care providers or leave the M+C program entirely and face larger out-of-pocket costs for health care. The payment system for Medicare+Choice has not brought more choice to more people in Medicare; in fact, quite the opposite has occurred.

In Chapter 4 we discuss what direction the program should take next. The Commission recommends the Congress set payments to M+C plans at 100 percent of per capita local FFS spending as soon as possible and that an adequate risk-adjustment mechanism be phased in at least as rapidly as is called for in current law. This financially neutral payment system would eliminate the multiple classifications of payment areas into so-called floor, blend, and minimum update areas, thus restoring equity between M+C and traditional Medicare in each local area. Such a change should be phased in to minimize disruption. Moving toward a financially neutral payment system would allow M+C to succeed where market forces allow it to and provide value to beneficiaries in those areas, while not costing the program more than traditional FFS. It will not bring M+C choices to all areas of the country, but as the current payment system has shown, that cannot be done without paying too much for the services Medicare covers.

The Commission also examined competitive bidding under a financially neutral payment system. Competitive bidding would be unlikely to bring M+C choices to areas that do not now have plans unless federal government payments exceeded FFS spending in those areas. But it could be constructed to get more choices in markets that now have M+C plans, and it could produce some savings if bids below FFS spending were used to set the government contribution. The savings could then be used to reduce federal outlays, or to improve the benefit package or reduce Part B premiums. However, beneficiaries in FFS would have to pay higher premiums in areas where savings were realized. Moving now toward a financially neutral payment system as recommended would not preclude competitive bidding and its possible benefits in the future, and would simplify and rationalize the program. ■



C H A P T E R

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## **How Medicare pays for services: an overview**

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## How Medicare pays for services: an overview

**M**edicare's 40 million beneficiaries use thousands of different health care products and services furnished by over 1 million providers in hundreds of markets nationwide. Medicare pays for these services using 15 payment systems that are generally organized by delivery setting. These payment systems share common goals and most have similar design elements that are tailored to accommodate the products Medicare is buying in each setting, the characteristics of the providers that produce them, the extent to which the same product may be furnished in different settings, and the market circumstances that affect providers' costs. In this chapter, we describe the key features of these payment systems and summarize related policy issues in each service setting.

### In this chapter

- Key structural elements of Medicare's prospective payment systems
- Acute inpatient services
- Ambulatory care
- Post-acute care
- Services for special populations
- Other services
- Medicare+Choice plans
- Further information on how Medicare pays for services

Medicare was enacted to improve access to care by reducing the financial burdens faced by elderly (and later disabled) people in obtaining medically necessary acute care services. To achieve this objective, Medicare helps its beneficiaries pay for covered products and services in 15 different health care settings. These settings encompass the full range of health care, including facility services—provided in hospital inpatient and outpatient departments, ambulatory care centers, and skilled nursing facilities, for example—and professional services furnished by physicians, therapists, and other practitioners.

In the traditional fee-for-service (FFS) program, Medicare sets prospectively the payment amounts (rates) providers will receive for most covered products and services and providers agree to accept them as payment in full.<sup>1</sup> Thus, in most instances, providers' payments are based on predetermined rates and are unaffected by their costs or posted charges. When beneficiaries use services, providers submit bills to Medicare's fiscal agents, who pay the predetermined rates minus beneficiaries' cost-sharing liabilities, such as deductibles and coinsurance. Providers then collect the remaining amounts from beneficiaries.<sup>2</sup>

In the Medicare+Choice (M+C) program, Medicare sets the county-specific monthly capitation payment rates that M+C organizations will receive for enrolled beneficiaries. M+C plans may offer beneficiaries additional benefits not covered in the traditional program and charge additional premiums if the total cost of all covered benefits exceeds Medicare's capitation payment rates. M+C plans, however, accept responsibility for contracting with and paying health care providers and suppliers for the products and services they furnish to enrolled beneficiaries.

In 2000, Medicare's program payments for covered services amounted to \$213 billion, representing 12 percent of total federal spending. Beneficiaries' financial liabilities amounted to an additional \$35 billion.

Recent legislation—the Balanced Budget Act of 1997 (BBA), the Balanced Budget Refinement Act of 1999 (BBRA), and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA)—fundamentally changed the way Medicare pays for many products and services. These laws required the Centers for Medicare & Medicaid Services (CMS)<sup>3</sup> to develop and adopt new prospective payment systems (PPSs) for services furnished by skilled nursing facilities, hospital outpatient departments, home health agencies, rehabilitation facilities, long-term care hospitals, and psychiatric facilities; they also required CMS to change the method for making prospective capitation payments to health care organizations under the M+C program. In addition, CMS has modified its PPSs for hospital inpatient acute care and physician services, and proposed changing its payment methods for durable medical equipment and ambulance services.

Under the law, the Medicare Payment Advisory Commission (MedPAC) must evaluate the design and implementation of Medicare's payment systems and make recommendations to the Congress and the Secretary of Health and Human Services (HHS) to address any problems. In addition, we make annual recommendations to the Congress on how payment rates should be updated (see Chapter 2). To carry out these responsibilities, we must have a clear understanding of Medicare's payment policy objectives, the major features of its payment systems, and how the features work to produce results that are (or are not) consistent with payment objectives.

Policymakers, providers, and others interested in understanding current Medicare payment issues and their implications also must begin with the basic features of these payment systems.

In this chapter, we describe the 15 major payment systems Medicare uses to pay providers for products and services they furnish to its beneficiaries. We also give a brief summary of current policy issues for each payment system. We begin with an overview of key structural elements that are present—explicitly or implicitly—in virtually all prospective payment systems. This overview is followed by six sections that describe the payment systems, grouped as follows:

- inpatient acute care in short-term hospitals and psychiatric facilities;
- ambulatory care furnished by physicians, hospital outpatient departments, ambulatory surgical centers, and clinical laboratories;
- post-acute care furnished by skilled nursing facilities, home health agencies, inpatient rehabilitation facilities, and long-term care hospitals;
- dialysis services furnished in outpatient centers and hospice care;
- ambulance services and products furnished by durable medical equipment suppliers; and
- services furnished by private health plans under the M+C program.

The 15 payment systems have substantially different spending patterns (Figure 1-1). For example, in 2000, program payments plus payments by beneficiaries (or third-party payers on their behalf) for inpatient acute care in short-term hospitals, physician services, and M+C plans accounted for 70 percent of Medicare spending.

1 Medicare pays for some services—those furnished by long-term care hospitals and psychiatric facilities, for example—based on a provider's incurred allowable costs. In these instances, providers receive interim payments, usually reflecting their unit costs in the preceding year; discrepancies between interim payments and allowable costs are resolved (settled) annually after the end of the provider's cost reporting period.

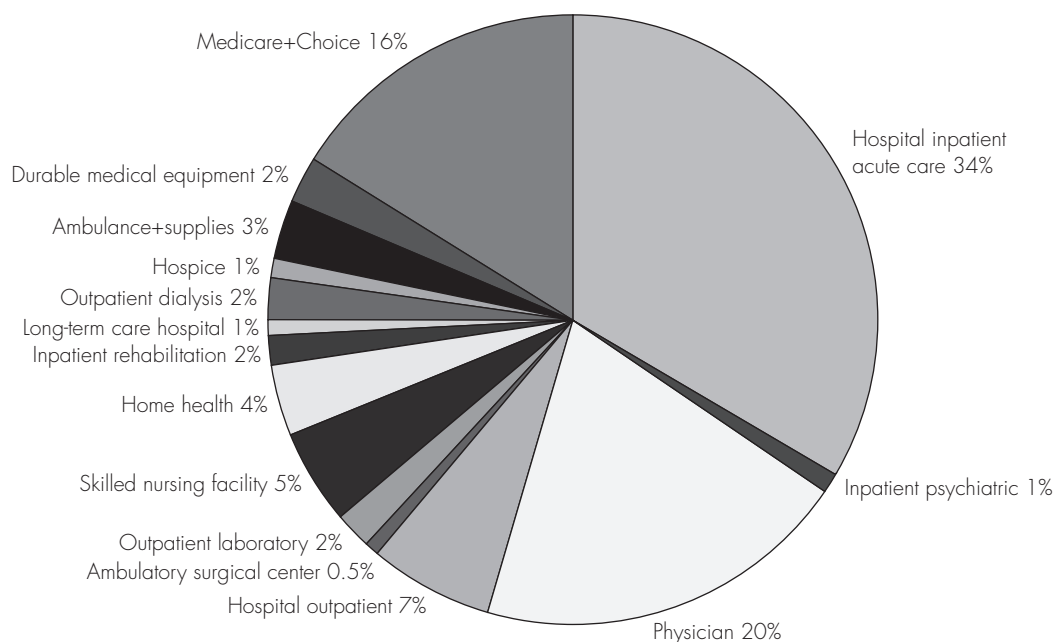
2 Most beneficiaries have secondary insurance; in this case, Medicare's fiscal agents generally bill the secondary payer directly for the beneficiary's liability.

3 CMS was formerly known as the Health Care Financing Administration.



**FIGURE  
1-1**

**Distribution of Medicare spending,  
by service setting, 2000**



Note: Spending shares reflect total payments, including program payments and those made by beneficiaries and by third-party payers on their behalf; percentages do not sum to 100 due to rounding.

Source: Centers for Medicare & Medicaid Services.

## Key structural elements of Medicare's prospective payment systems

Medicare's payment policies and methods are often seen as extremely complex, a perception strengthened by the myriad policy changes enacted in recent legislation. Even without these changes, however, Medicare's size and scope—buying a full range of health care products and services from many different types of providers in hundreds of markets nationwide—would make its payment methods complicated. Further complexity stems from the current mix of payment systems in which traditional payment methods based on providers' costs and charges have not yet been fully replaced by prospectively determined payment rates.

Nevertheless, Medicare's payment systems reflect common goals and problems that are addressed using a handful of similar structural elements. Focusing on the goals and design elements helps make these payment systems and related policy issues more understandable.

As discussed in previous MedPAC reports, Medicare's prospective payment systems are intended to support its principal policy objective—ensuring beneficiaries' access to high-quality care in the most appropriate clinical setting without imposing undue financial burdens on beneficiaries or taxpayers (MedPAC 2001c, MedPAC 1999). To achieve this objective, Medicare's payment systems must set payment rates that are consistent with efficient providers' short-run marginal costs of producing services. That is, payment rates must accurately reflect predictable cost variations among products and services and those associated

with patient or beneficiary characteristics and local market factors that are beyond providers' control.

To set and maintain accurate payment rates for many products and services—even in a single setting—is a difficult task. At a minimum, policymakers need certain tools (Table 1-1):

- the products and services Medicare is buying must be well defined,
- the relative costliness of each product or service compared with that of the average service unit must be measurable,
- production processes used by providers must be understood well enough to identify the major inputs that contribute to efficient providers' unit costs,
- patient or beneficiary characteristics and market circumstances that may

**TABLE  
1-1**

## Summary of Medicare's current payment systems by setting

Payment system description	Acute inpatient care		Ambulatory care				Post-acute care	
	Acute care hospitals	Psychiatric facilities	Physicians	Hospital outpatient departments	Ambulatory surgical centers	Outpatient laboratories	Skilled nursing facilities	Home health agencies
<b>Fiscal year began</b>	1984	1983	1992	2000	1982	1984	1998	2001
<b>Basis of payment</b>	Prospective	Facility costs with limit	Prospective	Prospective	Prospective	Prospective	Prospective	Prospective
<b>Product definition</b>								
Unit of payment	Discharge	Discharge	Service	Service	Procedure	Test	Day	60-day episode
Product classification system	506 DRGs	None	7,000+ HCPCS codes	HCPCS grouped in 750 APCs	HCPCS in 8 procedure groups	1,100+ HCPCS codes	44 RUG-III groups	80 HHRGs
Policies defining product boundaries	72-hour rule short-stay transfers; high-cost outliers	None	Differentials by setting, multiple or atypical services	High-cost outliers; multiple service discount	Multiple service discount	None	None	Fewer than 5 visits; high-cost outliers
<b>Product relative values</b>								
Components of relative values	Single value for each DRG	None	Physician work; practice expenses; liability insurance	Single value for each APC	Single amount for each group	Combined with base amount	Therapy services; nursing care	Single value for each HHRG
Source of relative values	Hospitals' billed charges	None	Expert judgement; practice expense data; premium survey	Median of estimated service costs	Median of estimated service costs	None	Staff-time studies	Estimated mean cost per HHRG
<b>Base payment rate/conversion factor</b>								
Components of base amount	Labor-related; nonlabor; capital	Current per unit operating costs	Single conversion factor (for sum of relative values)	Labor-related; other	Labor-related; other	Carrier-specific rates with limit	Therapy; nursing care; routine care	Labor-related; other
Source of base amount	Updated providers' 1982 costs	Facility's annual cost report	Projected spending under preceding method	1996 OPD charges adjusted to costs	1986 survey of ASCs	Updated 1983 lab charges	Target aggregate spending	Spending in preceding system

continued on next page

affect providers' costs must be known and measurable, and

- a payment update method must be developed to adjust payment rates annually, consistent with changes in input prices and other factors that may affect efficient providers' costs over time.

### Defining the products and services Medicare is buying

The products Medicare buys in each setting are defined by the unit of payment and a compatible classification system. The unit of payment may be an individual service (a physician office visit, for example), a day of care (care in a skilled nursing facility), an episode of care (a

hospital stay), or a month of service (as in the M+C program). Generally, the unit of payment should match the unit of service and the way providers think about delivering care in the setting.

Consistent with the unit of payment, the classification system identifies distinct services, types of patient care products, or

**TABLE  
1-1**

## Summary of Medicare's current payment systems by setting

Payment system description	Acute inpatient care		Ambulatory care				Post-acute care	
	Acute care hospitals	Psychiatric facilities	Physicians	Hospital outpatient departments	Ambulatory surgical centers	Outpatient laboratories	Skilled nursing facilities	Home health agencies
<b>Adjustments for local market conditions</b>								
Labor input prices	Hospital wage index (HWWI)	None	Separate GPCIs: work, practice expenses, PI	Hospital wage index (HWWI)	Hospital wage index (HWWI)	None	Hospital wage index (HWWI)	Hospital wage index (HWWI)
Other input prices	COLA	None	None	None	None	None	None	None
<b>Other payment adjustments</b>	Low-income patients (DSH); GME programs	None	Reduced rates for nonphysician practitioners	None	None	None	None	None
<b>Payment update method</b>	Rise in hospital market basket index	Rise in TEFRA market basket index	SGR formula	Rise in hospital market basket index	Rise in CPI-U	Rise in CPI-U	Rise in SNF market basket index	Rise in home health market basket index
<b>Payments for capital costs</b>	Separate prospective rates	Separate cost pass-through	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate
<b>Other policies</b>	Higher rates in large urban areas; policies for rural providers	National limit adjusted to reflect local market wage level	10 percent add-on for health professional shortage areas (HPSAs)	New technology pass-through; transitional corridors	None	National limit = median of carriers' rates	None	10 percent add-on for rural beneficiaries

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patients that are expected to require different amounts of resources. In some Medicare payment systems—the hospital inpatient PPS, for example—the classification categories reflect different clinical problems as indicated by diagnoses and procedures. In others, such as those for physician, hospital outpatient, or ambulatory surgical services, the categories reflect different procedures or evaluation and management services. In all payment systems, the classification categories define the products for which Medicare will pay.

### Setting relative values

Relative values measure the expected costliness of a unit in each classification category compared with the overall

average costliness of all units. Categories that require above-average resources have higher relative values and those that require fewer resources have lower ones. Relative values are often referred to as case-mix weights.

### Setting a national base payment rate

The base payment rate represents the amount Medicare would pay for an average unit of service in the setting in a market with national average input prices, if no other payment adjustments applied. The base payment rate in each setting should reflect the costs the payment rates are intended to cover—operating costs alone or operating and capital costs together.<sup>4</sup>

### Adjusting for local market conditions

Input prices differ among markets across the nation and these differences generally affect efficient providers' costs in predictable ways. Consequently, Medicare's payment rates in each market should be adjusted to reflect the local price level. To make these adjustments, policymakers must have one or more measures of geographic variation in input prices—such as the area wage index in the hospital inpatient acute care PPS or the geographic practice cost indexes in the physician fee schedule. Policymakers also must know what proportions of providers' unit costs are affected by variations in input prices. This information is used to determine how much of the national base

<sup>4</sup> Operating costs consist of expenses for room, board, routine and special care, and ancillary services, such as laboratory tests, therapy, and imaging. Capital costs, such as rent, interest, and depreciation, are included in the payment rates in some payment systems (such as the skilled nursing facility PPS) or excluded and paid separately.

**TABLE  
1-1**

## Summary of Medicare's current payment systems by setting

Payment system description	Post-acute care		Services for special populations		Other services		
	Inpatient rehabilitation facilities	Long-term care hospitals	Outpatient dialysis care	Hospice services	Ambulance services	Durable medical equipment	Medicare+Choice plans
<b>Fiscal year began</b>	2002	1983	1982	1983	1966	1986	1998
<b>Basis of payment</b>	Prospective	Facility costs with limit	Prospective	Prospective	Costs or charges with cap	Prospective	Prospective
<b>Product definition</b>							
Unit of payment	Discharge	Discharge	Dialysis treatment	Day	Trip	Item	Month
Product classification system	385 CMGs	None	None	4 care type groups	HCPCS	HCPCS within 6 equipment categories	Beneficiaries' demographics and health risk
Policies defining product boundaries	short-stay outliers/deaths; transfers; high-cost outliers	None	None	Beneficiary gives up curative treatment	None	None	All-inclusive capitation payment rate
<b>Product relative values</b>							
Components of relative values	Single value for each CMG	None	None	Combined with base amounts	None	Combined with base amounts	One value for each enrollee category
Source of relative values	Hospitals' billed charges	None	None	None	None	None	FFS bills 1992–1996
<b>Base payment rate/conversion factor</b>							
Components of base amount	Labor-related; other	Current per unit operating costs	Labor-related; other	Labor-related; other	None	Single amount	Updated 2001 rate; blended national/county rate
Source of base amount	Projected spending under preceding method	Facility's annual cost report	1977–1979 cost reports	Cost data from Medicare demonstration	None	Allowed charges in 1986–1987	Historical FFS spending in county and nation

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payment rate should be adjusted by the geographic input price factor for each market area. Most Medicare payment systems use a version of the hospital wage index.

### Other adjustments

Most payment systems have other adjustments that reflect unusual characteristics of patients, services furnished, the providers, or the market areas in which providers operate. These

adjustments generally are intended to reflect factors that are likely to substantially alter the resources needed to provide services or policymakers' decisions to support certain activities. Other adjustments are made for such things as providing graduate medical education, serving a disproportionate share of low-income patients, or furnishing services to rural beneficiaries. Some payment systems, such as the acute inpatient hospital PPS, have more adjustments than others.

### Updating payment rates

Payment rates for most settings must be updated annually to reflect changes in technology, practice patterns, and market conditions. CMS must develop methods and data sources to be used in updating the base payment amount, the classification system, and the relative values. Other payment adjustments also may need periodic revision as conditions change.

**TABLE  
1-1**

## Summary of Medicare's current payment systems by setting

Payment system description	Post-acute care		Services for special populations		Other services		
	Inpatient rehabilitation facilities	Long-term care hospitals	Outpatient dialysis care	Hospice services	Ambulance services	Durable medical equipment	Medicare+Choice plans
Adjustments for local market conditions							
Labor input prices	Hospital wage index (HWIu)	None	40% 1986 HWI + 60% 1980 BLS wage index	Hospice wage index	None	Carrier-specific rates with limit	Hospital wage index (HWIu); GPCIs
Other input prices	None	None	None	None	None	None	None
Other payment adjustments	Low-income patients	None	Higher rates for hospital-based facilities	None	None	Product-specific national limits	None
Payment update method	Rise in modified TEFRA market basket index	Rise in TEFRA market basket index	No routine update	Rise in hospital market basket index	Charge cap updated by rise in CPU	Rise in CPU	Rise in aggregate FFS spending; 2 percent minimum
Payments for capital costs	Included in prospective rates	Separate cost pass-through	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate
Other policies	Higher rates in rural areas	National limit adjusted to reflect local market wage level	Exceptions; extra payments for some tests and drugs	Annual payment per beneficiary capped	Mileage may be paid separately	None	None

Note: APCs (ambulatory payment classifications), ASC (ambulatory surgical center), BLS (Bureau of Labor Statistics), CMGs (case-mix groups), COLA (cost of living adjustment, applied in Alaska and Hawaii), CPU (consumer price index—all urban consumers), DRGs (diagnosis related groups), FFS (fee-for-service), GME (graduate medical education), GPCIs (geographic practice cost indexes), HCPCS (HCFA Common Procedure Coding System), HHRGs (home health resource groups), HWIu (hospital wage index with geographic reclassifications), HWIu (hospital wage index unclassified), OPD (outpatient department), PI (professional liability insurance), RUG-III (resource utilization group, version III), SGR (sustainable growth rate), SNF (skilled nursing facility), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).

In most payment systems, the national base payment rate is updated annually based on the forecasted increase in an industry-specific national input-price index called a market basket (MB) index. The MB index, developed by CMS, tracks national average price levels for labor and other inputs, weighted to reflect the relative importance of each input category in the specific industry.<sup>5</sup> This update affects all payment rates equally and does not affect the distribution of payments among product or service categories.

Updating the relative values affects the distribution of payments among products and services, and among providers according to their case or service mixes. In some payment systems, such as those for acute inpatient hospital care and inpatient rehabilitation services, relative values are updated annually. In other systems, such as the skilled nursing facility and home health PPSs, the relative values are updated less frequently.

The configuration of these elements varies widely among Medicare's payment systems, reflecting differences in the

nature of the services Medicare is buying, the characteristics of the providers that produce them, and how market conditions affect providers' costs. In addition, Medicare's payment systems often include provisions designed to offset or weaken providers' financial incentives to shift beneficiaries' care among settings. These financial incentives reflect fixed-price payment for bundles of services—providers can lower their costs and increase profits by shifting the provision of some services to another setting where they would be paid for in a different

5 For physician services, CMS uses the Medicare Economic Index (MEI), a weighted average of price changes for inputs used to provide care. These include physician time and effort, wage rates for nonphysician employees, and office expenses. The MEI is similar conceptually to the market basket index (see Chapter 2), except that it includes an adjustment for productivity growth.

payment system. These incentives also may arise because Medicare sets payment rates separately for each setting and may pay different amounts for the same service, depending on the setting in which it is furnished.

The remainder of this chapter describes how the key elements are combined and current policy issues for each of the 15 payment systems Medicare uses to pay providers for services they furnish to its beneficiaries. At the end of the chapter, we list some useful sources for further information on how Medicare pays for services.

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## Acute inpatient services

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This section describes Medicare's payment methods for acute inpatient care furnished to beneficiaries in:

- short-term general hospitals, and
- specialty psychiatric facilities.

### Payment for acute care services in short-term general hospitals

About 20 percent of Medicare's beneficiaries enrolled in the traditional program use hospital inpatient services each year.<sup>6</sup> They receive care in more than 4,800 short-term general hospitals that contract with Medicare to provide services and agree to accept the program's predetermined payment rates as payment in full.<sup>7</sup> Payments for inpatient care (about \$83 billion in 2000) account for the largest component—about 34 percent—of Medicare spending. These payments also provide the largest single source of hospitals' revenues—about 23 percent of overall revenues.

From its inception in 1966 until 1983, Medicare paid hospitals for inpatient services based on their incurred costs. This payment method gave providers little incentive to produce services efficiently. Because they were costly and relatively easy to distinguish, episodes of hospital inpatient care (stays) were the first to be converted to prospectively determined payment, beginning in fiscal year 1984. The hospital PPS is a mature system, but it nevertheless needs frequent adjustments to keep up with changes in technology, practice patterns, and market conditions that affect the amount and mix of resources hospitals use to furnish inpatient care.

The inpatient PPS pays hospitals predetermined per-discharge rates that are based primarily on two factors:

- the patient's condition and related treatment strategy, and
- market conditions in the facility's location.

Using information about patients' diagnoses, procedures, ages, and discharge destinations reported on hospitals' claims, Medicare assigns discharges to diagnosis related groups (DRGs), which are designed to group patients with similar clinical problems that are expected to require similar amounts of hospital resources. Each DRG has a national relative weight that reflects the expected relative costliness of inpatient treatment for a patient in that group compared with that for the average Medicare patient. Groups expected to require above-average resources have higher weights and those that require fewer resources have lower ones. The payment rates for DRGs in each local market are determined by adjusting a national average base payment amount (the amount that would be paid for an

average patient in a facility located in an average market) to reflect the input-price level in the local market, and then multiplying the adjusted local amount by the relative weight for each DRG. Payment rates also are increased for facilities that operate approved physician (resident) training programs, those that treat a disproportionate share of low-income patients, and for other factors.

Because the inpatient PPS accounts for a large share of Medicare spending, it faces ongoing scrutiny, often leading to technical and policy improvements. The inpatient PPS is intended to cover efficient providers' costs, thereby rewarding those whose costs fall below the payment rates. However, financial performance under the PPS differs substantially among certain groups of hospitals (see Chapter 2). These differences reflect some combination of desired effects of policies adopted by the Congress after careful deliberation, unintended results of inaccurate or inappropriate payment adjustments, and failures to address factors that affect efficient providers' costs in certain circumstances.

### Defining the hospital inpatient acute care products Medicare buys

Under the inpatient PPS, Medicare sets per-discharge payment rates for distinct treatment episodes represented by 506 DRGs, which are based on patients' clinical conditions and treatment strategies.<sup>8</sup> Clinical conditions are described by patients' discharge diagnoses, including the principal diagnosis—the main problem requiring inpatient care—and up to eight secondary diagnoses indicating other conditions that were present at admission (comorbidities) or developed during the hospital stay (complications). The treatment strategy—surgical or medical treatment—is

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6 The Medicare inpatient hospital benefit covers beneficiaries for 90 days of care per illness episode, with a 60-day lifetime reserve. Illness episodes begin when beneficiaries are admitted for care and end after they have been out of the hospital or a skilled nursing facility for 60 consecutive days. Beneficiaries are liable for a deductible of \$812 for the first hospital stay in an episode. Daily copayments—currently \$203—are imposed beginning on the 61<sup>st</sup> day.

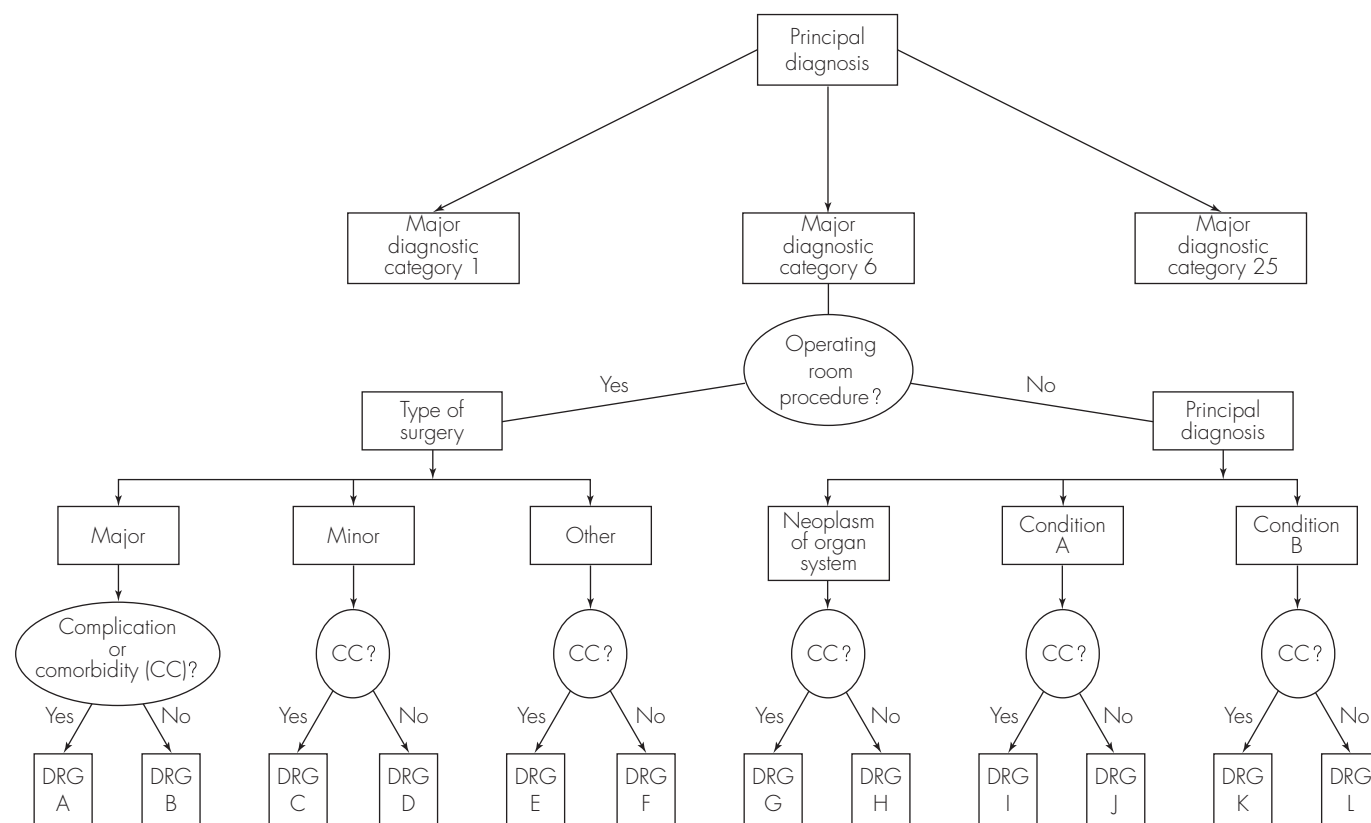
7 Except for convenience items or services not covered by Medicare, providers are not permitted to charge beneficiaries more than the predetermined payment rate. Medicare pays the predetermined rate minus any beneficiary liability, such as a deductible or copayment; the provider then collects the remaining amount from the beneficiary.

8 Although the federal DRG classification system includes 523 categories, 17 are no longer used for Medicare payment.



**FIGURE  
1-2**

## The general structure of diagnosis related group definitions



Note: Medicare uses 506 diagnosis related groups (DRGs) derived from 25 major diagnostic categories (MDCs). This diagram illustrates the logical structure of the DRG definitions for one MDC.

described by the presence or absence of up to six procedures performed during the stay. Age, sex, and discharge destination—for example, home, another PPS hospital, or a skilled nursing facility—are also occasionally used to distinguish groups of patients who are expected to use different amounts of resources.

The DRG definitions have a tree-like structure (Figure 1-2). Based on the principal diagnosis, cases are first assigned to one of 25 major diagnostic categories (MDCs), reflecting the affected organ system (such as the digestive system) or the etiology of the condition (such as burns or significant trauma).

Within each MDC, cases are subdivided into those with and those without operating room or other significant procedures. Each of these broad groups is then further divided; the surgical group by type of procedure and the medical group by specific type of condition as indicated by the principal diagnosis. Finally, medical and surgical subgroups are often subdivided further to form DRGs distinguished by the presence or absence of comorbidities or complications indicated by specific secondary diagnoses.<sup>9</sup>

CMS annually reviews the DRG definitions to ensure that they continue to include cases with clinically similar

conditions requiring comparable amounts of inpatient resources. When the review shows that clinically similar cases within a DRG consume atypical quantities of resources, CMS often reassigns them to a different DRG with comparable resource use; less often, CMS creates a new DRG.<sup>10</sup>

In return for Medicare's predetermined payment rates, hospitals are expected to furnish a reasonably well-defined bundle of inpatient services for each DRG. Facing fixed payment rates, however, providers have financial incentives to reduce their inpatient costs by moving some normally included services to another setting—such as an outpatient

<sup>9</sup> These groups are sometimes divided further to form DRGs for pediatric patients (under age 17); a few DRGs are also distinguished by patient sex or discharge destination.

<sup>10</sup> For example, CMS established a new DRG when it found that tracheostomy patients were substantially more costly than others in the same DRGs.

department or a skilled nursing facility—and billing those services separately. To counter these financial incentives, Medicare has adopted policies that help to strengthen the boundaries of the inpatient service bundles associated with the DRGs. Thus, patients must stay overnight before their discharges qualify for payment under the inpatient PPS. Related outpatient department services that were delivered in the three days before admission are included in the payment for the inpatient stay and may not be separately billed (the 72-hour rule). Similarly, payments for services may be reduced when patients are transferred to another hospital after a stay that is more than one day shorter than the national average stay for the DRG. The same payment reductions apply for certain DRGs when patients are transferred to rehabilitation or skilled nursing facilities or discharged to receive clinically related home health care.

### Setting product payment rates

Medicare sets separate per-discharge operating and capital payment rates, which are intended to cover the operating and capital costs that efficient facilities would be expected to incur in furnishing covered inpatient services.<sup>11</sup> Operating payment rates cover costs for labor and supplies; capital payment rates cover costs for depreciation, interest, rent, and certain property-related expenses for insurance and taxes.

Medicare sets operating and capital payment rates using similar methods and factors. In general, CMS sets national payment rates for all types of cases by multiplying a base payment amount by the relative weight for each DRG. The DRG payment rates are then adjusted to reflect

the local level of input prices in each market area. Finally, operating and capital payment rates are adjusted to account for certain hospital and case-specific factors.

**The base payment amounts** Medicare sets two separate operating base payment amounts (known as standardized payment amounts): one for large urban areas—metropolitan statistical areas (MSAs) with a population of one million or more—and one for all other urban and rural areas.<sup>12</sup> These base payment amounts represent what a hospital located in these areas would be paid for operating expenses for an average Medicare patient (before any adjustments). The base operating amounts per discharge for fiscal year 2002 are \$4,157 for large urban areas and \$4,091 for other areas.

Capital payments have only recently been made fully prospective, having completed a 10-year phase-in during fiscal year 2001.<sup>13</sup> The base capital rate for discharges from hospitals in large urban areas for fiscal year 2002 is \$402; it is \$391 for hospitals located in other areas.

**The diagnosis related group relative weights** Medicare assigns a weight to each DRG reflecting the average relative costliness of cases in that group compared with that for the average Medicare case. The same DRG weights are used to set operating and capital payment rates. CMS recalibrates the DRG weights annually based on average standardized billed charges for all PPS cases in each DRG in the most recent Medicare bill file.<sup>14</sup>

**Adjustment for market conditions** Medicare's base operating and capital payment rates are adjusted to reflect the expected impact on efficient providers'

costs of differences in local market prices for labor and other inputs. The base operating payment is adjusted by an area wage index; in Alaska and Hawaii, a cost of living adjustment (COLA) is also applied. The area wage index is intended to measure differences in hospital wage rates among labor markets; it compares the average hourly wage for hospital workers in each MSA or statewide rural area relative to the nationwide average.<sup>15</sup> The wage index is applied to the labor-related portion of the standardized payment amount—71 percent of the total—which reflects CMS's estimate of the portion of operating costs affected by local wage rates and fringe benefits. The wage index is revised each year based on wage data reported by PPS hospitals on their annual Medicare cost reports. The COLA reflects the higher costs of supplies and other nonlabor resources in Alaska and Hawaii; it increases the nonlabor portion of PPS operating payments—29 percent of the total—for hospitals in these states by as much as 25 percent.

The federal rate for capital payments is adjusted to reflect local market conditions using a geographic adjustment factor (which is based on the area wage index) and, for Alaska and Hawaii, the same COLA.

**Other adjustments** Payment rates also may be adjusted to reflect higher costs of care in hospitals that operate approved resident training programs, revenue losses associated with treating low-income patients, and the financial burden of exceptionally high-cost cases. These adjustments are intended to preserve access to care for Medicare beneficiaries by protecting hospitals that face certain

11 Certain costs are excluded from the inpatient PPS and paid separately, such as the direct costs of operating graduate medical education programs, organ acquisition costs, and bad debts.

12 Hospitals in Puerto Rico receive a 50/50 blend of the federal base payment amount and a Puerto Rico-specific rate.

13 New hospitals are exempt from prospective payment for capital costs for two years. During this period, they are paid 85 percent of their allowable capital costs.

14 Hospitals' billed charges are standardized to improve comparability. This involves adjusting charges to remove differences associated with variations in local market prices for inputs and those related to the size and intensity of hospitals' resident training activities.

15 A hospital may request geographic reclassification to a nearby market area for the standardized payment amount, the wage index (and capital geographic adjustment factor), or both. To qualify, a hospital must demonstrate that its wages are above average for its market area (above 106 percent for rural hospitals and 108 percent for urban hospitals) and comparable to the average in the area to which it seeks reclassification (at least 82 percent for rural hospitals and 84 percent for urban hospitals).



cost or revenue pressures.<sup>16</sup> Medicare also makes special payments to several groups of hospitals.<sup>17</sup> Most of these special payment provisions are designed to help rural hospitals, although some urban facilities also may qualify (MedPAC 2001b).

#### ***Indirect medical education payments***

Teaching hospitals receive add-on payments to reflect the additional (indirect) costs of patient care associated with operating approved physician training programs. The size of the indirect medical education (IME) adjustment applied to DRG payments depends on the hospital's teaching intensity, as measured by the number of residents per bed. In 2001, approximately 1,100 hospitals received IME payments; nearly 95 percent of those facilities were located in urban areas, although they served Medicare beneficiaries living in both urban and rural areas.

#### ***Disproportionate share payments***

Hospitals that treat a disproportionate share (DSH) of low-income patients receive additional payments that are intended to partially offset their revenue losses from furnishing uncompensated care. The DSH adjustment is based on nine different formulas and depends on urban or rural location, number of acute care beds, and other characteristics. The amount of the adjustment—the percentage from the applicable formula multiplied by the hospital's total DRG payments—depends on the hospital's low-income patient share. A hospital's low-income patient share is the sum of the proportion of its Medicare inpatient days furnished to patients eligible for Supplemental Security Income benefits and the proportion of its total acute inpatient days furnished to Medicaid patients. No DSH payments are

made unless a hospital's low-income patient share exceeds 15 percent.

Until 2001, small urban hospitals—those with fewer than 100 beds—and rural providers had to meet substantially higher minimum shares to qualify for DSH payments. In addition, those that qualified received DSH adjustments equal to 5 percent of DRG payments for small urban facilities and 4 percent for rural ones. Under these policies, DSH payments were highly concentrated in urban hospitals; more than 1,400 of the 1,800 DSH recipients were urban providers. The BIPA reduced the qualifying thresholds for small urban and rural providers to the same level applied for larger urban hospitals, and capped their DSH adjustments at 5.25 percent. (Urban hospitals with more than 100 beds do not have a maximum adjustment.) In 2001, these policy changes expanded eligibility for DSH payments from about 1,700 hospitals to about 2,800 hospitals; about 800 of the newly eligible facilities were in rural areas.

***Outlier payments*** In general, hospitals are expected to offset losses on some cases (in which costs exceed the payment rate) with gains on others (in which costs are below payments). Some cases, however, are extraordinarily costly, producing losses that may be too large to offset. Hospitals facing fixed payment rates have strong financial incentives to avoid patients who may be likely to require extraordinary care. To ensure that seriously ill beneficiaries continue to have access to high-quality inpatient care, Medicare makes extra payments for these so-called outlier cases, in addition to the usual operating and capital DRG payments. Outlier cases are identified by comparing their costs to a DRG-specific threshold

that reflects the DRG payment for the case (both operating and capital) plus a fixed loss amount. For instance, in 2002 the threshold is set at the DRG payment plus \$21,025—the national fixed loss amount—adjusted to reflect input price levels in the local market. Medicare pays 80 percent of hospitals' costs above their fixed loss thresholds. IME and DSH adjustments are not applied to outlier payments. Outlier payments are funded by offsetting reductions in the operating base payment amounts (5.1 percent) and the capital federal rate (6.2 percent).

***Transfer policy*** Medicare can reduce DRG payments when the patient is transferred to another PPS hospital, or in some instances to a post-acute care setting. When a patient is transferred to another PPS hospital, the transferring facility is paid a per diem amount for each day before the transfer occurs, up to a maximum of the full DRG payment.<sup>18</sup> The hospital receiving a transferred patient assigns a new DRG, which may or may not be the same as the DRG assigned in the previous hospital stay. Payment is according to the receiving hospital's assigned DRG as if the case had not been transferred.<sup>19</sup> Beginning in fiscal year 1999, discharges in 10 DRGs are treated as transfers if patients are sent to a long-term care hospital or a rehabilitation, psychiatric, or skilled nursing facility, or they receive clinically related home health care. This policy is intended to strengthen the boundaries of the hospital inpatient service bundle by reducing providers' financial incentives to unbundle services normally furnished during the latter part of a hospital inpatient stay. The 10 affected DRGs were selected by the Secretary of HHS based on their high volume and disproportionately high likelihood of post-acute care use. The

16 Medicare also reimburses acute-care hospitals for bad debts resulting from beneficiaries' nonpayment of deductibles and copayments after providers have made reasonable efforts to collect the unpaid amounts. The BBA reduced these payments, but the BIPA added some back. As a result, Medicare paid 70 percent of allowable bad debts in FY 2000.

17 These special payment provisions are discussed in greater detail in MedPAC's June 2001 Report to the Congress.

18 The per diem rate is the hospital's DRG payment rate divided by the national average length of stay for the same DRG. The hospital receives twice the per diem rate for the first day and the per diem rate for each additional day up to the full DRG rate. The hospital may also receive outlier payments calculated using a loss threshold prorated to reflect the length of stay.

19 If the patient is discharged to another PPS hospital, the transfer payment rules again apply.

Secretary was authorized to expand the set of DRGs to which this policy applies beginning in fiscal year 2001, but has not yet done so.

**Payment updates** Both the operating and capital payment rates are updated annually. The operating update is set by the Congress in law; the annual capital update is determined by the Secretary of HHS. In making recommendations regarding the annual updates, the Commission and CMS use update frameworks that take into account projected changes in input prices, science and technology, productivity, and other factors that are expected to affect efficient hospitals' costs (see Chapter 2).

Recommended and statutory updates for the operating and capital payment rates are generally expressed relative to the projected increase in the hospital MB index, which measures changes in national average prices for inputs hospitals purchase to produce services. An update usually would be expressed then as being equal to MB or MB minus 0.5 percentage points, for example.

## Issues

Medicare's payment policies under the inpatient PPS raise three persistent and related questions:

1. Are Medicare's aggregate payments for acute care inpatient services adequate to ensure beneficiaries' access to high quality care without imposing unwarranted burdens on beneficiaries and taxpayers?
2. Do the various rate adjustments fully account for factors that should affect efficient providers' costs, thereby generating accurate payment rates for providers facing different circumstances?
3. Given the various limitations of the payment adjustments, is it ever desirable to exclude groups of providers from the PPS, and if, so when?

In 2000 and 2001, MedPAC recommended a number of actions to address these questions.

*Improving clarity in assessing whether PPS payments are adequate to cover efficient providers' costs.* Medicare makes extra payments to hospitals that serve low-income patients (DSH payments) and those that teach residents (IME payments). These payments are largely unrelated to hospitals' costs for serving beneficiaries—DSH payments reflect revenue losses associated with furnishing uncompensated care and about one-half of IME payments exceed the estimated effect of teaching intensity on Medicare costs per case (see Chapter 2). These payments are intended to support activities other than furnishing care to beneficiaries and they are concentrated among urban hospitals. Thus, we would be double-counting these payments if we included them in assessing whether Medicare's payment rates are adequate to cover efficient hospitals' costs of furnishing beneficiaries' care—they cannot be both funding other activities and paying for services for Medicare beneficiaries.

*Improving accuracy in the payment adjustment for market input prices.* The wage index may not accurately capture the market conditions faced by some hospitals. The labor market areas used to determine the wage index—especially in statewide rural areas—are frequently too large to reflect local market conditions. Other wage index issues include deciding which proportions of the payment rates are labor-related and should be adjusted by the wage index, and establishing the extent to which differences in the occupational mix of hospital employment may distort the measured market wage level. In 2001, we recommended evaluating the proportion of providers' payments adjusted by the wage index, and fully phasing out wages for teaching physicians, residents, and certified registered nurse anesthetists be fully phased out from the wage index to ameliorate inaccuracies resulting from variations among markets in the average occupational mix of hospital employment (MedPAC 2001b).

*Addressing limitations in the payment adjustment for providers serving low-income patients.* DSH adjustments for

rural and small urban hospitals are currently capped at 5.25 percent, while those for large urban hospitals have no cap. We recommended major reforms that would be consistent for all hospitals (MedPAC 2001b, MedPAC 2000). Until those reforms can be implemented, however, we recommended increasing the cap on DSH adjustments for rural and small urban hospitals to 10 percent (MedPAC 2001b).

*Improving Medicare's inpatient case-mix measurement methods to more accurately reflect the relationship between illness severity and the cost of inpatient care.* The current DRG definitions and relative weights, and the current method of financing extra payments for high-cost outlier cases do not fully account for differences in illness severity associated with substantial disparities in providers' costs. To address this problem, we recommended that the Secretary improve payment accuracy by adopting DRG refinements that more fully capture differences in severity of illness and by basing the DRG relative weights on the national average of hospitals' relative values in each DRG. We also recommended that the Congress amend the law to change the method for financing outlier payments, using DRG-specific offsetting adjustments to the DRG relative weights rather than the current flat adjustment to the national average base payment amount (MedPAC 2000).

*Addressing the higher unit costs of care in low-volume hospitals.* Other things being equal, low-volume hospitals must spread their fixed costs over smaller numbers of cases, thereby raising their costs per discharge compared with facilities that treat larger numbers of patients. Our research (MedPAC 2001b) confirmed this relationship; hospitals with fewer than 500 total discharges per year had higher per-unit costs than hospitals with greater volume. We recommended that the Congress enact a graduated adjustment to the PPS payment rates for certain hospitals that experience low volume.

*Avoiding harm from payment inaccuracies.* When refinements are not available to address inadequacies in the PPS, excluding certain hospitals with similar characteristics may maintain the integrity and manageability of the inpatient PPS. The eligibility criteria for exemption, however, should target hospitals appropriately by identifying those with cost-raising conditions not accounted for in the PPS (MedPAC 2001b).

## Payment for specialty psychiatric facilities

Medicare beneficiaries with mental illnesses or alcohol and drug-related problems are frequently treated in specialty psychiatric facilities, either freestanding hospitals or specialized hospital-based units. (People often group psychiatric facilities with post-acute care providers, perhaps because many of their patients have chronic conditions. Nevertheless, they generally furnish short-term acute care.) To be admitted to a specialty facility, patients generally have to be considered a risk to themselves or others.<sup>20</sup> Payments to psychiatric facilities (almost \$3 billion in 2000) represent only a small part of total Medicare spending (about 1 percent), but the program accounts for about 30 percent of psychiatric facilities' revenue.

Psychiatric facilities are paid for furnishing care to Medicare beneficiaries under cost growth limits established in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA); payments are based on their incurred average operating costs per discharge, subject to an annually adjusted facility-specific limit (see text box, p. 16). Similar to their liability for stays in short-term acute care hospitals, beneficiaries treated in specialty psychiatric facilities are responsible for a deductible—\$812 in 2002—for the first admission during a

spell of illness, and for a copayment—\$203 per day—for the 61<sup>st</sup> through 90<sup>th</sup> days. Beneficiaries treated for psychiatric conditions in specialty facilities are covered for 90 days of care per illness, with a 60-day lifetime reserve.<sup>21</sup> Over their lifetimes, however, beneficiaries are limited to 190 days of treatment in freestanding psychiatric hospitals.

The Congress required CMS to develop and implement a per diem PPS beginning on October 1, 2002.

## Issues

CMS is developing a new PPS for beneficiaries' care in specialty psychiatric facilities. The design of the payment system is the principal emerging issue and will require the attention of policymakers in future years.

*Designing the prospective payment system.* The main issues are whether the PPS design will succeed in:

- distinguishing types of patient days that represent different bundles of clinical services with distinct resource costs,
- generating payments that are adequate to cover efficient providers' costs, and
- appropriately distributing those payments among treatment categories, markets, and other provider or patient characteristics.

A related issue is whether data to operate the payment system and monitor quality can be collected accurately and efficiently.

## Ambulatory care

Medicare beneficiaries receive ambulatory care services from a variety of practitioners in several settings. The most common ambulatory services are:

- physician services,
- outpatient hospital care,
- ambulatory surgical care, and
- outpatient laboratory services.

These physicians and providers furnish a wide range of services, including some that are common to more than one setting. For example, beneficiaries may receive identical services in physicians' offices and hospital outpatient departments. Outpatient laboratory services help physicians in offices and outpatient departments to diagnose, treat, and monitor patients' illnesses or conditions. Some ambulatory surgeries can be performed in physicians' offices, outpatient departments, or ambulatory surgical centers. This section discusses how Medicare pays for the services delivered in these settings and summarizes issues of concern.

## Payment for physician services

Physician services include office visits, surgical procedures, and a broad range of other diagnostic and therapeutic services. These services are furnished in all settings, including physicians' offices, hospitals, ambulatory surgical centers, skilled nursing facilities and other post-acute care settings, hospices, outpatient dialysis facilities, clinical laboratories, and beneficiaries' homes.<sup>22</sup> Medicare payments to physicians (about \$49 billion in 2000) account for about 20 percent of total spending.

20 Beneficiaries are also treated for psychiatric or alcohol and drug-related conditions in regular beds in acute care hospitals; in these instances providers are paid under the acute care inpatient PPS.

21 Beneficiaries are liable for a higher copayment for each lifetime reserve day—\$406 per day in 2002.

22 In general, Medicare makes separate payments for facility and professional services. Facility services may include room, board, routine and special care, and ancillary services (imaging, for instance) furnished in hospitals or other facilities. Professional services include procedures and evaluation and management services furnished by physicians and certain nonphysician professionals, such as physician assistants, nurse practitioners, and therapists.

## Payment for facilities exempt from the prospective payment system for acute care hospitals

From Medicare's inception until 1983, all hospitals were paid based on their Medicare-allowable incurred costs. In the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), the Congress set facility-specific limits on hospitals' operating costs per discharge, with penalties and rewards based on whether their costs were above or below the facility-specific limit or target. In 1984, short-term general acute care hospitals became subject to the inpatient prospective payment system (PPS), but other classes of facilities were exempt because the types of cases they treated and the relationships between case characteristics and efficient providers' costs were not well understood.

Five classes of specialty facilities were paid under TEFRA between 1983 and 2002—cancer hospitals, children's hospitals, long-term care hospitals, and rehabilitation and psychiatric facilities (including specialty hospitals and specialty units of general hospitals). From 1983 to 1998, each provider was paid an operating amount for each discharge, equal to the lesser of its current operating costs or a facility-specific target amount. The facility-specific target amount (limit) for each provider was based on its operating costs per discharge during its base year, updated for inflation using a TEFRA market basket index which measures changes in the prices of goods and services that specialty facilities must buy to produce inpatient care. Specialty facilities were paid for capital costs based on their Medicare-allowable incurred expenses until 1998, when the Congress reduced this capital pass-through to 85 percent of allowable costs.

Because facilities' operating targets were based on their own historical costs, TEFRA payments often varied substantially among facilities. In addition, new providers often entered the Medicare program with higher costs than older providers had, giving new providers higher targets and creating payment inequities.

To reduce these inequities, the Balanced Budget Act of 1997 (BBA) established national target caps beginning in 1998 for three provider groups: long-term care hospitals and rehabilitation and psychiatric facilities. (Cancer and children's hospitals continue to be paid under the old TEFRA method.) Operating payments for these providers are now determined by the lowest of three amounts:

- their current operating costs,
- their own updated target, or
- the national cap, adjusted to reflect the level of input prices in their local markets. The national per discharge cap in each provider group is the 75<sup>th</sup> percentile of the facility-specific targets for that group in 1996, updated for inflation. The

national cap amounts are adjusted to each local market by multiplying the labor-related portion—72 percent in fiscal year 2002—by a version of the acute care hospital wage index, and adding the nonlabor cap amount (28 percent) to the result.

National target caps are updated for inflation using the TEFRA market basket index (see below). Facility-specific target amounts are updated annually by a variable percentage increase that depends on whether a facility's costs were above or below its target in the previous year and the size of the difference. This update policy was designed to help reduce differences among facilities' targets.

The Congress recently required the Centers for Medicare and Medicaid Services to design PPSs for these facilities. Long-term care hospitals and specialty psychiatric facilities will continue to be paid under current rules until the new PPSs are implemented. Rehabilitation hospitals will be paid a blend of the TEFRA amount and the PPS rates until the beginning of their fiscal year 2003 cost-reporting periods unless they choose to receive the full federal rate immediately. ■

### National target caps for psychiatric facilities, rehabilitation facilities, and long-term care hospitals, fiscal year 2002

Facility class	Labor-related share	Nonlabor share	Total target cap
Psychiatric hospitals and units	\$8,429	\$3,351	\$11,780
Rehabilitation hospitals and units	15,736	6,256	21,992
Long-term care hospitals	31,490	12,519	44,009



The Medicare physician payment system, implemented in 1992, is a mature system. To make predetermined payments for physician services, Medicare uses a fee schedule with payment rates for more than 7,000 services. Many services have two payment rates—a higher rate for services provided in non-facility settings, such as physicians’ offices, and a lower rate for those furnished in facilities, such as hospitals. Rates are lower for services furnished in facilities because physicians’ practice costs are generally lower; the facilities furnish some of the services that physicians normally would supply in the office setting and are paid separately.

Each service has a weight—called a relative value unit—that measures the relative costliness of three types of resources used to provide physician services: physician work, practice expenses, and expenses for professional liability insurance (PLI). Payment rates for services in each local market are determined by adjusting each relative weight to reflect the input-price level in that market, and then multiplying the total of the adjusted weights by a dollar amount called the fee schedule’s conversion factor. Payment rates for physicians’ services are adjusted further when they are:

- furnished by practitioners other than physicians,
- furnished in Health Professional Shortage Areas (HPSAs),
- provided by a physician who has not agreed to accept Medicare’s payment rate as payment in full, or
- atypical (for example, the service is assisting the primary surgeon rather than serving as the primary surgeon performing a surgical procedure).

Payments are updated every year according to a formula called the sustainable growth rate (SGR) system, which is intended to keep spending growth consistent with growth in the national economy (see Chapter 2).

The physician fee schedule was adopted more than 10 years ago, but efforts to improve it continue. For example, CMS is working with the physician community to refine the relative weights for practice expenses. Other issues require the attention of the Congress. The SGR system does not adequately account for changes in the cost of providing physician services, a limitation that could jeopardize beneficiaries’ access to care. In addition, some have raised questions about the adequacy of payment rates for services provided by some nonphysician practitioners.

### **Defining the physician services that Medicare buys**

Under the physician fee schedule, the unit of payment is the individual service, such as an office visit or a diagnostic procedure. These products, however, range from narrow services (an injection) to broader bundles of services associated with surgical procedures, which include the surgery and related pre-operative and post-operative visits. All services—surgical and non-surgical—are classified and reported to CMS according to the HCFA Common Procedure Coding System (HCPCS), which contains codes for more than 7,000 distinct services.

### **Setting payment rates**

Under the fee schedule, payment rates are calculated by adding three relative weights and multiplying the sum by the conversion factor. The weights account for the relative costliness of the inputs used to provide physician services: physician work, practice expenses, and PLI expenses. The relative weights for physician work are based on physicians’ assessments of the relative levels of time, effort, skill, and stress associated with each service. The relative weights for practice expense are based on the expenses physicians incur when they rent office space, buy supplies and equipment, and hire nonphysician clinical and administrative staff. The PLI relative weights are based on the premiums physicians pay for professional liability insurance.

In calculating payment rates, each of the three relative weights is adjusted to reflect the price level for related inputs in the local market where the service is furnished. Three geographic practice cost indexes are used for this purpose. The fee schedule payment amount is then determined by summing the adjusted weights and multiplying the total by the fee schedule conversion factor.

Payments under the physician fee schedule also may be adjusted to reflect other factors. First, payments are decreased if services are furnished by certain nonphysician practitioners. Services provided by physician assistants and nurse practitioners are paid at 85 percent of physicians’ fees and nurse midwives’ services are paid at 65 percent.

Second, payments are adjusted according to so-called payment modifiers that appear on claims for payment to show whether the service provided was atypical. For example, physicians use a modifier to bill for a service when they serve as assistant surgeons. Payment for an assistant surgeon is 16 percent of the fee schedule amount for a surgical procedure. Other modifiers apply to multiple surgical procedures performed for the same patient on the same day, preoperative or postoperative management without surgical care, and bilateral surgery.

Third, under the Medicare incentive payment program, physicians receive bonus payments when they provide services in HPSAs. These payments are intended to attract more physicians to HPSAs. The bonus increases payments to these physicians by 10 percent (excluding beneficiary coinsurance).

Fourth, payments are adjusted downward when services are furnished by physicians who are not in Medicare’s participating physician and supplier program (see text box, p. 18). Payment rates for services provided by non-participating physicians are 95 percent of the fee schedule’s payment rate.

The fee schedule’s relative weights are updated at least every five years; HCPCS codes and the conversion factor are

## The participating physician and supplier program

**U**nder the participating physician and supplier (PAR) program, physicians agree to accept the fee schedule's payment rate for a service as payment in full. In return, the program payment for the service is sent to the physician and not to the beneficiary. Also, the names of PAR physicians appear in a directory of participating physicians, available at Social Security offices and other locations. A non-PAR physician must bill the beneficiary for the program payment, unless the beneficiary assigns to the physician the right to receive the payment. Although non-PAR physicians bear the administrative costs and possible bad debt losses associated with billing beneficiaries for the program payment (and the related 20 percent coinsurance), they can also "balance bill" for a portion of the difference between Medicare's payment rate and the physician's usual fee. Balance billing, however, is limited to 15 percent of the payment for non-participating physicians. ■

updated annually. The update of relative weights includes a review of changes in medical practice, coding changes, new data, and the addition of new services. In completing its review, CMS receives advice from a group of physicians and other professionals sponsored by the American Medical Association and physician specialty societies.

The annual updates for the conversion factor are made according to the SGR system, a formula intended to keep

spending consistent with a target based on growth in the national economy. If actual spending is less than the target, the update is greater than the change in input prices for physician services. If actual spending is greater than the target, the update is less than the change in input prices.

### Issues

Two issues are important in the physician fee schedule. Both concern the adequacy of payments.

*Updating the conversion factor.* Updates under the SGR system can lead to payments that diverge from costs because actual spending is unlikely to be the same as the system's target. Thus, payments are likely to be either too high, making spending higher than necessary, or too low, potentially jeopardizing beneficiaries' access to care (see Chapter 2).

*Paying for services furnished by nonphysician practitioners.* Payment rates are lower for services provided by nurse midwives than they are for services furnished by physician assistants and nurse practitioners. This difference in payment rates is not based on an analysis of training costs or other factors that might affect efficient practitioners' costs of furnishing care. This raises the question of whether current payment rates are appropriate for the services provided by these practitioners. The Congress has directed MedPAC to study this issue and report later this year.

### Payment for outpatient hospital care

Medicare beneficiaries receive a wide range of services in hospital outpatient departments, from injections to surgical procedures requiring general anesthesia. Spending for these services is growing rapidly, largely because of changes in technology and medical practice that have fostered new services and encouraged shifts in care from inpatient to ambulatory care settings. Outpatient hospital care

accounted for about 7 percent of total Medicare spending in 2000, or about \$17 billion.

Medicare originally paid hospitals for outpatient care based on their allowable incurred costs. The BBA almost completely eliminated such cost-based payment by requiring CMS to develop and adopt an outpatient PPS, which was implemented in August 2000.

In requiring the outpatient PPS, the Congress also reduced beneficiary copayments for outpatient hospital care. When the BBA was enacted, copayments accounted for about 50 percent of total Medicare payments to hospitals for outpatient care. Under the new payment system, beneficiaries' share of total payments will slowly decline.<sup>23</sup> MedPAC has recommended that the Congress accelerate the reduction in these copayments (MedPAC 2001c).

Like the payment system for physician services, the new outpatient PPS is a fee schedule. It sets payment rates for individual services based on a set of relative weights, a conversion factor, and an adjustment for geographic differences in input prices. The PPS also includes an outlier adjustment for extraordinarily high-cost services and so-called pass-through payments for certain new technologies that are used as inputs in the delivery of services.

Because of uncertainty about the effects of the new system, certain types of hospitals are at least partially protected from financial losses. Cancer and children's hospitals are permanently held harmless from losses; small rural hospitals are held harmless through 2003 (MedPAC 2001a). Other hospitals that experience losses are eligible for partially offsetting payment adjustments through 2003.

### Defining the outpatient hospital products that Medicare buys

Medicare pays for outpatient services based on the individual service or procedure provided, as identified by a

23 Under BIPA provisions, beneficiaries' shares of outpatient payments will be limited to no more than 40 percent by 2006; copayments of 20 percent for all services, however, will not be achieved for decades.

HCPCS code. CMS classified procedures, evaluation and management services, drugs and devices furnished in outpatient departments into about 750 ambulatory payment classifications (APCs). These APCs group items and services that are clinically similar and use comparable amounts of resources. More than 300 of the APCs identify drugs or devices used in conjunction with a procedure. In addition, some new services are assigned to certain “new technology” APCs based only on similarity of resource use. CMS chose to establish new technology APCs because some services were too new to be represented in the data used to develop the outpatient PPS. Services will remain in these APCs for two to three years while CMS collects the clinical and cost data necessary to refine and update the APC classification system.

Within each APC, CMS bundles integral services and items with the primary service. For example, the bundle for a surgical procedure includes operating and recovery room services, most pharmaceuticals, anesthesia, and surgical and medical supplies. In deciding which services to bundle and which to pay separately, CMS considered comments from hospitals, hospital suppliers, and others. For example, in response to public comments, CMS separated corneal tissue acquisition, maintenance, and distribution from services requiring corneal tissue. CMS also pays separately for 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 hospitalizations for psychiatric services are paid on a per diem basis. These intensive outpatient psychiatric services may be provided by a hospital outpatient department or by a community mental health center, and the per diem payment rate represents the expected facility costs for a day of care.

### **Setting product payment rates**

Payment rates in the outpatient PPS are intended to cover hospitals’ operating and capital costs for the facility services they

furnish; professional services (physicians’ services provided to individual patients, for example) are paid separately. Outpatient payment rates are determined by multiplying the relative weight for an APC by a conversion factor. Except for the new technology APCs, each APC has a relative weight that is based on the median cost of services in that APC. Services are assigned to a new technology APC based on their expected cost. New technology APCs start at \$0 to \$50 and end at \$5,000 to \$6,000; the relative weights are set at the midpoint of these ranges.

The conversion factor translates the relative weights into dollar payment amounts. The initial conversion factor was set so that projected total payments—including beneficiaries’ copayments—would equal the estimated amount that would have been spent under the old payment methods, after correcting for some anomalies in statutory formulas.

To account for geographic differences in input prices, the labor portion of the conversion factor (60 percent) is adjusted by the hospital wage index.

The outpatient PPS includes four additional payment adjustments: pass-through payments for new technology; outlier payments for high-cost services; hold-harmless payments for cancer, children’s and small rural hospitals; and transitional corridor payments that help to limit hospitals’ financial losses under the PPS.

In addition to the new technology APCs, the pass-through payments are a second way that the outpatient PPS accounts for new technologies. Unlike the new technology APCs, however, pass-through payments are not payments for individual services. Instead, they are payments for certain new technology items—drugs, biologicals, and devices—that are used in the delivery of services. By supplementing the payments for individual services, pass-through payments are meant to help ensure beneficiaries’ access to new technologies that were not well represented in the 1996

data that CMS used to set the PPS payment rates. For drugs and biologicals, the payments are based on average wholesale prices. For devices, the payments are based on each hospital’s costs (as determined by adjusting its charges using a cost-to-charge ratio). By law, total pass-through payments are limited to 2.5 percent of total payments under the outpatient PPS, and the conversion factor is reduced by 2.5 percent to finance them. If CMS projects that pass-through payments will exceed this limit during a year, the agency is required to reduce all pass-through payments in that year by a uniform percentage to meet the limit. However, CMS did not maintain budget neutrality in 2000 or 2001, and has not so far in 2002 (see Chapter 3).

Outlier payments are made for individual services or procedures with extraordinarily high costs, compared with the payment rates for their APC group. Outliers are defined by the BBRA as services with costs that exceed a threshold equal to three times the PPS payment rate. Hospitals will be reimbursed for 50 percent of the difference between the threshold and the cost of the service in 2002. Aggregate outlier payments are limited to 2 percent of total payments; outlier payments are financed by reducing the conversion factor by 2 percent.

The BBRA mandated that cancer hospitals and outpatient departments of small rural hospitals (100 or fewer beds) be held harmless from financial losses under the PPS. This protection is permanent for cancer hospitals; small rural hospitals are protected until 2003. In addition, the BIPA extended permanent hold-harmless protection to children’s hospitals. These hospitals will be paid according to the PPS payment rates. If their PPS payments are lower than those they would have received under previous policies, however, they will receive extra payments to make up the difference.

To smooth the way to the outpatient PPS, the Congress mandated transitional corridor payments in the BBRA that will continue through 2003. The amount of



these payments depends on the difference between a hospital's PPS payments and what it would have received under the previous payment policy. Corridor payments are intended to make up a high proportion of hospitals' small losses, but a declining proportion of larger losses. For example, in 2000 and 2001, corridor payments made up 80 percent of losses that were less than 10 percent of what the hospital would have received under previous policy, but only 70 percent of losses in the 10 to 20 percent range. In 2002 and 2003, the transitional corridor payments will make up declining proportions of hospitals' revenue losses under the PPS.

The APC groups and their relative weights are reviewed and revised annually. The review considers changes in medical practice, changes in technology, the addition of new services, new cost data, and other relevant information. CMS is required to consult with a panel of experts as part of this review.

CMS also annually updates the conversion factor by the hospital market basket index. For 2002, the BBA reduced this update by 1 percentage point.

## Issues

Three emerging issues are important in payment policy for outpatient hospital care.

*Limiting the pass-through payments for new technologies.* The pass-through payments are projected to exceed their statutory limit in 2002. This raises the question of whether and how the Congress or CMS should either reduce the payment rates for pass-through items or restrict the number of eligible items (see Chapter 3).

*Protecting cancer, children's, and small rural hospitals from financial losses.* The hold-harmless payments for small rural hospitals will end in 2003; hold-harmless payments for cancer and children's hospitals are permanent. The Congress enacted these payments in response to impact projections (prepared by CMS when it first proposed the outpatient PPS), which suggested that these hospital groups

would experience large payment reductions under the new payment system. At issue is whether hospitals' actual experience differs substantially from the initial projections, making changes to these provisions necessary.

*Updating the conversion factor.* Multiple factors affect the cost of providing outpatient hospital care, including changes in input prices, scientific and technological advances, and changes in complexity within services. In many instances, payment updates equal to the projected change in the hospital MB index would be sufficient to ensure adequate payment levels for hospital outpatient care. Policymakers need to be aware, however, that the effects of other factors may sometimes make such updates either too large or too small.

## Payment for care provided by ambulatory surgical centers

Since 1982, Medicare has covered surgical procedures provided in free-standing or hospital-based ambulatory surgical centers (ASCs). ASCs are distinct facilities that furnish only outpatient surgery; the most common procedures are cataract removal, colonoscopy, and arthroscopy. Payments to ASCs (about \$1 billion in 2000) account for 0.5 percent of total Medicare spending.

Medicare pays for surgery-related facility services provided in ASCs—such as operative nursing, recovery care, anesthetics, drugs, and other supplies—using a simple fee schedule. (Medicare pays for the related physician services—surgery and anesthesia—under the physician fee schedule.) The ASC fee schedule sets payment rates for only eight procedure groups. The payment rates are adjusted to reflect geographic differences in market input prices. Medicare revises the payment rates at five-year intervals based on a survey of ASCs' costs and charges. Between revisions, the rates are updated annually using the consumer price index for all urban consumers (CPI-U).

## Defining the care that Medicare buys from ambulatory surgical centers

The unit of payment in the ASC payment system is the individual surgical procedure. ASCs assign HCPCS codes to about 2,300 procedures when they submit claims for payment. These codes, in turn, are classified into one of eight payment groups.

Approved procedures generally are limited to those that are provided in hospital inpatient settings that also can be performed safely in outpatient facilities. Procedures frequently performed in physicians' offices are specifically excluded from the ASC-approved list. ASC-approved procedures usually require less than 90 minutes of operating room time and less than 4 hours of recovery room time.

## Setting product payment rates

To set ASC payment rates, CMS is required to survey a sample of ASCs every five years to collect data on their charges for individual procedures and their total costs and charges. After auditing the survey data, CMS adjusts ASCs' charges to reflect costs using their overall cost-to-charge ratios. Then, CMS sets the national payment rate for each payment group equal to the median cost for that group.

To account for geographic differences in market prices for inputs, the labor portion of ASC payment rates (34.45 percent) is adjusted by the hospital wage index. ASC payment rates also are adjusted when multiple surgical procedures are performed during the same operative session. In this case, the ASC receives full payment only for the procedure with the highest payment rate; payments for the other procedures are reduced to one-half of their usual rates.

Between rate surveys, the ASC payment rates are updated annually based on the CPI-U. The BBA limited those updates to the CPI-U minus 2 percentage points (but not less than zero) through fiscal year 2002. CMS also is required to update



every two years the list of procedures performed in ASCs that are eligible for Medicare payment.

## Issues

Two issues are important in ASC payment policy:

*Restructuring ASC payment rates.* In 1998, CMS proposed to restructure ASC payment rates to make them more consistent with the outpatient PPS. The proposal was to replace the eight ASC payment groups with a classification of services according to APCs. CMS has not implemented this proposal because other priorities have intervened, including work on the outpatient PPS. Now that the outpatient PPS is in its second year, the question is whether CMS has the resources necessary to move ahead with restructuring ASC rates.<sup>24</sup>

*Rebasing ASC payment rates.* In 1998, CMS also proposed to rebase ASC payment rates using more current rate survey data. The current rates are based on a rate survey conducted in the late 1980s and thus are probably not consistent with ASC costs. In response to CMS's proposal, the Congress included a provision in the BIPA that requires CMS to use survey data from 1999 or later in rebasing ASC rates. As with restructuring the rates, the issue is whether the agency has the resources necessary to proceed with a new rate survey.

## Payment for outpatient laboratory services

Clinical laboratory tests help physicians diagnose, treat, and monitor patients' illnesses and conditions. Beneficiaries may receive tests during a hospital stay or a visit to a physician's office or outpatient department. Medicare pays hospitals for tests furnished during a hospital stay as part of the bundled inpatient payment. In contrast, Medicare pays the labs directly

based on a fee schedule for tests performed in an outpatient setting. Three main types of labs serve these ambulatory patients: hospital-based labs; independent labs which usually serve a region; and physician office labs which generally perform only relatively simple tests. Although Medicare payments account for about 30 percent of laboratories' revenues, laboratory payments account for about 2 percent of total Medicare spending.

Medicare uses a simple PPS (fee schedule) established in 1984. Payment rates were initially set separately for more than 1,100 tests in each carrier's geographic market, based on what local labs charged in 1983; since then, the rates have been updated periodically for inflation.<sup>25</sup> PPS payment rates are also limited by national service-specific maximums that affect almost all lab claims.

## Defining the laboratory products Medicare buys

Medicare sets payment rates for more than 1,100 HCPCS codes used in billing for laboratory services. Although in theory there is a separate code for each service, in practice a single HCPCS code may identify more than one testing method for a given substance or more than one substance analyzed by a single method. Panel tests, which are tests commonly ordered together, have their own HCPCS codes as well.

## Setting product payment rates

The fee schedule payment rates represent the total payment laboratories will receive for their services; beneficiary copayments are not required. CMS assigns payment amounts for all lab HCPCS codes in each carrier market based upon 1983 charges from the laboratories in that market. Medicare payments were set at the 60<sup>th</sup> percentile of prevailing charges for freestanding laboratories and the 62<sup>nd</sup>

percentile for hospital-based laboratories in each area. In 1987, fees for outpatient services in hospital laboratories, other than those performed in sole community hospitals, were reduced to the 60<sup>th</sup> percentile of prevailing charges. Fee schedule amounts differ from carrier to carrier in some instances, but no separate geographic adjustment is provided.

Beginning in 1986, the Congress established upper limits on laboratory payment rates, called national limitation amounts (NLAs). NLAs are based on the median of all carrier rates for each test. The NLAs have been repeatedly reduced and currently are set at 74 percent of the median of all local fee schedule amounts for each procedure. Because so many of the carrier payment rates are constrained by the NLAs, most lab services are paid the same national rate.

When newly developed tests are used by laboratories, CMS either assigns payment rates based on their similarity to existing tests or requires carriers to independently set the rates for the first year of use. Carriers must research and set their own payment amounts. They may obtain cost data from manufacturers, payment data from other carriers, or perform their own analyses.

## Issues

Although no evidence exists that beneficiaries' access to laboratory services has been compromised, policymakers should address two problems in laboratory payment policy.

*Improving the relationship of payment rates to costs.* Unlike other PPSs, the lab fee schedules are based only on 20-year old charges. The carriers did not adjust those charges to costs when originally creating their fee schedules, so it is unlikely that the fee schedules were ever consistent with the efficient costs of providing laboratory services. The

24 In commenting on the ASC proposed rule, MedPAC raised two concerns. First, the large variations in costs among services in some APCs made us worry that some ASCs might respond inappropriately to financial incentives, increasing service volume for low-cost procedures while avoiding those with relatively high costs. Second, the APCs for ASCs were not fully consistent with those then being considered for outpatient hospital care. We took these positions before CMS implemented the outpatient PPS based on substantially revised APC definitions. Thus, we may not have the same concerns if CMS were to adopt the outpatient APCs in a restructured ASC payment system.

25 Carriers are CMS contractors who are responsible for reviewing and paying providers' Medicare Part B claims.

passage of time has probably made this problem worse because factors other than inflation, such as technological innovation, have affected laboratory costs since 1983.

*Streamlining fee schedule development and claims processing.* Having a separate fee schedule for each carrier region is a waste of resources. Similarly, different standards among carriers for documenting the medical necessity of tests have contributed to an average claims denial rate of 15 percent, with much higher rates for certain tests in some areas. To reduce this redundancy and confusion, the BBA required CMS to consolidate its contractor functions for laboratories into five or fewer regional laboratory carriers. The agency has deferred responding to this mandate largely because of resource constraints.

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## Post-acute care

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Many Medicare beneficiaries receive post-acute care from one of four types of providers:

- skilled nursing facilities,
- home health agencies,
- inpatient rehabilitation facilities, and
- long-term care hospitals.

Most patients use this care immediately following an acute hospital stay. This section discusses how Medicare pays for these services and issues that require attention in each of these settings.

### Payment for skilled nursing facility services

Beneficiaries who need short-term skilled care (nursing or rehabilitation services) on an inpatient basis following a hospital stay of at least three days are eligible to receive covered services in skilled nursing facilities (SNFs).<sup>26</sup> SNFs can be hospital-

based units or freestanding facilities.<sup>27</sup> About 1.4 million beneficiaries use SNF care in a year, but Medicare's payments for these services account for only about 10 percent of freestanding nursing facilities' revenues; they make up less than 2 percent of hospitals' revenues. Similarly, payments to SNFs (\$13 billion in 2000) represent only about 5 percent of total Medicare spending.

Medicare adopted a new PPS for SNF services on July 1, 1998. Throughout most of the 1980s and 1990s, however, SNFs were paid on the basis of their costs, subject to limits on their per diem routine costs (room, board, and routine nursing care); no limits were applied for ancillary services (such as drugs and therapy). Under the PPS, SNFs are paid a predetermined rate for each day of care. The per diem rates are based primarily on the patient's service needs and market conditions in the facility's location. Patients are assigned to 44 groups, each containing patients with similar service needs that are expected to require similar amounts of resources. The daily rate for each group is the sum of three components:

- a fixed amount for routine services (such as room and board, linens, and administrative services);
- a variable amount reflecting the intensity of nursing care patients are expected to require; and
- a variable amount for the expected intensity of therapy services.

The rates are computed separately for urban and rural areas and a portion of the total rate is adjusted to reflect market conditions in each SNF's location.

The SNF PPS has problems characterizing and classifying patient days, thereby raising questions about its ability to generate payments that accurately reflect efficient providers' costs of furnishing care. Partly in response to this problem,

the Congress temporarily increased payments to SNFs. Two of the three payment increases are scheduled to expire at the end of fiscal year 2002, prompting concern that the resulting payment reductions might adversely affect beneficiaries' access to high-quality care.

### The skilled nursing facility product Medicare buys

Medicare sets daily payment rates for 44 resource utilization groups, version III (RUG-III), which are distinguished by patients' expected service needs. Patients' expected service needs are determined by periodic assessments of their condition, including their needs for intensive physical, occupational, or speech therapy; special treatments (such as tube feeding); and their functional status (their ability to manage unassisted ordinary daily activities, such as eating, bathing, and dressing).

### Setting product payment rates

The PPS rates are expected to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing covered SNF services. Each of the 44 RUG-III groups has a daily rate comprising a fixed routine amount plus a nursing component and a therapy component. The nursing component is calculated by multiplying a base rate for nursing by a national relative weight that reflects the intensity of nursing care that patients in each RUG-III category are expected to receive. For groups that require intensive therapy, the therapy component is calculated by multiplying a base rate for therapy by a national relative weight that reflects the expected intensity of therapy; a fixed rate is used for groups receiving routine therapy. Rates are set separately for urban and rural SNFs.

The rates are adjusted to account for differences in input prices among SNF markets. The labor-related portion of the daily payment rate—75 percent for fiscal year 2002—is multiplied by the hospital

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26 Medicare covers 100 SNF days in a spell of illness. Medicare pays 100 percent of the rate for the first 20 days of a SNF stay. From the 21<sup>st</sup> to the 100<sup>th</sup> day, beneficiaries are responsible for a copayment equal to one-eighth of the hospital deductible, or \$101.50 per day in 2002.

27 Freestanding SNFs are frequently part of a nursing facility that provides residential long-term care, which is not covered by Medicare.

wage index in the SNF's location and the result is added to the nonlabor portion.<sup>28</sup> Rates are updated annually, based on the projected increase in the SNF market basket index, a measure of the national average price level for the goods and services SNFs purchase to provide care.

The initial payment rates in 1998 were set to reflect the projected amount that SNFs received in 1995, updated for inflation.<sup>29</sup> The Congress subsequently increased the payment rates temporarily in several ways:

- the BBRA increased rates for all 44 RUG-III groups by 4 percent for care furnished from April 2000 through September 2002,
- the BIPA increased the base rate for the nursing component by 16.66 percent for care furnished from April 2001 through September 2002, and
- the BBRA and BIPA increased rates for 14 rehabilitation groups by 6.7 percent, and those for 12 complex care groups by 20 percent. These increases were intended to give CMS time to refine the RUG-III classification system and they expire when CMS adopts that refinement.

With these changes, the rates range from \$141 to \$515 per day (unadjusted for wage differences).

## Issues

Three issues are important in SNF payment policy.

*Replacing the classification system.* The SNF patient assessment instrument does not collect certain information needed to characterize and classify the medically complex patients found in these facilities (MedPAC 2001c). In addition, the SNF

payment rates do not cover the costs of so-called nontherapy ancillaries (such as drugs and respiratory therapy) needed to care for some SNF patients.<sup>30</sup> An attempt to refine the RUG-III failed in 2000.

Therefore, in 2001, MedPAC recommended that a new classification be developed to better account for resources needed to care for SNF patients. CMS contract researchers are currently evaluating alternatives to the RUG-III classification system, as required by the BIPA.

*Ensuring adequate payments.* Two of the three temporary rate increases to SNF payments expire by the end of fiscal year 2002. Those intended to address limitations in the RUG-III classification system will remain. The temporary rate increases were designed to preserve beneficiaries' access to high quality SNF care. Our assessment of current SNF payment rates addresses the question of whether these rate increases may still be needed to protect beneficiaries (see Chapter 2).

*Monitoring substitution of services among alternative settings, including hospital inpatient facilities, SNFs, home health agencies and other post-acute care settings.* Patients hospitalized for specific conditions or procedures—strokes, broken hips, or joint replacements, for instance—might receive similar skilled care or rehabilitation services in any of several settings. The availability of multiple sites of care raises potential trade-offs for policymakers among access, cost, and quality of care. Moreover, shifts in service volume among settings could indicate that providers are shifting beneficiaries' care in response to financial incentives that reflect unwarranted disparities in payment rates; alternatively, such shifts could be benign. To ensure that beneficiaries have

access to care in the most clinically appropriate setting while acting as prudent buyers, policymakers need to monitor shifts in the locus of care and consider care alternatives in developing payment policies for each setting.

## Payment for home health care services

Beneficiaries who are generally confined to their homes and need skilled care (from a nurse, physical or speech therapist) on a part-time or intermittent basis are eligible to receive certain medical services at home. Covered services are delivered by home health agencies (HHAs) in visits to beneficiaries' homes, including:

- skilled nursing care;
- physical, occupational, and speech therapy;
- medical social work; and
- home health aide services.

Beneficiaries are not required to make any copayments for these services.

Almost 1 in 10 beneficiaries used home health care in 1999. Medicare's payments to HHAs were about \$9 billion in 2000, accounting for 4 percent of total Medicare spending but a large share of HHAs' total revenues.

Until October 2000, HHAs generally were paid on the basis of their incurred average costs per visit subject to annually adjusted limits.<sup>31</sup> In October 2000, CMS adopted a new PPS in which HHAs are paid a predetermined rate for each 60-day episode of home health care. The payment rates are based on patients' conditions and service use, and they are adjusted to reflect the level of market input prices in

28 The wage index used to adjust SNF payments is based on labor compensation data reported by acute care hospitals and is not adjusted for the effects of hospitals' geographic reclassifications.

29 By law, this projection excluded costs of SNFs that were exempt from Medicare's routine cost limits or that had so-called atypical exceptions in 1995 and included only 50 percent of the difference between the average costs of hospital-based and freestanding facilities.

30 SNF rates include costs of nontherapy ancillaries (ancillaries other than physical, occupational, and speech therapy) only to the extent that they correlate with nursing staff time. As a result, the rates do not cover the costs of patients in some groups who require above average amounts of these services.

31 From 1997 to October 2000, HHAs were paid the least of three amounts: their average annual cost per visit by visit type subject to limits, their average annual cost per beneficiary, or their charges.



the geographical area where services are delivered. If fewer than 5 visits are delivered during a 60-day episode, the HHA is paid per visit by visit type, rather than by the episode payment method. Adjustments for several other special circumstances, such as high-cost outliers, can also modify the payment. Payment rates also are increased for patients in rural areas.

The primary challenge for this new PPS is to set payment rates that are adequate to ensure beneficiaries' access to appropriate home care services. Setting rates for Medicare home health services has always been complicated by the lack of a clear definition of the benefit. The benefit was originally intended for short-term, post-hospital recovery care for beneficiaries who could not leave their homes, but changes to eligibility criteria have expanded the benefit. Beneficiaries who have no preceding hospital stay and are capable of spending significant time outside their homes are now eligible to receive covered services furnished in an unlimited number of home care episodes. Consequently, paying for appropriate care while controlling spending and ensuring access is a continuing challenge.

### **The home health products Medicare buys**

Medicare purchases home health services in units of 60-day episodes. For each episode of care, the payment amount is intended to cover what an efficient provider would have to spend in furnishing visits, supplies, outpatient therapy, and patient assessments. The severity of a patient's condition changes the expected amount of resources—chiefly the number and type of visits—required for high-quality care. To capture differences in expected resource use, patients receiving 5 or more visits are assigned to 1 of 80 home health resource groups (HHRGs) based on diagnosis, functional capacity, and service use.

### **Setting the rates**

The HHRGs range from groups of relatively uncomplicated patients to those containing patients who have severe medical conditions, severe functional limitations, and need extensive therapy. Each HHRG has a national relative weight reflecting the average relative costliness of patients in that group compared with the average Medicare home health patient. The payment rates for HHRGs in each local market are determined by adjusting a national average base amount—the amount that would be paid for a typical home health patient residing in an average market—to reflect the input-price level in the local market and then multiplying the adjusted local amount by the relative weight for each HHRG.

The initial national average base payment amount for a typical home health episode is intended to reflect the projected amount providers would have received per episode under the previous payment system, updated for inflation. Because providers receive payments on a per-visit basis for patients who are furnished fewer than 5 visits in 60 days, the base amount was adjusted to reflect this policy. It was also reduced 5 percent to account for anticipated high-cost outlier payments. For fiscal year 2002, the national average payment rates for HHRGs range from \$1,197 to \$6,393.

To capture local market conditions, the per-episode payment rate is divided into labor and non-labor portions; the labor portion—77 percent—is adjusted by a version of the hospital wage index to account for geographic differences in the market prices for labor-related inputs to home health services.<sup>32</sup> For most services provided in facilities, the location of the facility determines the local area adjustment that applies. For home health services, however, the local area adjustment is determined by the beneficiary's residence. The total payment is the sum of the adjusted labor portion and the nonlabor portion.

Payment rates are temporarily increased by 10 percent for care delivered to beneficiaries who live in rural areas. This is intended to compensate for potentially higher visit costs in rural areas related to low patient volume and long distances between patients.

When a patient's episode of care involves an unusually large number or a costly mix of visits, the HHA may be eligible for an outlier payment. To be eligible, imputed episode costs must exceed the payment rate by 13 percent or more. Episode costs are imputed by multiplying the estimated national average per visit costs by type of visit—adjusted to reflect local input prices—by the numbers of visits by type during the episode. When these estimated costs exceed the outlier threshold, the HHA receives a payment equal to 80 percent of the difference in addition to the episode payment.

The base rate is updated annually. The update is based on the projected change in the home health market basket, which measures changes in the prices of goods and services home health agencies must buy to produce care. For fiscal years 2002 and 2003, the update is set by law at the projected increase in the MB index minus 1.1 percentage points.

### **Issues**

Three issues are important in home health payment policy. Two of these concern whether payments are adequate to cover efficient providers' costs; any resolution will require the Congress' attention (see Chapter 2).

*Addressing the so-called 15 percent cut, now scheduled to take effect in 2003.* The BBA mandated a 15 percent reduction in Medicare payments for home health services in response to rapid growth and high levels of spending in the early 1990s. Under this policy, CMS would have to lower the PPS payment rates enough to reduce total home health spending to 15

32 The wage index used to adjust home health payments is calculated from wage data reported by acute care hospitals without the effects of geographic reclassifications.

percent below that projected under the previous per visit cost-based reimbursement system. Policymakers have postponed the reduction several times. At current spending levels, it is possible that the target spending level could be met by reducing the PPS payment rates by only about 6 percent. This raises the question of whether to continue to postpone the cut, eliminate it, or adopt it.

*Is the rural add-on needed?* Rural home health providers may face higher costs per episode because they have low service volume or they have to travel relatively long distances between clients. Neither of these factors is directly compensated in the PPS. Instead, the rural add-on increases payments for rural beneficiaries' home health services by 10 percent. However, it is not clear whether the add-on is needed, and if it is, whether it appropriately targets providers that have higher costs. We plan to further evaluate rural home health costs to address this issue.

*Identifying the appropriate level of home health service use and monitoring that these services are delivered.* One of the principal difficulties in setting payment rates for home health care is that policymakers do not know the appropriate level of service use. Development of clinical standards for home health care for common conditions might resolve at least some of the uncertainty. If so, policymakers need to provide resources and assign responsibility to carry out development and testing of clinical standards.

## Payment for inpatient services in rehabilitation facilities

After an illness, injury, or surgical care, some patients need intensive inpatient rehabilitation services, such as physical,

occupational, or speech therapy. Relatively few beneficiaries use intensive rehabilitation therapy because they must be able to tolerate and benefit from three hours of therapy per day to be eligible for treatment in an inpatient rehabilitation setting. Among those who qualify, many are admitted to inpatient rehabilitation facilities (IRFs), which may be freestanding hospitals or specialized, hospital-based units. Others may receive care in a SNF, especially in markets that lack IRFs or have few rehabilitation beds. Although payments to IRFs (about \$4 billion in 2000) represent only a small part of total Medicare spending (about 2 percent), Medicare accounts for a large share of IRF revenues.

Until January 1, 2002, Medicare paid IRFs (under TEFRA) on the basis of their incurred average costs per-discharge, subject to annually adjusted facility-specific limits (see text box, p. 16).<sup>33</sup> Beginning in January 2002, IRFs are paid predetermined per-discharge rates based primarily on the patient's condition (diagnoses, functional and cognitive statuses, and age) and market conditions in the facility's location.<sup>34</sup> Discharges are assigned to case-mix categories containing patients with similar clinical problems that are expected to require similar amounts of resources. Each case-mix category has a national relative weight reflecting the expected relative costliness of treatment for a patient in that category compared with that for the average Medicare inpatient rehabilitation patient. The payment rates for case-mix categories in each local market are determined by adjusting a national average base payment amount to reflect the input-price level in the local market, and then multiplying the adjusted local amount by the relative weight for each case-mix group. Payment rates also are increased for facilities located in rural

areas and those that treat a disproportionate share of low-income patients.

Like all new payment systems, this one must be monitored to ensure it provides adequate payments while operating efficiently. Inadequate payments might affect beneficiaries' access to high quality care.

## Defining the inpatient rehabilitation products Medicare buys

Under the inpatient rehabilitation PPS, Medicare sets payment rates for 385 intensive rehabilitation products—called case-mix groups (CMGs)—defined by types of treatment episodes. Patients are assigned to 380 of these treatment categories based on the primary reason for intensive rehabilitation care (for example, a stroke or burn); their age and levels of functional and cognitive impairments; and the types of comorbidities (co-existing conditions) present during the stay. The other five categories are for patients discharged before the fourth day—short-stay outliers—and for those few who die in a facility. Further, IRFs may receive only partial payment for other patients who do not receive a full course of intensive therapy because they are discharged to another facility and the length of stay is less than that typically provided to patients with the same condition.<sup>35</sup>

## Setting product payment rates

The PPS payment rates are intended to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing covered rehabilitation services. The initial payment level (base rate) for a typical discharge—\$11,838 for fiscal year 2002—is intended to reflect the projected amount providers would have been expected to receive per discharge under the previous payment system

33 Patients transferred to inpatient rehabilitation from a short-term acute hospital—about 93 percent of patients—are not responsible for a deductible for the admission. Those admitted directly pay the same deductible (\$812) and copayments as for an acute inpatient stay.

34 IRFs began receiving payments under the new PPS at the beginning of their 2002 cost reporting periods. During a one-year transition period, they are paid a blend of two-thirds the PPS rate and one-third their facility-specific TEFRA rate updated to fiscal year 2002.

35 For these patients, facilities are paid a per diem rate up to a maximum of the full rate for the treatment category.

(TEFRA) in 2002. Because providers will receive additional payments under the PPS for extraordinarily costly patients (high-cost outliers), the projected amount is reduced (3 percent) to maintain the same expected total spending. Further, reflecting its experience with similar financial incentives under other discharge-based PPSs, CMS decreased the base rate (by 1.16 percent) in the expectation that providers would lower their costs by reducing lengths of stay compared with those under TEFRA.

The base rate is adjusted to account for differences in input prices among markets. The labor-related portion of the base payment amount—72 percent—is multiplied by a version of the hospital wage index and the result is added to the nonlabor portion.<sup>36</sup> The adjusted rate for each market is multiplied by the relative weights for all CMGs to create local PPS payment rates.

Payment rates are increased for IRFs located in rural markets and for those that treat low-income patients. Rural facilities' payment rates are increased by 19 percent to compensate for their tendencies to have fewer cases, longer lengths of stay, and higher average costs per case. An IRF is eligible to receive higher payment rates if it serves at least one low-income patient. The payment adjustment for each facility is based on its low-income patient share, which is the sum of two proportions: the proportion of total inpatient days furnished to beneficiaries eligible for Supplemental Security Income benefits and the proportion of total patient days furnished to Medicaid patients.<sup>37</sup> After adjustments for local market conditions, rural location, and type of treatment category, the CMG payment rates range from \$5,050 to \$56,884 in the continental United States.

Finally, IRFs receive additional payments for high-cost outliers when their costs exceed a fixed-loss threshold. An IRF has a threshold for each CMG equal to its regular payment rate plus a national fixed-loss amount (\$11,211) adjusted by the wage index for the IRF's market. For high-cost outliers, IRFs receive their regular payment rates plus 80 percent of their costs above the fixed-loss threshold.

Both the base rate and relative weights are updated annually. The base rate is updated using the TEFRA market basket index (used for facilities originally excluded from the acute care hospital PPS) expanded to reflect changes in the price of capital. The relative weights are updated based on changes in national average charges per discharge for each CMG.

### Issues

Two issues are particularly important when a new payment system is implemented. The first is whether payments are adequate; the second is whether they are updated appropriately. Both need CMS's action.

*Ensuring adequate payments.* Like all new payment systems, this PPS will need to be monitored to determine whether the payment rates cover efficient providers' costs of furnishing rehabilitation care and whether the distribution of payments across treatment categories, markets, and other provider characteristics is adequate. In addition, some have questioned whether the current patient assessment instrument collects the right information. The reported information should be the minimum amount sufficient to operate the PPS and monitor quality.

*Updating payments.* The TEFRA market basket index is used to annually update inpatient rehabilitation facilities' payments. This market basket reflects changes in the prices of goods and

services used to furnish care by the five types of hospitals exempted from the acute care hospital PPS in 1983 and may not accurately measure price changes for inputs used to provide intensive rehabilitation care.

### Payment for services furnished in long-term care hospitals

Patients with clinically complex problems, such as multiple acute or chronic conditions, may need hospital care for relatively extended periods of time. Some are admitted to long-term care (LTC) hospitals.<sup>38</sup> Others—especially in the many markets without LTC hospitals—may be cared for in acute care hospitals or SNFs. Payments to LTC hospitals (almost \$2 billion in 2000) represent only a small part of total Medicare spending (less than 1 percent); however, Medicare accounts for a substantial proportion of LTC hospitals' revenues.

LTC hospitals are paid for furnishing care to Medicare beneficiaries on the basis of their average costs per discharge, subject to an annually adjusted facility-specific limit (see text box, p. 16).<sup>39</sup> The Congress required CMS to implement a per-discharge PPS beginning October 1, 2002.

### Issues

Two issues are important to payment policy for LTC hospital services and will require attention in the future. One is whether the new PPS will pay LTC hospitals adequately to preserve beneficiaries' access to this care. The other is whether Medicare is paying twice for patients in hospitals within hospitals (HWHs).

*Implementing the prospective payment system.* The principal issues are whether the PPS will appropriately characterize and classify patients, generate payments that are adequate to cover efficient

36 The wage index used to adjust IRF payments is calculated from wage data reported by acute care hospitals without the effects of geographic reclassifications.

37 The low-income patient share is different from the disproportionate patient share used in the acute care hospital inpatient PPS.

38 LTC hospitals are defined as hospitals with an average length of stay of 25 days or more.

39 Patients transferred to a long-term care hospital from a short-term acute hospital—about 80 percent of patients—are not responsible for a deductible for the admission. Those admitted directly pay the same deductible (\$812) and copayments as for an acute inpatient stay.



providers' costs of furnishing long-term hospital care, and accurately reflect cost differences among treatment categories, markets, and other provider characteristics.

*Growing numbers of hospitals within hospitals.* The number of long-term care HWHs has increased rapidly since the mid-1990s. HWHs are LTC hospitals located in buildings of or on the campuses of acute-care hospitals. HWHs reportedly represented more than one-fourth of LTC hospitals in 1997 and more than three-fourths of HWHs were established after 1993. Acute-care hospitals with HWHs have strong financial incentives to discharge patients who have longer-than-average stays into the HWH. To the extent that hospitals acted on these incentives, Medicare would pay twice for one patient stay.

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## Services for special populations

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Many Medicare beneficiaries have special needs resulting from end-stage renal disease (ESRD) or a terminal illness. These beneficiaries may receive services in two specialized settings:

- outpatient dialysis facilities, and
- hospices.

For each setting, we discuss Medicare's payment policies and summarize current issues of concern.

### Payment for outpatient dialysis services

Individuals with ESRD—irreversible loss of kidney function—require either dialysis or kidney transplantation to survive. In 1972, the Social Security Act extended all Medicare Part A and Part B benefits to individuals with ESRD who are entitled to receive Social Security benefits. This entitlement is nearly universal, covering

93 percent of all people with ESRD in the United States. Total Medicare spending for these beneficiaries has outstripped expectations—reaching nearly \$12 billion in 2000—primarily because of unanticipated growth in the ESRD population. The 331,000 enrolled ESRD beneficiaries in 1999 accounted for 0.8 percent of total Medicare enrollment, compared with only 0.1 percent of enrollment in 1974. This enrollment growth reflects population aging and improvements in clinical knowledge and technique that have enabled successful treatment of older patients and those with coexisting illnesses who might not have been treated 30 years ago.

Because of the scarcity of kidneys available for transplantation, most people with ESRD receive dialysis treatments three times per week in either freestanding or hospital-based facilities. Medicare spending for outpatient dialysis (\$5.5 billion in 2000) accounts for 2 percent of total program expenditures but is a predominant share of revenues for dialysis facilities. Medicare pays dialysis facilities a predetermined payment for each dialysis treatment they furnish, using a mature payment system first implemented in 1983. The prospective payment—called the composite rate—is intended to cover the bundle of services, tests, drugs, and supplies routinely required for dialysis treatment and is only adjusted to account for differences in local input prices.

Even though technological advances have changed the provision of dialysis care since the composite rate was established, CMS has not modified the unit of payment. Although CMS has occasionally changed the dialysis bundle, it has not used explicit criteria to determine which services should be included. Consequently, the composite rate currently excludes several new injectable drugs and clinical laboratory tests that have diffused widely into medical practice

over the past decade; providers are paid for these services based on their incurred costs. The BIPA requires the Secretary to:

- include in the composite rate by July 2002 diagnostic laboratory tests and drugs that are routinely used in furnishing dialysis care but are currently billed separately, and
- recommend to the Congress whether the composite rate should be updated annually or periodically.

### Defining the dialysis products Medicare buys

Medicare covers two methods of dialysis—hemodialysis and peritoneal dialysis. In hemodialysis, a patient's blood is cycled through a dialysis machine, which filters out body waste. About 90 percent of all dialysis patients undergo hemodialysis three times per week in dialysis facilities.<sup>40</sup> Peritoneal dialysis uses the membrane lining the peritoneal cavity to filter excess waste products, which are then drained from the abdomen. Patients undergo peritoneal dialysis five to seven times per week in their homes.

The unit of payment is the dialysis treatment. The composite rate payment system differs from Medicare's other prospective payment systems because it uses only one product category to define the service bundle Medicare is buying. Although different equipment, supplies, and labor are needed for hemodialysis and peritoneal dialysis, the current system does not differentiate payment based on dialysis method.<sup>41</sup>

### Setting product payment rates

The composite rate is intended to cover all operating and capital costs that efficient providers would incur in furnishing dialysis treatment episodes in dialysis facilities or in patients' homes. The base payment rate is \$131 for hospital-based facilities and \$127 for freestanding

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40 Recently, clinicians have expressed growing interest in using daily hemodialysis furnished five to seven times per week in dialysis facilities or in patients' homes.

41 The Congress made an exception to this policy in 1989 for a new type of peritoneal dialysis. Medicare pays up to 130 percent of the composite rate for this dialysis method when patients deal directly with one dialysis supplier (not a dialysis facility).

facilities in 2002.<sup>42</sup> Medicare caps its payments to facilities at an amount equal to three dialysis sessions per week, although dialysis may be given more frequently.

The labor-related portion of the composite rate—40 percent in 2002—is adjusted for local market differences in input prices using a wage index created in 1987. This wage index blends 60 percent of a wage index based on 1980 Bureau of Labor Statistics hospital wage data with 40 percent of the fiscal year 1986 PPS hospital wage index. Both component wage indexes use labor markets based on 1980 definitions for MSAs and statewide rural areas. The blended wage index is limited by a floor and a ceiling; areas that have blended index values lower than 90 percent of the national average are raised to the 90 percent level (the wage index “floor”), while those with blended index values higher than 130 percent of the national average are lowered to the 130 percent level (the “ceiling”). Thus, the minimum payment is \$121 and the maximum is \$144 per dialysis treatment in 2002.

A dialysis facility may apply for an exception to its composite rate when dialysis costs exceed the base payment rate. The four circumstances that may justify a payment exception are: 1) serving an atypical patient mix, 2) furnishing services to patients who are using fewer than three dialysis sessions per week, 3) serving an isolated area in which the facility is essential to ensure beneficiaries’ access to care, or 4) extraordinary circumstances, such as furnishing dialysis in an area affected by natural disaster.

Dialysis facilities are reimbursed for bad debt that results when, after a good faith effort, they are unable to collect some beneficiaries’ 20 percent coinsurance amounts. Medicare also pays providers based on their incurred costs for certain laboratory tests and new injectable drugs that are widely used but not included in the dialysis service bundle.

## Issues

The fundamental issue is whether the dialysis composite rate payment system needs to be overhauled. Action may be needed on every aspect of the payment system.

*Defining a comprehensive payment bundle.* Dialysis providers have strong financial incentives to control the costs of services included in the composite rate payment bundle, but weak incentives for controlling costs for those that are paid separately based on facilities’ incurred costs. The composite rate bundle excludes new injectable drugs and laboratory tests that have diffused widely into medical practice. CMS is developing a system to incorporate these items in the payment bundle.

*Rethinking the unit of payment.* Some have questioned whether the composite rate’s unit of payment (a single dialysis session) promotes efficient provision of high-quality care and whether it is consistent with providers’ thinking about changes in treatment patterns that might improve quality.

*Developing an effective dialysis product classification system.* The design of the outpatient dialysis payment system may hamper beneficiaries’ access to high-quality care because it does not account for differences in patient acuity and in dialysis dose and frequency that are known to affect providers’ costs.

*Ensuring adequate payment rates.* Some have questioned whether the current base composite rate is set too low because it has been updated only four times since it was established in 1982. In contrast, the payment rates for certain new injectable drugs that are billed outside the bundle appear to be too high and their profitability is offsetting losses that some providers may experience in furnishing the services included in the bundle.

*Updating payments.* CMS has not routinely updated the composite rate, in part because it is not required to consider

a periodic update. To address this issue, the BIPA requires the Secretary to develop by July 2002 update methods for the current payment system that account for projected inflation in input prices, anticipated scientific and technological advances, and changes in practice patterns and market conditions.

## Payment for hospice services

Terminally ill beneficiaries (certified to have a projected life expectancy of six months or less) may elect to receive hospice care, which aims to help these patients continue as normal a life as possible and remain in their homes. Therefore, the hospice benefit covers a wide array of services, including:

- physician services;
- skilled nursing services;
- counseling (dietary, spiritual, bereavement, and other counseling services);
- medical social services;
- drugs and biologicals for pain control and symptom management;
- physical, occupational, and speech therapy;
- home health aide and homemaker services; and
- inpatient respite care.

To be eligible for hospice services, beneficiaries must give up other covered services related to curative treatment of the terminal condition, although Medicare still pays for unrelated care. Twenty percent of Medicare beneficiaries who died in 1998 used hospice care (Hogan 2001). Payments to hospices (almost \$3 billion in 2000) represent a small part of total Medicare spending (about 1 percent), although Medicare makes up a large share of hospice revenues.

42 This \$4 difference stems from the Omnibus Budget Reconciliation Act of 1981, in which the Congress mandated separate rates for these types of facilities to reflect differences in their overhead costs.



Medicare pays hospices for each day a beneficiary is eligible and under hospice care, regardless of the amount of services furnished on any given day. Per diem payment rates are based on a fee schedule with separate rates for four broad categories of care. The rate for each day is adjusted to reflect local market conditions.

Medicare’s payment rates must be monitored to ensure that payment is adequate to maintain beneficiaries’ access to high-quality hospice care.

**Defining the hospice products Medicare buys and setting payment rates**

For hospice services, Medicare sets predetermined daily payment rates according to a fee schedule for four broad categories of care: routine home care, continuous home care, inpatient respite care, or general inpatient care.<sup>43</sup> Patients are assigned to these categories based on the type of care they actually receive each day.

The daily payment rates represent payment in full for all costs that hospices incur in furnishing services identified in patients’ care plans.<sup>44</sup> The initial payment level (base rate) per category is adjusted to account for differences in wage rates among markets. The labor-related portion of the base payment amount—69 percent for routine and continuous home care, 54 percent and 64 percent for inpatient respite care and general inpatient care, respectively—is adjusted by the hospice wage index for the location in which care is furnished and the result is added to the nonlabor portion. The base rates are updated annually by the projected increase in the acute care hospital MB index.

A hospice’s annual aggregate payments are limited by a capped amount (\$16,651 for fiscal year 2002) multiplied by the

number of beneficiaries newly enrolled during the year. The capped amount is updated annually by the CPI-U.

**Issues**

The main issue for hospice services is whether payments are adequate to cover efficient providers’ costs.

*Ensuring adequate payments.* The payment rates are based on old information from the Medicare hospice demonstration project in the early 1980s (GAO 2000, Huskamp et al. 2001). Although the initial rates have been updated for inflation over time, they may not be consistent with the costs hospices incur in furnishing care, potentially reducing beneficiaries’ access to these services.

**Other services**

Medicare also pays for other services and products used by beneficiaries in the traditional fee-for-service program, including:

- ambulance services, and
- durable medical equipment.

For each of these payment systems, we describe Medicare’s policies and current policy issues.

**Payment for ambulance services**

Medicare pays for both emergency and non-emergency ambulance services, including ground and air services, when the use of other means of transportation to health care services would be harmful to beneficiaries’ health. Ambulance staff provide a range of services to stabilize and treat patients in transit.

Because Medicare has repeatedly delayed implementing an ambulance fee schedule, payments for these services are still based on providers’ reported costs and charges. This approach provides few incentives for cost containment and often results in payment disparities among similar providers.

Ambulance providers are either hospital-based or freestanding, a distinction critical to current payment.<sup>45</sup> Hospital-based ambulance providers are paid based on their Medicare-allowed incurred costs. They are paid a base rate, which covers the costs of services and supplies, and a mileage payment. Freestanding providers are paid based on reasonable charges, subject to a cap, and can choose whether to be paid a bundled payment or bill separately for cost components. In billing Medicare, providers use procedure codes to distinguish different levels of services, including a range of Basic Life Support and Advanced Life Support services, various supplies, and mileage.

Concerns about inequities in payment, growth in expenditures, and inconsistent coverage policies among regions led the Congress to require CMS to develop a fee schedule. Several issues have delayed its adoption, including how to adjust for the higher costs incurred by low-volume providers, how to ensure that aggregate payments to ambulances are not reduced, and whether to require additional coding to document the medical necessity of services.

**Defining the ambulance product Medicare buys**

As of January 2000, nine HCPCS codes are used to distinguish the levels of services provided. Other codes are available to indicate the supplies used and mileage costs. Carriers may also require providers to report diagnosis codes to determine if the service was medically

43 Inpatient respite care provides short-term relief for a patient’s caregiver; general inpatient care may be necessary to perform procedures for pain control or symptom management when they cannot be furnished in other settings.

44 Beneficiaries are responsible for a 5 percent copayment for drugs and biologicals, up to a maximum of \$5 per prescription, and 5 percent of the reasonable cost of any respite care.

45 Technically, hospital-based ambulances are considered providers, while freestanding ambulances are considered suppliers. For the purposes of this chapter, we refer to both types as “providers”.

necessary and therefore covered by Medicare. Payments are reduced when a beneficiary dies before the ambulance arrives at the scene.

### Setting payment rates

Hospital-based ambulance providers receive a base rate and a payment for mileage for each trip. Payments are based on the provider's costs from the previous year, subject to an update factor established by Congress. The final payment is determined at the end of the hospital's fiscal year, as part of a year-end cost settlement process.

Freestanding ambulance providers choose whether to bill Medicare using an all-inclusive charge or separate charges for the different cost components (for example, mileage and supplies). Regardless of this choice, payment is set at the lowest of:

- the actual submitted charge,
- the provider's customary charge, which is its median charge for each procedure during the preceding year,
- the prevailing charge in the region, which is the 75<sup>th</sup> percentile of local providers' customary charges during the preceding year, or
- the inflation indexed charge (IIC), which is the lowest of the actual, customary, and prevailing charges in the preceding year, updated for inflation. The IIC was initiated in 1985.

### Issues

The Congress mandated a fee schedule for ambulance services to make payments consistent with efficient providers' costs and give them incentives to furnish services efficiently. This schedule has not yet been implemented.

*Implementing a fee schedule.* CMS's proposed fee schedule, published in September 2000, would have established a classification system for ambulance services with relative values for each type of service. It proposed a base payment amount—called a conversion factor—

based on providers' submitted claims, adjusted to account for varying costs of conducting business in different regions of the country. The base rate also would be adjusted upward for air services furnished in rural areas. A separately calculated payment would be made for mileage to account for costs attributable to the use of the ambulance vehicle. The proposed mileage rates varied for ground or air transport and included a 50 percent add-on to the mileage rate for the first 17 miles traveled with the patient on board in rural areas. Analysts have raised concerns about whether the proposed fee schedule adequately accounts for low-volume providers' costs, ensures that aggregate payments to ambulances are not reduced, and allows for a better coding method for documenting the medical necessity of services.

### Payment for durable medical equipment

When medical equipment is needed at home to treat a beneficiary's illness or injury, it is covered under the durable medical equipment (DME) benefit. Medicare spent about \$6 billion on DME in 2000, about 2 percent of program spending.

Wheelchairs and respirators are typical of the equipment Medicare pays for under this benefit. To be covered, the equipment must:

- withstand repeated use,
- primarily serve a medical purpose, and
- generally not be useful to a person without an illness or injury.

Thus, expendable supplies, such as bandages or incontinence pads, or otherwise useful equipment such as a humidifier would not be covered under this benefit.

Medicare also covers prosthetics, orthotics, and some medications under its DME benefit. Covered prosthetics generally are artificial limbs; orthotics include orthopedic braces and some supportive garments. Medication that is

necessary to the function performed by durable equipment is also covered under this benefit—for example, heparin administered in a home dialysis system, albuterol in a nebulizer, or chemotherapy drugs in an infusion pump.

Medicare has paid DME suppliers using a fee schedule since 1986. Under the fee schedule, covered items are classified into product groups within six major classes. The payment amount for each product group is a weighted average of local and regional prices, updated annually by the CPI-U. Suppliers are generally paid either a monthly rate for rentals or a lump sum for purchased items. Medicare also covers the cost of repairs, maintenance, delivery, and supplies necessary to use purchased equipment. Beneficiaries are responsible for a 20 percent copayment.

### The durable medical equipment Medicare buys

DME payments include a monthly rental fee or a lump-sum purchase fee. Under the DME fee schedule, Medicare sets prices for equipment by category and product group. Equipment is assigned to one of six categories based on its nature—whether or not it is inexpensive, needs frequent service, or is a rental item subject to an explicitly limited period of use. The six DME categories are:

- inexpensive or routinely purchased equipment,
- items requiring frequent and substantial servicing,
- customized items,
- prosthetic and orthotic devices,
- capped rental items, and
- oxygen and oxygen equipment.

Within the six categories, equipment is further categorized into about 2,000 product groups. Examples of product groups are high-strength lightweight wheelchairs and rental portable oxygen systems. All items within the same product group have the same payment rate.

The central issue in DME payment policy is the frequent failure of Medicare's payments to reflect current market prices. It is difficult for CMS to price DME in a way that is consistent with the market because the product definitions are too broad. Each product code has only one payment rate, but one product code can be used for many different items with varying prices in the retail market. Also, changing Medicare's payment rates in any way other than simple updating has been cumbersome.

The BBA gave Medicare the authority to apply a so-called test of inherent reasonability to some items that have well-developed retail markets; this allows CMS some price-setting flexibility. CMS is also conducting a competitive bidding project to test the effects of competition on prices for certain DME items.

### Setting the product payment rates

To ensure beneficiaries' access to needed DME, the fee schedule must cover efficient suppliers' costs of furnishing equipment for rental or purchase. Generally, the current fees are an average of the allowed charges from 1986 and 1987, adjusted by the CPI-U to account for inflation.

Over time, the inflation-adjusted prices have failed to reflect changes in medical equipment technology and other factors that have caused market retail prices to diverge from Medicare's payment rates. Recent legislation established two alternatives to the inflation adjustment. One is that Medicare can adjust prices by as much as 15 percent in one year for DME that is frequently purchased by other payers. To make the price adjustment, CMS would use an inherent reasonableness test based on a survey of market prices. The other is that Medicare can freeze some prices or put a limit on the amount of the annual increase.

Medicare uses different methods among the six broad equipment categories for capturing variations in prices due to local market conditions. In some instances, Medicare sets a separate fee schedule for

each state based on local allowed charges in 1986–87. In other cases, Medicare uses 10 regional fee schedules in which the prices in each region are based on an average of allowed charges in the constituent states. Both the state and regional schedules are subject to floors and ceilings to limit the variability in prices across the country. A third method is an item-by-item determination by the carrier. Rental payments are subject to a national payment limit. The applicable fee schedule is determined by the location of beneficiaries' residences rather than the location of the DME provider. All program payments are reduced by the 20 percent coinsurance paid by beneficiaries.

### Issues

The primary issue in DME is the adequacy of payment and Medicare's ability to keep payments in line with market prices.

*Ensuring appropriate payments.* CMS continues to seek ways of keeping its fee schedule in line with prevailing market prices. The BBA streamlined the inherent reasonability test to allow CMS some price-setting flexibility. CMS is also conducting a competitive bidding project to test the effects of creating a market for certain DME items.

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## Medicare+Choice plans

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Medicare beneficiaries may choose to receive their Medicare benefits from a private plan participating in the Medicare+Choice (M+C) program rather than from the traditional program. Under some M+C plans, beneficiaries may receive additional benefits beyond those offered under traditional Medicare and may pay additional premiums. Medicare pays plans a capitated rate for the 14 percent of beneficiaries currently enrolled. These payments amounted to \$40 billion in 2000, 16 percent of total Medicare spending.

Medicare payment rates for M+C plans are based on enrolled beneficiaries' characteristics and the counties in which

they live. Medicare uses beneficiaries' characteristics—primarily age and sex—to develop a measure of their expected relative risk for covered health spending. The payment rate for a plan enrolling a beneficiary is then calculated using the base rate for the beneficiary's county of residence, adjusted for the beneficiary's expected relative health risk. The base rate for each county is based on its historic average per capita spending in the traditional Medicare program, local levels of input prices, and the health risk characteristics of its Medicare population.

Controversy has surrounded the payment rate formulas. In response to concerns that plans could not survive in areas with low payment rates (because of historically low per capita Medicare spending), the Congress set floors to raise the lowest rates. Controversy has also surrounded the adjustment for health risk. Many analysts have been concerned that the current risk adjusters, based mostly on demographic variables, do not account for predictable differences in spending for covered services among beneficiaries. Although more accurate risk adjusters have been proposed, M+C plans have argued that they require burdensome data collection.

### Defining the Medicare+Choice products Medicare buys

Under the M+C program, Medicare buys calendar months of insurance coverage for its beneficiaries from private plans. The coverage must include all Medicare benefits, except that plans may limit enrollees' choices of providers more narrowly than under the traditional fee-for-service program.

Medicare's payment rates for a month of coverage are based on beneficiaries' counties of residence and on their relative expected cost, as predicted by demographic and diagnostic health factors. The county-level rates are determined administratively, based on statutory formulas. The 2002 rate for a county is the highest of three values:

- a floor rate of \$553 for counties in metropolitan areas with 250,000 or more people, or \$500 for all other counties;

- the county's 2001 rate increased by 2 percent; or
- a 50/50 blend of an input price-adjusted national average rate and an updated historical rate based on the county's 1997 payment rate. (All blended rates are adjusted by a budget neutrality factor that constrains national payments. For 2002, budget neutrality could not be achieved; thus, the blended rates were not applicable.)

Medicare currently calculates a beneficiary's relative expected cost—as compared with the average expected cost for all Medicare beneficiaries—based on seven factors:

- age,
- sex,
- whether the beneficiary has ESRD,
- whether the beneficiary is also covered by Medicaid,
- whether the beneficiary is institutionalized,
- whether the beneficiary is currently covered as an active worker under an employer-sponsored plan, and
- a health risk factor currently based on diagnoses made during any Medicare-covered hospital stays by the beneficiary during the preceding year.

### Setting product payment rates

The original theory behind setting payment rates for private plans was that the rates should be based on how much it would cost the traditional Medicare program to provide coverage for those that enrolled in the plans. Before the BBA, rates were set at 95 percent of the expected cost of providing coverage under the traditional Medicare program. Medicare would thus save 5 percent of the

expected spending on behalf of a beneficiary when the beneficiary enrolled in a private plan.

The theory raised several concerns in practice, however. Beneficiaries' spending in the traditional Medicare program varies substantially across counties; per capita spending in the highest county was three-and-a-half times that for the lowest county. Therefore, the payment rates for private plans were three-and-a-half times higher in some counties than in others. As a result of low payment rates and other factors, few beneficiaries in lower-spending areas had private plans available to them, while most beneficiaries in higher-spending counties had plans with extra benefits available. The BBA changed the rate-setting to the approach described earlier in an effort to reduce rate variation across the country and entice private plans into serving more counties.

The three county rates are updated annually. The floor rates are updated by the national average growth in per-capita spending in the traditional Medicare program. The county's prior year rates are increased by 2 percent, thus serving as a minimum update of 2 percent. Finally, the blended rates are recalculated and adjusted by a percentage constrained by budget neutrality. In most years, the blended rates were not applicable because of the budget-neutrality constraint.

### Issues

Two issues have dominated recent discussion of M+C payment rates: variation in the county-level rates and risk adjustment of those rates.

*Ensuring appropriate payments.* The Congress has been concerned because many M+C plans have withdrawn from the program since passage of the BBA. Some members want to see further compression of the county-level rates to attract plans to low-rate areas. Other members want rates once again to reflect the costs of the traditional Medicare

program in local areas. They believe that putting plans on more even footing with the traditional program would enable plans to thrive in areas with high spending. This debate is ongoing (see Chapter 4).

*Improving methods for risk-adjusting payments.* Medicare's method of risk-adjusting payments has also been controversial. Many critics have claimed that the current risk-adjustment factors do a poor job of predicting cost. Consequently, plans have strong financial incentives to select relatively healthy beneficiaries because their per capita payment rates will not be reduced to reflect healthier enrollees. The BIPA requires CMS to revise the risk-adjustment method to include factors related to diagnoses from outpatient settings. The health plan industry has complained that data collection efforts required to support a risk-adjustment system based on outpatient diagnostic encounter data are too burdensome. CMS responded to complaints by suspending encounter data collection that would have been used to develop the specific system. Currently, the type of system to be used is under development and CMS has not yet determined system specifics.

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## Further information on how Medicare pays for services

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Several sources are available to those seeking further information on how Medicare pays for services it furnishes to beneficiaries. For example, each year, Commerce Clearing House publishes a series that explains Medicare payment policy, complete with references to the law and regulations (CCH 2001). Readers interested in updating the information contained in this chapter also can refer to CMS's final rules for each payment system, generally published annually in the Federal Register.



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C H A P T E R

# 2

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## **Assessing payment adequacy and updating payments in traditional Medicare**

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# R E C O M M E N D A T I O N S

## Section A: Accounting for changes in input prices

- 2A** The Secretary should use the wage and benefit proxies that most closely match the training and skill requirements of health care occupations in all input price indexes used for updating payments. In determining index weights, measures specific to the health sector and to occupation categories in which health care plays a major role should be emphasized.

\*YES: 15 • NO: 0 • NOT VOTING: 0 • ABSENT: 2

.....

## Section B: Hospital inpatient and outpatient services

- 2B-1** The Congress should gradually eliminate the differential in inpatient payment rates between hospitals in large urban and other areas.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2B-2** The Congress should increase the base rate for inpatient services covered by Medicare's prospective payment system in fiscal year 2003 by market basket minus 0.55 percent for hospitals in large urban areas and by market basket for hospitals in all other areas.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2B-3** For calendar year 2003, the Secretary should increase the payment rates for services covered by the outpatient prospective payment system by the rate of increase in the hospital market basket.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

## Section C: Physician services

- 2C-1** The Congress should repeal the sustainable growth rate system and instead require that the Secretary update payments for physician services based on the estimated change in input prices for the coming year, less an adjustment for growth in multifactor productivity.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2C-2** The Secretary should revise the productivity adjustment for physician services and make it a multifactor instead of labor-only adjustment.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2C-3** The Congress should update payments for physician services by 2.5 percent for 2003.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

## Section D: Skilled nursing facility services

- 2D-1** The Secretary should develop a new classification system for care in skilled nursing facilities.

YES: 13 • NO: 0 • NOT VOTING: 0 • ABSENT: 4

- 2D-2** If the Centers for Medicare & Medicaid Services refines the classification system for care in skilled nursing facilities, the temporary payment increase, previously implemented to allow time for refinement, will end. The Congress should retain this money in the base payment rate for skilled nursing facilities.

YES: 13 • NO: 0 • NOT VOTING: 0 • ABSENT: 4

- 2D-3** For fiscal year 2003, the Congress should update skilled nursing facility payments as follows. For freestanding facilities, no update is necessary. For hospital-based facilities, update payments by market basket and increase payments by 10 percent until a new classification system is developed.

YES: 12 • NO: 1 • NOT VOTING: 0 • ABSENT: 4

## Section E: Home health services

- 2E-1** The Congress should extend for two years the 10 percent add-on payments for home health services provided in rural areas.

YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3

- 2E-2** The Congress should update home health payments by market basket for fiscal year 2003.

YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3

- 2E-3** The Congress should eliminate the payment cut for home health services scheduled for October 2002 in current law.

YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3

## Section F: Outpatient dialysis services

- 2F** For calendar year 2003, the Congress should update the composite rate payment for outpatient dialysis services by 2.4 percent.

YES: 14 • NO: 0 • NOT VOTING: 1 • ABSENT: 2

\*COMMISSIONERS' VOTING RESULTS



## Assessing payment adequacy and updating payments in traditional Medicare

**M**edPAC has developed a new approach for updating fee-for-service payments that breaks the process into two parts: assessing the adequacy of current payments and accounting for the increase in efficient providers' costs in the coming year. The approach is not fundamentally different from what the Commission has done in the past, but we expect formalizing the two parts of our process will lead to greater emphasis on the broad question of whether the amount of money in the system currently is right and less emphasis on the role of specific cost-influencing factors. Barring compelling evidence that other factors should be explicitly addressed, our allowance for cost increases in the next payment year will normally equal the forecasted increase in the appropriate measure of input price inflation. This approach emphasizes the need for accurate measures of input prices; accordingly, we recommend Medicare's price indexes be tailored as closely as possible to the relevant health care sector (Section 2A). We applied our updating model to services in six health sectors: hospital inpatient and outpatient (considered together), physician, skilled nursing facility, home health, and outpatient dialysis (Sections 2B through 2F). We generally found no evidence that payments are either too high or too low, but we recommend payments for hospital inpatient and skilled nursing services be redistributed as they are updated.

### In this chapter

- Accounting for changes in input prices
- Hospital inpatient and outpatient services
- Physician services
- Skilled nursing facility services
- Home health services
- Outpatient dialysis services

The goal of Medicare payment policy is to align payments with the efficient costs of providers, and in so doing help ensure beneficiaries' access to high-quality health care services. The adequacy of payments relative to efficient costs for any given service has three dimensions: the distribution of payments, the current payment level, and the payment increase for the coming year. Distributional issues are important, but have traditionally been handled separately. The level and updating of payments, on the other hand, have frequently been considered together, causing confusion if not tension. Ideally, policymakers would settle on an appropriate base rate first, and then consider the need for an update (as well as distributional changes that might be implemented at the same time).

Multiple factors can contribute to a gap between current payments and costs, such as unbundling of the payment unit, error in past forecasts of input price inflation, or changes in coding practices. In the past, we have attempted to determine which factors have contributed to payments being too high or too low and in what proportions. Given the difficulty of measuring cost-influencing factors, however, we believe it will be more productive to focus on *whether* payments are too high or too low rather than on *how* they became so.

Similarly, in looking to the next payment year, we have previously tended to focus on narrow issues, such as the impact of technological advances, productivity improvements, or the year 2000 computer problem. Because these factors are often offsetting and also present measurement problems, we believe that we should focus on the largest factor in the growth of unit costs: increases in the prices providers must pay for the goods and services they use in delivering patient care.

We explain our two-part model for updating payments in the introductory part of this chapter. In Section 2A, we review the nature and role of input price measures and consider a measurement issue with major payment implications—the treatment of labor compensation in the

price indexes that the Centers for Medicare & Medicaid Services (CMS) uses in updating payments. In Section 2B, we apply our updating model to hospital inpatient and outpatient services, after assessing the adequacy of current payments for all services hospitals provide to Medicare beneficiaries. Physician services are addressed in Section 2C, and in this case we recommend changing the payment system so that updating can be done with an approach similar to that used for facility-based services. In Sections 2D through 2F, we consider updates for two post-acute services with relatively new prospective payment systems—skilled nursing and home health—and for outpatient dialysis, the service with the longest-running payment system.

## Model for assessing payment adequacy and updating payments

MedPAC uses a two-part approach for updating payments in the traditional Medicare program (Figure 2-1). In the first step, we consider whether base payment rates for a particular service are appropriate. If evidence suggests that base payments are too high or too low, then our update recommendation will include an adjustment to the base rate. In the second step, we predict the change in efficient providers' costs in the next payment year.

Each part of the process results in a percentage change; they are summed to determine the final update recommendation.

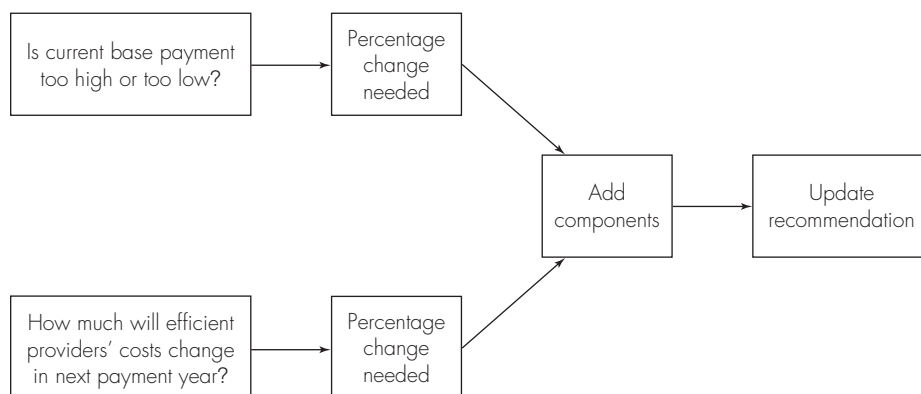
## Assessing payment adequacy

In most cases, we assess payments for the services covered by a single payment system (for example, home health or physician services). When a single organization provides services across multiple payment systems, however, commingling of revenues and inaccurate allocation of costs among services may distort our measures of payments and costs for individual services. This can result from past incentives to load costs into services covered by cost-based payment, such as the outpatient, home health, and skilled nursing facility (SNF) services that hospitals provide. It also can result from vastly different payment adequacy among services used by most patients, such as higher payments relative to costs for the drugs used in outpatient dialysis than for dialysis facility services.

In these instances, the best way to assess the adequacy of payments is to consider all the Medicare services that one type of provider furnishes. When a decision is made that payments in aggregate are too high or too low, however, a second decision must be made about how to distribute the resulting payment

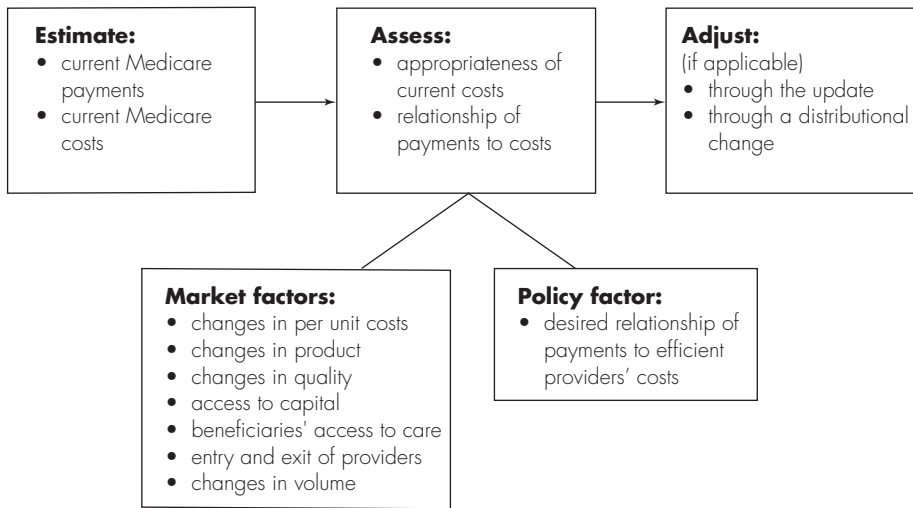
**FIGURE 2-1**

### Approach for assessing payment adequacy and updating payment rates



**FIGURE  
2-2**

## Steps and factors in assessing payment adequacy



adjustment among services. Moreover, even if the amount of money in the system is about right across all services a provider furnishes, it may be necessary to shift payments from one service to another.

With some customizing, MedPAC's approach can be used to assess the adequacy of payments in any Medicare service for which a prospective payment system (PPS) has been implemented. As shown in Figure 2-2, the approach includes three steps. The first step is to estimate current Medicare payments and costs; on the payment side, we can view this as determining how much money is in the system.<sup>1</sup> The second step is to assess the adequacy of current payments relative to costs, or determining how much money should be in the system. This includes assessing the appropriateness of the cost base that is compared with aggregate payments. The last step is to adjust current payments, which determines how to get to the appropriate level of funding. These steps—estimate, assess, and adjust—are explained in more detail in the following subsections.

### Estimating current payments and costs

Our assessment for any given service begins by estimating total Medicare payments nationally, along with the corresponding costs of treating Medicare beneficiaries. The relationship between costs and payments is typically expressed as a margin.<sup>2</sup> The base margin estimate covers the year preceding the year to which our update recommendation will apply—in this case, we estimate payments and costs in fiscal year 2002 (calendar year as appropriate) to inform our update recommendation for 2003.

Except for outpatient dialysis services, the latest data available to us from providers' Medicare cost reports are from fiscal year 1999. We hoped to have preliminary data for fiscal year 2000 in time for this report, but CMS's processing has been delayed by the need to make numerous changes in the cost reporting forms to implement Congressionally mandated changes in payment policy. Consequently, we have had to estimate the changes in both

payments and costs (assuming a constant volume of service) between 1999 and 2002.

On the payment side, we first applied the annual payment updates specified in law through 2002 to our base numbers and then modeled the effects of other policy changes that have affected the level of payments. For changes other than updates, we also included provisions scheduled to go into effect in the decision year (fiscal year 2003). This approach allows us to consider the revenue constraints providers will face in the decision year as we assess the adequacy of current payments. Examples of payment policies scheduled to go into effect in fiscal year 2003 are a reduction in the indirect medical education (IME) adjustment for hospital inpatient services and the elimination of two temporary payment add-ons to the rates for SNF services.<sup>3</sup>

On the cost side, we estimated the increases in costs per unit of output over the same period—a difficult task, given that fiscal year 2002 was just starting and the available cost report data lagged two years behind. For hospital services in fiscal years 2000 and 2001, preliminary data on rates of cost growth were available from the American Hospital Association's Annual Survey of Hospitals and the National Hospital Indicators Survey co-sponsored by CMS and MedPAC. For all other services, as well as for hospital services in fiscal year 2002, we assumed that unit costs increased at the rate of input price inflation as measured by the applicable CMS market basket index. Although payment updates are based on a forecast of the market basket, we used actual index changes for 2000 and 2001 along with more recent estimates for 2002 in our modeling.

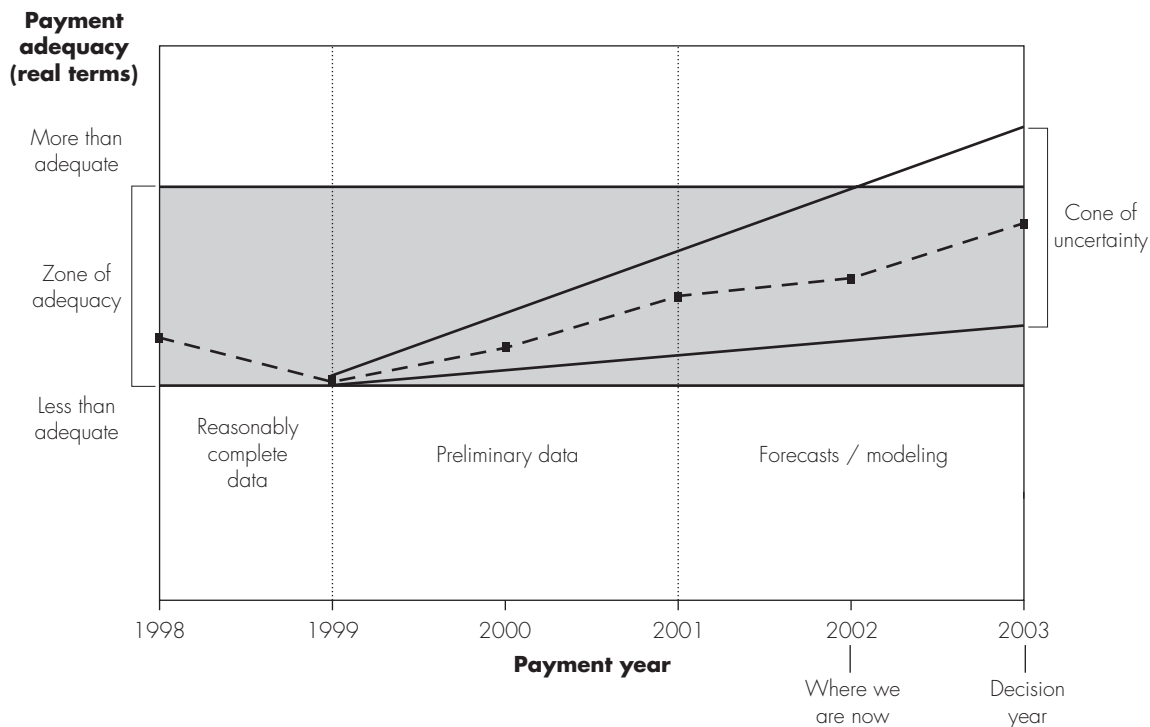
The assumptions we must make in estimating payments and costs result in an increasingly large margin of error as we extend further from actual data. As

<sup>1</sup> For physician services, only payment data will be available.

<sup>2</sup> A margin is calculated as payments less costs divided by payments. Alternatively, the data can be expressed as a ratio of payments to costs.

<sup>3</sup> We do not forecast costs and payments out to 2003 because that would entail making an assumption about the update—which is the subject policy decision. In effect, we estimate what payments would have been in 2002 if payments had been made using 2003 payment rules and both the volume of services and unit costs remained the same.



**FIGURE  
2-3****Uncertainty in assessing payment adequacy**

Note: Assessing payment adequacy begins by measuring the relationship between payments and costs (typically expressed as a margin) in the latest period for which reasonably complete data are available (1999 in this example). Then the annual changes in payments and costs are estimated so that margin points can be plotted through to the current year (2002 in this example). Preliminary data sources are used when available in this estimation; forecasting and modeling techniques must otherwise be used. If the cost base is considered appropriate, then the estimated margin for the current year provides a basis for assessing the current adequacy of payments and determining the appropriate update for the decision year. (Of course, other indicators, such as trends in volume and entry and exit of providers, may also be considered in this decision.) The margin estimate for the decision year results from applying the recommended payment update while forecasting the increase in costs.

In this hypothetical example, projected payments relative to the costs in the decision year are toward the high side of the "zone of adequacy." Therefore our confidence that the actual value will not be too low is greater than our confidence that it will not be too high.

depicted in Figure 2-3, we refer to this concept as the "cone of uncertainty." The uncertainty widens (perhaps exponentially) as we move from the reasonably complete cost report data of 1999, to preliminary data sources (in some cases) for 2000 and 2001, and then to forecasts and modeling efforts for 2002. Nonetheless, the resulting estimates provide a useful starting point for consideration of payment adequacy.

One last consideration is the definition of costs. Medicare has always related payments to "allowed costs," with certain cost elements disallowed altogether (such as direct advertising or lobbying

expenses) and others constrained (such as rules limiting salaries that can be counted for certain therapists and medical directors and how much depreciation can be taken). When Medicare paid on the basis of its share of treatment costs, it was critical that the program impose reasonable limits on the costs that would be covered. However, with the majority of payment rates now developed prospectively and the policies of a wide range of public and private payers providing revenue pressures on providers, it may be time to reconsider the role of Medicare's rules of allowability. Prospective payment itself gives providers incentives to control costs by putting them at financial risk.

Because this issue has not been settled, the Commission continued to use only Medicare-allowable costs in modeling current costs this year. However, we plan a comprehensive study to document the impact of non-allowable costs for hospitals as well as the relative contributions of various types of non-allowables.<sup>4</sup> When the results of this study are available, the Commission intends to review the use of cost report data in assessing payment adequacy and to consider the potential for lessening providers' reporting requirements.

4 Over time, this study may also be extended to other facility-based services, such as dialysis, home health care, and SNF services.

## Assessing the adequacy of current payments relative to costs

The second step in the process of assessing payment adequacy involves two interrelated issues: the appropriateness of providers' costs—that is, whether actual costs provide a reasonable representation of the costs of efficient providers—and the relationship of payments to efficient providers' costs. In addition to assessing the adequacy of Medicare payments directly, we also consider broader measures of the market conditions providers face.

In examining the cost base (aggregate current costs), we generally treat the volume of services as given. At a certain volume, total costs are driven by the average cost per unit of output, which then becomes the focal point of our analysis. If this unit cost is considered appropriate, then we proceed to the question of whether payments are adequate to cover costs and to provide sufficient funds for keeping plant and equipment up to date. If, on the other hand, costs are too high (implying that Medicare is paying more than necessary) or too low (implying that additional spending is needed to ensure appropriate quality and access to care), then an adjustment to reported costs may be needed before we decide whether payments are adequate relative to costs. This step is needed to avoid the prospect of declaring that the current margin is too low and therefore current payments must be increased, or vice versa, when the costs for which Medicare should be paying are different than those used in the margin calculation.

Assessing the appropriateness of the cost base and the adequacy of payments is an inherently judgmental task. Although available information is invariably limited, several types of data about the market conditions that providers face may provide useful clues (Figure 2-2). We use two indicators to assess the appropriateness of costs:

- the trend in average costs per unit of output, and
- evidence of product change.

Although it is nearly impossible to know whether costs are “efficient” in the absolute, if the cost base was considered appropriate at the time a PPS was enacted, then the rate of change in unit costs provides evidence of whether the initial level of appropriateness has been maintained. We would generally expect average cost growth to approximate the rate of increase in the applicable market basket index, though other cost-influencing factors, such as the introduction of major technological innovations, might appropriately alter this outcome. In addition, changes in product can have a major effect on unit costs. For example, substantial reductions in hospital length of stay during the 1990s, accompanied by more frequent and extensive use of such post-acute services as home health and rehabilitation, would be expected to reduce hospital costs per case (inflation adjusted). Similarly, changes in the characteristics of patients receiving home health services would be expected to affect unit cost growth in that sector.

Several other changes may suggest that payments are too high or too low relative to efficient costs, even in the absence of any direct evidence as to whether the cost base is appropriate. These are:

- changes in access to or quality of care,
- changes in the volume of services or number of providers, and
- changes in providers' access to capital.

Although difficult to measure, deteriorating quality or access to care may indicate that revenues (either specific to Medicare or across all payers) are inadequate. It is less likely, however, that quality or access measures would provide the basis for concluding that payments are too high because more assessment activities are focused on underuse and misuse of services than on overuse.

Reductions in the volume of services provided or in the number of providers may indicate that revenue flows are

inadequate for providers to continue operating or to provide the same level services. Facilities closing is the extreme outcome, although it is often difficult to differentiate closures that have serious implications for access to care in a community from closures that result from excess capacity. Private-practice physicians refusing to accept new Medicare patients is a less drastic but still important example. By the same token, substantial increases in volume or the number of providers may indicate that payments are more than sufficient to cover providers' financial needs, potentially leading to unnecessary services being provided.

Changes in bond ratings may indicate that providers' access to needed capital has deteriorated or improved, although the data are difficult to interpret because rating decisions depend on a variety of factors besides Medicare revenue flows and access to capital depends on more than just bond ratings.

One last consideration in assessing the adequacy of current payments is the desired relationship between payments and efficient providers' costs (Figure 2-2). Policymakers generally agree that payments should at least modestly exceed efficient costs so as to provide a way for providers to generate sufficient capital over time to replace worn-out plant and equipment and stay abreast of technological innovation. Although any measure of efficient costs would include depreciation as a way to recognize the costs of plant and equipment, investing depreciation payments over the life of capital assets rarely produces enough revenue to replace them. However, research and policy discussion have not produced consensus on what rate of return, whether expressed as a return on equity or return on revenue (margin), is required to maintain long-term financial viability. In fact, the range of adequate return undoubtedly differs from service to service and even over time for the same service. Consequently, the Commission does not plan to specify a “standard margin,” although we will take the need

for a small positive margin into account as we assess the adequacy of various fee-for-service payments.

### Adjusting current payments

In most situations, a finding that current payments are too high or too low should lead to a percentage adjustment to the payment update that otherwise would apply. If the required adjustment is large, then it should typically be phased in over two or more years to avoid too large an impact on provider operations.

Alternatively, policymakers may wish to increase or decrease the amount of money in the system in a way that simultaneously redistributes payments. A timely example is the Congress' decision to target an increase in the level of payments for SNF services to specific categories of patients with complex care requirements. In the course of this year's deliberations on payment adequacy and updates, the Commission has considered the merits of several policy options that would affect both the level and distribution of payments.

Often, policymakers focus on a perceived need to redistribute payments rather than on a conclusion that aggregate payments are too high or too low. In this situation, analyzing whether a change should be made with new money (or savings) or made in a budget neutral manner is an important part of the decision-making process. Two recent policy changes for hospital inpatient payments illustrate this issue. In the Balanced Budget Refinement Act of 1999, the Congress sought to improve the equity of disproportionate share (DSH) payments between urban and rural hospitals, and decided that the change should be implemented with new monies (that is, rural hospitals became eligible for higher DSH payments while the formula governing payments for most urban hospitals remained the same). In contrast, the Congress required a budget-neutral adjustment for the occupational mix of hospital workers in the wage index, which on average will raise

payments for rural hospitals and reduce them for hospitals in large urban areas.

### Accounting for providers' cost changes in the coming year

The Commission accounts for expected cost changes in the coming payment year primarily through a forecast of input price inflation, which estimates how much providers' costs would rise in the coming year if the quality and mix of inputs they use to furnish care and the types of patients they treat remain constant. Other factors that may affect providers' costs in the next payment year include:

- *Scientific and technological advances*—This factor is intended to raise payment rates to accommodate the expected effects of new technologies that improve quality of care but also increase costs.
- *Improvements in productivity*—This factor reflects the expectation that, in the aggregate, providers should be able to reduce the quantity of inputs required to produce a unit of service by at least a modest amount each year while maintaining service quality.
- *One-time factors*—This factor adjusts payments for one-time factors affecting the cost of providing services, when the factors are systematic and substantial and will improve care for beneficiaries.

Our update recommendation is anchored by the estimate of price inflation because it is the most important factor influencing providers' costs in the next payment year. Other factors will be reflected in our update recommendation only when credible and compelling analysis suggests that they are expected to change providers' costs significantly. This approach modifies our previous update decision-making process by increasing reliance on measures of changes in input prices in the next payment year, and

decreasing reliance on measures estimating changes in providers' costs in the forthcoming year due to technological advances, productivity improvements, and one-time factors. To the extent that these factors are not addressed when updating payments in a given year, their effects can be considered in the analysis of payment adequacy in the next payment cycle.<sup>5</sup>

### Estimating inflation in input prices

For most Medicare services, we estimate the changes in providers' input prices in the next payment year using available projections from CMS. For many institutional providers, including inpatient hospital, outpatient hospital, SNF, and home health, we use the forecasted increase in an industry-specific index of national input prices called a market basket. For physician services, we use a similar index, known as the Medicare Economic Index. These indexes, developed by CMS, track national average price levels for labor and other inputs, weighted to reflect the relative importance of each input category in the specific industry. A detailed discussion of how we account for changes in providers' input prices in the coming year can be found in the next major section of this chapter (Section 2A).

### Estimating scientific and technological advances

The Commission believes that Medicare's payment rates should be high enough to allow providers to adopt quality-enhancing, cost-increasing innovations when the current system does not do so automatically. The Commission monitors industry trends and has informal discussions with industry representatives in each service area. When sufficient evidence suggests that one or more scientific advances in a specific service area are playing an unusually large role in increasing providers' costs, we will attempt to estimate the cost impact of these advances.

<sup>5</sup> For example, if cost increases are unusually high or low due to a technological advancement, that will be reflected in our next year's estimate of current margins, unless the effect is offset by other factors or provider cost responses.

## Estimating productivity improvements

The Commission believes that the costs associated with technological advances should be financed at least partly through improvements in providers' productivity. Measuring productivity improvements made by providers is very difficult, however. Neither MedPAC nor CMS has been able to develop an accurate measure of productivity for fee-for-service providers that captures all aspects of input usage, measures a constant output over time, and is not influenced by unrelated factors. In addition, the Bureau of Labor Statistics does not publish a productivity measure for any medical care service industry. Because information is so limited, MedPAC will continue to offset the allowance for scientific and technological advances by a downward adjustment for productivity growth based on national productivity trends, reflecting the savings MedPAC expects from fewer or less expensive inputs being used to deliver services.

## Estimating one-time factors

The Commission's update recommendation can include an allowance when providers incur significant costs for unusual, nonrecurring events. The costs of one-time factors have been reflected in the Commission's payment update recommendations on only two occasions:

- to address year 2000 computer problems in the fiscal year 2000 update for inpatient hospital and outpatient dialysis services, and
- to address the costs of complying with the Health Insurance Portability and Accountability Act of 1996 in the fiscal year 2002 update for inpatient hospital services.

The Commission will assess the impact of one-time factors when sufficient and credible evidence suggests that such factors are playing an unusually large role in increasing costs for a specific service area.

## Updating payments for the coming year

The two parts of MedPAC's approach to updating payments each result in a percentage change; these percentages are then summed to determine the final update recommendation. If our analysis of payment adequacy suggests that payments are too high or too low, we carry over a compensating adjustment. Alternatively, if evidence suggests that total Medicare payments are sufficient but that payments for a subset of providers are not appropriate, then the Commission can implement a distributional change in payments through the update. A large compensating adjustment can be phased in over several years to minimize the impact on providers. Then, we add a compensating adjustment that accounts for changes in the rate of efficient providers' costs in the coming year.



# 2A

SECTION

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## **Accounting for changes in input prices**

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## R E C O M M E N D A T I O N

The Secretary should use the wage and benefit proxies that most closely match the training and skill requirements of health care occupations in all input price indexes used for updating payments. In determining index weights, measures specific to the health sector and to occupation categories in which health care plays a major role should be emphasized.

**\*YES: 15 • NO: 0 • NOT VOTING: 0 • ABSENT: 2**

**\*COMMISSIONERS' VOTING RESULTS**



# SECTION 2A

## Section 2A: Accounting for changes in input prices

The Centers for Medicare & Medicaid Services (CMS) and the Congress use forecasts of price indexes to update payment rates. In this section, the Commission reviews and assesses the price indexes CMS uses to measure input price changes for its prospective payment systems. Because the indexes rely heavily on measures of labor compensation from the general economy that do not reflect changes in compensation rates in health care, they may overestimate or underestimate changes in input prices, leading to payment updates that are too high or too low. Accordingly, we recommend that CMS change the treatment of wages and benefits in its input price measures to improve their accuracy in predicting changes in provider costs.

### In this section

- Why measure input prices?
- How to measure input prices
- Input price indexes used by CMS
- Treatment of labor costs in input price indexes

Inflation in input prices is one of the key determinants of change in the cost of providing health care services. Input price indexes provide information with which to estimate price changes over time. The Centers for Medicare & Medicaid Services (CMS) uses input price indexes for its payment systems to determine price change, and CMS and the Congress use these measures to update payment rates. As explained earlier in the chapter, the forecasted change in the appropriate input price index plays a prominent role in MedPAC's approach for developing update recommendations in all fee-for-service sectors. This section explains the concept of input price measurement, details Medicare's use of price indexes, and then discusses an important policy issue—the treatment of wages and benefits in CMS's market basket indexes.

## Why measure input prices?

Input prices are the amounts actually paid by health care providers for the goods and services used to produce and deliver care. They include payments for items purchased, leased, or rented, and wage and benefit payments to individuals who provide labor services. Depreciation, interest, and other measures of capital-related costs are used to estimate prices for capital inputs.

Price indexes are used to measure changes in input prices over time.<sup>1</sup> Policymakers can use indexes to set payment rates that provide desirable incentives to providers. Rates should not encourage providers to produce too many or too few services or respond with actions detrimental to the government or beneficiaries. Payments should be perceived as equitable by providers and encourage participation in the program.

An input price index measures prices for specific provider types in specific time periods. In most cases, the unit of analysis

is providers nationwide—that is, the price index reflects change in prices over time for a class of providers but does not vary geographically. Such indexes are typically calculated using information on a large number of prices and measures of the relative importance of each input in producing health care services.

## How to measure input prices

Most input price indexes are calculated by constructing a weighted sum of individual price measures. First, cost categories, or components, are identified to reflect the range of products providers use to furnish patient care. For each component, a proxy is chosen to measure its price. Proxies are chosen to match the actual prices of the components as closely as possible and are weighted by the share of expenditures in a base year. Proxies that rise more rapidly than average influence the price index more; those increasing less rapidly become less important. Input price indexes thereby reflect the relative importance of each component in the base period and each component's cumulative price change. The value of the overall input price index in a period is divided by the value in an earlier period to get the increase between periods. Periodically, weights must be recalibrated and updated.

Input price measures must use data that are reliable, regularly published by an independent source, and sufficient in quantity to permit evaluation and extrapolation. In general, these considerations lead designers of such measures to use statistical data published by government agencies such as the Bureau of Labor Statistics (BLS). The input price measures used by CMS rely on indexes of wages and salaries and employee benefits from the BLS to measure labor costs (Appendix A, Tables A-1 and A-2). CMS generally uses producer price indexes (PPIs) from the BLS to measure other costs (Appendix A, Tables A-3 and A-4).

Input price measures should reflect changes in prices and wages but not shifts in the mix of inputs purchased or types of labor employed. Because measures such as average hourly earnings may increase either because of increases in wages or in the share of hours paid at higher wages, they do not reflect changes in wages for a fixed mix of labor services, and thus would not be appropriate for use in updating payments. The BLS publishes employment cost indexes (ECIs) for wages and salaries, employee benefits, and compensation that calculate costs for a fixed mix of labor inputs. Changes in the ECIs thus reflect changes in unit costs for labor rather than changes in the composition of occupations. CMS generally uses the ECIs to measure labor compensation in its input price measures.

## Input price indexes used by CMS

CMS uses a different input price measure for each Medicare fee-for-service program (Appendix A, Table A-1).

- The inpatient prospective payment system (PPS) uses the PPS hospital market basket for operating costs and the capital market basket for capital costs.
- The outpatient PPS uses the PPS hospital market basket.
- The Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) payment system—for hospitals exempt from the inpatient PPS—uses the exempt-hospital market basket.
- The PPS for inpatient rehabilitation facilities uses the exempt-hospital market basket with capital costs.
- The PPS for home health agencies uses the home health market basket.
- The PPS for skilled nursing facilities (SNFs) uses the SNF market basket.

<sup>1</sup> Price measurement also is required to allow appropriate comparison of expenditures across geographic areas. Medicare uses wage indexes and special cost-of-living adjustments to adjust fee-for-service payment rates for geographic differences in costs.

**TABLE  
2A-1****Growth in input price measures by fiscal year:  
comparison with PPS hospital market basket****Difference in rate of change relative  
to PPS hospital market basket**

<b>Fiscal year</b>	<b>PPS hospital market basket</b>	<b>Exempt hospital market basket</b>	<b>SNF market basket</b>	<b>Home health market basket</b>	<b>Physician Medicare Economic Index</b>
1995	3.0%	0.2%	0.0%	-0.2%	-1.5%
1996	2.7	-0.2	0.0	0.0	-1.0
1997	1.8	0.2	0.6	0.9	0.1
1998	2.9	-0.2	-0.1	0.2	-0.7
1999	2.5	-0.1	0.5	0.3	-0.5
2000	3.6	0.0	0.4	0.0	-1.1
2001*	4.1	0.0	0.8	0.1	-1.7
Mean (1995–2000)	2.8	0.0	0.2	0.2	-0.8

Note: \* calculated using forecasted data. PPS (prospective payment system). SNF (skilled nursing facility). Difference = market basket—PPS hospital market basket.

Source: MedPAC analysis of data from CMS.

**TABLE  
2A-2****Input price measures: market basket weights by type  
of cost and origin of labor price proxies****Sector**

<b>Proxy</b>	<b>PPS hospitals</b>	<b>PPS-exempt hospitals</b>	<b>Home health</b>	<b>SNF</b>	<b>Physician</b>
Labor					
Health sector	20.2%	20.9%	17.6% <sup>1</sup>	63.0%	0.0%
General economy	41.2	42.8	60.1	0.0	71.3
Total	61.4	63.7	77.7	63.0	71.3
Non-labor	38.6	36.3	19.7	27.1	28.7
Capital	N/A <sup>2</sup>	N/A <sup>3</sup>	2.6	9.9	N/A <sup>3</sup>
Total	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> Based on hospital rather than home health data.

<sup>2</sup> Included in a separate capital market basket.

<sup>3</sup> Not included in market basket.

Note: PPS (prospective payment system). SNF (skilled nursing facility). Proxies: health sector (based on data for wages, salaries, and employee benefits in health care organizations). General economy (based on data for wages, salaries, and employee benefits in the general economy). Capital (depreciation, interest, and other capital-related costs). Non-labor (all proxies except labor and capital). Columns may not add to totals because of rounding.

Source: MedPAC analysis of data from Global Insights, Inc., DRI-WEFA, and CMS.

- The sustainable growth rate system for physician services uses the Medicare Economic Index (MEI).

CMS does not currently maintain a separate market basket to measure prices or update payments for outpatient dialysis services. In the absence of a dialysis market basket, MedPAC developed a measure of input price change to inform its update recommendations. The Commission has urged CMS to develop a dialysis-specific market basket (MedPAC 2000), and the Benefits Improvement and Protection Act of 2000 requires the Secretary to do so and report his results no later than July 1, 2002.

The price indexes CMS uses reflect differences in the relative importance of cost components and in the choice of price proxies among provider groups. The PPS hospital, exempt hospital, home health, and SNF market baskets showed similar growth rates from 1995 through 2001 (Table 2A-1). The physician MEI grew at a significantly slower rate, reflecting differences in components as well as inclusion of a productivity offset that reduced the impact of labor cost increases on the index. (See Section 2C of this chapter for further discussion of this issue.)

**Treatment of labor costs  
in input price indexes**

Labor costs (combining wages and benefits) account for more than half of expenditures on inputs as represented in the input price indexes used by CMS (Table 2A-2). Proxies for labor costs may be based on the wages and benefits paid to employees in similar occupations in the overall economy or in health care organizations. The former approach is appropriate for occupations such as accountants and computer programmers. In such cases, health care organizations and other firms hire similar employees in the same labor markets. The latter approach is appropriate for occupations such as nurses and therapists. In these cases, health care organizations and other firms face distinct labor markets. Wage levels and trends for health care employees may differ from those for other workers in the economy. For example, staff

**TABLE  
2A-3****Percent growth in employment cost index for wages  
and salaries by occupation, 1990–2001**

Calendar year	Civilian health services	Civilian hospital	All civilian workers	Professional, specialty, and technical occupations
1990	6.2%	6.0%	4.3%	5.3%
1991	4.7	4.4	3.8	4.1
1992	3.8	3.5	2.7	3.3
1993	3.1	3.1	3.0	3.0
1994	2.5	2.7	2.9	2.8
1995	2.5	2.3	2.8	2.7
1996	2.6	2.5	3.2	3.3
1997	2.7	1.9	3.5	2.9
1998	2.5	2.9	4.0	3.4
1999	2.4	2.7	3.3	3.0
2000	4.1	3.9	4.0	4.0
2001	4.8	5.4	3.6	4.0
Annual averages:				
1990–1993	4.4	4.2	3.4	3.9
1994–2000	2.8	2.7	3.4	3.2

Source: Bureau of Labor Statistics.

shortages appear to be affecting a number of health care occupations and may lead to wage increases unlike those in the general economy.

In the 1980s, some policymakers thought that inclusion of wage measures based solely on hospital wages in the PPS market basket would allow hospitals to increase wages more rapidly than necessary, thereby increasing the market basket and future Medicare payments. CMS concluded that health care labor markets were imperfect and should not be the basis for payment. Instead the agency made extensive use of wage and benefit proxies from the general economy in constructing its market baskets. These general economy proxies now account for over two-thirds of the labor measure in four input price indexes (Table 2A-2). In the 1990s, pressure to contain costs from health maintenance organizations and other private insurers increased substantially, so unwarranted wage increases are now unlikely. These developments, as well as the incentive for

each provider to minimize its own costs regardless of future aggregate effects, suggests that use of health industry proxies will not lead providers to agree to higher wages to affect future payments.

Increases in health sector wages have not closely tracked those of the general economy since 1990. From calendar years 1990 through 1993, the ECIs for the wages and salaries of civilian health services workers and hospital workers increased more rapidly than the ECI covering all workers (Table 2A-3). This was followed by six years of slower growth for health services workers and seven years of slower growth for hospital workers relative to workers in the general economy. The differences were substantial, with annual growth for health workers 1.0 percent faster from 1990 through 1993, but 0.6 percent slower from 1994 through 2000. Annual wage growth for hospital workers was 0.3 percent faster from 1990 through 1993, but 0.5 percent slower from 1994 through 2000 compared with the ECI for professional, specialty, and technical workers, which is

used in the PPS hospital market basket. This led to a divergence of 3.8 percent between the indexes from 1994 to 2000.

**RECOMMENDATION**

**The Secretary should use the wage and benefit proxies that most closely match the training and skill requirements of health care occupations in all input price indexes used for updating payments. In determining index weights, measures specific to the health sector and to occupation categories in which health care plays a major role should be emphasized.**

Compensation rates for health care workers are now increasing more rapidly than those in the overall economy. The prospect of future staff shortages for nurses, pharmacists, and other skilled health occupations raises the possibility of wage increases that will not be reflected in indexes for the general economy. The continued use of general economy wage and benefit proxies may lead to a significant divergence of market basket indexes from health care cost trends. Use of health sector wage and benefit proxies would automatically take into account the effects of staff shortages—if they occur—in future payment updates.

Although it is preferable to use proxies that reflect the market wages that providers must pay to hire the specific types of labor they require, designing input price indexes often involves a tradeoff between occupational specificity and industry specificity. The BLS publishes employment cost indexes for wages and salaries of employees in all health services, hospitals, and nursing homes.<sup>2</sup> ECIs also are available for all workers and for occupational groupings such as civilian professional, specialty, and technical, although they are not available for categories such as hospital nurses or even hospital professional, specialty, and technical workers. If such series were constructed, they would probably be based on more limited information and might be less reliable than the existing series. ■

2 The BLS does not publish ECIs for wages and salaries, employee benefits, and compensation for all health sectors.

## References

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Medicare Payment Advisory Commission. Report to the Congress: Medicare payment policy. Washington (DC), MedPAC. March 2000.



# 2B

SECTION

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## **Hospital inpatient and outpatient services**

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## R E C O M M E N D A T I O N S

- 2B-1** The Congress should gradually eliminate the differential in inpatient payment rates between hospitals in large urban and other areas.

\*YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

- .....
- 2B-2** The Congress should increase the base rate for inpatient services covered by Medicare's prospective payment system in fiscal year 2003 by market basket minus 0.55 percent for hospitals in large urban areas and by market basket for hospitals in all other areas.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

- .....
- 2B-3** For calendar year 2003, the Secretary should increase the payment rates for services covered by the outpatient prospective payment system by the rate of increase in the hospital market basket.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

\*COMMISSIONERS' VOTING RESULTS

# SECTION 2B

## Section 2B: Hospital inpatient and outpatient services

### In this section

- Assessing payment adequacy
- Update recommendation

We believe that aggregate Medicare payments for hospital acute and post-acute services are adequate as of fiscal year 2002, even after accounting for policy changes legislated for fiscal year 2003 that will reduce payments. Our estimate of the overall Medicare margin for hospital services in fiscal year 2002 is 3.8 percent. Hospital cost increases have been larger in recent years than in the 1990s, but the higher cost growth appears justifiable, primarily reflecting upward pressure on wages. Thus, we have no evidence that the current hospital cost base is inappropriate, and a 3.8 percent margin relative to those costs is within our range of adequacy. Other broad indicators (such as trends in volume and payments from private payers) are also generally consistent with a conclusion of adequate payments. This conclusion supports an update equal to hospital market basket for both inpatient and outpatient services. On the inpatient side, the data on margins and our analysis of costs suggest that maintaining two base payment rates (a 1.6 percent higher rate for hospitals in large urban areas) is unwarranted. Holding the update for hospitals in large urban areas to the legislated level of market basket minus 0.55 percent for fiscal year 2003 while raising it to market basket for all other hospitals would be an appropriate first step to phase out the base rate differential and provide funds to implement MedPAC's previous recommendations for improving payments to rural hospitals.

In this section of the chapter, we begin by assessing the adequacy of current payments for all services that hospitals provide to Medicare beneficiaries. We then address the appropriate allowance for cost increases in the coming payment year for inpatient and then outpatient services. On the inpatient side, we combine the update with recommended changes in the distribution of payments. For a complete description of these payment systems, see Chapter 1.

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## Assessing payment adequacy

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The first part of the process for determining the update for hospital services is to assess the adequacy of aggregate Medicare payments for hospital services relative to the costs of providing these services. Essentially, this means deciding if the total amount of money in the system is about right. In doing this, we first estimate current Medicare payments and costs, then determine whether the current payments are adequate relative to efficient providers' costs.

To estimate current Medicare payments and costs, we begin with a base of 1999 Medicare payments and costs and then project both to 2002. In assessing the level of Medicare payments relative to costs, we first consider the hospital cost base in the 1990s and trends through 2002 to determine whether the current level of hospital costs is appropriate. We then consider the relationship of all payments

hospitals receive relative to an appropriate cost base, including a review of broad indicators that go beyond Medicare, to gauge the financial health of the industry. Because Medicare is the largest purchaser of hospital services, Medicare payment adequacy should be reflected in these broad indicators.

### Current payments and costs

The relationship of payments to costs is expressed as a margin; the inpatient, outpatient, and overall Medicare margins show the relationship of payments to costs for Medicare services.<sup>1</sup> To estimate margins for 2002, we projected cost per unit of output from 1999 to 2002,<sup>2</sup> applied the payment updates in law through 2002, and modeled other changes in Medicare payment policy including those scheduled to go into effect in fiscal year 2003.<sup>3</sup> Thus, we end up with an estimate of payments relative to costs in 2002 as if 2003 payment rules had been in effect—other than the update for 2003, which is the subject policy decision.

We present the inpatient and overall margins both including and excluding disproportionate share (DSH) payments and the portion of indirect medical education (IME) payments above Medicare's share of teaching costs.<sup>4</sup> Our intent is to show how much money Medicare provides overall, as well as the relationship of core Medicare payments to the costs of services provided to Medicare beneficiaries. DSH payments offset the revenue pressure of treating low-income patients, whose care is typically unpaid or

incompletely paid. Although the purpose of IME payments is to reimburse the higher costs of treating Medicare patients in teaching hospitals, we have found analytically that Medicare's IME payments under the IME adjustment formula for 2002 are about twice our estimate of these higher costs. Thus, both DSH payments and IME payments go beyond covering the basic cost of treating Medicare patients.

Although we calculate margins net of DSH payments and above-cost IME payments, we do not intend to imply that hospitals do not receive these payments from Medicare. Medicare margins that include DSH and IME payments measure the full impact of Medicare payments—the alternative calculation simply allows policymakers to focus more readily on how well both core payments for patient care and the additional payments are targeted.

### Inpatient Medicare margin

We estimate that the inpatient Medicare margin will be 10.8 percent in 2002 (with 2003 payment rules), down slightly from 11.9 percent in 1999 (Table 2B-1). The largest factor in this decline is the change in IME payments scheduled for 2003, which will reduce Medicare payments to hospitals for inpatient services by about 1.2 percent. In 2002, the margin will range from about 5 percent for rural hospitals to 14 percent for hospitals in large urban areas.<sup>5</sup> The 9-point gap between hospitals in large urban and rural areas is smaller than the 12-point gap in 1999 because the

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1 A margin is calculated as revenues minus costs divided by revenues. These margins are based on Medicare-allowed costs. The overall Medicare margin includes the five largest Medicare services: acute inpatient, outpatient, rehabilitation and psychiatric units, skilled nursing facility, and home health agency. It also reflects Medicare payments for direct graduate medical education and bad debts.

2 We projected unit costs for all hospital services on the basis of change in cost per adjusted admission in the American Hospital Association's annual survey of hospitals for 2000 and the Centers for Medicare & Medicaid Services' projected increase in the hospital market basket for 2001 and 2002 (with a small downward adjustment for the effects of length-of-stay decline for acute inpatient services in 2001).

3 We modeled three significant changes in payment policy that will affect the level of payments to hospitals in 2003: a reduction in the indirect medical education adjustment factor from 6.5 percent to 5.5 percent for every 0.1 increment in the intern and resident-to-bed ratio (scheduled for 2003); increased disproportionate share (DSH) payments to rural hospitals (and urban hospitals with fewer than 100 beds) that went into effect in 2001; and increased payments for outpatient services due to transitional corridor payments meant to reduce the losses some hospitals would incur in the transition to prospective payment. The corridor payments are modeled at their 2003 level.

4 DSH payments provide extra funds for hospitals with a large share of low-income patients, defined on the basis of days of care for patients covered by Medicaid and Medicare patients who receive Supplemental Security Income.

5 An urban area is a metropolitan statistical area as defined by the Office of Management and Budget. A large urban area has a population greater than 1 million.

**TABLE  
2B-1****Inpatient Medicare margin by hospital group, 1999 and estimated for 2002**

Hospital group	1999	2002	
		All payments	Without DSH payments and IME payments above costs
All hospitals	11.9%	10.8%	3.1%
In large urban areas	15.8	14.1	5.0
In other urban areas	9.3	8.1	0.9
Rural	3.8	4.9	1.3
Major teaching	22.3	19.5	4.9
Other teaching	11.6	10.4	3.5
Non-teaching	6.5	6.5	1.9

Note: DSH (disproportionate share), IME (indirect medical education). IME payments above costs are payments in excess of Medicare's share of MedPAC's estimate of the cost of teaching. Estimates for 2002 reflect impact of 2003 cut in IME payments.

Source: MedPAC analysis of Medicare cost report data from Centers for Medicare & Medicaid Services (CMS).

scheduled reduction in IME payments will affect hospitals in large urban areas the most and because rural hospitals received most of the increase in DSH payments that went into effect in 2001.

We estimate that for all hospitals, the inpatient margin net of DSH payments and IME payments above the teaching cost relationship will be 3.1 percent in 2002. Urban hospitals—especially those in large urban areas—have higher Medicare margins primarily because they receive most of the DSH and IME payments. Without these special payments, inpatient margins are estimated at 5.0 percent for hospitals in large urban areas and 0.9 percent and 1.3 percent for those in other urban and rural areas, respectively. Many observers have assumed that rural hospitals fare the worst under Medicare's inpatient prospective payment system (PPS), but without DSH payments and above-cost IME payments, rural hospitals actually have a slightly higher margin for inpatient services than hospitals in other urban areas.

**Outpatient Medicare margin**

We estimate that the aggregate Medicare margin for outpatient services will be –16.3 percent in 2002 (with 2003 payment rules), a small improvement from –17.0 percent in 1999 (Table 2B-2). The outpatient margin is negative largely because of excessive allocation of overhead and ancillary costs to outpatient services. Hospitals had an incentive to overallocate costs to outpatient services because outpatient payments were linked to reported costs while inpatient payments were not. In addition, under payment rules in effect before implementation of the outpatient PPS, outpatient departments were paid a percentage of reported costs, making it impossible for a hospital to have a positive margin.<sup>6</sup> For these reasons, the outpatient margin is more useful as a relative measure over time and among groups of hospitals than as an absolute measure of payment adequacy.

The projected margins assume no behavioral changes in response to the implementation of the outpatient PPS in August 2000. The projected improvement

from 1999 to 2002 results from funds added to the system through the transitional corridor payments that limit hospitals' losses under the new payment system. Rural hospitals benefit more from these payments, producing slightly better margins in 2002 relative to urban hospitals.

**Overall Medicare margin**

The overall Medicare margin incorporates almost all Medicare-related payments and costs to hospitals. The inpatient margin, which covers about 70 percent of Medicare costs, is overstated to some extent because hospitals have generally allocated too little of their overhead and ancillary costs to inpatient services. The margins for other services—including outpatient departments and hospital-based skilled nursing facility and home health services—are therefore understated. By incorporating all services into one measure, the overall Medicare margin controls for this shifting of costs.

We estimate that the overall Medicare margin will be 3.8 percent in 2002, compared with 4.7 percent in 1999 (Table 2B-3). The range among hospital groups

**TABLE  
2B-2****Outpatient Medicare margin by hospital group, 1999 and estimated for 2002**

Hospital group	1999	2002
All hospitals	–17.0%	–16.3%
In large urban areas	–17.2	–17.0
In other urban areas	–16.5	–16.9
Rural	–17.2	–13.7
Major teaching	–18.8	–18.0
Other teaching	–15.7	–15.8
Non-teaching	–17.1	–15.9

Note: Estimates for 2002 reflect impact of transitional corridor payments for 2003 and assume budget-neutral implementation of pass-through payments for new technology.

Source: MedPAC analysis of Medicare cost report data from CMS.

<sup>6</sup> Prior to implementation of the outpatient PPS in August 2000, Medicare paid 94.2 percent of operating costs and 90 percent of capital costs.

**TABLE  
2B-3****Overall Medicare margin by hospital group,  
1999 and estimated for 2002**

Hospital group	1999	2002	
		All payments	Without DSH payments and IME payments above costs
All hospitals	4.7%	3.8%	-2.2%
In large urban areas	8.1	6.8	-0.4
In other urban areas	2.7	1.7	-4.0
Rural	-3.2	-1.8	-4.4
Major teaching	13.0	10.8	-0.6
Other teaching	5.1	4.0	-1.5
Non-teaching	-0.1	0.0	-3.5

Note: DSH (disproportionate share), IME (indirect medical education). IME payments above costs are payments in excess of Medicare's share of MedPAC's estimate of the cost of teaching. Estimates for 2002 reflect impact of 2003 cut in IME payments and 2003 outpatient policy changes.

Source: MedPAC analysis of Medicare cost report data from CMS.

is similar to that of the inpatient margin—from -1.8 percent for rural hospitals to 6.8 percent for hospitals in large urban areas. The overall Medicare margin has improved for rural hospitals (from -3.2 percent in 1999) because of increased DSH payments and increased outpatient payments under the transitional corridor payment policy. We estimate that the overall Medicare margin net of DSH payments and IME payments above teaching costs will be -2.2 percent in 2002. Excluding DSH payments and above-cost IME payments narrows the gap between large urban hospitals and other urban or rural hospitals, but there will still be a 4-point difference.

The estimate of 3.8 percent for the overall Medicare margin in 2002 (with 2003 payment rules) represents our best estimate of the current relationship between payments and costs in the Medicare payment system. The next step

in assessing payment adequacy is to determine whether the costs included in this margin are appropriate.

### Appropriateness of current costs

In general, we find no evidence that aggregate hospital costs are too high. In reaching this conclusion, we first considered the long-term trends that established the hospital cost base in the 1990s, and then considered recent trends using preliminary sources of data through 2002.

The growth of Medicare cost per case was modest throughout the 1990s. From 1993 through 1998, this growth was less than the increase in the hospital market basket, and from 1994 to 1996 it was actually negative. Because the hospital market basket measures changes in the prices of the inputs hospitals use to produce patient services, growth in cost per case lower than

the market basket—and especially decreases in unit costs—suggests that hospitals' product has changed. This did, in fact, occur: Medicare length of stay fell by about a third from 1990 to 1999, resulting in significantly lower resource use. In an earlier study, MedPAC found that during the period of the largest length-of-stay reductions, each percentage point drop in length of stay resulted in a corresponding 0.8 percent drop in real costs per case (Ashby et al. 2000). Growth in hospital wages was also lower than that of the general economy from 1994 through 2000 (Table 2A-3, p. 52). Because wages are the largest single component of hospital costs, this contributed substantially to the low overall cost growth.

Hospital cost growth began to increase at the end of the 1990s as the decline in length of stay slowed. The length-of-stay decline changed from -5.5 percent in 1996 to -1.4 percent in 1999, causing the growth in cost per case to increase from -0.4 percent to 3.0 percent. The 1999 increase was slightly more than the market basket increase of 2.5 percent. The relatively high cost growth in 1999 may at least partially reflect the effects of large, one-time losses due to divestiture of failing lines of business.

The best indicator of overall unit cost growth in hospitals after 1999 (the last year for which Medicare cost report data are available) is change in cost per adjusted admission, which reflects inpatient and outpatient services as well as all public and private payers. Cost per adjusted admission increased by 2.1 percent in 2000, well below the market basket increase of 3.6 percent.<sup>7</sup> However, it appears that the rate of cost growth increased considerably in 2001,<sup>8</sup> driven largely by hospital wage increases of 5.4 percent, compared with 3.9 percent in 2000 and 2.7 percent in 1999.<sup>9</sup>

7 Calculated with data from the American Hospital Association's annual survey of hospitals.

8 Calculated with data from the national hospital indicators survey, which is jointly sponsored by CMS and MedPAC. We do not quote an exact figure for cost per adjusted admission in 2001 because this estimate is based on a limited sample of about 125 hospitals.

9 Comparison of wage levels for non-federal hospital workers and all civilian workers, using data from the Bureau of Labor Statistics.



Preliminary data from the national hospital indicators survey (NHIS) suggest that over the 3-year period of 1999 through 2001, cost growth was at least modestly above growth in the market basket. In light of wage pressures (driven by the possible emergence of labor shortages), one-time costs, and only small length-of-stay declines, the higher growth appears justifiable. Moreover, with nearly all of hospitals' Medicare lines of business now under prospective payment, hospitals have strong financial incentives to control cost growth. Because the hospital cost base established in the 1990s seemed appropriate and the higher cost growth for hospitals in recent years does not appear excessive, we conclude that the current hospital cost base is within the range of acceptability.

## Relationship of payments to costs

We next consider the relationship between all payments to hospitals and the appropriate cost base, resulting in the conclusion that current Medicare payments (as of fiscal year 2002, but reflecting 2003 payment policy) are adequate. This analysis allows us to consider the general financial and economic health of the hospital industry, thus placing Medicare's role for hospitals in context of other relevant factors. We considered hospital volume measures, entry and exit of providers from the market, other payers' payments (especially private payers) and the hospital total margin, and how investors view the hospital market.

## Changes in volume

Large increases in volume could indicate overly favorable payment rates, and small ones less favorable rates. We measure hospital volume in terms of total admissions, total days of hospital care, and outpatient visits. Hospitals have shown strong volume growth in recent years. Total hospital admissions grew a cumulative 6.1 percent from 1990 through

2000, despite falling in the early 1990s and not exceeding the 1990 level until 1997. Admissions growth has been comparable for urban and rural hospitals, and the share of admissions that occur in rural hospitals has remained essentially unchanged (15.8 percent in 1990 and 15.6 percent in 1999). Preliminary data suggest that admissions continued to increase in 2001.<sup>10</sup>

Total hospital days decreased about 20 percent from 1990 through 1998, mostly because of the large decreases in length of stay, but increased in 1999 and 2000 by 2.4 and 2.5 percent, respectively, due to stabilization in length of stay and higher admission growth. Preliminary data suggest that total days also have increased in 2001.<sup>11</sup>

Hospital outpatient visits have been increasing steadily for more than two decades; the increase was 73 percent during the 1990s, and nearly 5 percent in 2001. Growth in hospital services (inpatient admissions and outpatient visits, as well as recent growth in total days) suggests that overall payments—of which Medicare constitutes a substantial portion—are probably adequate.

## Entry and exit of providers

Significant changes in the number of providers can also indicate the relative health of the hospital market. If payments are too low, some providers may be forced to close; if payments are too high, more providers than necessary may enter or remain in the field. Because Medicare is the largest purchaser of hospital services, entry and exit could be influenced by Medicare payment policy.

Nationwide, hospital closures have been modest in the past decade. From 1990 through 1999 there has been a net reduction of 340 short-term acute care hospitals: 440 closed (254 urban and 186 rural) and 100 opened or reopened. Although the number of hospitals has fallen by 6.5 percent, the reduction in total

hospital capacity was much smaller because the closed hospitals were generally small and had low occupancy rates and very low volumes (OIG 2001).

Closed hospitals tend to be in areas with low levels of demand for hospital services, while hospitals open each year in areas with excess demand. Closures do not appear to reflect deficient Medicare payments; urban and rural hospitals have closed at rates proportional to their shares of the market and closed hospitals have comparable Medicare and Medicaid utilization rates with other hospitals (OIG 2001). The Office of Inspector General found that hospital closures have not affected access to care for Medicare beneficiaries in most cases (OIG 2001). Although Medicare beneficiaries in rural areas may face greater challenges accessing hospital services due to greater travel distances for health care, MedPAC has not found significant differences in rural beneficiaries' use of care relative to urban beneficiaries (MedPAC 2001).

Both closures and openings have increased in recent years. In 1999, 64 short-term acute care hospitals closed while 22 opened or reopened, compared with 43 closing and 14 opening or reopening in 1998. There have been additional reopenings due to Medicare's critical access hospital program, which supports low-volume hospitals in isolated areas through full-cost payment for inpatient and outpatient services. This program appears to have improved access to care in these rural communities.

The total number of hospitals in the United States appears at least adequate; in 1999 the national occupancy rate was only 54 percent. Increased volume of hospital services—in both admissions and total days—also supports this notion.

10 The NHIS shows that total discharges grew 2 percent in fiscal year 2001.

11 The NHIS shows that total days grew 1.9 percent in fiscal year 2001.

## Payments from other payers and total margins

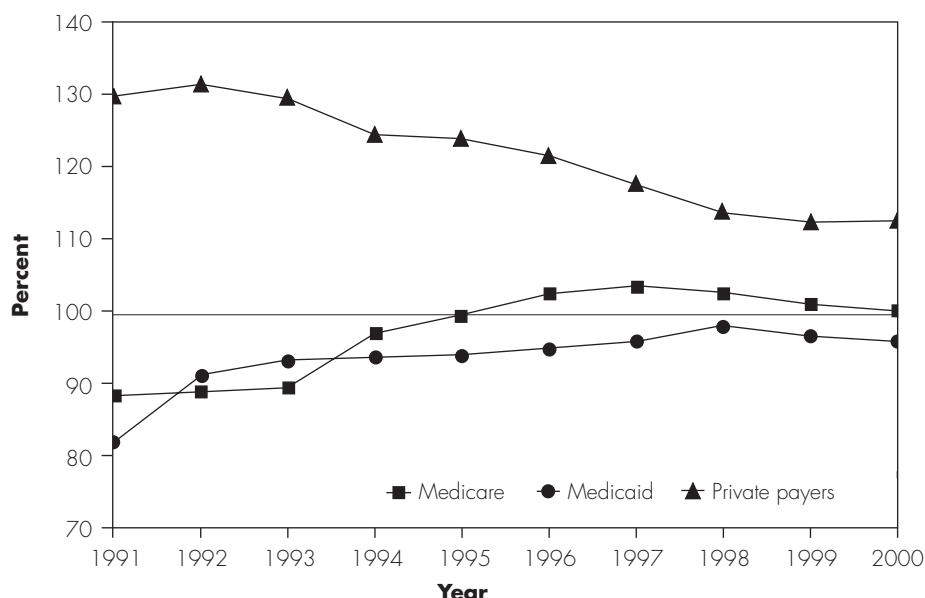
Although Medicare is the largest single purchaser of hospital services, private payers collectively purchase a slightly greater proportion of hospital services (43 percent, compared with 36 percent).<sup>12</sup> In 1998 and 1999, payments fell relative to costs for both private payers and Medicare (Figure 2B-1), resulting in increased revenue pressure and decreased total margins for hospitals. The downward trend in private sector payments may not be continuing, however, as the payment-to-cost ratio for private payers increased in 2000. This turnaround contributed to a rise in total hospital margins, which has provided further evidence that overall hospital revenues remain adequate.

The increase in private payer payments in 2000 was most pronounced for urban hospitals, for which the payment-to-cost ratio increased a full percentage point, compared with a decrease of two points for rural hospitals. The higher urban ratio suggests that these hospitals began to negotiate better payments from managed care payers. Improved negotiations may also be due to greater consolidation among hospitals, thereby increasing market power, as well as to changes in the private insurance market in 1999 and 2000, as preferred provider organizations (PPOs) began to supplant health maintenance organizations (HMOs) as the dominant private insurance model. PPOs have weaker negotiation leverage than HMOs, which should result in improved payments to hospitals.

The increased payments from private payers bring urban hospitals closer to the relatively high level of payments received by rural hospitals throughout the 1990s. Rural hospitals collected at least 134 percent of costs from private payers in each year from 1990 through 1999. The higher private sector payments received by rural hospitals, as well as the recently improved private payments for urban hospitals, have helped to maintain the adequacy of hospitals' overall revenues.

**FIGURE 2B-1**

## Hospital payment-to-cost ratios for Medicare, Medicaid, and private payers, 1991–2000



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.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals.

The total margin reflects the relationship of all hospital revenues—from all payers and including both operating and non-operating revenue—to all costs (including Medicare non-allowed costs). The hospital total margin dropped to 3.6 percent in 1999, the lowest level since the beginning

of the decade. About 37 percent of hospitals had negative total margins in 1999. But margins have risen since then, to 4.7 percent in 2000 and 4.5 percent in 2001 (Table 2B-4). Hospitals in other urban and rural areas have significantly higher total margins than those in large urban areas (Table 2B-5). This pattern is

**TABLE 2B-4**

## Trend in hospital total margin, 1998 through 2001

Fiscal year	Medicare cost report	National hospital indicators survey
1998	4.3%	4.3%
1999	3.6	2.7
2000	N/A	4.7
2001	N/A	4.5

Note: N/A (not available).

Source: MedPAC analysis of Medicare cost report data from CMS and national hospital indicators survey.

12 Measured in terms of share of total hospital costs, based on data from the 2000 American Hospital Association annual survey of hospitals.



**TABLE  
2B-5**

**Hospital total  
margin by hospital  
group, 1999**

All hospitals	3.6%
In large urban areas	2.7
In other urban areas	4.6
Rural	4.8

Source: MedPAC analysis of Medicare cost report data from CMS.

the opposite of that for Medicare margins, which are by far the highest for hospitals in large urban areas.

### Access to capital

Like most businesses, hospitals depend on access to capital to improve their equipment and physical plants. Nonprofit hospitals often raise money by issuing municipal bonds, making bond ratings an important indicator of their access to capital, while stock price may provide a better indicator for investor-owned hospitals. Investors appear to have had a favorable view of both nonprofit and for-profit hospitals in recent years, and this view seems to be holding steady through 2002.

About 85 percent of short-term acute care hospitals are nonprofit; access to capital for nonprofits is therefore a good indicator of financial health for the hospital industry. Although downgrades in nonprofit hospital bond ratings exceeded upgrades each year from 1999 through 2001, the hospital bond market appears fairly sound. The total number of downgraded hospitals and systems each year represents a small proportion of rated hospitals. As of January 2002, more than 90 percent of nonprofit hospitals and systems rated by Standard and Poor's, Moody's, and Fitch were rated investment grade (and therefore could be purchased by mutual funds, university endowments, pension funds, and other institutional investors). Further, downgrades in 2001 were fueled by a renewed commitment by

hospitals to invest in capital improvements, and not by poor financial condition as in earlier years. The total value of nonprofit health bond issues increased by over 30 percent in 2001 (to about \$23 billion), and the longer-term benefits of this renewed investment should offset the shorter-term strains on investment ratings (Sweeney et al. 2002).

The major bond rating services predict that in 2002, hospital ratings volatility will stabilize and possibly improve (Sweeney et al. 2002, Gordon et al. 2002). Industry reports have cited improved negotiations with private payers and improved Medicare payments as indicators of strong financial performance (Sweeney et al. 2002). Most nonprofit hospitals appear to have adequate access to capital, although raising capital may have become more expensive in recent years for some hospitals due to downgraded bond ratings.

For-profit hospitals have generally enjoyed strong investment ratings by financial analysts over the past two years. The value of stock in for-profit hospitals increased nearly 80 percent from January 1, 2000 through January 1, 2002 (Salomon Smith Barney 2002). Over the same period, the Standard and Poor's 500 (a comprehensive index of stock prices) lost 21 percent.

On balance, the favorable view of the hospital market by investors, encompassing both the nonprofit and for-profit sectors, suggests a financially sound industry. This would in turn suggest that hospitals' revenues are adequate.

### Conclusion on payment adequacy

Our review of trends found no evidence that the hospital cost base is inappropriate, and our best estimate of Medicare payments relative to these acceptable costs is an overall Medicare margin of 3.8 percent in 2002 (reflecting 2003 payment rules). A margin of 3.8 percent is within the zone of payment adequacy, especially given that the broad indicators of financial

health in the hospital industry do not provide evidence of insufficient revenues. Therefore, the Commission concludes that Medicare payments are adequate, and that no adjustment for payment adequacy is needed as part of the fiscal year 2003 update for either inpatient or outpatient services.

### Base rate differential for inpatient payments

In Medicare's inpatient PPS, the base payment rate for hospitals in large urban areas (metropolitan areas with more than 1 million people) is 1.6 percent above the payment rate for other hospitals. Current data do not support this differential. We believe that payments and costs would be better aligned with a single base rate than with the two-rate system currently in place. Eliminating the differential would improve payment equity across geographic areas and also help to simplify the payment system.

### RECOMMENDATION 2B-1

**The Congress should gradually eliminate the differential in inpatient payment rates between hospitals in large urban and other areas.**

The current payment differential reflects policy decisions made more than a decade ago. When the Congress established the inpatient PPS, payment rates for rural hospitals were set 20 percent below those for urban hospitals and no distinction was made between hospitals in urban areas based on the population of the metropolitan area. This initial differential was intended to reflect cost differences between urban and rural hospitals not accounted for by factors included in the new payment system.<sup>13</sup>

Starting in 1988, the Congress made separate updates for hospitals in large urban, other urban, and rural areas, effectively creating three separate payment rates while also substantially reducing the difference in base payment rates between rural and urban hospitals.

13 The differential was based on actual cost differences observed in the base data establishing the PPS payment rates.

Hospitals in large urban areas received higher updates at the time because analysis showed that the higher costs of those hospitals were not fully recognized by PPS payment policies.

In 1990, the base rate for rural hospitals was 7.0 percent lower than the rate for other urban hospitals. The rate for large urban hospitals was 1.6 percent higher than the other urban rate (the current differential). The Omnibus Budget Reconciliation Act of 1990 set update factors to eliminate the gap between payment rates for rural and other urban hospitals by fiscal year 1995, partly because analysis showed that rural hospital costs were 40 percent below those for urban hospitals while aggregate payments were 45 percent lower. As of 1999, rural hospital costs were 37 percent lower than large urban costs, but payments remained 45 percent lower. Costs for hospitals in other urban areas are 11 percent below those of the large urban group, but payments are 18 percent lower.

Medicare margin data provide support for eliminating the current differential. Both inpatient and overall Medicare margins for rural and other urban hospitals are substantially lower than for large urban hospitals (Table 2B-1, p. 59). This differential in performance is due in large part to the higher payment rates received by hospitals that qualify for DSH and IME adjustments; such hospitals are more likely to be located in large urban areas. However, even after removing DSH payments and the portion of the IME payment above the measured cost relationship, hospitals in large urban areas still have Medicare margins that are about 4 percentage points higher than other urban and rural hospitals (Table 2B-3, p. 60). The current differential in base payment rates accounts for about half this difference in margins. Hospitals in large

urban areas also benefit from the current lack of an occupational mix adjustment in the wage index, which may explain a significant portion of the remaining differential.<sup>14</sup> Greater competition in large urban areas may also have helped to hold down costs.

Medicare inpatient margins vary widely and tremendous overlap occurs in the distribution of margins across geographic areas, although the distribution of margins for hospitals in large urban areas tends to be higher than for hospitals in other urban or rural areas (Figure 2B-2). The overlap in the core margin (excluding DSH payments and IME payments above the cost relationship) is even greater (Figure 2B-3). Rural hospitals have a greater share of providers with margins over 20 percent, but large urban hospitals' performance still tends to be better than other hospitals across the rest of the distribution. For example, 49 percent of other urban hospitals and 46 percent of rural hospitals have a negative core inpatient margin, compared with 37 percent of large urban hospitals.

Statistical analysis also supports eliminating the differential in base payment rates. When hospitals in large urban areas are compared with all other hospitals, no relationship between large urban location and costs per case is apparent after controlling for cost-related payment adjustments in the inpatient PPS. We found that rural hospitals' costs were about 2 percent lower than those of large urban hospitals, but this analysis is based on 1997 data and does not account for the 2 percent higher cost growth experienced by rural hospitals between 1997 and 1999.<sup>15</sup> If the analysis was run using 1999 data, the cost difference between hospitals in large urban and rural areas would likely be much smaller, if not nonexistent.

Providing one base rate for all hospitals would also eliminate the need for geographic reclassification for the base rate. For base rate reclassification, a hospital must demonstrate that it is close to an area with a higher base rate and that its costs are closer to the amount it would be paid if it were reclassified than to the amount under its current classification.<sup>16</sup> In other words, a hospital with case-mix adjusted costs above its base rate can be reclassified, whereas a hospital with costs below its base rate cannot. This policy produces potentially undesirable incentives by rewarding high-cost hospitals with higher payment rates without the fulfillment of any other criteria demonstrating the need for the higher base rate.

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## Update recommendation

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With our conclusions that current payments for all hospital services are adequate but the higher base rates for inpatient services in large urban areas should be eliminated, we now turn to the question of the appropriate update for inpatient and outpatient services in fiscal year 2003. The update must account for the expected increase in efficient providers' costs, and the Commission's policy is that the adjustment for this factor should equal the forecasted increase in the appropriate measure of price inflation barring compelling evidence that other factors should be explicitly addressed.

## Inpatient services

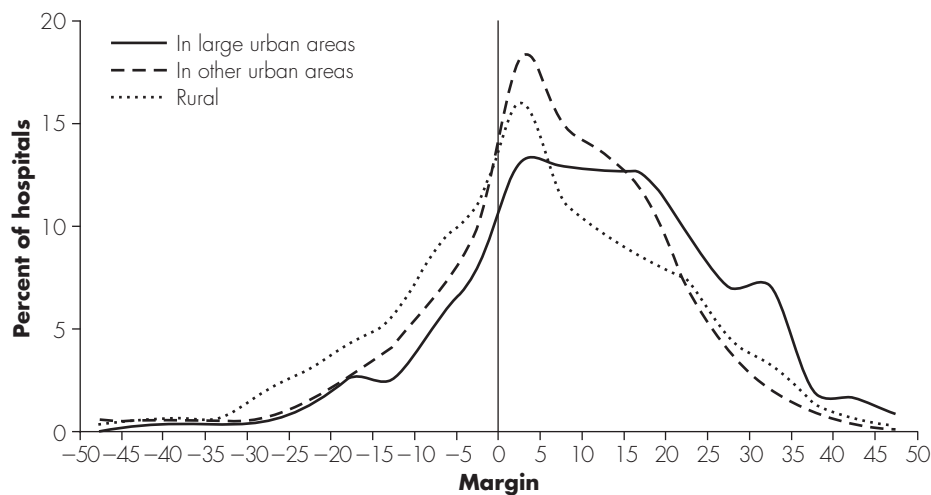
In the PPS for acute inpatient services, Medicare maintains separate procedures to update payments for operating costs (such as labor and supplies) and payments for capital costs (primarily buildings and equipment). The Congress sets the update for operating payments, usually several

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14 The current wage index reflects differences across geographic areas in the mix of labor used. For example, geographic areas that employ an above-average proportion of registered nurses may have higher average hourly wages than other areas, and this difference in labor mix is reflected in the current wage index. An occupational mix adjustment, which the Congress mandated in the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 but will not be implemented until about fiscal year 2005, would allow the wage index to reflect differences in the relative price for labor rather than the mix of labor.

15 Our cost analysis found no statistically significant difference in costs between hospitals in large urban and other urban areas.

16 Rural hospitals must be within 35 miles and other urban hospitals must be within 15 miles of the area to which they wish to be reclassified. In addition, they must demonstrate that at least 50 percent of their employees reside in that area. Sole community and rural referral hospitals do not need to meet the proximity criterion; they only need to demonstrate higher costs.

**FIGURE  
2B-2****Distribution of inpatient Medicare margin  
by hospital location—including DSH payments  
and IME payments above costs, 1999**

Note: DSH (disproportionate share), IME (indirect medical education). IME payments above costs are payments in excess of Medicare's share of MedPAC's estimate of the cost of teaching.

Source: MedPAC analysis of Medicare cost report data from CMS.

years in advance, while the Centers for Medicare & Medicaid Services (CMS) sets the capital update annually through regulation.

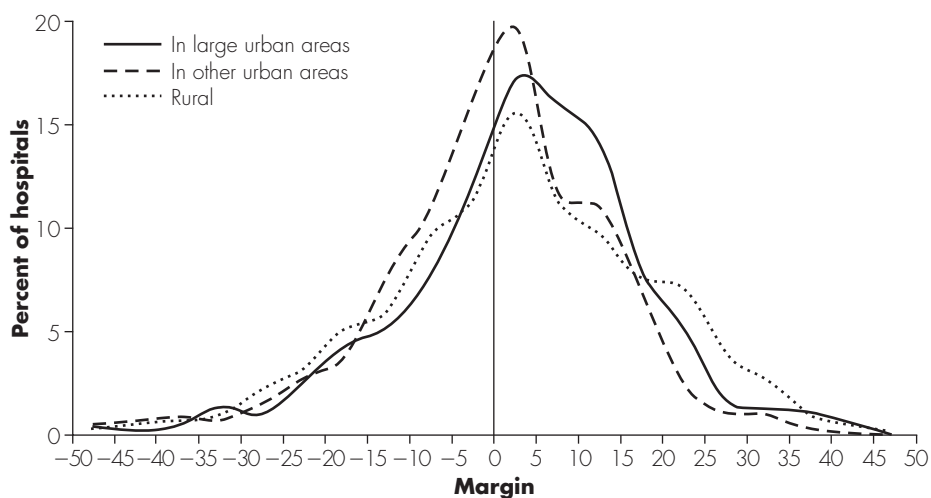
When the 10-year phase-in for the capital PPS ended last year, MedPAC recommended that CMS combine operating and capital payments, which would set the stage for a unified update (MedPAC 2000). With the two updates remaining separate, however, we focus on the operating update in this report—not only because it involves more money (applying to 92 percent of hospitals' Medicare costs), but also because it commands the most attention in Congress.

In formulating our update recommendation, we focus first on the appropriate adjustment to account for cost increases in the coming year and then recommend a way to combine this adjustment with important redistributive changes.

**Accounting for cost  
increases next year**

CMS's tool for measuring price inflation for the goods and services that hospitals use in producing inpatient services is the hospital market basket index. Separate indexes are maintained for operating and capital costs. CMS's latest forecast of the operating market basket for fiscal year 2003 is 2.9 percent, and under current law, the update will be market basket minus 0.55 percent, or 2.35 percent.<sup>17</sup>

Several other factors besides inflation could affect efficient providers' rates of cost growth in the coming year. Technological advancements will undoubtedly increase costs, but hospitals should also be able to improve their productivity at least modestly without affecting quality of care. We have no evidence that technological advancement cannot be adequately covered through productivity gains. In past years, changes in coding practices for diagnosis related groups (DRGs) and changes in intra-DRG case complexity played major roles in cost and payment trends, and therefore were a

**FIGURE  
2B-3****Distribution of inpatient Medicare margin  
by hospital location—excluding DSH payments  
and IME payments above costs, 1999**

Note: DSH (disproportionate share), IME (indirect medical education). IME payments above costs are payments in excess of Medicare's share of MedPAC's estimate of the cost of teaching.

Source: MedPAC analysis of Medicare cost report data from CMS.

17 This forecast reflects historical data through the third quarter of 2001.

major factor in developing update recommendations. But we have no reason to expect that such changes are occurring today. Preparation for bioterrorism may increase costs, but the steps hospitals will take and their cost implications are not yet known. In addition, the Congress may provide funding for this purpose outside of Medicare because the benefits will accrue to the entire U.S. population.

In the past several years, the most important factor in our update recommendations has been unbundling of the per-case payment unit. Unbundling occurs when hospitals shift the latter days of inpatient stays to various post-acute settings. Although we have no way of measuring its effects directly, unbundling is strongly suggested by the substantial drop in acute hospital length of stay that has occurred over the last decade, coupled with a simultaneous increase in the use of various forms of post-acute care. The Commission recommended a series of downward adjustments for this factor because the shift of care to other settings reduced hospitals' costs much more than it reduced Medicare's payments.

Under our new updating approach, the effect of unbundling in past years is considered in the course of assessing the adequacy of current payments. In light of the fact that Medicare length of stay declined 10 years in a row through 1999 and appears to have declined further through 2001, it might be reasonable to predict that we will experience another drop in fiscal year 2003.<sup>18</sup> If length of stay did fall again, we would expect it to reduce the rate of cost growth and therefore the payment update required. However, the declines have been shrinking in recent years and we have no information on fiscal year 2002.

Therefore, we believe it would not be prudent to take change in length of stay into account prospectively.

After considering all factors that might potentially affect the rate of growth in efficient providers' costs, we conclude that the appropriate adjustment for cost growth in fiscal year 2003 is the forecasted increase in the market basket, or 2.9 percent.

### Phasing out the differential in base rates

Based on the conclusions reached thus far, the appropriate update for hospital inpatient services in fiscal year 2003 would be the forecasted increase in the hospital market basket, which is 0.55 percentage points higher than the update in law. Rather than change the current update across the board, however, we believe the additional 0.55 percent increment should be devoted to implementing redistributive changes. This includes a first step in closing the gap in base rates between hospitals in large urban and all other areas, as recommended above, and providing the funding needed to implement inpatient payment changes that MedPAC has already recommended for rural hospitals.

A reasonable first step in eliminating the base rate differential would be to raise the update for hospitals in other urban and rural areas from the current market basket minus 0.55 percent to market basket, while leaving the legislated update in place for hospitals in large urban areas. This would eliminate about one-third of the 1.6 percentage point gap between the two base rates, without changing the increase in payments that hospitals in large urban areas expect.<sup>19</sup> On a weighted basis, the change would raise payments for all hospitals by 0.3 percent. The approach implies a three-year phase-out of

the differential, but we plan to wait until next year, when more recent cost and payment data are available, to recommend an appropriate second step.<sup>20</sup>

## RECOMMENDATION 2B-2

**The Congress should increase the base rate for inpatient services covered by Medicare's prospective payment system in fiscal year 2003 by market basket minus 0.55 percent for hospitals in large urban areas and by market basket for hospitals in all other areas.**

In our recent rural report, we made four recommendations designed to increase inpatient payments for rural hospitals (MedPAC 2001):

- The Secretary should fully implement the policy of excluding from the hospital wage index salaries and hours for teaching physicians, residents, and certified registered nurse anesthetists.
- Also for the hospital wage index, the Secretary should reevaluate current assumptions about the proportions of providers' costs that reflect resources purchased in local and national markets.
- The Congress should require the Secretary to develop a graduated adjustment to the base payment rates for hospitals with low overall volumes of discharges.
- The Congress should raise the cap on the disproportionate share add-on a rural hospital can receive from 5.25 percent to 10 percent.

The first two recommendations are budget neutral, but based on simulations done for our report, we estimate that the last two

18 Two-year cohort data from the national hospital indicators survey, which MedPAC and CMS sponsor, documented a small drop in length of stay in both 2000 and 2001, but a sample of only 125 hospitals was available for this analysis.

19 For capital payments, the difference in base rates is 3.0 percent rather than 1.6 percent. Although we are focusing primarily on the operating update in this section, CMS should also eliminate about one-third of the differential in setting the update for capital payments.

20 At a minimum, the currently available 1999 data will be extended to 2000 for decision making in the next cycle. We are hopeful that CMS will be able to return to its normal processing schedule, in which case preliminary 2001 data will also be available.



would raise payments across all hospitals by 0.2 percent.<sup>21</sup> As shown in Table 2B-6, our update recommendation coupled with these rural recommendations would raise aggregate payments by approximately market basket. As planned, however, this set of policies would have a markedly different effect by geographic area. The payment increase would be 2.3 percent for hospitals in large urban areas, 3.0 percent for those in other urban areas, and 4.7 percent for rural hospitals.

## Outpatient services

Although we considered payment adequacy for hospitals as a whole, the structure of Medicare's payment systems requires a separate update for services provided under the outpatient PPS. The Balanced Budget Act of 1997 mandated the development of a new PPS for outpatient services and legislated updates for 2000 through 2002. Barring additional legislation, the Secretary will set the update for 2003.

As concluded above, MedPAC finds no evidence that current Medicare payments to hospitals are inadequate. Therefore, no adjustment to the update is needed to better align payments with costs. We have also looked at factors likely to affect hospitals' costs for outpatient services in 2003, such as changes in input prices, technological advancements, increases in productivity, and the implementation of a new payment system. While we have considered all available information, we note that this is a new payment system (first implemented in August 2000), and CMS has not made systematic data from hospitals operating under the PPS available.

## RECOMMENDATION 2B-3

**For calendar year 2003, the Secretary should increase the payment rates for services covered by the outpatient prospective payment system by the rate of increase in the hospital market basket.**

**TABLE  
2B-6**

## Operating payment update and impact of MedPAC's rural recommendations for hospital inpatient services, fiscal year 2003

Hospital group and payment component	Percent	Relation to market basket
<b>Hospitals in large urban areas</b>		
Payment update	2.35%	MB - 0.55%
Impact of rural recommendations	-0.1	
Overall payment increase	2.25	MB - 0.65
<b>Hospitals in other urban areas</b>		
Payment update	2.9	MB
Impact of rural recommendations	0.1	
Overall payment increase	3.0	MB + 0.1
<b>Hospitals in rural areas</b>		
Payment update	2.9	MB
Impact of rural recommendations	1.8	
Overall payment increase	4.7	MB + 1.8
<b>All hospitals (weighted average)</b>		
Payment update	2.65	MB - 0.25
Impact of rural recommendations	0.2	
Overall payment increase	2.85	MB - 0.05

Note: MB (market basket). Updates and rural recommendations apply only to Medicare's inpatient prospective payment system (PPS). The Centers for Medicare & Medicaid Services' (CMS) forecast of the hospital operating market basket for fiscal year 2003 is 2.9 percent, and the current law update for all hospitals covered by the inpatient PPS in 2003 is MB - 0.55 percent, or 2.35 percent.

MedPAC has previously recommended a combined update for operating and capital payments. Because the operating update is set legislatively while the capital update is specified through regulation by CMS, this table covers only the operating update.

For more information on MedPAC's recommendations for rural hospitals, see MedPAC 2001.

Source: Data from CMS and MedPAC analysis.

After considering the adequacy of current payments, MedPAC's general approach to accounting for changes in efficient providers' costs in the next payment year is to use the forecasted market basket increase, barring compelling evidence that some other factor should be explicitly taken into account. As with the inpatient update, the appropriate index is the hospital market basket. The outpatient update will be implemented January 1, in contrast to October 1 for the inpatient update. The latest forecast of the hospital

market basket for calendar year 2003 is 3.0 percent (slightly higher than the fiscal year forecast).

In addition to increases in the prices of inputs, other factors may influence costs in 2003. In particular, technological advancements may increase or decrease costs. As described in Chapter 1 and discussed further in Chapter 3, most new outpatient technologies that increase costs will be paid for explicitly through two special provisions: new technology ambulatory payment classifications (APCs) and pass-through payments.

21 This estimate does not reflect any change in assumptions regarding the shares of resources purchased in national and local markets for the wage index, because the results of a CMS study of the labor share issue would be needed before a policy change could be formulated.

The new technology APCs pay for completely new services. These payments are not budget neutral, which means payments are made for these new technology services when they are provided, resulting in increased spending. Therefore, the costs of technological advances in the new technology APCs do not need to be taken into account in determining the update.

The pass-through payments, however, are implemented in a budget-neutral fashion (analogous to the recalibration of relative weights among services). This means that payments for all services are reduced to fund the pass-through payments and no additional funds are provided to cover the increased costs associated with new technologies covered by this provision. Therefore, the net increase in costs due to these technologies, after taking into account any technologies that decrease costs, should factor into the update. Although considerable technology costs flowed through the pass-through mechanism in 2002, a sharp reduction in pass-through costs is expected in 2003 as most, if not all, technologies eligible for pass-through payments in 2002 will be fully incorporated into base payment rates by that time.

While technological advances may increase or decrease costs, increases in productivity decrease costs. In the absence of compelling data to the contrary, we assume that increases in costs from new technologies are offset by improved productivity. We think this is a conservative assumption that is likely to benefit hospitals, given that both CMS and industry representatives predict a limited number of pass-through technologies will be approved in the coming years.

Another consideration in updating payment rates for the outpatient PPS is the costs and savings associated with implementing a new payment system. On the one hand, increased costs will be incurred for establishing information systems and training staff to code claims accurately. Many of these costs should be one-time costs incurred in 2001 and 2002, and are, therefore, not relevant to the update for 2003. On the other hand, experience with the inpatient PPS has shown that hospitals tend to control costs more carefully during transition periods due to the uncertainty associated with moving to a new payment system. Furthermore, in a manner analogous to the inpatient PPS, the APC system may provide hospitals with a tool for

measuring the costs of outpatient services, as well as a direct incentive to control costs, leading to better cost control. The net impact of the new payment system on the costs of outpatient services in 2003 is uncertain; therefore, we do not make any assumptions for our update recommendation.

Early experience from implementing the inpatient PPS showed that improved coding led to increased payments. Given concern over the adequacy of coding for outpatient services in the data used to set payment rates under the PPS, we expect that reported case mix will also increase in the first years of the new outpatient payment system due to improved coding. For example, in the data used to set payment rates, many hospitals undercoded clinic visits by assigning them all the lowest-intensity code because payment was not tied to coding. The PPS, however, gives hospitals an incentive to correctly code visits according to their intensity by establishing three payment categories. Because we do not have data documenting changes in reported case mix, it is difficult to factor them into our update recommendation for 2003, but in the future we will consider such changes. ■

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# SECTION 2C

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## Physician services

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## R E C O M M E N D A T I O N S

- 2C-1** The Congress should repeal the sustainable growth rate system and instead require that the Secretary update payments for physician services based on the estimated change in input prices for the coming year, less an adjustment for growth in multifactor productivity.

\*YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

- .....
- 2C-2** The Secretary should revise the productivity adjustment for physician services and make it a multifactor instead of labor-only adjustment.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

- .....
- 2C-3** The Congress should update payments for physician services by 2.5 percent for 2003.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

\*COMMISSIONERS' VOTING RESULTS

# SECTION 2C

## Section 2C: Physician services

Previously, MedPAC recommended that the Congress replace the method for updating payments for physician services—the sustainable growth rate system—because it fails to account for changes in the cost of efficiently producing physician services, tying updates instead to growth in the national economy. It also applies only to physician services, exacerbating Medicare’s problem of paying different amounts for the same service depending on whether the service is furnished in a physician’s office, a hospital outpatient department, or an ambulatory surgical center. The Commission now recommends a new update method for physician services similar to the methods for other services. The Congress would base the update on an estimate of the change in input prices for the coming year and could adjust the estimate using evidence on whether the current level of payments is adequate. We use this method to develop an update recommendation for 2003. We conclude that although Medicare’s payments for physician services were not too low in 1999, payment updates since then have been less than the increase in input prices. We cannot justify an adjustment for payment adequacy, however, until we have further information. In the interim, we recommend an update for 2003 of 2.5 percent.

### In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

Medicare's payments for physician services are made according to a fee schedule, under which services are given relative weights that reflect resource requirements. These weights are adjusted for geographic differences in practice costs and multiplied by a dollar amount—the conversion factor—to determine payments. The sustainable growth rate (SGR) system updates the conversion factor annually.

The Commission is concerned that the SGR system can cause payments to diverge from costs because it does not fully account for factors affecting the cost of providing physician services. Although the system accounts for input price inflation, productivity growth, and other factors affecting costs, it overrides these factors to achieve an expenditure target.

The main problem is two incompatible goals:

- update payments to account for changes in the cost of providing physician services, and
- control spending for physician services by adjusting updates to achieve an expenditure target.

Updates under the SGR system can lead to payments that diverge from costs because actual spending for physician services is unlikely to be the same as the target. When this occurs, payments will either be too low, potentially jeopardizing beneficiaries' access to care, or too high, making spending higher than necessary. This is a particular concern given that the SGR system only applies to services paid for under the physician fee schedule. Because these services can be provided in physicians' offices, hospitals, ambulatory surgical centers, and other settings, updates based on an expenditure target that applies only to one setting could create financial incentives that inappropriately influence clinical decisions about where services are provided.<sup>1</sup>

Even if the SGR system's goals were compatible, it is unlikely that such a mechanism would work as the Congress intended. When first enacting an expenditure target for physician services in 1989, it was assumed that the system would provide physicians with a collective incentive to control the volume of services. This goal is unrealistic, however, because an individual physician reducing volume in response to incentives provided by the SGR system would not realize a proportional increase in payments. Instead, the increase in payments would be distributed among all physicians providing services to Medicare beneficiaries. If anything, an individual physician has an incentive to increase volume under such a system.

Recently, another problem has surfaced: the SGR system can produce volatile and unpredictable updates. Updates went from large increases in 2000 and 2001 of 5.4 percent and 4.5 percent, respectively, to an unexpected large reduction in 2002 of 5.4 percent.

To solve these problems, in our March 2001 report we recommended that the Congress replace the SGR system with an annual update based on factors influencing the unit costs of efficiently providing physician services (MedPAC 2001). The Commission's recommendation is based on a belief that getting the price right is important when making update decisions. If spending control is necessary, it should not occur through an update formula with no consideration of payment adequacy. In this report, we go further to describe how the Congress should replace the SGR system.

## RECOMMENDATION 2C-1

**The Congress should repeal the sustainable growth rate system and instead require that the Secretary update payments for physician services based on the estimated change in input prices for the coming year, less an adjustment for growth in multifactor productivity.**

Replacing the SGR system would solve the fundamental problems of the current system and would allow updates to more fully account for factors affecting costs. The change also would uncouple payment updates from spending control and would make updates for physician services similar to the updates for other services. This would promote the goal of achieving consistent payment policies across ambulatory care settings, including physician offices, hospital outpatient departments, and ambulatory surgical centers.

The proposed update method for physician services differs from the methods for other services in that it includes an adjustment for growth in multifactor productivity. For other services, MedPAC is assuming that decreases in cost due to productivity growth will offset increases in cost due to scientific and technological advances and other factors. For physician services, however, it is unclear whether savings from productivity growth are offset by such cost-increasing factors. The unit of payment is small, which allows new and revised billing codes to account for much of the cost increases due to technological advances and other factors.

To replace the SGR system, the Congress could repeal provisions in current law and replace them with language similar to that for other services. For example, the Social Security Act requires updates for inpatient hospital care that equal the increase in the hospital market basket index except for years in which the Congress chooses to make the update smaller or larger than this increase. The Congress generally makes these choices after considering advice from MedPAC and the Secretary. With a similar update method for physician services, the Commission intends to base its advice to the Congress on assessments of payment adequacy such as the one discussed below, and we believe that the Secretary should also advise the Congress on payment adequacy.

<sup>1</sup> Problems with the SGR system are discussed further in Chapter 2 of MedPAC's March 2001 report to the Congress (MedPAC 2001).

For the proposed update method to work appropriately, the Congress and the Secretary should take several steps. The Congress should:

- change current law to replace the SGR system, and
- require the Secretary to change the current measure of input price inflation for physician services—the Medicare Economic Index (MEI)—to make it a forecast of input price growth for the coming year.

The Secretary should:

- remove the productivity adjustment from the MEI so the MEI measures prices only and productivity can be considered separately in update decisions, and
- change the productivity adjustment so it measures growth in the productivity of all inputs, not just labor.

The budgetary consequences of replacing the SGR system are important. The system is designed to control spending for physician services by limiting growth in the quantity and intensity of services per beneficiary to growth in real gross domestic product (GDP) per capita. Growth in real GDP per capita is estimated at 2.3 percent per year through 2010 (OMB 2001). Projected growth in the quantity and intensity of services is higher: 2.9 percent per year through 2010 (Board of Trustees 2001). Without the SGR system, the difference between these two projected growth rates would not be used to adjust payment rates, so spending would be higher than with the SGR.

Changing the productivity adjustment that the Centers for Medicare & Medicaid Services (CMS) uses to update payments for physician services would also increase

the annual updates, by about 1.1 percentage points.<sup>2</sup> This increase would be offset slightly if another Commission recommendation were adopted: changing the measure of inflation in input prices from a retrospective measure to a forecast (MedPAC 2001). This change would have a one-time effect on the update. Together, the budgetary impact of all these changes would be an increase in spending of about 1.7 percent per year.

The cost of replacing the SGR system could be higher than the 1.7 percent estimate because recent events suggest a wider difference between growth in real GDP and growth in the quantity and intensity of services. First, the current recession could last longer than projected, which would lead to lower estimates of growth in real GDP per capita and a wider gap between updates based on the SGR system and updates based on MedPAC’s proposed update method. Second, CMS recently reported that it had omitted some of the growth in the quantity of physician services when calculating the 2000 and 2001 updates under the SGR system (CMS 2001). The agency has not yet reported the size of this error, but correcting it would reduce future updates under the SGR system.

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## Assessing payment adequacy

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The first question in applying MedPAC’s approach is whether the current level of Medicare’s payments for physician services is adequate. The information available to answer this question is limited, which suggests caution in answering it. We lack information on the cost of physician services, so we cannot compare Medicare’s payments and costs the way we can for other services, such as inpatient hospital care, post-acute care,

and outpatient dialysis. On the other hand, we have information on several other factors that, when considered together, allows judgments about the adequacy of payments. This information includes data on the number of physicians furnishing services to Medicare beneficiaries, the results of surveys of physicians on their perceptions of the Medicare program and their willingness to furnish services to beneficiaries, and information from surveys of beneficiaries on their ability to obtain care and their satisfaction with the care received.

The data available on payment adequacy are limited for two reasons. First, the most recent data are for 1999. Payment changes since then are important, including the 5.4 percent reduction that occurred in 2002. Second, all the available measures of payment adequacy present formidable challenges of interpretation. Even collectively, the measures do not provide conclusive evidence of the appropriateness of Medicare’s payment rates. Nevertheless, the combined weight of evidence allows reasonable judgments about payment adequacy, as described below.

Available information suggests that, through 1999, payments were not too low. From 1999 onward, we have very limited data; we do know, however, that payments did not keep up with increases in input prices.<sup>3</sup> This suggests that payments for 2002 may be too low, raising concerns about beneficiary access to care. We will not know if payments are too low until we have further information on payment adequacy.

## Entry and exit of providers

Provider entry and exit data provide information regarding adequacy of the current level of payments. Rapid growth in the number of providers furnishing services to beneficiaries may indicate that

2 This increase is the difference between average growth in labor-only productivity (through 2006) of 1.6 percent and MedPAC’s policy standard for growth in multifactor productivity of 0.5 percent.

3 The updates have averaged 1.7 percent per year, including an update of –5.4 percent for 2002. Over the same period, the change in input prices has averaged 3.6 percent per year. This average change in input prices is based on the MEI, excluding the index’s productivity adjustment. If the productivity adjustment is included in the index, the average change in input prices is 2.4 percent per year, which is still higher than the average update of 1.7 percent. There is evidence that, on average, updates have been less than the change in input prices since 1992 (Maves 2002).

Medicare's payment rates are too high. Conversely, widespread provider withdrawals from Medicare could suggest that the rates are too low.

Counts of physicians billing Medicare shows that the number of physicians furnishing services to beneficiaries has kept pace with growth in the number of beneficiaries (Table 2C-1).<sup>4</sup> From 1995 to 1999, the number of physicians per 1,000 beneficiaries grew slightly, from 12.9 to 13.1. This is evidence that payment rates were not too low in 1999.

### Beneficiaries' access to care

Another way to evaluate the adequacy of payment rates is to evaluate beneficiaries' access to and quality of care. Evidence of widespread access or quality problems for beneficiaries may indicate that Medicare's payment rates are too low. Access and quality measures are often difficult to interpret, however, because they are influenced by many factors. Access to care for specific services, for example, may be influenced by beneficiaries' incomes, secondary (medigap) insurance coverage, preferences, local population increases, or transportation barriers, all of which are unrelated to Medicare's payment policies.

As detailed below, access to care was good in 1999, according to a survey of beneficiaries. Furthermore, MedPAC's 1999 survey of physicians suggests that physicians were willing and able to serve beneficiaries. These results are consistent with the conclusion that payment rates were not too low in 1999.

### Beneficiary reports about access

Data from the Medicare Current Beneficiary Survey suggest that access was good in 1999 (Table 2C-2). The percentage of beneficiaries reporting trouble getting care (4 percent) was low and essentially unchanged from previous years. Other access measures were also unchanged: slightly more than 9 percent of beneficiaries reported that they did not have a usual source of care, and about 19

**TABLE  
2C-1**

### Physicians billing traditional Medicare

Year	Number of physicians	Part B enrollment	Number of physicians per 1,000 beneficiaries
1995	460,700	35,684,584	12.9
1996	469,915	36,139,608	13.0
1997	476,164	36,460,143	13.1
1998	478,123	36,780,731	13.0
1999	484,576	37,039,848	13.1

Note: The numerator of the ratio of physicians per 1,000 beneficiaries includes allopathic and osteopathic physicians. The denominator is the number of beneficiaries enrolled in Medicare Part B, including traditional Medicare and Medicare+Choice, on the assumption that physicians are providing services to both types of beneficiaries.

Source: Unpublished CMS data.

percent had not had a physician office visit that year. The data also show that beneficiaries were overwhelmingly satisfied with the care they received.

### Physician willingness and ability to serve beneficiaries

Findings from a 1999 survey of physicians, sponsored by MedPAC and conducted by Project HOPE and The Gallup Organization (Schoenman and Cheng 1999), show that physicians were willing and able to care for Medicare beneficiaries.

- Only about 10 percent of physicians reported any change since 1997 (before Medicare payment policy changes took place) in the priority given to Medicare patients seeking an appointment. Of those changing their appointment priorities, the percentage that reported giving Medicare patients a higher priority was almost the same as the percentage that assigned Medicare patients a lower priority.
- Only 4 percent of physicians said that it was very difficult to find suitable referrals for their fee-for-service Medicare patients, a finding comparable to the percent who

reported problems referring their privately insured fee-for-service patients.

One of the most important findings of the survey was that, among physicians accepting all or some new patients, more than 95 percent said they were accepting new Medicare fee-for-service patients. This finding is consistent with the results

**TABLE  
2C-2**

### Beneficiary access to and satisfaction with care

Characteristics	Percentage
Access	
Had trouble getting care	3.7
No office visit this year	18.9
No usual source of care	9.4
Satisfaction	
Strongly agree/agree	
Physician checks everything	93.9
Great confidence in physician	94.9
Very satisfied/satisfied	
Availability of medical care	93.7
Overall quality of care	96.1

Source: MedPAC analysis of 1999 Medicare Current Beneficiary Survey Access to Care file.

4 These counts include only physicians, and not nurse practitioners, physician assistants, psychologists, chiropractors, podiatrists, or other health care professionals.



of a 1998-1999 survey sponsored by the Robert Wood Johnson Foundation and conducted by the Center for Studying Health System Change, which showed that, among physicians accepting new privately insured patients, more than 98 percent were accepting at least some new Medicare patients (Reed 2002).<sup>5</sup>

While these findings are positive, many doctors participating in MedPAC's survey expressed concerns about payment levels. About 45 percent said that reimbursement levels for their Medicare fee-for-service patients were a very serious problem; 25 percent reported that reimbursement levels for private fee-for-service patients were a very serious problem. Fifty-nine percent reported that reimbursement for fee-for-service Medicaid patients was a very serious problem. Physicians expressed the highest level of concern with the reimbursement by health maintenance organizations (HMOs) and other capitated plans: about 66 percent said that HMO reimbursements were a very serious problem.

Finally, many physicians who responded to MedPAC's survey reported taking steps to reduce their practice costs. More than 50 percent said their practices had reduced staff costs, and two-thirds said their practices had delayed or reduced capital expenditures.

Data from a 1999 survey sponsored by the American Medical Association (AMA) show similar changes in physician practices (Hixson and Thran 2001). For example, 65 percent of physicians said they had reduced the length of visits, increased the number of visits per day, or referred more difficult cases to other physicians.

The relationship between changes in physician practices and Medicare payment policy is unclear, however. MedPAC survey data show no consistent relationship between time physicians

spent furnishing services to Medicare beneficiaries and reductions in staff costs or capital expenditures.<sup>6</sup> More importantly, such practice changes may not indicate that payments are inadequate. Instead, physicians could be making their practices more efficient, in response to forces in the marketplace, without compromising quality of care. Research on patient outcomes is necessary before policymakers can reach conclusions about whether access to high-quality care has diminished.

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### Accounting for cost changes in the coming year

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Given the information about the adequacy of the current level of payments, the next step in determining payment updates is to ask how much costs will change in the coming year. Several factors will affect the cost of physician services, but the most important one is inflation in input prices. The available measure—the MEI—has two problems, but the Secretary can correct them. Other factors that may increase costs include scientific and technological advances and the regulatory burden of the Medicare program, including the burden of compliance with requirements of the Health Insurance Portability and Accountability Act of 1996. These other factors are likely to have small or unmeasurable effects on costs. The remaining factor—productivity growth—will reduce costs. Here again, a measure is available but the Secretary should change it. Using measures of inflation and productivity growth, it appears that the cost of physician services will increase by 2.5 percent during the coming year.

### Measuring input price inflation

The MEI is the SGR system's measure of input price inflation. It is calculated by CMS as a weighted average of price changes for inputs used to provide physician services (Table 2C-3). Those inputs include physician time and effort, or work, and practice expense. Practice expense includes nonphysician employee compensation, office expense, medical materials and supplies, professional liability insurance, medical equipment, and other professional expenses, such as private transportation. In general, the weights used to construct the MEI represent the shares of physicians' practice revenues attributable to each input, based on a survey conducted by the AMA in 1996. Physician work has a weight of 54.5 percent; the remaining 45.5 percent is allocated among categories of practice expense.

The MEI is analogous to the market basket index used to update payments for inpatient hospital care; however, the MEI, as currently calculated by CMS, differs from the market basket index in that it includes an adjustment for productivity growth. This adjustment is intended to prevent double-counting of changes in productivity (Freeland et al. 1991). Such double-counting could occur if the changes in input prices measured by the MEI are partly due to changes in the productivity of the inputs. Failure to account for productivity growth could mean that physicians are paid twice for productivity growth—once in the MEI and once for any increases in the volume and intensity of services they provide that are the result of increased productivity.

Although productivity growth is an important factor, MedPAC believes that it should be considered separately in update decisions. This allows input price indexes to account only for changes in prices, not other changes in cost. Other factors affecting costs often offset each other.

5 In addition to this overall finding, the survey showed a small decrease in the number of physicians accepting all new Medicare patients and a small increase in the number of physicians accepting most new Medicare patients. These changes occurred between the first round of the survey (conducted in 1996-1997) and the second round (conducted in 1998-1999).

6 The AMA survey shows a relationship between practice changes and Medicare, but physicians were not asked about other payers in this survey.

**TABLE  
2C-3****Medicare Economic Index weights and forecast  
of input price changes for 2003**

Input	Weight (%)		Price changes for 2003 (%)
	Category	Total	
Total		100.0	3.0
Physician work		54.5	3.2
Wages and salaries	44.2		3.1
Nonwage compensation	10.3		3.2
Practice expense		45.5	2.9
Nonphysician employee compensation			3.3
Wages and salaries	12.4		3.3
Nonwage compensation	4.4		3.4
Office expense	11.6		2.3
Medical materials and supplies	4.5		2.1
Professional liability insurance	3.2		4.6
Medical equipment	1.9		2.0
Other professional expense			2.6
Professional car	1.3		1.3
Other	6.3		2.8

Source: Unpublished data from CMS.

Removing the productivity adjustment is not the only change necessary in the MEI. As used in the SGR system, the MEI is not a forecast of the change in input prices for a given year; instead, it measures input price inflation for the previous year. To allow payment updates to anticipate changes in costs during the coming year, MedPAC has recommended that CMS use a forecast of the MEI when making payment updates for physician services (MedPAC 2001).

By removing the productivity adjustment and making it a forecast, the MEI would become a better measure of input price inflation. So modified, the index shows that input prices for physician services are expected to increase by 3.0 percent in 2003.<sup>7</sup>

### Other cost-increasing factors

The cost of physician services may increase because of factors other than input price inflation. The effects of some of these factors are likely to be small, however. For instance, costs could go up because of scientific and technological advances or complexity changes within service categories.<sup>8</sup> These two factors are usually accounted for in the physician fee schedule, however, when new billing codes are created or existing codes are revised.<sup>9</sup> Many such changes in the codes occur every year (Figure 2C-1). Technological advances and within-service complexity are also accounted for when the fee schedule's relative weights are reviewed and recalibrated every five years. CMS estimated a small spending

impact for the most recent of these five-year reviews: 0.46 percent, or about 0.1 percent per year.<sup>10</sup>

Other factors increasing costs are difficult to measure. For example, the regulatory burden of the Medicare program is an important concern of physicians. Nevertheless, estimates of the cost of this burden are not available. Furthermore, the Secretary has appointed an advisory committee on regulatory reform and has taken other steps to reduce regulatory burden. These activities are important but complicate any effort to assess cost impacts. One way to account for any increases in cost due to these factors is to assess payment adequacy, as described earlier, and adjust payments accordingly in the updates for years after 2003.

### Productivity growth

Assuming the Secretary removes the productivity adjustment from the MEI as MedPAC recommends, how should the Secretary measure productivity growth for physician services?

Productivity growth is the ratio of growth in outputs to growth in inputs. Measuring productivity growth requires detailed information on the personnel, facilities, and other inputs used and on the quantity, quality, and mix of services (outputs) produced. Because such data are generally not available, MedPAC has adopted a policy standard, or goal, for achievable productivity growth that is based on growth in multifactor productivity in the national economy.<sup>11</sup>

Why is this policy standard necessary for physician services? If productivity growth is unmeasurable, why don't we assess it after the fact when we assess payment adequacy? Because we do not have cost reports for physician services, our tools

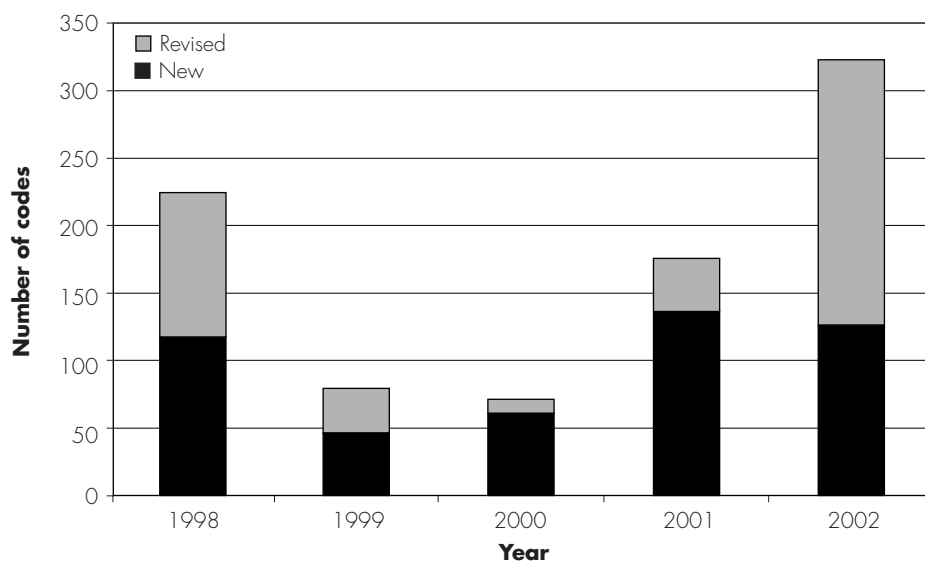
7 This estimate is subject to change as CMS collects better data. Better data are important because of recent instability in the market for professional liability insurance (Albert 2002).

8 Scientific and technological advances include advances that enhance quality of care but also raise costs. Complexity changes within service categories are changes in the average severity of illness or other factors that raise costs.

9 Some coding changes are budget neutral, which prevents them from accounting for increases in cost.

10 CMS used this estimate to adjust payment rates so the five-year review would be budget neutral.

11 Multifactor productivity is based on all relevant inputs used to provide goods and services. Those inputs include labor, capital, and other inputs, such as energy and materials.

**FIGURE  
2C-1****New and revised billing codes**

Source: CMS, Physician fee schedule final rules, various years.

for assessing payment adequacy are much better at telling us if payments are too low than if payments are too high. Therefore, we cannot use these tools to see if cost-decreasing effects of productivity growth have led to payments that are too high.

The productivity adjustment currently in the MEI is a policy standard like the one proposed here because it is not based on measures of productivity growth for physician services. The current adjustment only accounts for growth in the productivity of labor inputs, however. It does not account for growth in the productivity of capital and other inputs.

**RECOMMENDATION 2C-2**

**The Secretary should revise the productivity adjustment for physician services and make it a multifactor instead of labor-only adjustment.**

Revising the productivity adjustment to account for labor and nonlabor factors is consistent with the way physician services are produced. Labor accounts for most of the cost of providing physician services, but other inputs are also important, including office space, medical materials and supplies, and equipment. A labor-only productivity adjustment implies that there is no complementarity between labor and other inputs. The Commission believes that such complementarity exists, however. The production of physician services, like the production of most other goods and services, is a joint effort that requires both labor and non-labor inputs.

Another reason to revise the productivity adjustment is to make it consistent with modern methods of measuring productivity. A labor-only adjustment has been part of the MEI since the index was first used in paying for physician services in 1975, before the Bureau of Labor

Statistics (BLS) began publishing measures of multifactor productivity in 1983 as a way to capture the joint effects of multiple inputs (BLS 2001a).

If the Secretary decides to make the productivity adjustment for physician services a multifactor one, he has two options. He can adopt a policy standard such as MedPAC's, which is 0.5 percent, or he can calculate an adjustment using the same method as the one used for the current, labor-only adjustment, which is a 10-year moving average of productivity growth. Based on current estimates from the BLS on growth in multifactor productivity, the adjustment would be about 0.7 percent (Figure 2C-2).<sup>12</sup>

Regardless of the option chosen, the Commission believes that the Secretary should continue to use an adjustment that is stable from year to year. The adjustment should be based on long-run trends in multifactor productivity growth, however.

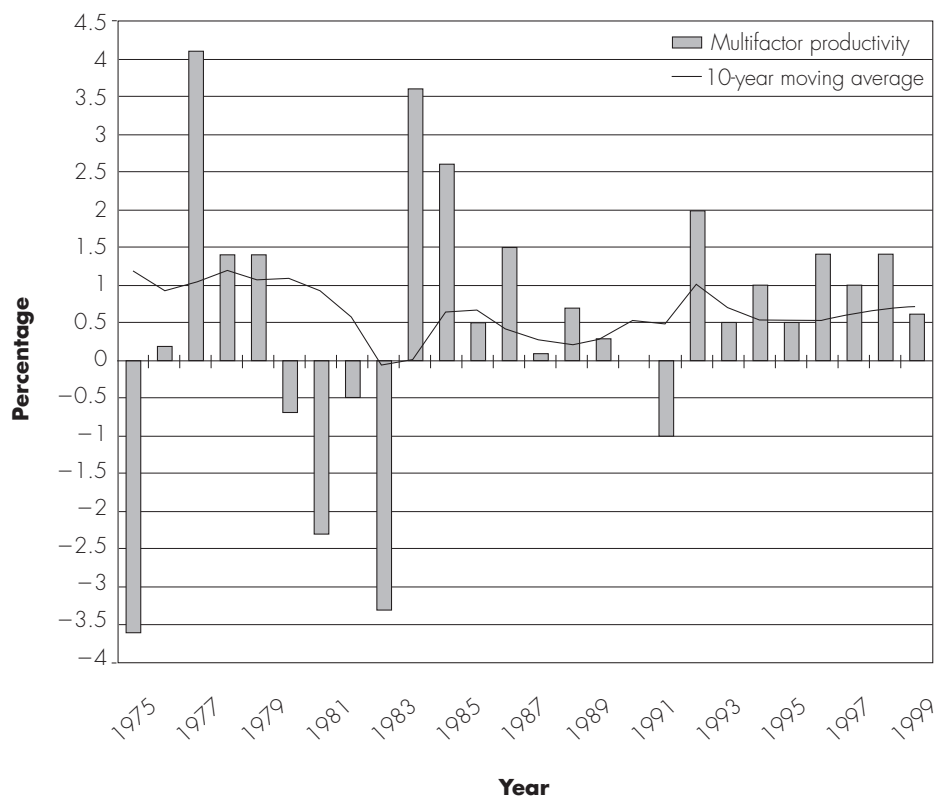
Are such productivity gains achievable for physician services? A number of factors contribute to growth in multifactor productivity, including research and development, new technologies, economies of scale, managerial skill, and changes in the organization of production (BLS 2001a). These factors appear relevant to physician services. Two examples illustrate this:

- **Economies of scale.** Research has shown that doubling the size of a physician practice (from the current average of about 2.5 physicians to 5 physicians) would increase productivity by 9 percent with no increase in practice expense per physician (Pope and Burge 1996). Physicians apparently perceive the advantages of group practice (Figure 2C-3): in 1990, 52 percent of self-employed physicians were in solo practice, but by 1998, that percentage had dropped to 42 percent.

<sup>12</sup> MedPAC's productivity growth standard of 0.5 percent is lower than the current trend in multifactor productivity because this standard was established before recent increases in productivity growth. Since 1999, MedPAC has used this standard when making update recommendations for services other than physician services.

**FIGURE 2C-2**

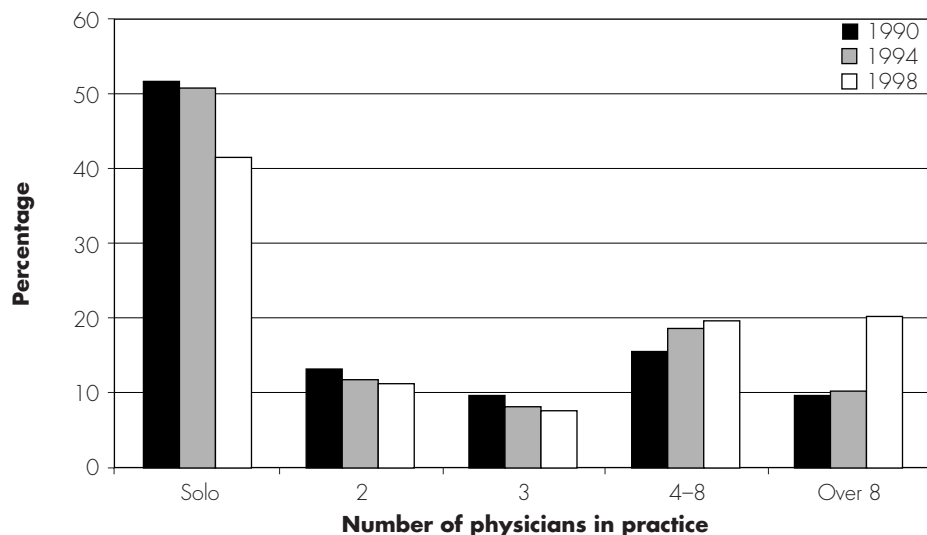
## Multifactor productivity growth, 1975–1999



Source: MedPAC analysis of data from the Bureau of Labor Statistics (2001b).

**FIGURE 2C-3**

## Distribution of self-employed physicians by size of practice, 1990, 1994, and 1998



Source: AMA, Physician Marketplace Statistics, Fall 1990; AMA, Physician Marketplace Statistics, 1994; and AMA, Physician Socioeconomic Statistics, 1999–2000.

- New technologies. Physicians are increasing their productivity by using a variety of new technologies, including handheld computers, electronic medical records, and the Internet (Bureau of National Affairs 2001). Of these, the Internet probably has the greatest potential. Physicians currently use it for claims processing, research, and continuing education. Future uses include remote interpretation of radiographic and other medical images in central imaging centers designed for optimal productivity (Kieffer and Drew 2000). New technologies do not always lead to productivity increases, however. For example, e-mail communication between physicians and patients can reduce physician productivity if it diverts them from providing services.

## Update recommendation

Under MedPAC's proposed update method for physician services, updates can include three components: an adjustment for payment adequacy, if appropriate; an estimate of inflation in input prices; and a downward adjustment in the update for growth in multifactor productivity.

### RECOMMENDATION 2C-3

**The Congress should update payments for physician services by 2.5 percent for 2003.**

Payments for physician services may be too low currently because payment updates have not kept pace with the change in input prices since 1999. MedPAC recommends no adjustment for payment adequacy at this time, however, pending collection of further data. The other components of the update are the estimate of the change in input prices for 2003, which is 3.0 percent, and MedPAC's adjustment for growth in multifactor productivity, which is 0.5 percent. ■

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# 2D

SECTION

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## **Skilled nursing facility services**

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## R E C O M M E N D A T I O N S

**2D-1** The Secretary should develop a new classification system for care in skilled nursing facilities.

\*YES: 13 • NO: 0 • NOT VOTING: 0 • ABSENT: 4

.....  
**2D-2** If the Centers for Medicare & Medicaid Services refines the classification system for care in skilled nursing facilities, the temporary payment increase, previously implemented to allow time for refinement, will end. The Congress should retain this money in the base payment rate for skilled nursing facilities.

YES: 13 • NO: 0 • NOT VOTING: 0 • ABSENT: 4

.....  
**2D-3** For fiscal year 2003, the Congress should update payments to skilled nursing facilities as follows. For freestanding facilities, no update is necessary. For hospital-based facilities, update payments by market basket and increase payments by 10 percent until a new classification system is developed.

YES: 12 • NO: 1 • NOT VOTING: 0 • ABSENT: 4

\*COMMISSIONERS' VOTING RESULTS

# SECTION 2D

## Section 2D: Skilled nursing facility services

Medicare spending for care in skilled nursing facilities grew rapidly in the early 1990s—23 percent annually from 1990 to 1996. To control growth, the Congress required the Centers for Medicare & Medicaid Services to implement a prospective payment system for care in skilled nursing facilities. From its beginning in July 1998, the payment system has had problems classifying patients and paying appropriately for their care. To mitigate shortcomings in the prospective payment system, the Congress enacted a series of temporary rate increases. In this section of Chapter 2, we recommend that a new classification system for skilled nursing facility care be developed because the existing system is fundamentally flawed. We also examine whether the payments are adequate to ensure beneficiaries' access to skilled nursing facility care, and we conclude that the overall base payment is adequate but that payments are maldistributed between freestanding and hospital-based facilities. Therefore, for fiscal year 2003, we recommend different updates to payments for the two types of skilled nursing facilities.

### In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

Under the prospective payment system (PPS), skilled nursing facilities (SNFs) are paid a case-mix adjusted, per diem amount intended to cover the routine, ancillary, and capital-related costs of furnishing SNF services (see Chapter 1, p. 22, for additional information on the payment method).

Patients are assigned to one of 44 groups by a case-mix classification system, the resource utilization group, version III (RUG-III). The RUG-III measures patients' relative resource use on the basis of staff time to provide nursing care and rehabilitation. It does not adequately measure the resource needs of patients who require multiple types of services (such as extensive medical services and rehabilitation) or nontherapy ancillary services (such as pharmaceuticals or laboratory tests) (MedPAC 2001).<sup>1</sup>

In response to providers' concerns about the SNF PPS, the Congress instituted a series of temporary rate increases through two pieces of legislation—the Balanced Budget Refinement Act of 1999 and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000. These laws provided for:

- a 4 percent increase for all rates for care furnished from April 2000 through September 2002, which in the following discussion we call add-on X;
- a 16.66 percent increase in the base rate for the nursing component for care furnished from April 2001 through September 2002, which we call add-on Y; and
- a 20 percent increase for 12 case-mix groups of medically complex patients and a 6.7 percent increase for 14 groups of patients receiving rehabilitation; these latter two rate increases were intended to give the Centers for Medicare & Medicaid Services (CMS) time to refine the RUG-III and will expire when CMS declares the case-mix system refined. We call these temporary increases add-on Z.

## Assessing payment adequacy

The Medicare Payment Advisory Commission's (MedPAC's) assessment of payment adequacy for SNFs is made in the context of enormous uncertainty because of the age and poor quality of the underlying data available to inform the evaluation. Because we know that the data are imperfect, our assessment process attempts to consider multiple factors, including providers' entry into and exit from the program, beneficiaries' access to SNF care, and SNFs' access to capital. Our assessment is also complicated by the fact that SNF care is furnished in two settings—freestanding facilities that generally are part of nursing homes and skilled nursing units that are part of hospitals.

Two issues lie at the heart of assessing payment adequacy: whether the base rate is adequate and whether the distribution of payments is appropriate. According to our best estimate, the base rate for SNFs overall appears to be adequate if add-on Z remains in effect. Without this add-on, however, the base rate would probably be less than adequate.

Based on Medicare margins, the distribution of payments between freestanding and hospital-based SNFs appears inappropriate, with or without add-on Z. Freestanding SNFs have high Medicare margins while hospital-based facilities appear to have large negative margins. Differences in measured margins are difficult to interpret, although they result partly from the artifact of hospitals' allocation of costs to their SNFs and partly from differences in case mix and product between the two types of facilities. From 1998 to 2001, almost 20 percent of hospital-based facilities have left the Medicare program, but there has been a 1 percent increase in freestanding SNFs. Exits of hospital-based SNFs without comparable exits of freestanding

facilities reinforce margin data that suggest the distribution of payments is inappropriate.

In the next sections, we discuss the evidence supporting these conclusions.

## Appropriateness of current costs

SNF costs were extremely high under cost-based payment. Under that system, SNFs had limits for routine operating costs (for example, room and board) but no limits on costs for ancillary services, such as physical therapy. Most of the rapid growth in SNF spending—23 percent annually from 1990 to 1996—was due to increased provision of ancillary services. Both the General Accounting Office (GAO) and Office of Inspector General (OIG) maintain that SNF costs were overstated under the cost-based payment system (GAO 1998, OIG 1999).

Under prospective payment, SNFs have financial incentives to decrease their costs and have responded accordingly—costs per day for freestanding SNFs dropped from \$305 in 1997 (pre-PPS) to \$240 in 1999. Anecdotal evidence suggests that after the implementation of the PPS, SNFs were able to cut costs substantially by negotiating lower prices for contract therapy (physical, occupational, and speech therapists) and pharmaceuticals. SNFs also cut costs by substituting lower-cost labor for higher-cost labor (Liu et al. 2000); for example, using therapy assistants instead of therapists to provide therapy services or using licensed nurses instead of respiratory therapists to provide respiratory therapy. In addition, SNFs cut the number of therapy staff under the PPS (White 2001). We do not know how these cost-cutting measures affect the quality of care furnished to beneficiaries in SNFs because studies have not yet been completed.

Hospital-based SNF costs (\$470 per day in 1998, compared with \$305 for freestanding facilities) are difficult to interpret because hospitals have historically allocated administrative costs

1 Nontherapy ancillary is the term used to describe an ancillary service that is not physical, occupational, or speech therapy.

to units paid on a cost basis—including SNFs and outpatient departments (OPDs). For hospital OPDs, this cost allocation has increased reported costs by an estimated 15 to 20 percent. We do not know the extent that costs are allocated to SNFs, but reported costs for hospital-based SNFs appear inappropriately high, even after we take their higher case-mix index and staffing into consideration.

Hospital-based SNFs have had a substantially higher case mix than freestanding SNFs, as shown by MedPAC’s analysis using all-patient refined diagnosis related groups (MedPAC 2001). Hospital-based SNFs also have more licensed staff than freestanding SNFs (HCFA 2000). How much of the different staff mix is a result of a higher case mix is not known. However, a shorter average length of stay—13 days, compared with 26 days for freestanding SNFs—combined with differences in staffing and case mix suggests that hospital-based SNFs furnish a different product.

Relationship of payments to costs

Every year MedPAC recommends to the Congress a payment update for the coming fiscal year for skilled nursing facilities. To inform our recommendation, we estimated margins for 2002, including policy changes that will be in effect for 2003 under current law.

To estimate the relationship between payments and costs, we modeled fiscal year 2002 SNF payments and costs using methods like those we use for all settings paid prospectively. For each PPS, we:

- used the latest cost report data available (fiscal year 1999) as the cost and payment base,
- increased costs by market basket for 2000 and 2001 and used CMS’s forecast of market basket increase for 2002,
- increased payments by the update factor for each year starting after 1999.

We modeled 2002 payments and costs to reflect policy changes that will be in effect in 2003:

- SNFs will be paid at 100 percent of the federal rate because the phase-in of the PPS will be complete.
- Because of uncertainty of whether CMS will refine the RUG-III classification system and the effect of these changes on payments, we modeled 2002 payments and costs with and without add-on Z (the 20 percent increase for medically complex patients and 6.7 percent increase for rehabilitation patients).

We did not include add-ons X and Y, the two temporary rate increases that were in effect after fiscal year 1999 but expire in fiscal year 2003.

We also adjusted costs for hospital-based SNFs to reflect our best estimate of reasonable costs. We began with costs for freestanding SNFs because these facilities are able to deliver SNF care under the PPS. We then added 30 percent to costs for freestanding facilities to account for differences in case mix and product between the two types of facilities.

The estimate of current costs MedPAC used to calculate 2002 margins may be overstated for two reasons. First, we used fiscal year 1999, the first year that most SNFs were subject to the PPS, as the cost base for our modeling.<sup>2</sup> Second, we

assumed that costs increased by the full market basket increase for each year after 1999. Our method did not allow us to take into account SNFs’ behavioral adjustment to the PPS after the first year. SNFs likely cut costs as they gained experience with the PPS and as knowledge of ways to cut costs diffused within the industry. For example, SNFs substituted some licensed practical nurse and nurse aide time for registered nurse time after some experience with the PPS (Hodlewsky et al. 2001).

Overall margins for 2002 suggest that with add-on Z in effect, Medicare’s payments are adequate. The Medicare margin for all facilities is almost 5 percent, including the adjustment for hospital-based SNFs costs discussed above (Table 2D-1). Without add-on Z, however, the Medicare margin for all facilities drops to almost –5 percent.

The factors we examined in addition to the Medicare margin also suggest that the base rate is adequate. Freestanding SNFs have stayed in the Medicare program (although more than 400 hospital-based SNFs have closed). In addition, the OIG found that beneficiaries have had stable access to SNF care in 2000 and 2001 (OIG 2001). Finally, most SNFs appear to have adequate access to capital.

Entry and exit of providers

A significant number of hospital-based SNFs (almost 20 percent) have exited the Medicare program since the PPS began

TABLE 2D-1 Medicare margins for skilled nursing facilities, 1999 and estimated 2002

SNF group	Reported 1999 (No add-ons)	Estimated 2002	
		With add-on Z	Without add-on Z
Freestanding	9.0	9.4	0.4
Hospital-based	–55.6	–21.0	–33.0
All SNFs	–4.2	4.8	–4.6

Note: For 2002, we modeled costs for hospital-based skilled nursing facilities (SNFs) as equal to costs for freestanding facilities plus 30 percent. Add-on Z increases rates by 20 percent for medically complex patients and 6.7 percent for rehabilitation patients.

Source: MedPAC analysis of CMS cost reports.

2 SNFs became subject to the PPS according to their cost reporting year as of July 1998; more than 60 percent of SNFs had cost reporting years beginning January 1999.

**TABLE  
2D-2**

**Change in number of certified skilled nursing facilities by type, 1998-2001**

	1998	2001	Percent change 1998-2001
<b>Medicare only</b>			
Hospital-based	1,032	705	-32%
Freestanding	428	401	-6
<b>Medicare/Medicaid</b>			
Hospital-based	1,141	1,057	-7
Freestanding	12,434	12,592	1
<b>Totals</b>			
Hospital-based	2,173	1,762	-19
Freestanding	12,862	12,993	1
All facility types	15,035	14,755	-2

Source: MedPAC analysis of CMS On-line Survey, Certification, and Recording System (OSCAR) data.

(Table 2D-2). At the same time, the number of freestanding SNFs has increased modestly (1 percent). Particularly notable is the 32 percent decrease in Medicare-only hospital-based SNFs, compared with a 6 percent decrease in Medicare-only freestanding SNFs.

**Beneficiaries' access to care**

According to a recent OIG study of access, beneficiaries have generally not had problems obtaining SNF care. Almost three-fourths of hospital discharge planners reported in 2001 that they were able to place all patients who needed SNF care; one-fifth reported being able to place all but 1 to 5 percent and the rest had problems placing more than 5 percent of patients. Patients requiring costly services had the most difficulty accessing SNF care (OIG 2001). These findings are consistent with those from a 2000 study (OIG 2000).

**Access to capital**

More than 90 percent of SNFs are part of either a hospital or a nursing home. Medicare-covered SNF care represents a small share of both hospitals' and nursing homes' business.<sup>3</sup>

Hospitals generally have good access to capital (see Section 2B). However, hospitals may not continue to allocate capital to SNFs if that line of business continues to lose money.

Most nursing homes also have access to capital. Under the PPS, many independent freestanding SNFs and small to medium-sized regional chains, which represent 47 percent of the nursing home market, have had increases in net income and debt coverage, before any payment add-ons (PricewaterhouseCoopers 2001). Generally, researchers have found that net operating income margins and the ability to service debt for these facilities were about the same under PPS as under cost-based payment.

As widely reported, five of the seven largest publicly traded nursing home chains declared bankruptcy in 1999. GAO (2000) found that these bankruptcies resulted from heavy investment in ancillary service lines of business and high capital-related costs (such as depreciation, interest and rent). Two chains emerged from Chapter 11 bankruptcy in 2001 and another is expected to emerge in early 2002.

**Different updates for freestanding and hospital-based SNFs**

Assuming the continuation of add-on Z, payments appear to be more than adequate for freestanding SNFs. For hospital-based SNFs, departures from the Medicare program and negative margins beyond what we would expect after adjusting for case mix and cost allocation together suggest payments are not adequate.

This difference in payment adequacy is partly the result of the RUG-III classification system's inability to adequately classify patients and partly due to differences in product between hospital-based and freestanding SNFs. The RUG-III classification system is based on a patient assessment instrument that does not collect certain information needed to account for the resource use of more medically complex patients who need SNF care (MedPAC 2001). In addition, the system does not appropriately account for all the costs of providing SNF care, especially costly ancillaries such as drugs.

Ideally, an inappropriate distribution of payments that results from the classification system would be addressed by fixing that system. However, CMS faces substantial obstacles in refining the RUG-III successfully to provide an acceptable case-mix classification system for SNF patients.

**RECOMMENDATION 2D-1**

**The Secretary should develop a new classification system for care in skilled nursing facilities.**

The Commission believes that the RUG-III cannot be refined to provide an acceptable classification system. The RUG-III has four fundamental problems, three of which refinement cannot remedy. First, it is based on a patient assessment instrument that does not collect the information needed to account for the needs of patients who require SNF care. Second, the system is subject to a high rate of error in classifying patients. Third,

3 SNFs make up 2 percent of hospitals' Medicare payments and 3 percent of their Medicare costs. Medicare SNF payments make up about 10 percent of nursing homes' revenue (AHCA 2001).



classification of rehabilitation patients is based on services provided rather than patient characteristics and because payment rates are higher for these patients, the system gives SNFs incentives to provide therapies when they may not be beneficial. Finally, the system allocates expected resource use inappropriately because costs of nontherapy ancillary services are included only to the extent that these costs are correlated with nursing staff time. Even if CMS were able to refine the RUG-III to better account for the resources needed to care for SNF patients, the problems of inadequate information, classification errors, and provider manipulation of the system would remain.

We anticipate that a new classification system will be available no sooner than fiscal year 2006.<sup>4</sup> Therefore, we recommend a less than optimal fix—different updates for freestanding and hospital-based SNFs—to temporarily address existing distributional problems.

## Accounting for cost changes in the coming year

MedPAC's update recommendation depends on two things: the adequacy of current payments for care in skilled nursing facilities and expected changes in the cost of providing care in the coming year. As in the other PPS settings, when considering changes in costs in the coming year we start with a market basket forecast. The SNF market basket provides

a measure of how prices change for a fixed set of inputs to provide SNF care (see Section 2A); however, we expect SNFs to continue adjusting to the PPS in fiscal year 2003, finding more efficient ways to use inputs and reduce costs. The phase-in of the prospective payment system was intended to allow facilities to adjust gradually to prospective payment, and we anticipate that SNFs will continue to do so. Using MedPAC's framework for making update recommendations and taking into account our expectation that SNFs will reduce costs, we recommend that overall SNF payments be increased by about market basket minus 1 percent.

## Update recommendation

To implement this overall increase, MedPAC recommends several specific changes: one affecting the base payment amount and two affecting payments for care in hospital-based SNFs.

### RECOMMENDATION 2D-2

**If the Centers for Medicare & Medicaid Services refines the classification system for care in skilled nursing facilities, the temporary payment increase, previously implemented to allow time for refinement, will end. The Congress should retain this money in the base payment rate for skilled nursing facilities.**

To protect beneficiaries' access to SNF care, we recommend that if CMS refines the RUG-III classification system and

add-on Z expires, the money should be incorporated in the base payment rate. Without add-on Z, the estimated Medicare margin for all SNFs would be -5 percent, which appears to be inadequate.

### RECOMMENDATION 2D-3

**For fiscal year 2003, the Congress should update payments to skilled nursing facilities as follows. For freestanding facilities, no update is necessary. For hospital-based facilities, update payments by market basket and increase payments by 10 percent until a new classification system is developed.**

Contingent on the money from add-on Z being retained in the base rate, we recommend different updates for freestanding and hospital-based SNFs. We believe, based on an estimated 9 percent Medicare margin and other indicators, that no update for freestanding SNFs is appropriate. In contrast, we believe that the Medicare margins of hospital-based SNFs, as well as other indicators, suggest that a market basket update is needed for fiscal year 2003 to account for changes in input prices between 2002 and 2003. In addition, to recognize differences in case mix and product, we recommend that the base rate for hospital-based SNFs be increased temporarily by 10 percent until a new and effective classification system is implemented. Together, these updates for hospital-based SNFs would cost about the same as updating payments for all SNFs by market basket minus 1 percent. ■

<sup>4</sup> The Congress required CMS to report on alternative SNF classification systems in January 2005. We estimate that implementation will take an additional nine months.

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# 2E

SECTION

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## Home health services

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## R E C O M M E N D A T I O N S

**2E-1** The Congress should extend for two years the 10 percent add-on payments for home health services provided in rural areas.

**\*YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3**

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**2E-2** The Congress should update home health payments by market basket for fiscal year 2003.

**YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3**

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**2E-3** The Congress should eliminate the payment cut for home health services scheduled for October 2002 in current law.

**YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3**

**\*COMMISSIONERS' VOTING RESULTS**

# SECTION 2E

## Section 2E: Home health services

The home health sector has experienced many changes in the past decade. Rapid growth in spending and use of services in the early 1990s was followed by changes in the basic structure of the payment system, eligibility for the benefit, and efforts to reduce fraud and abuse. Spending and use of services fell dramatically. Nonetheless, over the past two years more stable market conditions and evidence that beneficiaries do not face difficulties in accessing home health services suggest that current payments are neither too high nor too low. In the absence of evidence of problems with current payments, the Commission supports stabilizing payment policy. To maintain the current relationship of payments and costs, Medicare's payments should increase by market basket—the rate at which we expect costs to grow. In addition, the Congress should eliminate the substantial reduction in the base rate currently scheduled for October 2002 and retain the rural add-on payment for two additional years.

### In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

Under the prospective payment system (PPS), home health agencies receive payment for 60-day episodes of care. The payment is intended to cover the costs an efficient provider would incur in furnishing skilled nursing, aide service, medical social work, or therapy to homebound beneficiaries in their places of residence. Payments totaled \$9.4 billion in 2000. Neither copayments nor deductibles apply to home health.

The base payment amount for a 60-day episode of care is \$2,274.17 in fiscal year 2002. This amount is adjusted to account for differences in patients' expected resource needs, as reflected by their clinical and functional severity, recent use of other health services, and therapy use. Payment also is adjusted for differences in local market conditions by a version of the hospital wage index. Adjustments for several other special circumstances, such as outliers or episodes with four or fewer visits, can also modify the payment (see Chapter 1, p. 23, for more information).

The current structure of home health payment follows several years of near-constant change. During the late 1980s and early 1990s, both the proportion of beneficiaries using home health and average number of visits per user increased dramatically (MedPAC 1998). In 1987, the average number of visits per user was 23; by 1997 it had risen to 78. Over the same period, Medicare spending for home health services grew from \$2 billion to \$17 billion. The escalation reflected two factors: a cost-based payment system that provided weak incentives for agencies to limit the volume of services, and a program that was increasingly providing essentially long-term care under what was intended to be a post-acute care benefit.

Escalating costs and growing use of home health services provided a catalyst for policy action. The payment system was changed from a cost-based system to an interim system with stricter payment limits in 1997, then changed again to the prospective payment system in October 2000. Eligibility for the benefit was also modified; some low-intensity, long-term

beneficiaries no longer qualify for a full range of home health services if their only skilled need is the drawing of blood. Finally, Operation Restore Trust and other anti-fraud and abuse initiatives reduced unnecessary care and decreased use by beneficiaries who probably were not eligible for the benefit.

The new payment systems, adjustments to eligibility, and fraud and abuse reduction efforts were intended to reduce spending and redirect the benefit toward briefer, more intense care. Changes in spending and use between 1997 and 1999 demonstrate that these changes had some dramatic effects (McCall et al. 2001):

- Total Medicare spending on home health fell 52 percent;
- The proportion of beneficiaries who used home health fell 20 percent;
- Average visits per user fell 40 percent;
- Average home health length of stay declined; and
- The proportion of therapy visits, a relatively intense service, increased from 10 percent of all visits in the first quarter of 1997 to 18 percent by the last quarter of 1999; and visits by home health aides, a low-intensity service, decreased from 49 percent to 34 percent over the same interval.

The magnitude of the changes since 1997 suggests that the policies implemented thus far have substantially met their goal of reducing home health spending and use. However, frequent changes impair providers' abilities to foresee their own costs and payments and to make decisions about participating in the program. Frequent changes also impair our ability to evaluate the adequacy of current payments by limiting both the data available and our ability to identify and interpret trends.

Given the recent disruptions, the Commission supports stabilizing payment policy. In evaluating the need for a payment update, we assessed the adequacy of current payments and accounted for cost changes next year.

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## Assessing payment adequacy

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We evaluated payment adequacy by considering beneficiaries' access to care and the entry or exit of providers. Recent changes in the payment system and the lack of a clear definition of the benefit limit our ability to use current payments and costs to determine whether payments are too high or too low.

## Current payments and costs

Typically, one factor that the Commission uses to evaluate the adequacy of current payments is the ratio of payments to estimated current costs. Current costs are estimated by updating the most recent available data. However, for the home health sector, the most recent available cost reports cover 1999. Those costs were generated before the payment system changed to its current structure. The interim payment system in place in 1999 was very different from the current one. Home health care is likely very different under the current payment system because of incentives for efficiency under the PPS; therefore, the 1999 costs would tell us very little about expenses in 2002 under the PPS. Cost reports from the current payment system are not yet available because programming difficulties at the Centers for Medicare & Medicaid Services (CMS) have delayed the statistical reports upon which providers rely to produce the cost reports.

## Product changes

The PPS replaced the visit as the unit of payment with a new unit, the episode. This change has fundamentally altered the incentives of the payment system and may affect the product that home health agencies provide.

Prior to the PPS, home health agencies were paid per visit according to visit type, such as therapy, nursing, or home health aide. Paying per visit encouraged agencies to provide as many visits as possible as long as their costs were less than the per-visit payment limits for that type of visit.

This incentive was a catalyst for the rapid growth in the number of visits delivered, and hence in spending, until 1997.

In contrast, because the unit of payment is an episode under the PPS, agencies have the incentive to make at least five visits to qualify for an episode payment<sup>1</sup> but not more, because additional visits will not increase the episode payment. Under the episode payment of the PPS, agencies maximize profit by limiting costs per episode. To the extent that agencies respond to the financial incentives of the new unit of payment, we would expect the home health product to change from short, frequent visits to fewer (perhaps somewhat longer) visits and to include more non-visit services such as telemonitoring. Decreases in the number of visits per beneficiary provide some evidence that this change may be occurring.

## **Appropriateness of current costs**

Judgment about whether Medicare home health costs are appropriate is limited by lack of a clear definition of the benefit. The absence of clinical practice standards also limits our ability to interpret costs and service use. At present, home health use varies considerably over time and by geographic location, but we do not know whether this variation reflects differences in access, in beneficiaries' health, in the supply of alternatives (such as nursing homes), excessive use or stinting on care, or some other factor.

CMS is pursuing several research projects to develop standards for home health services, including a contract to test whether the volume of home health services is related to outcomes (HCFA 2001). Thus far, the research has not found strong volume-outcome relationships after controlling for patient condition. Another study is developing ways to identify instances when stinting on services has affected the quality of

care. Both studies could lead to standards for the appropriate amount of service.

## **Relationship of payments to costs**

Although we lack a direct measure of costs, we would expect large discrepancies between payments and costs to be evident in the exit and entry of providers or beneficiaries' access to care. Our analysis of these market indicators provides no compelling evidence that payments are not appropriate.

## **Entry and exit of providers**

The absence of substantial entry or exit of home health agencies in 2000 or 2001 may suggest that costs and payments are roughly in line with each other. In the past two years, the number of participating agencies has remained stable around 7,000. In 1996, under the cost-based payment system, about three new agencies entered for each exiting agency. During 1999 under the interim payment system, exiting agencies outnumbered entering ones 8 to 1.

Medicare's payments are a key factor influencing agencies' exit and entry, but two factors unrelated to costs and payments may also cause exit or prevent entry. First, agencies must meet Medicare's quality-of-care and financial standards or they can be involuntarily removed from the program. Involuntary exits may be unrelated to costs and payments. Second, some entries to the program may be prevented or delayed by state regulations that limit the number of participating agencies in that state. Finally, the structure of the PPS may favor larger agencies with the ability to average profit and loss over a large and varied patient population, thus creating a barrier to entry for small, start-up agencies in this new system.

A reduction in the number of Medicare-certified agencies does not necessarily indicate a reduction in home health care

capacity. Some observers have suggested that having only a small number of agencies per Medicare beneficiary in an area may impair access, but no evidence exists to suggest that the number of agencies is a meaningful measure of access. Despite closures and changes in practice patterns, access generally had not been impaired (GAO 1999). Furthermore, because the home health industry has been experiencing consolidation, the agencies still participating in Medicare may be larger than their predecessors.

## **Beneficiaries' access to care**

According to the Office of Inspector General (OIG), beneficiaries continue to maintain good access to care (OIG 2001a, OIG 2001b), suggesting that payments are at least adequate to induce agencies to serve Medicare beneficiaries. The OIG surveyed hospital and nursing home discharge planners in early 2001, after the PPS had been in place for about six months. Most discharge planners reported placing beneficiaries in home care without difficulty. Of the few planners who reported difficulties, most were unable to place only a small fraction of discharged beneficiaries.

Until recently, observations on access focused on beneficiaries discharged from a hospital or nursing home. However, this year the OIG also studied beneficiaries admitted to home health care directly from the community. The OIG surveyed physicians, representatives from community services for the elderly, home health agencies, and others about the experience of beneficiaries who did not use the resources of a facility-based discharge planner. Those surveyed reported little difficulty in placing beneficiaries from the community.

## **Home health in rural areas**

Concerns about access to home health services in rural areas led the Congress to provide an additional 10 percent payment for home health services provided to

<sup>1</sup> Providing four or fewer visits within a 60-day period results in per visit payment based on the visit type (the low utilization payment adjustment, LUPA) instead of the episode payment. Even the higher LUPA payments are much lower than the lowest episode payment.

beneficiaries living in rural areas.<sup>2</sup> This addition is scheduled to expire in April 2003.

In June 2001, the Commission concluded that the new PPS should work equally well in both urban and rural settings based upon our analysis of the design of the PPS. We found that the unit of payment, the base payment, and the case mix adjustment should work as well in rural as in urban areas. Although the Commission was concerned that costs per patient could be higher in rural areas than in urban because of the small scale of operations, the distances to travel among rural clients, and differences in the use of therapy, our inability to measure costs made it difficult to assess this issue.

As discussed earlier, we have no evidence to suggest that payments are not adequate for home health generally. Our information about rural home health specifically is mixed. On one hand, two market indicators (McCall et al. 2001) suggest that continuing the add-on may be appropriate. The proportion of beneficiaries using home health declined significantly more rapidly between 1997 and 1999 in rural areas (–26 percent) than it did in urban areas (–19 percent). Also, rural areas lost a larger proportion of their agencies than urban areas. On the other hand, OIG’s finding that discharge planners at urban and rural hospitals were able to place Medicare beneficiaries in home health at similar rates does not support the argument that special treatment for rural areas is necessary (OIG 2001b).

Given the mixed evidence, it may be appropriate to continue the add-on payment until additional data become available to make a more accurate evaluation. In the interim, the Commission makes the following recommendation:

## RECOMMENDATION 2E-1

**The Congress should extend for two years the 10 percent add-on payments for home health services provided in rural areas.**

Services for beneficiaries in rural areas were recently in sharp decline and a higher proportion of rural agencies than urban agencies closed. Although we have no evidence to suggest that access to care in rural areas is impaired with rural payments at their current level, we do not know if that would persist without the rural add-on.

### Accounting for cost changes in the coming year

In addition to accounting for the adequacy of current payments, a payment update for home health services should account for changes in costs in the coming year. To account for changes in the cost of inputs, the Commission’s update framework begins with the forecasted increase in the indicator for price change—in this case the home health market basket. Unless we believe some factor would cause costs to rise more or less quickly than input prices, we expect the market basket to capture the changes in costs for the coming year.

Home health agencies may have decreased their costs following the implementation of the PPS. However, the same data shortfall that limited our ability to estimate current costs also limits our ability to estimate changes in costs over the coming year.

Our analysis of the components of the PPS suggests that agencies that were paid a prospective amount per episode have an incentive to lower their costs per episode. In 1996, CMS conducted a demonstration to test the effects of the PPS’s incentives on the cost of home health care services

(Cheh and Trenholm 1999). Treatment-group agencies were paid a lump sum for 120-day episodes of care. Control groups enrolled in the demonstration for comparison were paid per visit. In this demonstration, prospectively paid agencies significantly decreased the number of visits per episode, compared with the control group. Though the prospectively paid agencies’ costs per visit increased, the net effect was that costs per episode were lower for the treatment group than for the control group.

Though both our analysis of the components of the PPS and CMS’s demonstration suggest that agencies will decrease their costs, we cannot conclude that costs will grow more slowly than input prices in the coming year for two reasons. First, we do not have evidence that cost decreases have definitely occurred. Though preliminary evidence suggests that the number of visits per episode has decreased<sup>3</sup> and decreasing visits per episode could lead to decreased costs per episode, the decrease could be offset by rising costs per visit. Without data on the costs per visit, we cannot conclude that declining visits per episode implies a proportionate decline in costs per episode. Second, we do not know when any cost decreases occurred or whether there are more to come. The PPS will have been in place for two years by the time the Commission’s update recommendation is implemented. If the efficiencies have already been realized, then costs in fiscal year 2003 may indeed rise at the same rate as the price of inputs.

### Update recommendation

The numerous recent changes, the immaturity of the current system, the lack of standards by which to judge the appropriateness of service use, and uncertainty regarding both appropriate costs and the likely changes in costs all

2 Under the legislation, rural beneficiaries are those who reside outside a metropolitan statistical area.

3 In an episode database developed by CMS when it created the PPS, CMS estimated that the average number of visits per episode was 31 in 1997 and 27 in 1998. Findings somewhat better than anecdote but less reliable than a scientifically drawn and analyzed sample of claims and agencies suggest that the average number of visits per episode was fewer than 20 during the first three quarters of the PPS (October 2000 through June 2001).

caution against substantial payment changes for this sector. Instead, the Commission supports a period of stability for payments for home health and makes the following two recommendations for minimizing disruptions to the system.

#### **RECOMMENDATION 2E-2**

**The Congress should update home health payments by market basket for fiscal year 2003.**

#### **RECOMMENDATION 2E-3**

**The Congress should eliminate the payment cut for home health services scheduled for October 2002 in current law.**

Our recommendation for a full market basket update is based on two conclusions. First, we do not have evidence that payments for home health are inappropriate, whether too high or too

low. Second, we have no evidence to suggest that costs will not grow at the same rate as input prices. In the absence of such evidence, we conclude that a full market basket update is appropriate.

Under current law, a substantial change to the system is imminent. The so-called 15 percent cut in home health payments, currently scheduled for October 2002, would be the last phase of the process begun in legislation in 1997 to reduce spending on home health services. Substantial reductions in spending and use have already occurred, however, and implementing the cut does not appear to be necessary to achieve the goals of the legislation.

Postponing the cut would prolong the uncertainty about payment rates. The uncertainty comes both because providers do not know when the cut will actually be implemented and because it is not clear

how large the cut would actually be. The scheduled reduction would not necessarily cut the payment rate by 15 percent. Instead, the reduction would be computed in such a manner so that the total amounts payable in fiscal year 2003 would be equal to the amount that would have been paid had the interim payment system remained in effect with its limits 15 percent lower than they were in 2000. Thus, the size of the cut depends upon the difference between the projected spending under the interim payment system and the projected spending under the PPS.

In addition, future adjustments to the system can be achieved through annual evaluations of payment adequacy, although without clinical standards or a clear definition of the benefit it will be difficult to know whether we have achieved the long-term goal of buying the right services at the right price. ■



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# 2F

SECTION

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## **Outpatient dialysis services**

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## R E C O M M E N D A T I O N

For calendar year 2003, the Congress should update the composite rate payment for outpatient dialysis services by 2.4 percent.

**\*YES: 14 • NO: 0 • NOT VOTING: 1 • ABSENT: 2**

**\*COMMISSIONERS' VOTING RESULTS**

# SECTION 2F

## Section 2F: Outpatient dialysis services

Current aggregate Medicare payments for outpatient dialysis services appear to be adequate. MedPAC's best estimate for 2002 is that payments for composite rate services and separately billable medications together exceed providers' costs by about 3 percentage points; however, neither payments for composite rate services nor payments for medications outside the payment bundle accurately reflect efficient providers' costs. Although composite rate payments did not cover the costs of providing dialysis services, payments for separately billable medications significantly exceeded providers' costs. We have no evidence that the current cost base for composite rate services is inappropriate, as providers' costs for these services have grown at about the same rate as growth in input prices. Other indicators, such as market conditions and beneficiaries' access to care, also suggest that total payments for outpatient dialysis are adequate, relative to providers' costs. Based on this evidence, we see no need to adjust the base rate for composite rate services. To account for changes in providers' costs in the coming year, we recommend that the composite rate for outpatient dialysis services be updated by 2.4 percent in 2003.

### In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

In this section, we apply our two-part framework for updating payments for outpatient dialysis services. First, we assess the adequacy of current outpatient dialysis payments. Second, we examine factors that will change efficient providers' costs in the coming year and recommend an update to payments that will account for these factors.

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## Assessing payment adequacy

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To determine the update for outpatient dialysis services, we assessed the adequacy of aggregate Medicare payments for dialysis services relative to the costs of providing these services. We estimated current Medicare payments and costs by considering both dialysis services and separately billable medications because both are important sources of payments and costs for dialysis facilities. In 2000, for freestanding dialysis facilities, total allowed charges for providing composite rate services were \$3.0 billion and total allowed charges for injectable medications were \$1.9 billion. We also looked at several indicators, including growth in the volume of dialysis services furnished, growth in the capacity of providers to furnish dialysis, and changes in the financial health of dialysis providers, to determine whether current payments are adequate relative to efficient providers' costs.

MedPAC concludes that total payments for outpatient dialysis services were adequate in 2000 and that no adjustment for payment adequacy is needed as part of the 2003 update for outpatient dialysis services. Combined payments for composite rate services and separately billable drugs exceeded costs by about 5 percentage points in 2000 and our best estimate of the payment-to-cost ratio for 2002 is about 3 percentage points, 2 points lower than the 2000 level (reflecting 2001

and 2002 payment rules). Payment-to-cost ratios at this level appear to be within the zone of payment adequacy, especially given the broad indicators of the financial health of dialysis providers. Specifically, providers responded to increased demand for dialysis services in the 1990s by opening new facilities. Between 1993 and 2000, the number of facilities—which increased at an average rate of 7 percent annually—kept pace with the increase in the number of dialysis patients, which grew at the same annual rate. Data from the Centers for Medicare & Medicaid Services (CMS) show that providers continue to improve the quality of care furnished to beneficiaries, as assessed by measures of dialysis adequacy and anemia management. Finally, the large for-profit multi-center dialysis companies (chains), which provide dialysis for about 55 percent of all end-stage renal disease (ESRD) patients, appear to have adequate access to capital, as evidenced by continued growth in the number of facilities.

## Current payments and costs

Traditionally, the Commission evaluated the adequacy of outpatient dialysis payments by calculating a Medicare payment-to-cost ratio, which compares the composite rate payments providers receive from Medicare with their Medicare-allowable costs. In our March 2001 report, however, we expanded our analysis to include payments and costs for injectable medications administered during dialysis treatment for which providers receive separate payments from Medicare. We modified our approach because the use of and payments for injectable medications, which include erythropoietin and iron dextran used to treat anemia, antibiotics, and vitamin D analogues, have increased significantly throughout the 1990s. Consequently, their effect on the financial performance of dialysis providers is significant. Including the payments and costs for separately

billable medications gives a more accurate picture of the financial performance of dialysis providers.

In 2000, composite rate payments to freestanding facilities did not cover the costs of providing dialysis services.<sup>1</sup> The payment-to-cost ratios for dialysis, including in-center and home hemodialysis and the two major forms of peritoneal dialysis, fell from 1.01 in 1997 to 0.96 in 2000 (Table 2F-1). All types of facilities showed a decline in payment-to-cost ratios during this time. The decline occurred because providers' costs increased by 2.2 percent annually, on average, but the composite rate was increased only once, by 1.2 percent in 2000.

A different picture of financial performance emerges when we compare the aggregate payments providers receive for both composite rate services and separately billable medications with their Medicare-allowable costs. In 2000, Medicare's payments for composite rate services and injectable medications exceeded providers' costs by about 5 percentage points.<sup>2</sup> All types of dialysis facilities benefited from the positive payment margins from separately billable medications, suggesting that the positive payment margins of erythropoietin and other separately billable drugs are subsidizing the lower payment margins under the composite rate.

Although the payment-to-cost ratio for composite rate services and injectable medications together was 1.05 in 2000, it fell from 1.09 in 1997. This drop probably occurred because of the real decline in the composite rate and the increase in providers' costs for composite rate services during this time. In addition, the manufacturer of erythropoietin raised the price by 3.9 percent in 2000.

To assess providers' financial performance in 2002, we estimated the payment-to-cost ratio for composite rate

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1 The Commission uses only Medicare cost report data from freestanding facilities. No current evidence suggests that the costs incurred by freestanding and hospital-based facilities differ based on differences in practice patterns or patient acuity.

2 The payment-to-cost ratio for composite rate services and injectable medications is calculated by linking data from providers' cost reports with claims from the institutional outpatient file.

**TABLE  
2F-1****Payment-to-cost ratios for composite rate services and separately billable drugs for freestanding dialysis facilities, 1997–2000**

	1997	1998	1999	2000
<b>Composite rate services for in-center and home dialysis</b>				
All facilities	1.01	0.99	0.98	0.96
Small	0.92	0.90	0.88	0.86
Medium	1.00	0.97	0.96	0.95
Large	1.05	1.03	1.02	1.00
Nonprofit	0.98	0.95	0.93	0.94
For profit	1.02	1.00	0.99	0.97
Urban, in an MSA	1.02	1.00	0.98	0.97
Rural	0.99	0.97	0.97	0.94
<b>Composite rate services for dialysis and separately billable drugs</b>				
All facilities	1.09	1.08	1.07	1.05
Small	1.01	0.99	1.00	0.97
Medium	1.08	1.06	1.06	1.05
Large	1.11	1.11	1.10	1.07
Nonprofit	1.06	1.05	1.03	1.04
For profit	1.09	1.08	1.08	1.05
Urban, in an MSA	1.09	1.08	1.07	1.05
Rural	1.08	1.06	1.08	1.04

Note: MSA (metropolitan statistical area, as defined by the U.S. Office of Management and Budget). The calculations represent mean payment-to-cost ratios, weighted by the number of dialysis sessions at each facility. The size of the facility is defined in each year based on the 25<sup>th</sup> and 75<sup>th</sup> percentile of dialysis sessions. Small facilities are defined as those reporting dialysis sessions less than or equal to the 25<sup>th</sup> percentile of all dialysis sessions, medium facilities are defined as those reporting dialysis sessions greater than the 25<sup>th</sup> percentile but less than the 75<sup>th</sup> percentile of all dialysis sessions, and large facilities are defined as having greater than or equal to the 75<sup>th</sup> percentile of all dialysis sessions. Although our analysis shows how well Medicare does in covering the costs it is legally obligated to pay for, this approach does not measure how much providers actually gain or lose from caring for Medicare patients.

Source: Data compiled by MedPAC from 1997–2000 CMS cost reports and the institutional outpatient files obtained from CMS.

services and injectable medications by assuming that providers' costs will grow at the same rate predicted by MedPAC's dialysis market basket in 2001 and 2002 and applying the composite rate update in law for 2001.<sup>3</sup> Based on these assumptions, payments for composite rate services and injectable medications

relative to providers' costs are likely to be about 2 percentage points lower than the 2000 level.

Although the payment-to-cost ratio for composite rate services and injectable medications is the most comprehensive measure we currently have to assess the financial performance of dialysis

facilities, it does not account for the profitability of other services associated with outpatient dialysis. For example, several national dialysis chains own laboratories and receive Medicare payments for laboratory tests outside the composite rate payment bundle. The General Accounting Office (GAO) has noted that facilities can influence the tests physicians order through the use of so-called standing orders, lists of tests periodically performed on all patients unless the ordering physician overrides them (GAO 1997). The agency found wide variation in the rate of laboratory tests ordered for patients with ESRD and suggested this may lead to excessive use, with some patients receiving too frequent or unnecessary tests.

Our current analysis shows how well Medicare covers the costs for which it is legally obligated to pay, but it does not measure how much providers actually gain or lose, on average, from caring for Medicare beneficiaries. As discussed in the introduction to this chapter, the Commission's analysis of the current costs of providers is designed to include only Medicare-allowable costs.

However, a portion of the costs included in this analysis will most likely be found to be non-allowable because the cost reports for 1997 to 2000 have not yet been audited by CMS. Unlike other institutional providers such as hospitals, the Secretary was not required to audit the cost reports of dialysis providers regularly until 1996.<sup>4</sup> CMS is currently auditing cost report data from 1996 and preliminary results show that the allowable cost per treatment for composite rate services for freestanding facilities was about 96.0 percent of the reported cost of treatment.<sup>5</sup> Excluding non-allowable costs affects the relationship of Medicare's payments to providers' costs. For example, payment-to-cost ratios for composite rate services in 1996 would

3 The Congress increased the composite rate by 2.4 percent in 2001.

4 The Balanced Budget Act of 1997 required the Secretary to audit the cost reports of each dialysis provider at least once every 3 years beginning in 1996.

5 An earlier audit performed by CMS in 1988 indicated that the allowable cost per treatment for freestanding facilities was 88.2 percent of the reported cost per treatment (ProPAC 1993).

increase by 3 percentage points if we excluded the costs that CMS found to be non-allowable.

Finally, our finding that neither payments for services in the prospective payment bundle nor payments for medications outside the payment bundle accurately reflect efficient providers' costs partly stems from the design of the outpatient dialysis payment system. MedPAC has previously found deficiencies in the size and content of the composite rate payment bundle, the lack of a classification system, and needed adjustments to the rate. As a result, we recommended that the outpatient dialysis payment system be revised to reflect the services furnished during dialysis and to account for the costs of efficient providers (MedPAC 2001). The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) requires the Secretary to develop a payment bundle that includes diagnostic laboratory tests and medications routinely used in furnishing dialysis care (but currently billed separately) and to report on the expanded bundle to the Congress by July 2002.

## Appropriateness of current costs

Because the composite rate pays predetermined rates for services, dialysis providers have an incentive to keep costs below the payment rate. In contrast, because injectable medications are paid based on their cost, providers have little incentive to improve efficiency. At issue is whether aggregate dialysis costs provide a reasonable representation of the costs of efficient providers. To address this issue, the Commission considered the growth in providers' costs for furnishing composite rate services and injectable medications. We find no evidence that providers' costs for composite rate services were too high between 1997 and 2000. However, our finding that payments for separately billable medications

significantly exceeded providers' costs suggests that Medicare pays too much for certain injectable medications.

Most of the pressure experienced by dialysis providers to contain costs has come from Medicare, the predominant purchaser of dialysis services in the United States. The 1972 amendments to the Social Security Act extended Medicare benefits to individuals with ESRD who are fully or currently insured under Social Security or Railroad Retirement programs, entitled to monthly benefits under one of these programs, or the spouse or dependent child of an eligible person. Once eligibility is established, Medicare coverage begins after a three-month waiting period.<sup>6</sup> Data from the 2000 annual survey of dialysis facilities show that 83 percent of all in-center hemodialysis patients were enrolled in Medicare and an additional 7 percent of patients had an application pending with Medicare.

The pressure to contain costs from private payers, however, has increased in recent years because the Congress extended the Medicare secondary payer provisions for incident ESRD patients who have employer group health coverage. Specifically, the Congress extended the period during which Medicare is the secondary payer from 18 months to 30 months in 1997. Analysis of providers' cost report data indicates that the proportion of in-center hemodialysis treatments paid for by Medicare has declined from 81 percent in 1996 to 73 percent in 2000.

## Costs for composite rate services

Providers' costs for composite rate services grew as predicted by the Commission's dialysis market basket over the 1997–2000 period. Providers' costs increased by 2.2 percent annually, on average, and the market basket increased by 2.1 percent annually, on average.

Our finding that payments for composite rate services did not cover providers' costs could imply that payments are too low or that costs are too high. Many experts believe that Medicare overpaid for dialysis services for much of the 1980s and early 1990s. For example, the composite rate payment exceeded providers' allowable costs by more than 10 percentage points in the early 1990s (MedPAC 1999). Despite providers' productivity improvements, particularly during the first half of the decade, providers' costs for composite rate services appear to have caught up with Medicare's payment rate because the Congress did not update the payment rate between 1991 and 2000.

## Costs for separately billable medications

Providers' costs per dialysis treatment for separately billable medications increased by about 10 percent annually, on average, over the 1997–2000 period. This cost growth has occurred both because of how Medicare pays for these services and because of the effect of other factors on providers' costs. Medicare uses cost-based methods to pay for separately billable medications.<sup>7</sup> As a result, providers have no incentive to improve efficiency. In contrast, prospective payment methods encourage providers to control costs because payment is based on a predetermined rate unaffected by incurred costs or posted charges. In addition, substituting new, more costly drugs for older, less expensive medications has increased providers' costs for injectable medications per dialysis treatment during the 1997–2000 period. For example, the price of a vitamin D analogue (paricalcitol) newly approved in 2000 is twice that of the older agent it has displaced (calcitriol). We do not know to what extent new injectable medications would be adopted if Medicare paid for them prospectively. Finally, increases in the prices charged for medications by manufacturers also have increased providers' cost per treatment.

6 This period is waived for beneficiaries who elect to participate in a self-care dialysis training program.

7 Dialysis facilities are paid 95 percent of the average wholesale price for all injectable medications other than erythropoietin. Medicare pays \$10 per 1,000 units for erythropoietin administered either intravenously or subcutaneously.



Our finding that payments for injectable medications not included in the payment bundle significantly exceeded providers' costs between 1997 and 2000 could imply that payments are too high or costs are too low. Given providers' lack of incentive to reduce costs, it is highly probable that Medicare pays too much for certain injectable medications. Two studies by the Office of Inspector General (OIG) reached this same conclusion (OIG 2000, OIG 1997). In addition, the GAO recently published a study showing that physicians are able to obtain Medicare-covered drugs at prices from 13 to 34 percent below current Medicare payments (GAO 2001).

## Relationship of payments to appropriate costs

We assessed the relationship of payments to appropriate costs for outpatient dialysis services and found that aggregate Medicare payments appear to be sufficient. We based this conclusion on evidence about market conditions throughout the 1990s that shows: 1) the average annual growth in the number of hemodialysis treatments has kept pace with the average annual growth in the number of hemodialysis patients; 2) there has been a significant increase in the use of injectable medications furnished during dialysis; 3) there has been no widespread access or quality problems for beneficiaries; and 4) there has been no change in providers' access to capital, as evidenced by continued growth in the number of providers and their capacity to furnish dialysis.

## Changes in volume

Between 1993 and 2000, growth in the number of in-center hemodialysis treatments generally kept pace with growth in the number of dialysis patients. The number of dialysis treatments increased, on average, by 9 percent annually; by comparison, the number of dialysis patients increased, on average, by 7 percent during this time. The slightly greater growth in the number of treatments compared with patients could

reflect providers' efforts to improve the quality of care by improving patients' compliance with their dialysis regimen.<sup>8</sup>

Use of certain injectable drugs has significantly increased in the 1990s. Recent data from CMS show the mean dose of erythropoietin administered intravenously increased to 81.0 units per kilogram in 1999 from 65.6 units per kilogram in 1997 (HCFA 2000). Earlier data from Greer et al. (1999) also show increases between 1990 and 1998 in mean erythropoietin dose per unit administered to dialysis patients (from 2,700 units to 5,472 units per dose). Total allowed charges for erythropoietin furnished by freestanding dialysis facilities increased from \$255 million in 1990 to \$1.3 billion in 2000. Claims for injectable drugs other than erythropoietin submitted by freestanding dialysis facilities also show significant growth in payments, from \$281 million in 1997 to \$605 million in 2000.

The importance of the revenue derived from injectable medications relative to that for composite rate services for dialysis facilities has increased. Injectable medications represented about 33 percent of total allowed charges for dialysis facilities in 1997; by 2000, injectable medications represented nearly 40 percent of total allowed charges.

Use of injectable medications has grown for several reasons. First, many agents—including erythropoietin and iron dextran—were only approved by the Food and Drug Administration in the early 1990s. Since their approval, their use has been advocated in clinical guidelines set forth by the National Kidney Foundation (NKF). The use of many of these medications has enhanced the quality of care furnished to dialysis beneficiaries. For example, the increased use of erythropoietin has reduced the proportion of dialysis patients suffering from anemia, which contributes to morbidity if not treated effectively. However, the profitability of certain injectable

medications may have influenced how they are used. For example, Medicare pays \$10 per 1,000 units for erythropoietin administered either intravenously or subcutaneously. This policy promotes the use of the intravenous form, which requires higher average doses (more units) to achieve target hematocrit levels. The predominant use of intravenous erythropoietin persists despite the publication of the NKF's Dialysis Outcome Quality Initiative Clinical Practice Guideline for the treatment of anemia, which advocated subcutaneous administration (NKF 1997a). The Department of Veteran Affairs (VA) reported that substantial cost savings might be achieved if use of the subcutaneous form increased among patients treated at their facilities. The VA found that the average erythropoietin dose needed to maintain a hematocrit of 30 to 33 percent is one-third lower with subcutaneous administration than with intravenous administration (Kaufman et al. 1998).

## Entry and exit of providers

The number of dialysis facilities in the United States continues to grow, keeping pace with the growth in the number of dialysis patients. The number of dialysis facilities and the number of in-center hemodialysis patients each grew by about 7 percent between 1993 and 2000 (Table 2F-2, p. 107). The proportion of facilities located in rural areas slightly increased from 22.7 percent of all facilities in 1993 to 24.9 percent in 2000.

The composition of dialysis providers, in terms of their profit status and affiliation, has changed in the 1990s. Freestanding and for-profit facilities grew at the expense of hospital-based and nonprofit facilities. Between 1993 and 2000, freestanding facilities increased to 82 percent of all facilities from 70 percent, while for-profit facilities increased to 78 percent of all facilities from 61 percent. In addition, dialysis chains continue to acquire independently operated facilities.

<sup>8</sup> Patients who skip dialysis treatments or leave dialysis treatments early are less likely to receive adequate dialysis compared with patients who are compliant.

MedPAC estimates that about 55 percent of all facilities were operated by one of the four largest for-profit chains in 2000.

The growth in the number of dialysis facilities masks the fact that 406 facilities closed between 1993 and 2000. Facilities that closed were more likely to be smaller, as measured by the number of in-center hemodialysis stations available and the average number of hemodialysis treatments furnished. This finding is consistent with our analysis of providers' financial performance that showed that payment-to-cost ratios varied primarily according to facility size (Table 2F-1). Between 1997 and 2000, the payment-to-cost ratios for small facilities were about 13 percentage points lower than large facilities. This finding may reflect difficulty in competing with larger facilities with greater economies of scale. Facilities that closed also were more likely to be nonprofit (42 percent versus 26 percent) and hospital-based (58 percent versus 24 percent) than were facilities that remained open. Facilities that closed were not different than facilities that remained open in terms of the proportion of in-center dialysis treatments paid for by Medicare (81 percent versus 79 percent) or rural location (24 percent each). This analysis represents the worst-case scenario for trends in facilities closing because we did not consider whether another facility was available in the general proximity of a closed facility.

The Commission finds that providers have kept up with the demand for dialysis by increasing the number of facilities rather than increasing capacity within facilities. We based this finding on our analysis of trends in:

- average hemodialysis stations per facility,
- average in-center hemodialysis treatments per facility, and
- average in-center hemodialysis treatments per dialysis station.<sup>9</sup>

The total number of in-center hemodialysis treatments provided by dialysis facilities has increased by about 8 percent per year between 1997 and 2000, but the average number of hemodialysis stations per facility has remained relatively constant at about 22 per facility. Average total in-center hemodialysis treatments also have remained relatively constant, ranging from 15,500 to 16,000, as have average treatments per station, ranging from 641 to 661, during the same time period.

### **Beneficiaries' access to high-quality care**

A review of the published literature shows no hard evidence of beneficiaries facing problems in obtaining needed dialysis care. Reports of facility closings tend to be linked to local issues, such as rising real estate prices in certain areas, shortages of technicians and nurses to staff facilities, and states' certificate of need regulations.

Clinical performance indicators collected by CMS show continued improvements in the quality of dialysis care, as measured by the percent of hemodialysis patients receiving adequate dialysis and suffering from anemia (Table 2F-3). One quality of care issue of concern to some beneficiaries is the practice of reusing synthetic dialyzer membranes. This practice is followed by more than 80 percent of dialysis facilities in an attempt to contain costs (USRDS 2000). The NKF found no evidence to substantiate the notion that reuse of membranes affects morbidity or mortality and has taken no position for or against dialyzer reuse (NKF 1997b). However, the proportion of facilities practicing reuse is expected to decline when the largest for-profit chain begins to phase-in single-use dialyzers in 2003.

### **Access to capital**

Access to capital is necessary for dialysis facilities to improve their equipment and open new facilities to accommodate growth in the number of patients requiring dialysis. About 80 percent of all dialysis facilities are for profit, and the four largest for-profit chains account for about 55 percent of all facilities. These chains appear to have adequate access to capital, as demonstrated by growth in the number of clinics, the number of patients they treat, and their earnings. Data from industry sources show that growth in revenues between 1996 and 2000 for these four chains ranged from 36 percent to 62 percent. A bond analyst described the sector as having no problems with access to capital and ratings for the bonds of two of the largest chains, although below investment grade, are not expected to change appreciably in the near future. In addition, industry reports have cited that revenues for dialysis are fairly predictable, given the recurring requirement for treatment. However, they also have noted that dialysis providers: 1) face potential pressures from private payers, and 2) are highly susceptible to any future changes in Medicare's payment policies. Finally, the stocks of these for-profit chains have in large part enjoyed positive ratings by financial analysts over the last year.

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### **Accounting for cost changes in the coming year**

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As noted earlier, the Commission accounts for expected cost changes in the coming year primarily through the forecast of input price inflation. CMS has not developed a market basket index for outpatient dialysis services.<sup>10</sup> Consequently, MedPAC uses an index for dialysis services comprising components from price indexes for hospitals, skilled nursing facilities, and home health agencies. MedPAC's index indicates that the prices dialysis facilities

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9 For our analysis, we weighted average hemodialysis stations per facility, treatments per facility, and treatments per dialysis station by the number of dialysis sessions at each facility.

10 In our March 2000 report, MedPAC recommended that the Congress instruct CMS to consider a periodic update for outpatient dialysis services. The BIPA instructed the Secretary to submit a report on methods to update the outpatient dialysis payment system, including a market basket for dialysis services, by July 2002.

**TABLE  
2F-2****Characteristics of dialysis facilities, 1993–2000**

	1993	1994	1995	1996	1997	1998	1999	2000
Total number of dialysis facilities	2,343	2,502	2,732	2,940	3,172	3,394	3,619	3,805
<b>Percent of all facilities</b>								
For profit	60.8%	62.2%	64.6%	67.4%	71.1%	75.0%	77.3%	78.3%
Nonprofit	33.4	32.2	30.3	28.1	25.2	21.9	19.8	19.1
Government	5.8	5.6	5.0	4.4	3.8	3.2	2.9	2.7
Freestanding	70.0	71.6	73.7	75.1	77.0	78.8	80.7	81.6
Hospital-based	30.0	28.4	26.3	24.9	23.0	21.2	19.3	18.4
Urban, in an MSA	77.3	76.8	76.8	76.2	75.6	75.1	75.1	75.1
Rural, total	22.7	23.2	23.2	23.8	24.4	24.9	24.9	24.9
Adjacent to an MSA								
Includes a town with at least 10,000 people	6.7	6.8	6.5	6.8	6.7	6.6	6.6	6.5
Does not include a town with at least 10,000 people	5.0	5.4	5.5	5.8	6.1	6.5	6.6	6.8
Not adjacent to an MSA								
Includes a town with at least 10,000 people	6.6	6.4	6.4	6.3	6.1	6.1	5.9	5.7
Does not include a town with at least 10,000 people	4.4	4.5	4.8	5.0	5.5	5.8	5.9	5.9

Source: MSA (metropolitan statistical area, as defined by the U.S. Office of Management and Budget). Data compiled by MedPAC from the 1993–2000 CMS facility survey file.

pay for their inputs included in the composite rate will rise an estimated 2.4 percent between calendar years 2002 and 2003.

Other factors that may affect providers' costs in the next payment year include scientific and technological advances and productivity improvements. Our review of the literature on medical advances

suggests that the costs associated with these advances will be offset by improvements in providers' productivity.

**TABLE  
2F-3****Clinical performance indicators, 1994–1999**

Performance indicator	Year					
	1994	1995	1996	1997	1998	1999
Percent of hemodialysis patients receiving inadequate dialysis	51%	41%	32%	28%	26%	20%
Percent of hemodialysis patients suffering from anemia	N/A	N/A	N/A	57	41	32
Percent of hemodialysis patients who are malnourished	20	16	19	16	18	20

Note: N/A (not available). Patients receiving inadequate dialysis are those with urea reduction ratios of less than 65 percent. Patients suffering from anemia are those with hemoglobin levels less than 11 gm/dL. Patients malnourished are those with serum albumin levels less than 3.5 gm/dL.

Source: HCFA 2000.

**Update recommendation**

Based on our review of the adequacy of payments for outpatient dialysis services and expected cost changes in the coming year, the Commission recommends the following:

**RECOMMENDATION**

**For calendar year 2003, the Congress should update the composite rate payment for outpatient dialysis services by 2.4 percent. ■**

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C H A P T E R

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## **Paying for new technology in the outpatient prospective payment system**

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# R E C O M M E N D A T I O N S

## **3A** The Congress should:

- Replace hospital-specific payments for pass-through devices with national rates.
- Give the Secretary authority to consider alternatives to average wholesale price when determining payments for pass-through drugs and biologicals.

**\*YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3**

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## **3B** The Secretary should:

- Ensure additional payments are made only for new or substantially improved technologies that are expensive in relation to the applicable ambulatory payment classification payment rate.
- Avoid basing national rates only on reported costs.
- Ensure that the same broad principles guide payments for new technologies in the inpatient and outpatient payment systems.

**YES: 14 • NO: 0 • NOT VOTING: 0 • ABSENT: 3**

**\*COMMISSIONERS' VOTING RESULTS**

## Paying for new technology in the outpatient prospective payment system

**M**edicare continues to struggle to find the optimal methods to pay for new technology. Medicare adopted a special payment provision for hospital outpatient services to ensure adequate payment for new technology—the so-called pass-through payments. Implementation of the pass-through payments, however, has been fraught with difficulties. While the Commission believes that Medicare must ensure adequate payment for new technology, we see systemic flaws in the pass-through payment mechanism. As currently structured, the pass-through payments provide manufacturers and hospitals with incentives to raise their prices and charges, potentially resulting in overpayments. The overstated charges also cause a second-order problem of incorrect relative payments among services when the costs of new technology are incorporated into the base payment rates at the end of pass-through eligibility. To correct this problem, MedPAC recommends that the Congress replace hospital-specific payments for pass-through devices with national rates to be set by the Secretary. The Congress also should give the Secretary authority to consider alternatives to average wholesale price when determining payments for pass-through drugs and biologicals.

### In this chapter:

- Development of the outpatient payment system
- Approaches to paying for new technology
- How technology is paid for under the outpatient payment system
- Systemic problems with the pass-through payments
- Alternatives for paying for technology used in outpatient departments
- Improving the pass-through system



This chapter first reviews the development of the outpatient prospective payment system (PPS) and provides a conceptual discussion of alternative approaches to paying for new technology. It discusses the existing payment mechanism under the outpatient PPS—the so-called pass-through payments—and highlights its problems. Finally, the chapter discusses ways to address shortcomings in the system and recommends an alternative approach.

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## Development of the outpatient payment system

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The Balanced Budget Act of 1997 (BBA) mandated the use of a PPS for services provided in hospital outpatient departments. The law required that the Centers for Medicare & Medicaid Services (CMS) use claims data from 1996 and the most recent available hospital cost reports to develop the PPS, which was implemented in August 2000.

The PPS groups services into ambulatory payment classifications (APCs) based on clinical and cost similarity. All services in an APC have the same base payment rate; the unit of payment is the individual service. If a patient receives multiple services during an encounter, such as a clinic visit and a diagnostic x-ray, the hospital will receive separate payment for each service. The payment system also has an outlier policy that partially reimburses hospitals for extraordinarily high-cost services (see Chapter 1 for a description of the outpatient PPS, including the outlier policy).

Payment for a service in an APC includes limited bundling of ancillary services and supplies, including drugs, biologicals, and medical devices (hereafter called technology).<sup>1</sup> The most extensive bundling occurs for outpatient surgery, but

even that is limited. Payment for outpatient surgery covers hospitals' costs for the operating and recovery rooms, anesthesia, most drugs, and most surgical supplies used during the surgery. Given the limited bundling in the PPS, a specific input, such as a medical device, can represent a fairly large share of the total cost of the service. For example, in the 2002 final rule for the outpatient PPS (CMS 2001a), the national payment rate for pacemaker implantation (APC 0089) is about \$7,600, of which CMS estimates device costs at about \$6,400, or 84 percent of the total payment. By contrast, the pacemaker itself represents about 64 percent of the total inpatient payment for a pacemaker implantation with no complications, reflecting the broader bundle under the inpatient PPS.<sup>2</sup>

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## Approaches to paying for new technology

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Making bundled payments for services has a number of goals. First, it gives hospitals an incentive to provide services efficiently because they can control the allocation of spending among inputs. Second, it avoids incentives to increase the use of inputs inherent in payment systems that pay for services on a line-item basis or on costs. Third, it obviates the need for CMS to set prices for individual items, an administratively cumbersome task that is likely to result in errors. If item-level prices are wrong, some items will be overpaid and others will be underpaid, providing incentives for providers to choose some technologies and avoid others for financial, rather than clinical reasons.

Although bundled payments are generally thought to enhance efficiency, unbundling may be appropriate in some cases. With regard to the outpatient PPS, unbundling payment for some technologies may be appropriate to the extent that the payment

rates are, in fact, too low for the covered technology, which may discourage use of the most clinically appropriate technologies. In the case of costly new technology, bundled payments are likely to be insufficient until payment weights are recalibrated to take into account the incremental costs of the new technology, which generally takes two years.

The way Medicare pays for new technology may influence technological diffusion, access to new technologies for Medicare beneficiaries, and the level of trust fund spending. Medicare needs to balance the incentives to avoid costly new technology inherent in bundled payment with the incentives to use—and perhaps overuse—new technology paid for on a fee schedule or cost basis.

## Impact on diffusion

A fully bundled payment will not cover the incremental costs of an expensive new technology unless use of the technology is also accompanied by savings in other areas. If losses associated with the use of new items are significant, hospitals may ask physicians to avoid using them or refuse to stock them, thereby hampering diffusion of technology. However, hospitals must balance financial incentives against the clinical merits of the technology and the desire of physicians to use it, which may lead them to use the technology even if payments are below cost. In addition, competitive pressures to keep abreast of changes in technology and pressure from physicians to use new technology may lead hospitals to accept short-term losses on some items. The clinical importance of a particular new technology, its incremental cost, and the relationship of the incremental cost to the base payment all factor into decisions about whether or not to use an item under a fully bundled payment.

In contrast to a fully bundled payment, a fee schedule or cost-based approach to paying for new technology provides

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1 As described below, special payment rules have been put into place for new drugs, biologicals, and medical devices under the outpatient PPS. Biologicals include items such as blood products, hormones, and antibodies.

2 This comparison assumes that the estimated device cost is the same in each setting. For the inpatient calculation, we assume diagnosis related group 116 performed in a non-teaching, large urban hospital with a wage index of 1.0.

incentives to increase use of these items as long as the extra payment exceeds the extra costs to the hospital of treating the case. Depending on the level of payment, such an approach can provide strong incentives favoring diffusion. In fact, given the reliance on technology in medicine and the role technology plays in competition between providers, this approach to paying for new technology may accelerate technological diffusion unnecessarily, which could affect both costs and the quality of patient care.

Impact on access and quality

Medicare has a responsibility to ensure that its payment systems provide beneficiaries with access to needed care, including access to new technologies that will bring significant clinical benefits. As mentioned above, a bundled payment might impede access to new technologies. For example, inadequate payment for cochlear implants under the inpatient PPS appears to have reduced access to this technology (Lewin Group 2000). In some instances, however, new technologies turn out to be less advantageous than originally thought. For example, in the late 1980s, CMS debated whether an adjustment to the inpatient PPS was warranted for tissue plasminogen activator (tPA), a thrombolytic agent used in treating blockages in coronary arteries. Interest in a specific payment adjustment was generated by the unusually high cost of tPA. Additional experience with the drug, however, suggested it was not as widely beneficial as anticipated. The agency decided not to implement a payment adjustment, and the costs of the drug were offset by shorter lengths of stay and decreased costs per case (CMS 2001c).

Impact on spending

In comparing the impact of a bundled payment mechanism with a separate payment for new technology, a bundled payment is more likely to save trust fund

dollars by paying less than the full cost for a new technology, and by providing a financial incentive to avoid costly new technology altogether.<sup>3</sup> In contrast, a fee schedule that pays at least adequately or cost-based payments are more likely to increase spending by paying the full cost of technology and by providing incentives to increase use. Of course, other factors such as patient preferences or physician practice patterns also affect spending.

To balance the desire to promote efficiency with the need to pay enough to ensure beneficiaries' access to quality-enhancing new technologies, the Congress directed CMS to maintain a bundled payment for the outpatient PPS, but make additional pass-through payments for new technologies that have high incremental costs. Additional payments are made until payment weights can be recalibrated to accurately capture the costs of new technologies. Important characteristics of the system include the eligibility criteria for additional payment, the approach used to set the additional payment amounts, and the impact of the payment mechanism on the data used to recalibrate relative weights. Unfortunately, both the eligibility criteria and the approach used to set the additional payment amounts led to undesirable effects, as will be discussed below.

How technology is paid for under the outpatient payment system

For a number of reasons, including the age of the data and poor coding of claims, critics were concerned that the payment rates set by CMS under the outpatient PPS did not accurately account for the costs of technology, and particularly recently developed technology. In response, the Congress established pass-through payments for certain classes of technology in the Balanced Budget Refinement Act of

1999 (BBRA). A pass-through payment is a cost-based payment that supplements the standard APC rate when a specific technology is used. It covers inputs to outpatient services and is meant to pay the incremental costs of technologies with costs that exceed the technology costs included in base payment rates.<sup>4</sup> In general, the new technologies replace existing items that have costs already included in the bundled payment amount. The pass-through payments are to be made for two to three years, and data collected during that period are to be used to modify the relative weights for APCs that use these technologies. The two goals of the pass-through payments are to ensure adequate payment for new technology and to obtain accurate data on the costs of the new technology that can then be incorporated into the base APC rates.

The law and regulations establish eligibility criteria to define those drugs, biologicals, and medical devices that are to receive pass-through payments. When hospitals bill for a service using one of these items, they receive: (1) the base APC payment, and (2) the gross payment for the item minus an amount representing the costs of similar items already included in the base (the pass-through payment). Payments for drugs and biologicals are based on 95 percent of average wholesale price (AWP). Payments for devices are based on reported costs, defined as the product of hospital charges and a hospital-specific cost-to-charge ratio for all outpatient services.

To clarify how CMS determines pass-through payments, we need to look at devices separately from drugs and biologicals. First, suppose a hospital uses a pass-through device and charges \$15,000 for it. The hospital has a cost-to-charge ratio of 0.5, so CMS estimates the cost of this device at \$7,500 (0.5 x \$15,000). CMS also estimates that the cost of the device being replaced in the

3 Although this is true for technologies that increase costs, in the case of technologies that decrease costs, a bundled payment may prove more expensive if payments are not adjusted in a timely manner.

4 Completely new services are handled through new technology APC groups.

associated APC is \$5,000. The pass-through payment is then \$2,500 (\$7,500 minus \$5,000).<sup>5</sup>

The method of determining pass-through payments for drugs and biologicals is a little different because payment is based on AWP (and CMS has given each pass-through drug its own APC). To estimate the payment for pass-through drugs and biologicals already included in the base, CMS imputes the acquisition cost, usually at 68 percent of AWP. The additional pass-through payment is calculated as the difference between 95 percent of AWP and the estimated acquisition cost. For example, suppose a hospital uses a pass-through drug with an AWP of \$100. Total allowed payment is \$95, or 95 percent of \$100, and CMS imputes the acquisition cost of the drug at \$68. The pass-through payment is then \$27 (\$95 minus \$68).

To protect beneficiaries and taxpayers against the payment system's incentives to overuse technologies, the Congress made pass-through payments budget neutral. This means the base payment rates for all services are reduced to cover pass-through costs. The Congress further protected beneficiaries and taxpayers by limiting pass-through payments to 2.5 percent of total payments in the outpatient PPS (2.0 percent in 2004 and later). If CMS estimates that the cap will be exceeded in the coming year, a pro rata reduction in all pass-through payments must be made to maintain the cap. For 2002, CMS estimates that total payments for services covered by the outpatient PPS will be \$17.5 billion. Therefore, the limit on pass-through spending should be about \$435 million. Due to political pressures and uncertainty regarding data, however, during 2000, 2001, and the first three months of 2002 (at least), the pass-through payments were not reduced, even though total spending on these items was likely to greatly exceed the cap, at least in 2001 and 2002.<sup>6</sup>

A major reason payments are expected to exceed the cap in 2002 is that administrative and legislative actions significantly expanded the number of items eligible for pass-through payments after the initial law was passed. In August 2000, CMS softened one cost-based criterion for device pass-through eligibility and delayed two others. Through the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA), the Congress made pass-through payments possible for many items whose costs were included in the data used to set base rates (see text box, opposite, for a description of the pass-through eligibility criteria).

The likelihood of pass-through payments exceeding the cap should diminish substantially in the future, and, therefore, so should the need for large pro rata reductions in pass-through payments. The number of items eligible for pass-through payments should be lower in 2003 and beyond, because nearly all current items will exhaust their eligibility for pass-through payments on December 31, 2002.<sup>7</sup> In addition, CMS has created more stringent eligibility criteria for new categories of medical devices. Representatives of device manufacturers and CMS predict a substantially reduced pool of pass-through items in the future, with fewer than 15 applications for new device categories and less than 5 applications for new drugs and biologicals currently in the pipeline.

Although the volume of pass-through items will decrease, the pass-through payment mechanism continues to have some systemic flaws, relating mainly to setting payment rates, that should be addressed.

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## Systemic problems with the pass-through payments

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The pass-through payment mechanism suffers from a number of flaws that will persist, even as the number of pass-through items declines.

- The pass-through payment mechanism, which relies on reported costs and AWP, provides an incentive for manufacturers and hospitals to increase their prices and charges for pass-through items. Studies have shown that Medicare overpays for drugs when payments are based on AWP (GAO 2001, OIG 2001). In addition, the mechanism CMS uses to determine hospitals' costs for devices—the product of charges and a cost-to-charge ratio—can be manipulated because the cost-to-charge ratio is determined for all outpatient services, not for a specific device, and is known in advance.
- The pass-through payment system effectively unbundles APCs. It provides an incentive to use pass-through items rather than comparable technologies because a separate payment is made for these items but not for other technologies that may be clinically appropriate but not eligible for special payment. If the separate payment covered only hospitals' actual incremental costs, there would be no incentive for overuse. However, the pricing mechanism provides an opportunity to receive payments that exceed incremental costs.
- The incentive to raise charges also makes the goal of collecting reliable cost data on new technology difficult

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5 CMS was not initially able to estimate the cost of most devices in the underlying payment rates other than pacemakers and neurostimulators. Therefore, to date, most pass-through payments for devices have not been decreased to account for the cost of devices in the associated base rates, resulting in overpayments. When the 2002 payment rates are implemented, the agency will have estimates of the costs of devices in all base rates.

6 The estimate for 2002 was \$1.3 billion in pass-through spending, requiring a pro rata reduction in pass-through payments of almost 70 percent to maintain budget neutrality (CMS 2001a).

7 CMS will incorporate the costs of the over 1,000 pass-through items into base APC payments at that time.

## Eligibility for pass-through status

The eligibility criteria for pass-through payments are complex, and include both clinical and cost criteria.

### Clinical criteria

Initially, the Balanced Budget Refinement Act of 1999 (BBRA) required that to be eligible for pass-through payments drugs, biologicals, and devices had to be in one of these groups:

- drugs, biologicals, and brachytherapy used in cancer therapy;
- orphan drugs;<sup>1</sup>
- radiopharmaceutical drugs and biological products used in diagnostic, monitoring, and therapeutic nuclear medicine procedures; or
- medical devices, drugs, and biologicals first covered by Medicare as outpatient services after 1996—which is a requirement that these items be “new”—and have costs “not insignificant” in relation to the base rate of the applicable ambulatory payment classification (APC).

The Centers for Medicare & Medicaid Services (CMS) further specified devices eligible for pass-through payments as those that “are used for one patient only, are single use, come in contact with human tissue, and are surgically implanted or inserted in a patient during a procedure but may also be removed during the procedure so that the patient leaves the hospital without the device” (HCFA 2000). Also, devices must be covered by Medicare and approved by the Food and Drug Administration.

Provisions in the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) expanded the number of eligible items in several ways. First, contrast agents used in imaging procedures were added to the pass-through list. Second, the law made possible pass-through payments for devices that do not meet the BBRA criterion for being new. One provision required that CMS approve categories of devices that serve a similar purpose rather than individual devices. These categories are eligible for additional payments for two to three years. The BIPA also required that the initial set of categories consist of devices already approved, which would seem to imply they must meet the BBRA definition of new. However, another BIPA provision allowed for devices not specified in the initial set of categories that do essentially the same thing as one of the categories to also be eligible. The latter provision makes it possible for devices already in use for decades to be eligible, potentially increasing the number of eligible items significantly.

The BIPA also required CMS to establish guidelines for categories of pass-through devices not defined in the initial set. Devices included in the new categories:

- cannot be described by any of the existing or previously existing categories;
- were not paid for as an outpatient service as of December 31, 1996;
- must have demonstrated they will achieve substantial clinical improvement over devices in previously established categories or other available treatments, such as reduced mortality, reduced rate of

complications, lesser symptoms, or reduced recovery time; and

- must meet more stringent cost criteria (see below).

Once established, the new device categories are eligible for pass-through payments for two to three years.

### Cost criteria

The BBRA stated that pass-through items “must add substantially to the cost of care.” In interpreting the statute, CMS put forth the following cost criteria for devices:<sup>2</sup>

- the estimated average reasonable cost of devices in a category must exceed 25 percent of the payment amount in the applicable APC;
- the estimated average reasonable cost of devices in a category must exceed the cost of the device it replaces by at least 25 percent; and
- the difference between the average cost of a new category of devices and the cost of the device it replaces must be greater than 10 percent of the payment rate in the applicable APC.

In an August 2000 interim final rule, CMS lowered the first of these cost criteria for medical devices so that a device’s expected reasonable costs needed to exceed 10 percent of the applicable APC payment. A recent interim final rule increased the threshold back to 25 percent because the lower threshold greatly expanded the pool of eligible devices (CMS 2001b). All of these cost criteria are relative; there are no dollar amount thresholds for pass-through eligibility. ■

1 Orphan drugs are products used to treat diseases affecting fewer than 200,000 Americans.

2 The initial regulations applied to specific devices. To conform with the BIPA, they were changed to apply to categories of medical devices.



to achieve. In general, CMS relies on hospital charge data to estimate costs. While the agency has methods to estimate overall charge inflation, it cannot measure inflation for specific items.

- Overpayment and overuse of pass-through items will distort relative weights when CMS incorporates the costs of pass-through items in the relative weights. Including the pass-through items in the costs of related services will increase the relative weights for the APCs associated with pass-through technologies. To maintain budget neutrality during the recalibration of relative weights, CMS must reduce the relative weights for all APCs when pass-through costs are incorporated into the relative weights associated with the pass-through items. If pass-through items are overused and overpaid, APCs that include these technologies will be relatively overpaid while APCs that do not will be underpaid. This process also will have inappropriate distributional effects among hospitals if some hospitals provide more services that use pass-through technologies than others.
- The pass-through payment system is administratively burdensome for hospitals and CMS. It requires that eligible technologies be separately coded, and that costs be calculated at the hospital level. In the 2002 final rule, there were about 400 APC codes for outpatient services and around 350 codes covering over 1,000 pass-through items. The system also increases the burden of monitoring claim accuracy—including coding edits and fraud and abuse measures—because of the additional payments for unbundled items.
- The pass-through payment mechanism in the outpatient PPS also creates an additional difference in the way services are paid across sites of care: inpatient, outpatient, ambulatory surgical centers, and

## Paying for new technology in the inpatient payment system

The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 required the Centers for Medicare & Medicaid Services (CMS) to establish additional payments for new technologies that are inputs to services covered by the inpatient prospective payment system (PPS) for a period of two to three years while data on the costs of new technologies were being collected. The final regulations outlining the process to be used were released in September (CMS 2001c); payments under the new process will be made beginning in October 2002.

The unit of payment in the hospital inpatient PPS is the case, or inpatient discharge, as classified by diagnosis related group (DRG). The DRG system provides for much broader patient classifications than the outpatient ambulatory payment classification system, encompassing all routine nursing, support service, and ancillary costs incurred in patients' stays. The payment

provision for new technology has the following elements:

- Eligibility criteria include requirements for clinical improvement similar to those governing outpatient pass-through device categories.
- On average, cases using new technology must exceed the average cost of all cases in the DRG by a specified amount.
- Payment is made for individual cases, based on hospitals' reported costs.
- Payment covers only 50 percent of the increased costs for cases using eligible new technology.
- Payment is limited by the average national price of the new technology, as determined by CMS based on information obtained from manufacturers on their applications for eligibility. ■

physicians' offices. This payment differential creates incentives to provide services in the setting that receives the most favorable payment, which may not be best suited to the patient and may result in increased costs for the program. The inpatient PPS also has a system for making additional payments for new technologies (described in text box, above), which differs somewhat from the outpatient pass-through mechanism.

Given the flaws in the current payment system, movement to a different means of paying for technology used in providing outpatient services may be appropriate. The next section evaluates two alternative approaches against a number of criteria.

## Alternatives for paying for technology used in outpatient departments

The Congress established pass-through payments because data were not available to reflect the costs of new technology in base payment rates; the intent was to provide adequate payments for new technology while CMS collected meaningful cost data. Because the pass-through mechanism has several flaws, as discussed above, an alternative system may be appropriate.

We have identified two viable possibilities:

- Phase out the pass-through payments so that APC base rates are the only reimbursements for all technologies.

- Continue to use pass-through payments, but change the mechanism that gives manufacturers and hospitals an incentive to increase prices. For devices, base payments on a fee schedule, which would replace the hospital-specific payments for pass-through devices with pre-set national rates. For drugs and biologicals, consider alternatives to AWP as the basis for pass-through payments.

When assessing these alternatives, three criteria should be considered. First, what are the efficiency incentives in the payment system: are there incentives to inflate prices to maximize payment? Second, how does the payment system affect the use of technology: does it inappropriately hinder or help the diffusion of specific technology items? Third, what is the administrative burden for CMS and hospitals?

## Phasing out pass-through payments

Phasing out pass-through payments would fare well against two of our criteria. First, a phase-out would avoid the incentive in the pass-through system for manufacturers and hospitals to increase prices and charges for new technologies. This would allow hospitals to determine whether or not a new technology is clinically appropriate and cost-effective without the bias in favor of using new technology embedded in the current system. Also, relative payments would not be distorted in favor of services that use new technologies.

A phase-out also would reduce administrative burden. CMS and hospitals would not have to identify eligible items or process the data necessary for pass-through payments.

A phase-out compares less favorably against the criterion of diffusion of new technology, however. Base rates might not adequately cover the cost of expensive new technologies, giving hospitals a disincentive to use them. In cases in which the cost of a new technology substantially

exceeds the cost of the technology it replaces, we believe underpayment would slow diffusion and therefore impair beneficiaries' access. Quality of care also could be affected.

## Continue the pass-through system with modifications

Under this option, CMS would continue to make pass-through payments, but use a fee schedule as the basis for calculating pass-through payments for devices. CMS should establish this fee schedule with national rates that reflect adequate payments for hospitals to make pass-through devices available. Also, the Secretary should have authority to consider alternatives to AWP when determining payments for pass-through drugs and biologicals. These changes would require Congressional action.

A fee schedule would address the criterion of eliminating the incentive for hospitals to increase profits on pass-through devices by raising charges. Also, payments for drugs and biologicals could be based on measures below AWP, which has been shown to substantially exceed hospitals' acquisition costs in many cases (GAO 2001). Consequently, there would be less financial incentive for hospitals to inappropriately use pass-through technology or avoid other comparable technology. CMS also would acquire more meaningful data to incorporate the costs of new technology into the base rates because payment for devices would no longer depend on hospitals' charges. Therefore, relative weights would be less distorted.

Manufacturers, however, would have an incentive to persuade CMS that fee schedule rates should be higher than necessary. CMS would have to address this when setting rates.

A fee schedule also would fare well against the criterion of diffusion of new technology. If rates are set adequately, hospitals would be paid enough to ensure that high-cost new technologies are used in outpatient departments. Consequently, new technology would diffuse quickly,

and beneficiaries would have access to new technology that improves their quality of care.

Relative to the phase-out, a fee schedule does not perform well on the criterion of administrative burden for CMS and hospitals. A fee schedule would impose on hospitals and CMS most of the burdens of the current system, except CMS would not have to calculate hospitals' cost-to-charge ratios. However, CMS would have the additional burden of setting rates for the fee schedule.

## Improving the pass-through system

In terms of our criteria, both options have comparative advantages and disadvantages. The comparative disadvantage that concerns the Commission the most is the incentive for hospitals to avoid high-cost new technology under a phase-out, which could adversely affect beneficiaries' access to quality-improving technology. A fee schedule would assure beneficiaries' access to new technology, if rates are adequate. Therefore, although a fee schedule would be more burdensome for CMS, the Commission recommends that the Congress base payments for new technology on a fee schedule that uses national rates.

### RECOMMENDATION 3A

#### The Congress should:

- **Replace hospital-specific payments for pass-through devices with national rates.**
- **Give the Secretary authority to consider alternatives to average wholesale price when determining payments for pass-through drugs and biologicals.**

To further improve the pass-through system, we also recommend the following:

## RECOMMENDATION 3B

### The Secretary should:

- **Ensure additional payments are made only for new or substantially improved technologies that are expensive in relation to the applicable ambulatory payment classification payment rate.**
- **Avoid basing national rates only on reported costs.**
- **Ensure that the same broad principles guide payments for new technologies in the inpatient and outpatient payment systems.**

The first directive for the Secretary reflects the Commission's belief that pass-through payments should be targeted to technologies with costs that are not adequately reflected in the base rates; these costs should be sufficiently high in relation to the applicable payment rate that diffusion would be impeded without additional payment to hospitals.

We applaud CMS's recent efforts to base pass-through eligibility for new device categories on more restrictive cost criteria and new clinical criteria and encourage the agency to be diligent in applying these criteria to avoid unnecessary pass-through payments. Limiting pass-through payments to high-cost technologies that are new or substantially improved has several benefits. It limits the burden of the pass-through system on hospitals and CMS because special payments would be made for fewer items; it reduces the likelihood of exceeding the statutory cap on pass-through payments; and given budget neutrality requirements, it limits the redistribution of funds across hospitals that are high versus low users of pass-through technology.

The second directive—to avoid basing payment rates only on reported costs—reflects the Commission's concern that manufacturers and hospitals have an incentive to inflate reported costs if

payments are tied too closely to them. Finally, the Commission believes that outpatient and inpatient payments for new technology should be based on the same broad principles to help ensure that decisions about where to provide care are based on clinical criteria as opposed to financial criteria. This does not imply that identical methods must be used. However, introducing national payment rates would make the two systems more consistent. The Secretary could also make the cost criteria more consistent.

### Setting fee schedule rates for devices

Setting appropriate rates for a fee schedule would be a difficult task for CMS. Good data are the biggest concern; one of the reasons pass-through payments exist is because CMS did not have adequate data on new technology to incorporate their costs into the base APC rates.<sup>8</sup> The Commission believes strongly that basing payments on manufacturers' prices or hospitals' reported costs gives incentives to inflate these measures. We discuss a number of alternatives for setting rates below, but recognize that future work is needed to devise an adequate mechanism.

Conceptually, one possibility is to set fee schedule rates for devices at levels that, if paid to manufacturers, would give them adequate but not excessive return on equity to supply the devices. This would avoid incentives for hospitals to inflate charges, but establishing rates for devices would be burdensome for CMS. The agency would have to obtain access to manufacturers' financial information, perhaps having to obtain legal rights to do so. Also, CMS would have to determine manufacturers' equity used to produce pass-through items. For manufacturers with many products, CMS would have to disentangle equity used to produce pass-through items from the equity associated with other products. Moreover, debate would occur over what represents an adequate rate of return.

Although this return on equity approach would present a burden for CMS, the concept has been used in the United Kingdom (UK) to regulate profits on new drugs. Manufacturers are allowed to set any price they wish, subject to the constraint that the total rate of return on capital invested in the UK on all their products reimbursed by the National Health Service does not exceed a pre-set limit. Manufacturers negotiate their limits with the government. Manufacturers who exceed their limits may retain part of the excess and either return the remainder or decrease their prices (Danzon 1997).

A second possibility for fee schedule rates is competitive bidding, which has successfully reduced program payments for durable medical equipment in demonstration projects. An advantage of competitive bidding is that there would be no debate over whether manufacturers are being paid adequately. However, competitive bidding could not be used for those pass-through devices that have only one manufacturer, which will probably be true of most pass-through devices in the future.

Although we have not presented a convincing alternative to payments based on cost, the Commission intends to further investigate the options discussed here and others we identify later. We urge CMS to join us in that effort because establishing an appropriate fee schedule is vital for paying adequately for new technology until quality data become available for incorporating new technologies into base payment rates.

Because we have yet to identify a satisfactory alternative, CMS may need to base fee schedule rates partially and temporarily on cost data from manufacturers or hospitals. We believe the best option is to use manufacturers' estimates of prices paid by hospitals, net of discounts and other reductions. Even though manufacturers would have an incentive to inflate reported prices, CMS could mitigate this problem through

8 An additional problem is that payment codes for devices represent categories rather than specific products. The devices in a category can have a range of costs, making precise payments difficult in some cases. However, we do not think relatively small inaccuracies in an add-on payment will affect hospitals' use of new devices.



auditing. Also, this approach would be relatively efficient because manufacturers already must include this information on applications for pass-through eligibility. Finally, using this data source would increase consistency between sites of care because payments for pass-through technology used in inpatient departments are limited by the prices paid by hospitals as reported by manufacturers on applications for pass-through eligibility.

### **Setting payments for drugs and biologicals**

Pass-through drugs and biologicals are essentially already on a fee schedule with national rates because payments are based on AWP, which are fixed national rates. AWP, however, typically exceed

hospitals' acquisition costs by a wide margin. The U.S. General Accounting Office has argued that Medicare could reduce payments for drugs if it used either of two pricing systems used by other public programs (GAO 2001). One system is the federal supply schedule (FSS) administered by the Veterans' Administration, which is intended to equal or better the price that manufacturers offer to their most-favored non-federal customer. The other is average manufacturer price (AMP) used by Medicaid, which is the average price—net of discounts and other reductions—paid to drug manufacturers by wholesalers. The application of a system similar to either FSS or AMP would be limited, however. Pass-through payments will be restricted

to new products, so the necessary market-based prices would not be available for many pass-through drugs and biologicals.

Another possibility is to set payments at levels that would give an adequate return on equity to manufacturers, as we suggested earlier for devices. We reiterate that this would present an administrative burden to CMS, especially in cases where manufacturers produce many products. As with medical devices, we recognize that finding an appropriate mechanism for setting prices will require additional work. In the interim, CMS could rely on information included in manufacturers' applications for pass-through status that estimates the prices paid by hospitals, net of discounts and other reductions. ■

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C H A P T E R

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## **What next for Medicare+Choice?**

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## R E C O M M E N D A T I O N

The Congress should set payments to Medicare+Choice plans at 100 percent of per capita local fee-for-service spending as soon as possible, and an adequate risk-adjustment mechanism should be phased in at least as rapidly as called for in current law.

**\*YES: 12 • NO: 2 • NOT VOTING: 1 • ABSENT: 2**

**\*COMMISSIONERS' VOTING RESULTS**

## What next for Medicare+Choice?

**T**he Balanced Budget Act of 1997 established the Medicare+Choice program to increase choices available to Medicare beneficiaries, address perceived regional inequities caused by payment rates that varied widely across the country, and reduce overall Medicare spending. Unfortunately, the payment system governing it is a complex patchwork that creates inequities between Medicare+Choice plan payments and traditional fee-for-service spending in local areas, leading to unsustainable underpayments and unnecessary overpayments to health plans. To preserve the Medicare+Choice program for the long run and correct some of the current problems, the Medicare Payment Advisory Commission recommends moving as soon as possible to a financially neutral payment system in which payments to Medicare+Choice plans are set equal to local spending in traditional fee-for-service Medicare, with adequate risk adjustment. The Commission also examines how competitive bidding might work in conjunction with a financially neutral payment system, although we make no recommendations about moving to competitive bidding at this time.

### In this chapter:

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- Problems with the Medicare+Choice payment system
  - A better payment system
  - Could competitive bidding improve a financially neutral payment system?
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The Balanced Budget Act of 1997 (BBA) established the Medicare+Choice (M+C) program with a payment system designed to correct some perceived problems with the pre-BBA payment system for health plans, such as payment rates that varied widely across the country. The M+C program was also intended to increase the plan choices available to Medicare beneficiaries and to reduce overall Medicare spending. Unfortunately, the M+C payment system has been unsuccessful in addressing the perceived problems with the pre-BBA system and has made some worse. It has not solved the problem of unequal plan distribution across the country, nor has it reduced the costs of the Medicare program. In fact, market forces that have increased costs and reduced enrollment in health maintenance organizations (HMOs) in general, combined with lower growth in plan payments in certain areas, have caused many M+C plans to exit the program, leaving beneficiaries with fewer choices instead of more. Finally, in trying to solve geographic inequities, the M+C payment system created inequities between M+C payments and spending in traditional fee-for-service (FFS) Medicare within local areas. To improve equity between M+C payments and traditional FFS spending and avoid unsustainable underpayments and unnecessary overpayments to plans in local areas, the Medicare Payment Advisory Commission (MedPAC) recommends moving as soon as possible to a financially neutral system in which Medicare pays the same risk-adjusted amount for beneficiaries enrolling in M+C plans as it pays for beneficiaries remaining in traditional FFS Medicare. In making this recommendation, we are expanding on a recommendation we made last year (MedPAC 2001).

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## Problems with the Medicare+Choice payment system

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Four years after the implementation of the M+C program, few are happy with the results. Medicare beneficiaries generally have access to fewer private plans and less generous benefit packages than they did before the BBA, in part because of recent market forces affecting the entire HMO industry and in part because of M+C restrictions on the growth of plan payments in some areas. The M+C program has not resulted in cost savings for Medicare, nor has it addressed the continuing geographic disparities in access to plans and plan benefits. Private plans contend they cannot participate in Medicare in many areas of the country under the current payment structure, and health policy analysts object to the inappropriate incentives that result from payment inequities in local areas.

## Reduced access to plans and decreased benefits

The number of plans participating in Medicare has fallen since the implementation of the M+C program, and the additional benefits offered have decreased steadily. The number of M+C contracts peaked at 346 in 1998. By January 2002, this number had fallen to 148.<sup>1</sup> In the past four years, between 300,000 and 1 million M+C enrollees annually have lost access to the plan they were in and had to switch to another plan (if one was available in their area) or return to traditional FFS Medicare. Beneficiaries returning to traditional Medicare could purchase a Medicare supplemental insurance policy (known as medigap), but generally faced higher premiums for medigap coverage than they had paid for their M+C plan and were limited in their choice of coverage.<sup>2</sup> Such

disruptions can take a financial and emotional toll on beneficiaries, who may have to switch health care providers or face larger out-of-pocket costs for health care services and outpatient prescription drugs.

In many cases, plans that have not withdrawn have reduced the overall value of their benefit packages. Before the inception of M+C, Medicare HMOs were popular in certain areas of the country because they offered extra benefits—such as coverage for outpatient prescription drugs and lower copayments for hospital admissions and physician visits than traditional Medicare—at little or no additional cost to their enrollees. M+C plans provided a less expensive alternative than medigap insurance for beneficiaries in many areas of the country. In response to rising health care costs and slow growth in M+C payments in certain areas, however, plans have steadily increased the premiums they charge beneficiaries and reduced the benefits they offer. The percentage of beneficiaries living in areas where at least one zero-premium plan is offered has fallen by about half (60 percent to 32 percent) since 1999. While 51 percent of beneficiaries still have access to at least one plan that offers prescription drug benefits in 2002, the dollar value of these benefits has declined significantly. Plans have been increasing beneficiary copayments, limiting the total dollar amount of coverage, restricting coverage to a formulary, or covering only generic drugs.

Reduced plan participation and declining benefit packages are not unique to the M+C program. The commercial HMO market has experienced similar trends in recent years; one study suggests that overall HMO market share is lower now than at any time since 1993 (Gabel et al. 2001). Analysts cite several reasons for these trends. First, health care consumers

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1 The reduction in contracts was due in part to a number of HMO contract consolidations over the same period.

2 Medigap plans are privately purchased insurance plans that cover some of the costs of health care not covered in traditional FFS Medicare, including some portion of beneficiaries' deductibles, coinsurance, and copayments for traditional Medicare services. Current medigap plan options include 10 standardized plans and a number of other plans that either pre-date or are otherwise exempt from adhering to the federal standards. Few medigap plans offer any prescription drug coverage, and those that do generally have much higher than average premiums and limited coverage. The General Accounting Office reported that, in 1999, the average annual premium for medigap plans was more than \$1,300 (GAO 2001). Beneficiaries whose M+C plans leave the program are only guaranteed to be able to purchase some of the standardized plans; none of these guaranteed options offers prescription drug coverage.

are increasingly rejecting many techniques that HMOs use to control costs, such as restricted provider networks, specialty referral requirements, and preauthorization for services. In response, HMOs have loosened some of these restrictions, causing costs and premiums to rise (Gabel et al. 2001). Also, consumer demand for large, stable provider networks and consolidations of providers have increased providers' bargaining leverage enough that they generally no longer offer the deep discounts that helped HMOs lower costs in the past. The combination of rising costs and declining enrollments has caused the entire HMO industry, not just Medicare HMOs, to consolidate, restrict benefit offerings, and charge higher premiums.

### **Lack of cost savings**

Although the number of exits suggests that M+C payment rates may currently be too low to sustain plan participation in some areas, the M+C program has not resulted in cost savings for Medicare. In fact, MedPAC has estimated that average spending for beneficiaries in the M+C program was about 4 percent higher than spending for demographically similar beneficiaries in the traditional Medicare program in 2001.<sup>3</sup> This estimate does not adjust for the relative health of beneficiaries in M+C plans or traditional Medicare.

### **Payment inequities between Medicare+Choice and fee-for-service Medicare in local health care markets**

In trying to solve the pre-BBA problem of wide differences in plan payment rates across the country, the M+C payment system created a new problem: payment inequities between M+C and traditional FFS within local health care markets. The BBA constrained M+C payment rates in

many areas of the country in which FFS spending was higher than average, while setting M+C payment rates far above local FFS spending in many areas with lower-than-average spending (see Chapter 1, p. 31). Ironically, this policy, which has caused M+C payments to lag behind FFS costs in some areas, may make it more difficult for private plans to serve areas where they would otherwise be most effective in negotiating provider discounts, managing use of health care resources, and providing health services to beneficiaries more efficiently than traditional FFS Medicare. At the same time, the system subsidizes private plans for operating in areas of the country in which market conditions make it difficult to manage care or operate more efficiently than traditional Medicare.

Areas of the country with relatively high concentrations of health care providers and beneficiaries and high FFS spending (often an indicator of above-average health care use) have generally been amenable to HMO cost-control methods. In these areas, private plans typically have more success negotiating with health care providers for volume discounts and using resource management tools to control use of services. In addition, many of these areas have above-average M+C payment rates, either because beneficiaries' use of health care resources is higher than average or because prices are higher than average, or both. By taking advantage of higher payment rates and more cost saving opportunities, plans generally have been able to offer additional benefits in these areas at little or no additional premium. In some cases, plans have used the extra revenues they generate to subsidize services in less profitable adjoining areas. However, by restraining payment increases, the M+C payment system may have reduced the incentives for M+C plans to operate in these areas.

The M+C payment system also introduced floor payment rates (subsidies) to encourage plans to operate in lower-payment areas. Many of these areas, though not all, have few providers and relatively few Medicare beneficiaries spread over large distances, making them unfavorable to HMOs.<sup>4</sup> The limited number of health care providers makes it difficult for plans to negotiate volume discounts or establish adequate provider networks. The limited number of beneficiaries increases the financial risk to plans and generally makes serving these areas financially questionable. Although the floor payment rates have been unsuccessful in attracting many managed care plans to enter these areas, private FFS plans are beginning to recognize a profit opportunity.<sup>5</sup> The first such plan, called Sterling Option 1, has more than 19,000 enrollees in 24 states. Sterling serves mostly floor payment rate counties, where it receives M+C payment rates set far above local FFS spending while paying providers essentially FFS rates (based on the Medicare fee schedule). In addition to being costly for the Medicare program because of the subsidy, the plan offers beneficiaries little beyond the basic Medicare benefit package and charges enrollees a monthly premium of \$78. The floor payment rates inappropriately provide incentives for private plans to enter areas where they are least likely to influence market behavior or contain costs.

### **The Medicare+Choice payment system needs to be changed**

The current M+C payment system does not encourage more health plan choice or save Medicare money. It also discourages plan entry in areas where M+C plans are most effective at competing with

3 To estimate relative spending in M+C and traditional FFS Medicare, MedPAC first calculated M+C spending using M+C payment rates, weighted by enrollment. Next, we used the Centers for Medicare & Medicaid Services' national growth factors for 2000 and 2001 to update the 1999 estimates of per-capita FFS spending (without graduate medical education payments and standardized for demographic factors) for each county. We weighted aggregate FFS spending by M+C enrollment and compared it with M+C spending.

4 Some areas, such as Portland, Oregon and Minneapolis, Minnesota, are exceptions to this generalization in that they have relatively large provider and beneficiary populations and high HMO penetration, even though they have lower-than-average M+C payment rates.

5 Private FFS plans pay providers for each covered service they deliver and allow enrollees to obtain services from any provider willing to accept the plan's payments (which are typically based on the Medicare FFS payment schedule).



traditional FFS Medicare and encourages plan entry in areas where they are least effective. In addition, the current system has not been successful in solving the geographic equity problem of beneficiaries in some areas having access to additional benefits, generally at lower cost than medigap coverage, while beneficiaries in other areas do not. However, as long as FFS spending varies substantially across geographic areas, the geographic equity problem is difficult to solve without introducing serious inequities in M+C payments and traditional FFS spending at the local level. For these reasons, the current M+C payment system is unsustainable in the long run and may ultimately result in few plans operating in areas other than floor payment rate counties.

## A better payment system

Notwithstanding problems with the payment system, the M+C program itself is popular. Many beneficiaries value the option of receiving Medicare benefits through private health plans. Believing that private plans may do a better job of delivering cost-effective, high-quality health care to beneficiaries than a government-run system, many policymakers support Medicare reform proposals that would rely heavily on the private market to provide Medicare benefits.

To preserve and sustain the M+C program for the long run without substantially increasing Medicare spending, the Commission recommends a financially neutral payment system that would equalize Medicare payments between beneficiaries in M+C and in traditional FFS Medicare within local areas, adjusted for differences in risk. This system would provide beneficiaries with the choice of enrolling in an M+C plan or remaining in traditional FFS without directing beneficiaries toward one option or the other. Furthermore, the Commission believes that if the M+C program provides a choice of delivery systems and additional value for

beneficiaries, it should do so without costing Medicare more than it would otherwise pay to provide the basic benefits package to enrollees through the traditional FFS program.

### RECOMMENDATION

**The Congress should set payments to Medicare+Choice plans at 100 percent of per capita local fee-for-service spending as soon as possible, and an adequate risk-adjustment mechanism should be phased in at least as rapidly as called for in current law.**

The Commission would prefer to see payment rates moved to 100 percent of per-capita local FFS spending over a short transition period to avoid undue disruption in the M+C program. Eliminating the floor payment rates and the minimum updates immediately could create too much instability in local plan payments, especially because the floor payment rates

and minimum updates have insulated some counties from significant rate reductions.

For example, if rates were moved immediately to 100 percent of FFS spending, areas such as Manhattan and Portland, Oregon would experience large decreases in payment rates that would likely force plans to leave immediately. Plans in other areas—such as Las Vegas—would see large increases in payment rates. To lessen these effects, the Commission considered a four-year phase-in of the new financially neutral payment rates (Table 4-1). In 2003, the rates would be a blend equal to 75 percent of the 2003 M+C payment rates under current law and 25 percent of local estimated FFS spending. The portion of rates determined by local FFS spending would increase each year until rates are set at 100 percent of FFS spending in 2006. This transition should produce more manageable rate changes. Even in areas

**TABLE 4-1**

**Illustrative effects of moving to a financially neutral payment system, assuming a 4-year phase-in period**

Selected payment areas	2002 per capita FFS costs	2002 payment rates	Payment rates under phase-in				GME/IME per capita spending in 2006
			2003	2004	2005	2006	
2 percent update areas							
Manhattan, NY	\$654	\$795	\$775	\$764	\$762	\$772	\$104
Miami, FL	805	834	843	865	900	950	16
Los Angeles, CA	672	694	702	721	751	793	20
Las Vegas, NV	676	583	618	665	724	798	8
Floor payment areas							
Portland, OR	408	553	527	514	499	481	25
Phoenix, AZ	515	553	554	572	590	608	15
Current law as percent of total payment			75%	50%	25%	0%	
Per capita FFS as percent of total payment			25%	50%	75%	100%	

Note: FFS (fee-for-service), GME (graduate medical education), IME (indirect medical education). All dollar figures are per capita per month. This illustration assumes that: FFS costs and GME/IME spending grow at 2% in 2003 and 5% annually from 2004–2006, payment rates in 2% update areas grow at 2% annually, and payment rates in floor payment areas grow at 2% in 2003 and 5% annually from 2004–2006. Estimated FFS costs in 2002 exclude GME and IME spending. GME and IME spending represent amounts paid directly to teaching hospitals that serve Medicare+Choice enrollees.

Source: CMS, 1999 FFS expenditure data by county, and 2002 Medicare+Choice payment rates.

## A brief history of risk adjustment in Medicare+Choice

The Balanced Budget Act of 1997 (BBA) directed the Secretary of Health and Human Services to begin making payments to Medicare+Choice (M+C) plans on January 1, 2000, using a system that accounts for differences in health status among enrollees. As a first step in meeting the BBA requirement, the Centers for Medicare & Medicaid Services (CMS) began phasing in the principal inpatient diagnostic cost group (PIP-DCG) model on the required date. The PIP-DCG model measures enrollees' health status using their:

- age,
- sex,
- Medicaid status the previous year,
- original reason for eligibility (aged or disabled), and
- principal diagnoses from any hospital inpatient stays in a defined prior 12-month period.

For 2000 through 2003, the Balanced Budget Refinement Act of 1999 and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) mandated that the new risk-adjustment system apply to 10 percent of the payment for M+C plans, and that the remaining 90 percent be

based on a demographic model already in use. For 2004, the BIPA specifies that risk adjustment be based on a multiple-site model that uses data from hospital inpatient and ambulatory settings. The BIPA also requires that such a model apply to 30 percent of payments in 2004, and that this percentage be increased annually until it reaches 100 percent in 2007.

Considerable uncertainty exists over the form the risk-adjustment system will take in 2004. Before the BIPA was passed, CMS had plans to replace the PIP-DCG model with a multiple-site model that takes into account diagnoses from physician and hospital outpatient visits as well as hospital inpatient stays. CMS intended for M+C plans to submit all diagnoses from all hospital inpatient, hospital outpatient, and physician office encounters, as well as data elements that would have made auditing easier and would have allowed for eventual use of encounter data to calibrate the risk-adjustment model. Plans argued that collecting and submitting the full encounter data would be an excessive burden. In response, the Secretary suspended collection of full encounter data from ambulatory sites in May 2001 and

directed CMS to investigate alternative methods that would not require plans to submit full encounter data.

CMS intends to reduce the burden on plans by requiring them to submit only the data elements necessary to run a risk-adjustment model: beneficiaries' identification number, diagnosis codes, beginning and ending dates of service, and type of provider (inpatient, outpatient, or physician's office). CMS is also considering decreasing the burden on plans by reducing the number of diagnoses it will use to risk-adjust payments. Plans would be required to submit only information on those diagnoses used in the risk-adjustment model, but they would also be allowed to submit information on other diagnoses if they choose. Finally, plans will have flexibility in how they submit the data. They can submit either full encounter forms or summary forms with only the required data elements.

CMS will announce the variables to be used in the risk-adjustment model on or before March 29, 2002. It will announce which multiple-site risk-adjustment model it will use on or before January 15, 2003, and will begin using the model to adjust payments beginning January 1, 2004. ■

like Manhattan—which currently has an M+C rate that is \$141 per month above FFS spending—the annual adjustments over the transition period are likely to be \$20 per month or less.

Similarly, the Commission recommends phasing in as quickly as possible a reliable risk-adjustment system to account for the relative health status of beneficiaries in M+C plans and in FFS Medicare. Such a system is necessary for the proper functioning of a financially neutral payment system. If M+C plans were paid

based on the estimated cost of treating average beneficiaries in traditional FFS Medicare without adjusting for the relative health status of M+C enrollees, plans could be paid too much or too little for the health care needs of their Medicare enrollees. This could give beneficiaries who join M+C plans access to very generous benefits at the expense of other beneficiaries and increase Medicare spending (if plans are paid too much), or it could make it impossible for plans that enroll more costly beneficiaries to operate in Medicare (if plans are paid too little).

However, current risk adjustment—the principal inpatient diagnostic cost group (PIP-DCG) model—does not work well enough to differentiate adequately among beneficiaries based on health status.<sup>6</sup> Therefore, MedPAC continues to support moving to a system, such as one of those currently being considered by the Centers for Medicare & Medicaid Services (CMS), that would include data from some outpatient settings (see text box above). The data do not presently exist to allow us to determine the distributional

6 MedPAC recently examined these issues in more depth (MedPAC 2000).

consequences of moving to an adequate risk-adjustment system. We believe that some plans probably have healthier-than-average populations of enrollees and that other plans probably have less healthy enrollee populations, but whether use of a more accurate risk-adjustment system would ultimately result in an increase or a decrease in plan payments, on average, is uncertain.<sup>7</sup>

In addition to risk adjustment, Medicare faces three technical issues in setting rates: the appropriate size of payment areas, how to treat the interaction of the Medicare program with spending on behalf of beneficiaries who are also eligible for benefits through the departments of Defense and Veterans Affairs, and how to account for payments related to graduate medical education (GME). The first two issues have been raised in previous reports by MedPAC and one of MedPAC's predecessor commissions, the Prospective Payment Assessment Commission (MedPAC 2001, ProPAC 1997); these issues are not discussed here. The Commission believes that the current M+C payment policy with regard to payments for GME should be continued (see text box, right).

### Effects of moving to a financially neutral payment system

The Commission believes that a financially neutral payment system is a prudent way to preserve and improve the M+C program in the long run. Such a system would improve equity between M+C payments and traditional FFS spending and eliminate unsustainable underpayments and unnecessary overpayments to plans. It would not necessarily improve geographic equity across areas, reduce overall spending, or increase plan choices, but neither will the current M+C payment system.

A financially neutral payment policy would improve equity between M+C enrollees and traditional FFS beneficiaries

## The reduction in Medicare+Choice payments for graduate medical education

Prior to the Balanced Budget Act of 1997 (BBA), payment rates to Medicare health maintenance organizations (HMOs) were based on county-level fee-for-service (FFS) costs, including graduate medical education (GME) and indirect medical education (IME) payments to teaching hospitals (among other payment add-ons). Thus, plan payment rates were higher in counties where FFS beneficiaries obtained care from teaching hospitals and lower in counties with less use of teaching hospitals.

The Congress changed this policy with the creation of Medicare+Choice (M+C) because some policymakers believed that reflecting GME and IME payments in plan payment rates was inappropriate to the extent that there was a belief that managed care plans used teaching hospitals less often than traditional FFS Medicare and paid them less. Thus, current law requires that M+C payment rates be computed without the GME and IME payments and that these payments be paid by Medicare directly to teaching hospitals for the M+C enrollees they treat. The Congress intended for this change to be phased in over a 5-year period ending in 2002, but GME payments have not been fully removed from M+C payment rates in many areas because the floor payment rates and minimum updates have prevented rates from declining.

However, teaching hospitals began receiving some GME payments from Medicare immediately after implementation of the BBA and will receive the full amount of the GME payments for M+C enrollees in 2002.

To help ensure that M+C plans have incentives to direct enrollees to use teaching hospitals when appropriate, the Commission supports excluding GME and IME payments from plan payment rates. This exclusion is sometimes referred to as the carve-out. In the absence of a carve-out, M+C plans would receive additional payments that could be used to pay for the higher cost of care in teaching hospitals, but they might elect instead to contract with community hospitals and use the additional funds for other purposes, including additional benefits. Continuing the carve-out, however, allows teaching hospitals to compete with lower-cost community hospitals. Under the carve-out, teaching hospitals only receive the additional GME and IME payments directly from Medicare if they treat M+C enrollees; they therefore have incentives to lower their rates to encourage plans to contract with them. If teaching hospitals' rates are competitive with those of community hospitals, plans have an incentive to use teaching hospitals when their enrollees would benefit from the care that teaching hospitals provide. ■

within local payment areas. By design, the Medicare program would spend the same risk-adjusted amount for M+C enrollees and beneficiaries in the traditional FFS program within each local market, something that is not true under the current M+C payment system.

Beneficiaries would be free to choose between enrolling in an M+C plan or remaining in traditional FFS Medicare, without Medicare paying more for either.

A financially neutral payment system also would avoid the problem of unsustainable underpayments and unnecessary

<sup>7</sup> CMS analyzed the potential impact of the current risk adjuster, the PIP-DCG, and found that overall plan payments would decrease. However, it is unclear whether any existing risk selection would have changed between then and now as a result of higher plan premiums and less generous benefits.

overpayments. Plans would be paid what it costs to treat beneficiaries in traditional FFS Medicare and would have incentives to operate in areas in which they could provide services at lower cost than FFS. Similarly, plans would no longer be subsidized for operating in areas where they cannot compete with traditional Medicare.

A financially neutral payment system would not improve geographic equity across areas. Geographic variation in spending in FFS Medicare precludes improving both geographic equity across areas and equity between M+C payments and traditional FFS spending within local areas at the same time. The Commission believes that changes to M+C payment rates are the most effective way to improve equity within areas, while changes to FFS payment systems and practice patterns would be needed to improve geographic equity across areas.

It is unclear whether the payment policy MedPAC recommends would change overall spending relative to the current M+C payment system. Eliminating floor payment rates could reduce spending, but payment rates to other areas would increase under a financially neutral payment system. The change in overall payments relative to current spending would depend on the relative magnitudes of the two effects.

Even under the current payment system for M+C, which was designed to encourage choice in more areas of the country, many areas still lack plan choices. Moving to financially neutral payment rates would likely lower M+C payment rates in most areas currently without plans, especially in floor payment areas. Thus, the new rates probably would not result in new plans entering areas that have no plan choices now. However, the system could help to maintain or even increase the choices available in areas where choices already exist.

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## Could competitive bidding improve a financially neutral payment system?

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Some policy analysts suggest that implementing a financially neutral payment system through competitive bidding might encourage greater plan participation, reduce Medicare costs, and improve geographic equity across areas. In evaluating this proposition, we assume the notion of competitive bidding that is embodied in the private market for health insurance. Insurers develop products that differ in the benefits they offer and other characteristics of interest to potential enrollees. Insurers' offerings can be thought of as bids. Buyers—in this case, beneficiaries—face different prices for the different offerings and make tradeoffs among price, quality, and convenience when choosing to enroll in a particular plan.

In fact, many elements of this form of competitive bidding already exist in the M+C program. Plans compete against one another on the basis of supplemental benefits and premiums. They also compete against the FFS Medicare program (often combined with medigap), although they are sometimes limited in the ways in which they can compete. For example, M+C organizations currently cannot offer plans that are less expensive than traditional FFS Medicare; they may only offer plans with richer benefits. This means that M+C enrollees are required to pay the same Part B premium as beneficiaries who remain in traditional FFS Medicare, even if their M+C plan would like to charge them less and offer fewer supplemental benefits. A provision in the BIPA takes effect in 2003 that will ease this restriction and will allow plans to refund all or part of the Part B premium to their enrollees.

However, current law differs significantly from most models of competitive bidding in that market competition does not affect the government contribution to M+C plan payments. (The payment an M+C plan receives for each enrollee is the

government contribution, typically referred to as the M+C payment rate, plus any additional premium the plan charges beneficiaries.) Some proponents suggest that using competitive bidding to set the government contribution could help lower overall program costs. For example, if some plans bid lower than traditional FFS Medicare, and if beneficiaries choose lower-cost plans to avoid paying the additional costs of more expensive plans, then overall Medicare spending could be reduced.

## An illustrative model of competitive bidding

In this section, we analyze an illustrative model of competitive bidding and examine how the results could be generalized to other system options. Although there are many possible models for competitive bidding, the Commission has focused on those that would be compatible with a financially neutral payment system (which we define as one that requires the government's contribution in a local area to be equal for beneficiaries in M+C plans and those in traditional FFS Medicare). We also assume that the benefit packages on which plans bid would be the same in traditional Medicare and M+C plans. We made this assumption to avoid the question of how to distinguish differences in plan costs from differences in benefits. If plans were allowed to bid on different packages, it would be difficult to determine which benefits the government contribution was actually supporting.

In our illustrative model, plans' bids would be based on the basic Medicare benefits package, although they might be able to offer richer benefits. (Plans do this now when they submit their adjusted community rate proposals, which report the benefits they offer and the premiums and copayments they charge.) Traditional FFS Medicare would be one of the plans in the market, and its bid would equal estimated FFS costs in the local area. Other plans would be free to bid whatever they wanted to provide the defined set of benefits. The amount of the government contribution to plan payments in each



local area could be determined in a number of ways. For example, it could be based on the lowest bid, the average bid, or some percentage above the lowest bid. However, because traditional FFS Medicare would submit a bid and because we focus on models which are consistent with a financially neutral payment policy, we assume the government contribution would never exceed local costs for traditional FFS Medicare.

Two different types of local markets would exist under this competitive bidding model: those with only traditional FFS Medicare and those with traditional FFS Medicare and at least one private alternative. In markets with only traditional Medicare, the government contribution would be equal to local estimated FFS costs, as it is under current law, and beneficiaries would pay the Part B premium, as they do now (Table 4-2).

In markets with at least one alternative to traditional Medicare, the government contribution could be set in any number of ways. In Table 4-3, we illustrate a market that has at least one M+C plan, in addition to traditional Medicare. We assume that the government contribution for market B has already been chosen, using any of the possible methods, and that M+C plan X's bid happens to equal the government contribution, which in this case is lower than traditional FFS Medicare's bid. Beneficiaries living in this market who choose to remain in traditional Medicare would have to pay the Part B premium plus the difference between the cost of traditional Medicare and the government contribution. For example, if expected costs were \$500 under traditional Medicare and the government contribution were set at \$450, beneficiaries choosing to remain in traditional Medicare would pay the \$54 Part B premium plus \$50 (Table 4-3). Beneficiaries enrolling in plans with higher bids would pay the Part B premium plus an additional premium equal to the difference between their plan's bid and the government contribution. (Additional premiums collected from beneficiaries could be used to lower the national Part B premium, increase the level of benefits in

**TABLE  
4-2**

## Payments under illustrative competitive bidding model

Markets	Medicare pays	Beneficiary pays
Market with traditional FFS only	providers as usual in FFS	Part B premium only
Market with traditional FFS plus 1 or more private plans	providers as usual in FFS government contribution to private plans	Part B premium Plus – people in plans with bids above the government contribution pay the difference between bid and government contribution  – people in FFS pay the difference (if any) between expected local FFS costs and government contribution

Note: FFS (fee-for-service).

**TABLE  
4-3**

## How rates and premiums would be set in the illustrative competitive bidding model, in markets with only the traditional fee-for-service plan available and in markets with an alternative lower-cost Medicare+Choice plan

Markets	Plan bid	Government contribution	Beneficiary premium
<b>Market A</b>			
Traditional FFS plan	\$510	\$510	\$54
<b>Market B</b>			
Traditional FFS plan	500	450	54+50
M+C plan X	450	450	54

Note: M+C (Medicare+Choice). FFS (fee-for-service). Illustrative market A has only traditional FFS Medicare as an option. Illustrative market B has traditional FFS Medicare and at least one M+C plan alternative. The traditional FFS plan's bid is set equal to traditional FFS plan costs in the local market. The government contribution has already been set at \$450 in market B. \$54 is the 2002 Medicare Part B premium.

the standard benefit package, or lower the overall cost of the Medicare program to taxpayers.) Beneficiaries enrolled in M+C plan X would pay no additional premium beyond the Part B premium because the plan's bid would be equal to the government contribution.

## Effects of moving to competitive bidding

This section compares outcomes under the illustrative competitive bidding model with the current M+C payment system and a financially neutral payment system that does not use competitive bidding based on the criteria introduced earlier in

this chapter: geographic equity across areas, choice of plans, and overall spending.

The illustrative competitive bidding model would offer a different sense of geographic equity across areas than either the current M+C system or a financially neutral payment system without competitive bidding. All beneficiaries nationwide would have access to a basic benefit package (not necessarily provided through traditional FFS Medicare) at the same Part B premium, and would have to pay more if they wanted to join a more costly plan. This differs substantially from the current situation: all beneficiaries nationwide have access to traditional FFS Medicare at the same Part B premium, and beneficiaries in some areas have access to plans with extra benefits for no additional premium. Because the illustrative model adheres to the financially neutral payment policy, equity between M+C enrollees and traditional FFS beneficiaries in each local market would be improved.

Would setting the government contribution using the illustrative competitive bidding model expand choice of plans? Unless the model allowed the government contribution to exceed the expected local costs of traditional FFS Medicare (which would violate the policy of financial neutrality), plans would have no greater incentive to participate than they would under a financially neutral payment system without competitive bidding. In areas with no plans, a plan that was not already participating would still be unlikely to participate, given that rates could only be lowered under our illustrative model relative to financial neutrality without competitive bidding. In areas with alternatives to traditional FFS Medicare, the fact that beneficiaries would have to pay more to remain in traditional FFS Medicare could encourage more beneficiaries to enroll in M+C plans and create opportunities for additional plans to compete in these areas. However, a recent study using a simulation model to predict the outcomes of different competitive bidding models concluded that significantly greater enrollment in M+C

plans is unlikely under any of the models examined (Thorpe and Atherly 2001). The simulations were based on previous studies that found that beneficiaries tend not to switch health plans unless presented with significant financial incentives.

Medicare spending under competitive bidding is difficult to predict because it depends on how the government contribution is set and whether some plans would bid lower than traditional FFS Medicare. Nonetheless, our illustrative model would likely not increase Medicare spending, at any point in time, relative to a financially neutral payment system without competitive bidding. In fact, spending could decrease depending on how the model is structured. For example, the authors of the competitive bidding study cited above estimated that a model with the government contribution set equal to the average bid would generate savings to the Medicare program of close to 10 percent of total Medicare spending (Thorpe and Atherly 2001). Savings would arise primarily from the additional premiums paid by beneficiaries remaining in traditional Medicare, and to some extent from lower government contributions paid to M+C plans.

### **Issues with moving to competitive bidding**

Several complications would likely arise in the actual implementation of a competitive bidding model. Because the premiums beneficiaries would pay for traditional FFS Medicare could vary more under a competitive bidding model than they do under the current system, risk selection issues could be more serious. In addition, competitive bidding would change the nature of the Medicare entitlement. Finally, policymakers would need to consider tradeoffs in the actual design of a competitive bidding model.

Adequate risk adjustment would be essential to ensure the stability of traditional FFS premiums in any competitive bidding system like the one we illustrate. Under the current M+C system, beneficiary premiums for the traditional FFS program are fixed in the

short run. In a competitive bidding system without adequate risk adjustment, however, premiums for traditional FFS Medicare could increase rapidly in some local markets if healthier beneficiaries chose M+C plans and less-healthy beneficiaries stayed in traditional Medicare. Once premiums began to rise, increasing numbers of healthier beneficiaries could decide to trade the broad choice of physicians available in traditional FFS Medicare for less expensive health plan alternatives, further raising the average costs of beneficiaries remaining in the traditional program and perpetuating an unsustainable series of premium increases for traditional Medicare.

In addition, under this illustrative model of competitive bidding, beneficiaries would no longer be entitled to get care through traditional FFS Medicare for the same premium nationwide. Beneficiaries would still be entitled to receive the standard Medicare benefits package, but not necessarily through the broad choice of providers available in traditional FFS Medicare. Beneficiaries would always have the traditional FFS option, but they could be required to pay more for it if less expensive alternatives were available in the market.

Finally, two types of tradeoffs need to be considered in implementing a competitive bidding system in which the government contribution might be lowered and beneficiaries in some areas could be required to pay more to remain in traditional Medicare. One tradeoff is between higher premiums paid by some beneficiaries and cost savings. The savings could be distributed either to taxpayers or to all Medicare beneficiaries nationwide through lower Part B premiums or an improvement in the standard Medicare benefits package. The other tradeoff occurs among geographic areas. In areas of the country where M+C plans currently provide extra benefits at minimal cost, such bargains probably would not exist after implementation of competitive bidding. Beneficiaries in these areas who chose to remain in traditional FFS Medicare would face

additional premiums. Beneficiaries in areas of the country that currently have no M+C plans would either be unaffected or would benefit if overall savings were used to lower Part B premiums or enhance the basic Medicare benefits package.

Overcoming the challenges and reaching a political consensus on these tradeoffs would be difficult. In the meantime, the

Congress should move to a financially neutral payment system, incorporating adequate risk adjustment, as soon as possible without creating undue disruption to the M+C program. It is not necessary to wait to see if competitive bidding will be enacted; the use of competitive bidding to set M+C payment rates would be

compatible with financial neutrality as long as traditional FFS Medicare is included as one of the bidders. Competitive bidding would simply determine the level of the government contribution, and thus could be done at a later time. ■



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A P P E N D I X

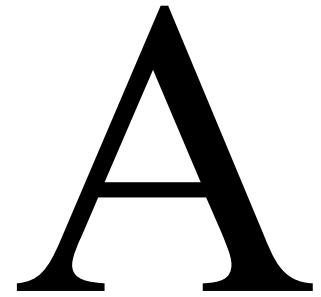
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## **The construct of Medicare price indexes**

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# The construct of Medicare price indexes

This appendix presents detailed information on input price indexes (generally referred to as market baskets) used by the Centers for Medicare & Medicaid Services (CMS) to measure changes over time in the prices paid for inputs by specific classes of health care providers. It supplements the information in Chapter 2A and provides the data that underlie Table 2A-2.

Chapter 2A reviews and assesses the price indexes Medicare uses to measure changes in input prices for its prospective payment systems. CMS and the Congress use these indexes to update payment rates. In addition to discussing price indexes generally, Chapter 2A considers the treatment of labor costs, including wages and salaries and employee fringe benefits, in the price indexes used by CMS. These indexes rely heavily on measures of labor compensation from the general economy, as shown in Tables A-1 and A-2 in this appendix. However, measures from the general economy often do not reflect compensation changes in health care. The Commission believes that the use of measures from the general economy may cause the indexes to overestimate or underestimate input price change, resulting in payment updates that are too high or too low. The chapter includes a recommendation that CMS change the treatment of wages and employee benefits

in its input price measures to improve their accuracy in predicting changes in provider costs.

Each of CMS's five price indexes consists of categories of inputs used to produce health care services, price indexes used as proxies to represent the change in price in those categories, and percentage weights for the categories based on information about spending by providers on inputs. The categories account for spending on capital and operating inputs or just on operating inputs, depending on the input price index.

The input category names are those used by CMS in describing the indexes. The proxies are employment cost indexes, producer price indexes, and other measures used to represent the change in price of the inputs in the category. Each proxy is identified by the Bureau of Labor Statistics or CMS name for the specific series. The weights are estimates of the percentage of expenses accounted for by the input category for the specific provider type. They are generally based on data from the U.S. Department of Commerce or Medicare cost reports submitted by providers to CMS.

The tables in this appendix include information on input price indexes for prospective payment system (PPS)

hospitals, PPS-exempt hospitals, home health agencies, skilled nursing facilities, and physicians. The price indexes for PPS hospitals, PPS-exempt hospitals, and physicians exclude capital, although CMS maintains a separate capital market basket for updating PPS hospital capital payments. The home health and SNF market baskets, in contrast, include capital categories accounting for 2.64 percent and 9.88 percent, of their respective market basket weights.

For the market basket indexes that exclude capital, the weights shown in the first three tables (wages and salaries, employee benefits, and non-labor inputs) sum to 100 percent. For those indexes that include capital, the weights in the first three tables sum to less than 100 percent. In the last table, the weights sum to 100 percent for capital only.

Inputs are classified as labor, non-labor, or capital. Tables A-1 and A-2 present information on measures of prices for labor. The former focuses on wage and salary rates, and the latter focuses on employee benefits. Table A-3 presents information on non-labor inputs other than capital and Table A-4 concerns capital inputs. In combination, the four tables present complete information on the input price indexes used by CMS for the specified types of providers.

**TABLE  
A-1**

**Input price measures: input categories, price proxies,  
and weights for wages and salaries**

Category	Proxy	Weight				
		PPS hospitals	PPS- exempt hospitals	Home health	SNF	Physician
Civilian hospital	Civilian hospital	16.51%	17.14%	14.64%	—	—
Professional and technical	Professional, specialty, and technical*	16.51	17.14	14.64	—	5.66%
Managers	Managers*	4.80	4.98	3.31	—	2.41
Sales	Sales	0.20	0.21	—	—	—
Clerical workers	Clerical*	6.22	6.46	9.52	—	3.83
Craft & kindred workers	Craft and repair	0.85	0.88	—	—	—
Operative etc., except transport	All other operators	0.22	0.23	—	—	—
Transport operatives	Transport operatives	0.06	0.06	—	—	—
Nonfarm laborers	Nonfarm laborers	0.04	0.04	—	—	—
Service workers	Service workers*	4.83	5.01	22.13	—	0.52
Wages and salaries	Private nursing homes	—	—	—	52.26%	—
Physician time— wages & salaries	Average hourly earnings, nonfarm production workers (proxy not an ECI)*	—	—	—	—	44.20
Total wages and salaries		50.24	52.15	64.23	52.26	56.62

Notes: Except as noted, all proxies are employment cost indexes (ECIs) for wages and salaries for the category. PPS (prospective payment system). SNF (skilled nursing facility). Columns may not add to totals because of rounding.

\*When used in the Medicare Economic Index, includes an adjustment for productivity. Proxy divided by the 10-year moving average of output per man-hour in the nonfarm business sector. Adjusted proxy =  $(1 + \text{unadjusted change in proxy}) / (1 + \text{change in productivity})$ .

Source: MedPAC analysis of data from Global Insights, Inc., DRI-WEFA, and CMS.

**TABLE  
A-2****Input price measures: input categories, price proxies,  
and weights for employee benefits****Weight**

<b>Category</b>	<b>Proxy</b>	<b>PPS hospitals</b>	<b>PPS- exempt hospitals</b>	<b>Home health</b>	<b>SNF</b>	<b>Physician</b>
Civilian hospital	Civilian hospital	3.66%	3.79%	2.97%	–	–
Professional and technical	Professional, specialty, and technical	3.66	3.79	2.97	–	–
Managers	Managers	1.07	1.11	0.69	–	–
Sales	Sales	0.05	0.05	–	–	–
Clerical workers	Clerical	1.39	1.44	2.13	–	–
Craft & kindred workers	Craft and repair	0.19	0.20	–	–	–
Operative etc., except transport	All other operators	0.05	0.05	–	–	–
Transport operatives	Transport operatives	0.01	0.01	–	–	–
Nonfarm laborers	Nonfarm laborers	0.01	0.01	–	–	–
Service workers	Service workers	1.07	1.11	4.69	–	–
Physician time- fringe benefits	Private nonfarm workers*	–	–	–	–	10.26%
Nonphysician compensation- fringe benefits	White-collar workers*	–	–	–	–	4.39
Benefits-private nursing homes	Private nursing homes	–	–	–	10.73%	–
Total benefits		11.16	11.57	13.44	10.73	14.65

Notes: All proxies are employment cost indexes (ECIs) for employee benefits. PPS (prospective payment system). SNF (skilled nursing facility). Columns may not add to totals because of rounding.

\*When used in the Medicare Economic Index, includes an adjustment for productivity. Proxy divided by the 10-year moving average of output per man-hour in the nonfarm business sector. Adjusted proxy =  $(1 + \text{unadjusted change in proxy}) / (1 + \text{change in productivity})$ .

Source: MedPAC analysis of data from Global Insights, Inc., DRI-WEFA, and CMS.

**TABLE  
A-3**

**Input price measures: input categories, price proxies,  
and weights for non-labor expenses**

Category	Proxy	Weight				
		PPS hospitals	PPS- exempt hospitals	Home health	SNF	Physician
Other professional fees (nonmedical)	ECI compensation for professional, specialty, and technical	2.13%	2.10%	—	2.63%	—
Malpractice insurance	CMS professional liability insurance premium index	1.19	1.08	—	—	—
MEI-malpractice expense	Physician malpractice cost index	—	—	—	—	3.15%
MEI-office	CPI-U-housing	—	—	—	—	11.58
Electricity	PPI-commercial electric power	0.93	1.01	—	1.42	—
Fuels (nonhighway)	PPI-commercial natural gas	0.37	0.40	—	0.43	—
Water and sewerage	CPI-U-water and sewerage	0.25	0.27	—	0.52	—
Utilities	CPI-U-fuel and other utilities	—	—	0.83%	—	—
Pharmaceuticals	PPI-ethical (prescription) drugs	4.16	3.07	—	3.01	1.51
Food: direct purchase	PPI-processed foods and feeds	2.31	2.37	—	3.20	—
Food: contract service	CPI-U-food away from home	1.07	1.10	—	0.94	—
Chemicals	PPI-industrial chemicals	3.67	3.75	—	0.89	—
Medical instruments	PPI-medical instruments and equipment	3.08	3.15	—	—	1.88
MEI-medical materials and supplies	PPI-surgical appliances and supplies	—	—	—	—	1.51
Photographic supplies	PPI-photographic supplies	0.39	0.40	—	—	—
Rubber and plastics	PPI-rubber and plastics products	4.75	4.87	—	1.61	—
MEI-medical equipment	CPI-U-medical equipment and supplies	—	—	—	—	1.51

continued on next page



**TABLE  
A-3****Input price measures: input categories, price proxies,  
and weights for non-labor expenses****Weight**

Category	Proxy	Weight				
		PPS hospitals	PPS- exempt hospitals	Home health	SNF	Physician
Paper products	PPI-converted paper and paperboard	2.08%	2.18%	—	1.29%	—
Paper products	CPI-U-household paper products	—	—	0.53%	—	—
Apparel	PPI-apparel	0.87	0.89	—	—	—
Machinery and equipment	PPI-machinery and equipment	0.21	0.21	—	—	—
Miscellaneous products	PPI-finished goods	2.24	2.23	—	—	—
Miscellaneous products	PPI-finished goods less food and energy	—	—	—	2.59	—
MEI-auto	CPI-U-private transportation	—	—	—	—	1.30%
Postage	CPI-U-postage	0.27	0.30	—	—	—
Telephone services	CPI-U-telephone services	0.58	0.63	0.73	0.45	—
All other: labor intensive	ECI-compensation for private service occupations	7.28	5.44	—	4.09	—
All other: nonlabor intensive	CPI-U-all items	0.80	0.83	—	4.06	—
Administrative costs	CPI-U-services	—	—	7.59	—	—
Transportation	CPI-U-private transportation	—	—	3.41	—	—
Insurance	CPI-U-household insurance	—	—	0.56	—	—
All other	CPI-U-all items less food and energy	—	—	5.32	—	6.30
Total non-labor		38.63	36.28	19.69	27.12	28.74

Notes: This table includes all non-labor and non-capital inputs. CMS (Centers for Medicare & Medicaid Services). CPI-U (consumer price index—all urban consumers). ECI (employment cost index). MEI (Medicare Economic Index). PPI (producer price index). PPS (prospective payment system). SNF (skilled nursing facility). Columns may not add to totals because of rounding.

Source: MedPAC analysis of data from Global Insights, Inc., DRI-WEFA, and CMS.

**TABLE  
A-4**

**Input price measures: input categories, price proxies,  
and weights for capital-related expenses**

		Weight				
Category	Proxy	PPS hospitals	PPS-exempt hospitals	Home health	SNF	Physician
Building and equipment						
Building and fixed	Boeckh institutional construction index (vintage weighted)	30.09%	—	—	36.54%	—
Movable equipment	PPI for machinery and equipment (vintage weighted)	34.75	—	—	16.77	—
Fixed capital	CPI-U, owner’s equivalent rent	—	—	66.67%	—	—
	PPI, machinery and equipment	—	—	33.33	—	—
Interest						
Government and nonprofit	Average yield municipal bonds (Bond Buyer index–20 bonds) (vintage weighted)	27.06	—	—	19.13	—
For-profit	Average yield Moody’s AAA bonds (vintage weighted)	4.78	—	—	19.86	—
Other capital-related cost						
	CPI-U–residential rent	3.32	—	—	7.69	—
Total capital		100.00	—	100.00	100.00	—

Notes: CMS (Centers for Medicare & Medicaid Services). CPI-U (consumer price index—all urban consumers). ECI (employment cost index). MEI (Medicare Economic Index). PPI (producer price index). PPS (prospective payment system). SNF (skilled nursing facility). Source of weights: PPS hospitals, PPS capital market basket; home health, home health market basket; SNF, SNF market basket. Weights of home health and SNF market basket capital components standardized to sum to 100 percent. Columns may not add to totals because of rounding.

Source: MedPAC analysis of data from Global Insights, Inc., DRI-WEFA, and CMS.

A P P E N D I X

B

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**A data book on hospital  
financial performance**

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# A data book on hospital financial performance

This appendix provides data on hospital financial performance. The analyses and data in this section were used to support our update recommendation for inpatient and outpatient prospective payment system (PPS) payments, and other MedPAC recommendations.

Tables in this data book provide variables by hospital group and are presented for 10 years (1990-1999 or 1991-2000) unless otherwise noted below. Tables created with data from the American Hospital Association annual survey of hospitals are presented for 1991-2000. Tables created with data from Medicare cost reports run through 1999 because cost reports for 2000 were not available in time for this report. However, the 1999 cost report data presented in this appendix cover about 80 percent of hospitals, compared to a sample of about 50 percent used for our March 2001 Report to the Congress. Hospitals are grouped by several attributes, including location (urban and rural), teaching status (major teaching, other teaching, non-teaching), receipt of disproportionate share payments, census region, and ownership status. All measures are national aggregates, not the averages of individual facilities; this provides an overview of the industry as a whole. Definitions of the variables included in these tables can be found in the table notes.

The data book starts with case-based variables:

- Table B-1 shows the trends in hospital payments per case, costs per case and length of stay.
- Table B-2 shows the trend in Medicare cost per discharge.
- Table B-3 shows the trend in Medicare inpatient length of stay.

Further tables present data on a number of margin measures for PPS hospitals, based on Medicare cost report data. This analysis features our overall Medicare margin, which incorporates payments and costs for inpatient and outpatient services as well as hospital-based home health, skilled nursing and PPS-exempt units. Margins for each of these components and the overall Medicare margin (which includes graduate medical education and Medicare bad debt) are presented by hospital group.

- Table B-4 shows the trend in Medicare inpatient margins.
- Table B-5 shows the distribution of Medicare inpatient margins for 1999.
- Table B-6 shows the trend in Medicare outpatient margins for 1996 through 1999.
- Table B-7 shows the trend in hospital-based Medicare skilled nursing facility margins for 1996 through 1999.

- Table B-8 shows the trend in hospital-based Medicare home health agency margins for 1996 through 1999.
- Table B-9 shows the trend in Medicare PPS-exempt unit margins for 1996 through 1999.
- Table B-10 shows the trend in the overall Medicare margins for 1996 through 1999.

The analysis is then expanded from Medicare to comparative tables among payers. These tables contain aggregate values for all community hospitals, which includes all PPS hospitals and most PPS-exempt facilities.

- Table B-11 shows the trend in payment-to-cost ratio by source of revenue.
- Table B-12 shows the trend in gains or losses by source of revenue.

The appendix concludes with data on hospital total margins.

- Table B-13 shows the trend in hospital total margins.
- Table B-14 shows the distribution of hospital total margins for 1999.

**TABLE  
B-1****Change in hospital payment, cost, and length of stay indicators, 1991–2000**

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
1991	3.4%	4.4%	6.1%	7.0%	−2.7%	−1.3%	5.5%
1992	3.0	3.2	6.2	4.6	−3.3	−1.6	5.7
1993	2.7	3.1	3.5	1.2	−5.5	−2.3	3.4
1994	2.0	2.6	3.1	−1.1	−6.0	−3.8	−0.1
1995	2.0	3.2	4.9	−1.2	−6.2	−4.3	−0.5
1996	1.5	2.4	5.4	−0.4	−5.5	−3.5	0.4
1997	2.0	2.0	1.9	0.8	−3.4	−1.9	−1.5
1998	0.0	2.9	−2.1	1.4	−2.4	−0.9	−2.3
1999	1.1	2.5	0.5	3.0	−1.6	−1.8	2.7
2000	1.1	3.6	N/A	N/A	N/A	−1.9	2.1

Note: N/A = not available.

Source: MedPAC analysis of Medicare cost report data from CMS, and data from the American Hospital Association annual survey of hospitals.



**TABLE  
B-2****Change in Medicare inpatient costs per discharge, 1990–1999**

Hospital group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All hospitals	8.2%	7.0%	4.6%	1.2%	-1.1%	-1.2%	-0.4%	0.8%	1.4%	3.0%
Urban	7.8	6.7	4.4	1.1	-1.5	-1.4	-0.6	0.7	1.3	2.9
Rural	9.8	8.7	5.9	2.1	0.8	0.1	1.1	1.8	2.4	3.6
In large urban areas	7.4	6.1	3.4	1.3	-2.0	-1.5	-0.7	0.8	1.2	2.7
In other urban areas	8.4	7.6	6.1	0.8	-0.6	-1.2	-0.3	0.6	1.5	3.4
Rural referral	9.2	8.7	5.6	2.1	0.2	-0.4	-0.1	1.5	2.5	4.7
Sole community	9.1	8.6	4.8	2.5	1.1	1.6	1.7	2.3	2.5	2.5
Small rural Medicare-dependent	10.1	9.2	4.7	1.8	1.5	-2.5	4.8	1.3	3.1	0.5
Other rural < 50 beds	13.7	6.8	6.3	2.2	2.3	2.1	3.5	1.2	4.0	3.1
Other rural ≥ 50 beds	9.3	8.7	7.0	1.5	0.8	-0.3	0.4	2.0	1.7	3.4
Major teaching	7.8	6.9	3.7	2.0	-2.5	-1.1	0.7	1.5	0.1	4.1
Other teaching	8.3	6.8	4.5	0.8	-1.2	-0.8	-0.7	0.8	1.5	2.4
Non-teaching	8.0	7.2	4.8	1.1	-0.7	-1.8	-0.7	0.6	1.8	3.1
Major teaching										
Public	5.9	7.3	5.6	0.3	-3.5	-1.8	4.8	1.2	0.6	7.1
Private	8.3	6.8	3.3	2.3	-2.4	-0.9	-0.3	1.5	-0.1	3.4
Other teaching										
Public	9.4	8.6	5.2	0.4	-1.1	-1.9	-2.7	0.2	4.7	6.0
Private	8.3	6.6	4.5	0.9	-1.2	-0.7	-0.6	0.9	1.3	2.1
Non-teaching										
Public	9.3	9.0	5.6	2.1	0.8	-1.0	1.3	1.0	2.8	3.0
Private	7.7	6.8	4.7	0.9	-1.0	-1.9	-1.1	0.6	1.6	3.2
DSH										
In large urban areas	7.2	6.2	3.0	0.9	-2.1	-1.4	-0.4	1.2	0.9	2.9
In other urban areas	8.4	7.9	6.5	0.8	-0.4	-1.4	-0.3	0.7	1.5	3.8
Rural	9.8	9.4	7.1	2.3	0.1	-1.4	0.2	2.2	3.3	3.1
Non-DSH	8.6	7.1	4.8	1.5	-0.9	-0.9	-0.5	0.5	1.6	2.8
Teaching and DSH	8.1	7.0	4.3	0.9	-1.7	-1.0	0.1	1.2	0.6	3.2
Teaching and non-DSH	8.6	6.5	4.5	2.1	-1.4	-0.6	-1.0	0.4	1.8	2.3
Non-teaching and DSH	7.4	7.0	4.8	0.8	-0.8	-2.4	-1.6	0.7	2.2	3.1
Non-teaching and non-DSH	8.4	7.4	4.9	1.2	-0.6	-1.3	-0.1	0.6	1.5	3.1
New England	6.6	2.7	4.3	2.6	0.9	-0.5	-1.7	-0.1	-0.6	1.7
Middle Atlantic	8.4	6.7	4.7	2.2	-0.7	0.1	-0.9	1.7	-0.7	2.4
South Atlantic	9.2	6.8	4.6	1.0	-1.8	-2.1	-0.6	0.6	2.0	3.6
East North Central	7.8	7.5	5.0	1.0	-0.6	-0.2	-0.3	-0.4	2.0	2.7
East South Central	10.4	10.2	7.3	0.1	-3.2	-1.9	1.1	1.6	2.3	2.4
West North Central	10.6	6.3	4.9	1.4	0.1	-0.6	3.5	2.4	2.5	3.8
West South Central	8.6	8.5	3.9	1.9	-1.6	-3.4	-1.7	0.0	1.9	2.9
Mountain	7.7	6.4	5.4	-0.3	0.4	-1.4	0.1	1.0	2.8	1.5
Pacific	5.0	6.9	3.0	0.2	-1.7	-1.5	-0.2	1.9	2.0	6.3
Voluntary	8.2	6.9	4.6	1.4	-1.0	-0.9	-0.3	0.7	1.2	2.7
Proprietary	7.7	6.2	3.6	-0.7	-3.0	-3.6	-4.0	1.2	1.2	3.5
Urban government	7.2	7.9	5.5	0.8	-1.5	-2.0	1.5	0.2	2.1	5.3
Rural government	10.5	9.5	6.3	3.1	2.0	0.1	2.4	1.8	3.2	2.5

Note: DSH (disproportionate share). 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.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-3****Change in Medicare inpatient length of stay, 1990–1999**

Hospital group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All hospitals	-1.5%	-2.7%	-3.3%	-5.5%	-6.0%	-6.2%	-5.5%	-3.4%	-2.4%	-1.4%
Urban	-1.8	-3.0	-3.4	-5.9	-6.3	-6.6	-5.9	-3.5	-2.4	-1.3
Rural	-0.2	-1.3	-3.1	-3.5	-4.3	-4.7	-3.8	-2.9	-2.4	-1.6
In large urban areas	-2.1	-3.4	-3.8	-5.7	-6.7	-6.4	-5.8	-3.2	-2.5	-0.9
In other urban areas	-1.3	-2.3	-2.8	-6.0	-5.8	-6.7	-5.8	-3.7	-2.2	-1.8
Rural referral	-0.9	-1.9	-3.7	-4.6	-6.3	-6.0	-5.7	-3.1	-1.8	-1.3
Sole community	-0.4	-1.0	-2.2	-3.0	-2.9	-3.6	-3.0	-2.3	-3.4	-1.1
Small rural Medicare-dependent	-0.1	-0.5	-2.7	-2.3	-2.0	-3.9	-0.1	-2.4	-1.6	-4.1
Other rural < 50 beds	2.1	-2.0	-2.5	-1.7	-3.4	-1.3	-1.7	-3.7	-2.9	-0.7
Other rural ≥ 50 beds	0.0	-1.1	-3.2	-3.2	-3.6	-5.2	-3.8	-3.2	-2.2	-1.9
Major teaching	-2.3	-3.2	-3.5	-5.8	-7.2	-6.7	-6.5	-3.9	-3.2	-0.7
Other teaching	-1.5	-3.0	-3.4	-6.2	-6.3	-6.3	-6.0	-3.8	-2.4	-1.9
Non-teaching	-1.3	-2.3	-3.4	-4.9	-5.4	-6.1	-4.9	-3.0	-2.1	-1.2
Major teaching										
Public	-3.0	-2.2	-3.1	-5.8	-5.6	-6.8	-5.1	-3.6	-2.9	-0.5
Private	-2.2	-3.4	-3.5	-5.8	-7.5	-6.7	-6.8	-4.0	-3.3	-0.7
Other teaching										
Public	0.0	-3.6	-2.0	-7.5	-6.2	-6.8	-7.2	-4.9	-0.4	-2.5
Private	-1.6	-3.0	-3.5	-6.1	-6.3	-6.3	-5.9	-3.7	-2.6	-1.8
Non-teaching										
Public	-1.0	-0.9	-3.1	-3.5	-3.5	-4.9	-3.5	-2.8	-1.5	-1.4
Private	-1.3	-2.6	-3.4	-5.1	-5.7	-6.3	-5.2	-3.0	-2.3	-1.2
DSH										
In large urban areas	-2.0	-3.6	-3.6	-5.8	-6.3	-6.4	-5.9	-3.2	-2.6	-0.8
In other urban areas	-1.1	-2.4	-2.6	-6.1	-5.8	-6.7	-5.9	-3.8	-2.0	-2.0
Rural	0.6	-1.2	-2.8	-3.5	-4.4	-5.6	-5.5	-3.5	-2.0	-2.0
Non-DSH	-1.5	-2.3	-3.6	-5.1	-6.0	-5.9	-5.0	-3.3	-2.5	-1.3
Teaching and DSH	-1.6	-3.2	-3.1	-6.1	-6.6	-6.5	-6.4	-3.9	-2.6	-1.7
Teaching and non-DSH	-2.0	-2.7	-3.9	-5.9	-6.7	-6.3	-5.8	-3.7	-3.0	-1.2
Non-teaching and DSH	-1.3	-2.6	-3.3	-5.2	-5.1	-6.5	-5.4	-2.9	-2.1	-1.1
Non-teaching and non-DSH	-1.2	-2.2	-3.5	-4.6	-5.6	-5.8	-4.5	-3.0	-2.2	-1.3
New England	-2.5	-7.8	-4.3	-5.4	-7.5	-8.6	-7.7	-6.2	-3.8	-1.8
Middle Atlantic	-1.2	-2.8	-2.2	-5.8	-6.3	-6.7	-6.7	-2.9	-5.4	-1.5
South Atlantic	-1.2	-2.6	-4.2	-5.0	-6.1	-6.6	-5.7	-3.4	-1.5	-1.8
East North Central	-1.5	-2.8	-3.9	-6.0	-6.5	-5.8	-6.0	-3.5	-2.2	-1.0
East South Central	0.2	-0.5	-2.5	-5.4	-6.1	-6.4	-4.4	-3.9	-1.6	-1.5
West North Central	-2.0	-2.7	-3.8	-5.6	-4.9	-5.0	-2.2	-2.6	-1.5	-1.2
West South Central	-1.2	-1.3	-3.4	-4.4	-5.4	-6.8	-4.8	-3.2	-1.2	-1.0
Mountain	-0.8	-3.2	-2.7	-6.7	-5.1	-5.7	-3.8	-1.8	-1.4	-1.6
Pacific	-4.3	-3.1	-4.8	-6.2	-4.8	-3.2	-3.1	-0.9	0.5	0.7
Voluntary	-1.5	-2.9	-3.4	-5.6	-6.3	-6.3	-5.7	-3.6	-2.7	-1.5
Proprietary	-1.7	-2.5	-3.7	-5.3	-5.8	-6.6	-5.7	-2.3	-1.7	-0.3
Urban government	-2.1	-2.2	-2.8	-5.8	-5.3	-6.6	-5.3	-3.7	-1.6	-0.9
Rural government	-0.1	-0.7	-3.0	-2.5	-2.7	-4.0	-2.9	-2.7	-1.7	-2.2

Note: DSH (disproportionate share). 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.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-4****Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 1990–1999**

Hospital group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All hospitals	-1.5%	-2.4%	-0.9%	1.3%	5.6%	11.1%	15.9%	16.9%	13.9%	11.9%
Urban	-1.2	-2.2	-0.8	1.6	6.4	11.8	16.7	18.0	15.2	13.2
Rural	-3.7	-3.7	-1.4	-0.5	0.6	6.1	10.2	9.5	5.7	3.8
In large urban areas	-0.9	-1.6	0.4	3.0	8.6	13.9	18.9	20.4	17.3	15.8
In other urban areas	1.7	-3.3	-2.9	-0.8	2.7	8.3	13.4	14.4	12.0	9.3
Rural referral	-3.6	-3.7	-1.0	-1.1	0.0	5.8	10.2	10.3	6.2	4.2
Sole community	-0.9	-0.9	2.1	4.1	5.2	8.6	12.2	10.5	7.1	5.0
Small rural Medicare-dependent	-1.2	1.2	3.3	2.4	-0.6	6.7	9.7	10.3	8.1	6.6
Other rural < 50 beds	-3.9	-5.4	-4.2	-1.2	-0.8	4.5	8.7	8.0	3.5	2.5
Other rural ≥ 50 beds	-6.8	-7.1	-5.7	-3.8	-1.8	4.6	9.2	7.5	3.5	1.6
Major teaching	6.5	6.8	8.7	10.9	16.8	21.5	25.4	27.9	24.3	22.3
Other teaching	-1.5	-2.8	-1.7	0.7	4.8	10.0	14.8	15.9	13.3	11.6
Non-teaching	-5.2	-6.4	-5.0	-3.0	0.6	6.6	11.7	12.1	9.0	6.5
Major teaching										
Public	10.7	10.8	11.4	14.4	21.0	26.1	28.2	30.4	26.1	20.0
Private	5.6	5.9	8.2	10.1	15.8	20.3	24.7	27.5	24.0	23.2
Other teaching										
Public	-0.6	-1.5	-0.4	1.9	4.9	10.4	14.9	17.2	10.4	9.4
Private	-1.5	-2.9	-1.7	0.7	4.8	10.1	14.9	15.9	13.4	11.8
Non-teaching										
Public	-4.5	-6.3	-5.1	-3.5	-2.0	3.9	8.0	7.4	4.3	1.8
Private	-5.3	-6.4	-4.9	-2.9	1.0	7.1	12.3	13.0	9.9	7.4
DSH										
In large urban areas	2.3	2.2	4.6	7.7	13.6	18.5	23.0	24.1	21.1	19.6
In other urban areas	0.2	-1.4	-0.9	1.2	4.8	10.7	15.7	16.7	13.9	10.7
Rural	-3.0	-2.7	-1.1	-0.4	0.1	7.3	12.4	11.3	7.1	5.3
Non-DSH	-5.5	-6.7	-5.4	-3.9	-0.4	5.2	10.4	11.4	8.5	6.9
Teaching and DSH	3.7	3.1	4.7	7.4	12.5	17.3	21.5	22.8	19.9	17.9
Teaching and non-DSH	-3.7	-4.6	-3.2	-1.8	2.2	7.7	13.4	14.8	12.2	11.3
Non-teaching and DSH	-3.3	-4.2	-2.5	-0.1	3.9	10.3	15.7	15.8	12.6	9.8
Non-teaching and non-DSH	-6.8	-8.1	-7.0	-5.3	-2.2	3.5	8.3	9.0	5.8	3.8
New England	-5.7	-2.1	0.0	1.3	5.3	10.0	16.6	18.7	17.1	14.5
Middle Atlantic	1.7	1.1	2.3	4.5	8.9	12.7	17.7	19.9	19.8	18.9
South Atlantic	-6.9	-5.9	-4.3	-2.3	2.7	9.5	14.2	15.4	12.1	9.8
East North Central	-2.5	-5.1	-3.4	-1.2	2.2	7.1	12.0	13.8	9.4	7.5
East South Central	-1.3	-3.7	-4.4	-1.9	4.0	11.2	15.8	15.2	12.1	11.1
West North Central	-1.2	-3.0	-2.7	-1.2	2.4	7.1	10.8	11.0	7.8	5.7
West South Central	-2.8	-4.5	-2.3	-0.6	4.0	11.4	17.7	17.5	15.1	11.9
Mountain	2.2	1.7	3.4	6.5	8.4	13.1	16.9	16.9	12.2	9.7
Pacific	2.9	1.4	4.3	7.9	13.2	18.9	22.7	21.8	17.4	13.9
Voluntary	-1.3	-2.4	-1.0	1.0	5.1	10.1	14.9	16.3	13.4	11.9
Proprietary	-5.4	-4.7	-2.4	1.2	7.8	15.5	21.5	21.0	18.5	15.4
Urban government	2.7	1.5	2.5	5.3	1.3	16.1	19.6	20.5	17.0	12.5
Rural government	-4.1	-4.6	-3.1	-2.2	-2.7	3.0	7.0	5.7	2.1	0.7

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-5****Number of hospitals and distribution of Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 1999**

Hospital group	Number of hospitals		Percentile					Percent with negative margins
	Total	Sample	10th	25th	50th	75th	90th	
All hospitals	4,883	3,891	-16.4%	-4.2%	6.3%	17.3%	27.0%	34.2%
Urban	2,707	2,127	-10.9	-0.4	9.2	19.1	28.6	26.4
Rural	2,176	1,764	-21.5	-8.4	2.5	14.5	24.6	43.7
In large urban areas	1,545	1,213	-8.5	1.2	11.7	21.7	31.7	22.8
In other urban areas	1,162	914	-12.8	-2.3	6.3	15.6	22.8	31.1
Rural referral	230	207	-11.5	-4.9	3.2	11.5	19.2	37.7
Sole community	659	535	-18.8	-7.1	4.5	17.2	27.4	38.7
Small rural Medicare-dependent	353	281	-25.5	-8.2	4.5	15.3	25.8	42.3
Other rural < 50 beds	523	405	-26.7	-13.8	-0.2	14.2	24.7	50.1
Other rural ≥ 50 beds	411	336	-21.3	-8.4	0.5	10.7	20.3	48.5
Major teaching	302	245	7.5	14.9	22.1	31.1	37.8	3.3
Other teaching	805	649	-4.4	2.2	10.5	19.9	28.4	19.7
Non-teaching	3,776	2,997	-18.6	-6.8	3.9	14.8	24.2	39.9
Major teaching								
Public	86	65	7.7	12.8	19.4	27.5	34.8	4.6
Private	211	173	9.4	15.9	23.9	32.2	40.0	2.3
Other teaching								
Public	70	55	-22.6	-1.8	8.1	14.3	20.8	30.9
Private	731	593	-4.1	2.6	11.1	20.6	29.2	18.5
Non-teaching								
Public	1,120	903	-24.3	-10.0	1.0	13.4	23.8	48.0
Private	2,527	2,071	-16.7	-4.9	5.1	15.4	24.3	36.0
DSH								
In large urban areas	809	625	-1.7	7.3	17.5	27.1	33.9	12.8
In other urban areas	605	480	-6.6	1.6	9.8	17.8	25.3	20.8
Rural	416	314	-14.5	-3.4	8.1	19.9	28.4	32.5
Non-DSH	3,053	2,472	-20.7	-7.8	2.8	13.4	22.3	42.4
Teaching and DSH	735	585	0.5	8.1	16.8	26.2	33.9	9.7
Teaching and non-DSH	372	309	-7.8	-0.2	8.2	18.5	26.7	25.6
Non-teaching and DSH	1,095	834	-10.1	-0.8	9.4	19.7	27.8	27.0
Non-teaching and non-DSH	2,681	2,163	-21.6	-8.6	1.8	12.6	21.9	44.8
New England	198	168	-21.6	-8.3	5.4	18.5	29.9	38.7
Middle Atlantic	501	460	-6.6	1.7	12.0	22.4	33.8	21.5
South Atlantic	682	552	-11.4	-2.5	6.4	15.8	23.5	30.6
East North Central	746	631	-22.1	-9.5	0.4	10.2	21.4	49.0
East South Central	428	353	-9.5	0.3	11.2	20.1	27.6	24.6
West North Central	690	540	-20.6	-9.5	0.8	12.0	21.9	47.6
West South Central	697	532	-15.7	-1.6	9.9	20.4	29.3	28.9
Mountain	355	262	-17.2	-5.8	5.8	17.3	26.2	35.9
Pacific	586	393	-13.9	0.3	9.7	20.0	30.7	24.7
Voluntary	2,773	2,327	-14.7	-3.2	6.3	16.6	26.4	32.4
Proprietary	696	510	-10.1	2.2	12.9	22.8	31.1	20.6
Urban government	379	283	-12.9	-3.0	7.9	18.4	27.2	32.2
Rural government	897	740	-25.7	-10.7	0.7	13.5	24.5	48.9

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report and impact file data from CMS.

**TABLE  
B-6****Medicare outpatient margins excluding  
payments for direct graduate medical  
education, by hospital group, 1996–1999**

<b>Hospital group</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>
All hospitals	-7.8%	-6.7%	-16.6%	-17.0%
Urban	-8.0	-6.9	-16.7	-17.0
Rural	-6.7	-5.9	-16.2	-17.2
In large urban areas	-8.4	-7.1	-17.4	-17.2
In other urban areas	-7.4	-6.6	-15.7	-16.5
Rural referral	-5.4	-5.1	-14.6	-14.9
Sole community	-4.5	-2.8	-14.3	-15.4
Small rural Medicare-dependent	-10.3	-8.8	-19.8	-21.9
Other rural < 50 beds	-10.6	-9.4	-19.2	-21.0
Other rural ≥ 50 beds	-7.9	-7.5	-18.0	-19.4
Major teaching	-10.7	-10.0	-20.5	-18.8
Other teaching	-7.1	-6.4	-15.3	-15.7
Non-teaching	-7.1	-5.7	-16.0	-17.1
Major teaching				
Public	-12.7	-13.1	-22.2	-19.2
Private	-10.1	-9.3	-19.9	-18.6
Other teaching				
Public	-7.7	-7.5	-13.7	-15.0
Private	-7.0	-6.3	-15.4	-15.8
Non-teaching				
Public	-7.4	-7.5	-16.9	-17.8
Private	-7.1	-5.3	-15.7	-16.9
DSH				
In large urban areas	-8.9	-8.0	-18.4	-17.7
In other urban areas	-7.6	-6.6	-16.0	-16.8
Rural	-5.3	-4.0	-15.6	-17.1
Non-DSH	-7.4	-6.2	-15.8	-16.7
Teaching and DSH	-9.0	-8.4	-18.0	-17.4
Teaching and non-DSH	-7.3	-6.4	-15.6	-15.7
Non-teaching and DSH	-6.6	-5.1	-16.0	-17.1
Non-teaching and non-DSH	-7.4	-6.1	-15.9	-17.1
New England	-8.1	-7.4	-15.1	-16.0
Middle Atlantic	-10.8	-9.2	-18.6	-17.6
South Atlantic	-6.4	-5.3	-14.1	-14.5
East North Central	-7.8	-7.9	-17.9	-18.8
East South Central	-6.7	-6.4	-17.0	-18.2
West North Central	-7.0	-5.6	-15.3	-15.9
West South Central	-6.9	-4.3	-14.8	-16.4
Mountain	-6.4	-4.3	-14.5	-15.3
Pacific	-8.1	-6.6	-19.3	-19.2
Voluntary	-7.8	-6.6	-16.4	-16.7
Proprietary	-6.4	-4.3	-15.8	-17.7
Urban government	-9.9	-9.7	-18.3	-17.6
Rural government	-7.2	-7.6	-17.5	-18.2

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-7****Hospital-based Medicare skilled nursing facility  
margins excluding graduate medical  
education, by hospital group, 1996-1999**

Hospital group	1996	1997	1998	1999
All hospitals	-11.8%	-14.5%	-25.9%	-55.6%
Urban	-11.6	-14.3	-25.5	-54.4
Rural	-12.9	-15.4	-27.5	-60.6
In large urban areas	-11.6	-14.1	-24.5	-50.7
In other urban areas	-11.6	-14.6	-27.2	-60.0
Rural referral	-11.7	-15.0	-29.7	-69.3
Sole community	-16.8	-20.8	-26.9	-48.2
Small rural Medicare-dependent	-16.5	-19.3	-45.3	-59.4
Other rural < 50 beds	-9.0	-10.3	-17.1	-34.5
Other rural ≥ 50 beds	-12.2	-12.9	-24.7	-65.6
Major teaching	-15.0	-12.9	-24.3	-62.7
Other teaching	-12.3	-15.1	-27.0	-52.2
Non-teaching	-11.2	-14.4	-25.5	-56.5
Major teaching				
Public	-22.9	-24.3	-27.8	-125.9
Private	-14.5	-12.0	-23.9	-53.3
Other teaching				
Public	-8.9	-13.9	-27.5	-55.8
Private	-12.5	-15.2	-27.0	-51.9
Non-teaching				
Public	-12.3	-13.1	-23.0	-58.6
Private	-11.0	-14.6	-26.0	-56.1
DSH				
In large urban areas	-12.7	-14.5	-24.2	-52.0
In other urban areas	-12.3	-15.2	-29.0	-58.8
Rural	-10.3	-12.7	-25.4	-69.5
Non-DSH	-11.3	-14.4	-25.7	-55.0
Teaching and DSH	-14.0	-15.3	-26.8	-54.9
Teaching and non-DSH	-10.8	-13.5	-25.8	-52.9
Non-teaching and DSH	-10.8	-14.0	-25.3	-57.5
Non-teaching and non-DSH	-11.5	-14.7	-25.7	-55.8
New England	-21.4	-21.6	-31.2	-59.8
Middle Atlantic	-8.0	-4.5	-28.0	-47.8
South Atlantic	-8.5	-11.5	-22.4	-59.0
East North Central	-12.9	-18.3	-24.8	-61.2
East South Central	-5.9	-8.8	-27.9	-65.2
West North Central	-15.5	-19.2	-29.7	-58.2
West South Central	-13.4	-16.7	-26.2	-58.6
Mountain	-10.9	-14.2	-28.0	-48.8
Pacific	-12.6	-16.6	-23.8	-42.2
Voluntary	-12.6	-14.9	-27.2	-55.1
Proprietary	-9.1	-13.6	-21.4	-51.3
Urban government	-11.9	-14.8	-26.1	-61.3
Rural government	-12.8	-12.2	-20.1	-64.1

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.



**TABLE  
B-8****Hospital-based Medicare home health agency  
margins excluding graduate medical  
education, by hospital group, 1996–1999**

Hospital group	1996	1997	1998	1999
All hospitals	–4.5%	–4.5%	–24.3%	–13.8%
Urban	–4.6	–4.4	–22.3	–12.4
Rural	–4.2	–4.6	–30.4	–18.0
In large urban areas	–4.7	–3.9	–19.7	–10.8
In other urban areas	–4.5	–5.2	–26.5	–15.3
Rural referral	–4.5	–4.5	–32.5	–18.4
Sole community	–5.6	–6.8	–35.6	–21.9
Small rural Medicare-dependent	–2.9	–3.5	–28.0	–17.5
Other rural < 50 beds	–2.2	–3.9	–26.1	–14.6
Other rural ≥ 50 beds	–4.3	–3.7	–27.1	–15.7
Major teaching	–5.7	–4.2	–17.5	–13.6
Other teaching	–4.7	–4.8	–21.1	–11.8
Non-teaching	–4.2	–4.4	–27.0	–14.8
Major teaching				
Public	–3.0	–3.9	–32.7	–33.5
Private	–6.2	–4.2	–16.3	–11.4
Other teaching				
Public	–4.9	–2.2	–26.3	–13.5
Private	–4.7	–4.9	–20.7	–11.9
Non-teaching				
Public	–3.7	–4.6	–30.8	–20.3
Private	–4.3	–4.3	–26.2	–13.5
DSH				
In large urban areas	–4.7	–4.2	–21.0	–12.0
In other urban areas	–4.6	–5.3	–25.3	–14.7
Rural	–2.3	–2.6	–29.4	–15.2
Non-DSH	–4.6	–4.5	–25.0	–14.3
Teaching and DSH	–5.3	–5.1	–20.6	–13.3
Teaching and non-DSH	–4.4	–3.6	–19.4	–10.3
Non-teaching and DSH	–3.6	–3.9	–26.7	–13.4
Non-teaching and non-DSH	–4.7	–4.8	–27.2	–15.8
New England	–1.8	–0.6	–11.4	–8.5
Middle Atlantic	–4.4	–2.8	–16.6	–9.6
South Atlantic	–3.6	–3.0	–24.4	–12.1
East North Central	–4.8	–5.3	–22.3	–13.3
East South Central	–1.8	–2.4	–23.6	–10.3
West North Central	–5.2	–4.8	–31.2	–20.6
West South Central	–5.7	–7.9	–36.0	–20.4
Mountain	–7.1	–7.5	–32.4	–21.0
Pacific	–6.7	–7.2	–25.4	–17.3
Voluntary	–4.6	–4.6	–20.8	–12.7
Proprietary	–4.6	–4.4	–38.6	–13.3
Urban government	–3.7	–3.4	–28.2	–20.7
Rural government	–3.8	–4.9	–32.1	–19.4

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-9****Hospital Medicare PPS-exempt unit margins  
excluding graduate medical education,  
by hospital group, 1996–1999**

Hospital group	1996	1997	1998	1999
All hospitals	6.2%	4.4%	–2.0%	–2.4%
Urban	6.0	4.3	–2.6	–2.7
Rural	7.7	4.9	1.7	–0.3
In large urban areas	6.4	4.2	–3.7	–4.4
In other urban areas	5.2	4.3	–0.7	–0.1
Rural referral	11.7	8.2	8.8	3.7
Sole community	–0.2	–1.7	–11.5	–8.8
Small rural Medicare-dependent	6.3	2.3	–9.2	1.1
Other rural < 50 beds	1.2	3.0	–2.6	–4.9
Other rural ≥ 50 beds	8.0	5.1	0.6	–1.7
Major teaching	3.1	1.5	–9.1	–8.0
Other teaching	6.7	4.2	–1.5	–3.7
Non-teaching	7.2	5.6	0.9	1.2
Major teaching				
Public	–0.9	0.4	–29.2	–40.7
Private	5.2	2.8	–2.3	1.4
Other teaching				
Public	3.5	–0.4	–5.5	–1.5
Private	6.5	4.2	–1.1	–3.7
Non-teaching				
Public	6.1	4.8	–0.9	1.2
Private	7.3	5.8	1.2	1.2
DSH				
In large urban areas	6.0	3.8	–4.8	–6.3
In other urban areas	5.3	3.1	–0.8	–0.9
Rural	11.1	9.2	8.3	3.9
Non-DSH	6.4	5.1	–1.2	–0.3
Teaching and DSH	4.6	2.8	–5.9	–6.8
Teaching and non-DSH	7.3	4.5	–0.4	–1.4
Non-teaching and DSH	8.7	5.8	3.4	2.1
Non-teaching and non-DSH	5.8	5.5	–1.7	0.4
New England	1.9	0.2	–4.6	–1.8
Middle Atlantic	4.9	4.3	–7.7	–6.5
South Atlantic	5.6	5.4	3.3	1.4
East North Central	5.6	3.4	–2.4	0.6
East South Central	6.4	3.3	–0.7	–1.0
West North Central	5.6	2.6	–3.0	–5.7
West South Central	6.1	5.0	0.0	–4.3
Mountain	10.2	5.6	–6.4	–2.6
Pacific	11.5	7.6	0.4	–2.5
Voluntary	5.9	3.9	–0.7	–0.7
Proprietary	9.6	7.6	1.7	0.0
Urban government	2.4	2.2	–14.8	–16.6
Rural government	5.7	2.5	–3.2	–2.1

Note: DSH (disproportionate share). PPS-exempt units include inpatient psychiatric and rehabilitation services. 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-10****Overall Medicare margins including  
payments for direct graduate medical  
education, by hospital group, 1996–1999**

Hospital group	1996	1997	1998	1999
All hospitals	9.9%	10.4%	6.0%	4.7%
Urban	10.7	11.5	7.4	6.1
Rural	5.0	4.1	-2.1	-3.2
In large urban areas	12.3	13.2	9.1	8.1
In other urban areas	8.2	8.8	4.7	2.7
Rural referral	5.9	5.4	-0.6	-2.1
Sole community	6.1	4.8	-1.5	-2.4
Small rural Medicare-dependent	3.2	3.3	-2.8	-3.0
Other rural < 50 beds	2.4	1.7	-5.4	-5.4
Other rural ≥ 50 beds	4.2	2.9	-3.7	-5.1
Major teaching	17.2	19.0	14.6	13.0
Other teaching	9.6	10.1	6.5	5.1
Non-teaching	6.5	6.7	1.8	-0.1
Major teaching				
Public	18.3	19.5	14.6	8.2
Private	16.8	18.9	14.6	14.4
Other teaching				
Public	9.5	11.0	5.5	3.0
Private	9.7	10.1	6.7	5.3
Non-teaching				
Public	3.6	2.9	-2.1	-4.3
Private	7.1	7.4	2.6	0.7
DSH				
In large urban areas	15.5	16.1	12.3	11.1
In other urban areas	10.0	10.5	6.4	3.8
Rural	7.5	6.4	0.0	-1.3
Non-DSH	5.6	6.2	1.2	0.5
Teaching and DSH	14.4	15.2	11.5	9.7
Teaching and non-DSH	8.4	9.4	5.2	5.0
Non-teaching and DSH	10.0	9.8	5.3	3.0
Non-teaching and non-DSH	3.8	4.2	-1.2	-2.8
New England	10.4	11.7	7.9	6.5
Middle Atlantic	12.0	13.7	10.9	11.0
South Atlantic	9.1	9.7	5.3	3.8
East North Central	6.7	7.3	2.3	0.5
East South Central	10.2	9.4	4.8	3.9
West North Central	5.5	5.5	-0.1	-0.8
West South Central	10.1	10.1	5.5	3.2
Mountain	10.5	10.5	4.5	2.8
Pacific	15.1	14.4	9.2	6.2
Voluntary	9.3	10.2	5.9	4.9
Proprietary	13.6	13.0	9.3	7.9
Urban government	12.3	12.6	8.0	3.9
Rural government	2.6	1.4	-5.0	-5.9

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-11****Hospital payment-to-cost ratios,  
by source of revenue, 1991–2000**

Year	Medicare	Medicaid	Uncompensated care	Private payers
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
1999	101.1	96.7	13.2	112.3
2000	100.2	96.1	12.1	112.5

Note: Payment-to-cost ratios cannot be used to compare payment rates 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), which corrects for under-representation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category. The costs allocated to Medicare and Medicaid include CMS's allowed and non-allowed costs.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals.

**TABLE  
B-12****Gains or losses as a percent of total hospital costs, by source of revenue, 1991–2000**

Year	Medicare	Medicaid	Other government payers and subsidies	Uncompensated care	Private payers	Non-patient	Total gains
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
1999	0.4	−0.4	0.1	−5.4	5.2	5.1	4.9
2000	0.1	−0.4	0.1	−5.3	5.4	5.1	4.8

Note: 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. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Non-patient reflects both other operating and non-operating revenue. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (about 35 percent of observations), which corrects for under-representation 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). The costs allocated to Medicare and Medicaid include CMS's allowed and non-allowed costs.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals.

**TABLE  
B-13****Hospital total margins, by hospital group, 1990–1999**

Hospital group	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All hospitals	3.6%	4.4%	4.4%	4.4%	5.0%	5.8%	6.1%	5.9%	4.3%	3.6%
Urban	3.5	4.3	4.3	4.3	4.9	5.6	5.9	5.8	4.2	3.4
Rural	4.6	5.2	5.3	5.2	5.6	6.6	7.1	6.6	4.8	4.8
In large urban areas	2.5	3.7	3.7	3.9	4.3	4.9	5.1	5.1	3.7	2.7
In other urban areas	5.2	5.5	5.2	5.2	6.0	6.9	7.2	7.0	5.1	4.6
Rural referral	6.4	6.7	6.9	6.3	6.8	8.4	9.2	9.4	7.0	7.5
Sole community	4.1	5.1	5.1	5.1	5.6	5.7	6.1	5.7	4.3	3.4
Small rural Medicare-dependent	3.7	3.1	2.4	3.9	3.3	3.9	4.0	3.5	1.6	2.5
Other rural < 50 beds	1.4	2.2	2.3	2.5	2.1	2.8	3.8	2.4	0.8	1.7
Other rural ≥ 50 beds	4.0	4.5	4.8	4.7	5.6	6.7	6.9	5.7	4.5	3.6
Major teaching	1.1	3.7	3.4	3.4	3.3	4.0	3.5	4.8	3.3	2.4
Other teaching	4.6	4.6	4.5	4.6	5.3	6.3	7.1	6.4	4.3	4.0
Non-teaching	4.3	4.8	5.0	4.9	5.9	6.5	7.0	6.2	4.9	4.0
Major teaching										
Public	-0.6	4.5	4.2	4.5	2.8	3.1	2.5	5.1	4.2	3.0
Private	1.7	3.3	3.0	3.0	3.4	4.3	3.8	4.7	3.0	2.5
Other teaching										
Public	4.8	5.4	4.2	4.4	3.8	4.9	6.5	4.7	3.0	2.1
Private	4.5	4.6	4.5	4.7	5.5	6.4	7.1	6.5	4.4	4.1
Non-teaching										
Public	4.1	4.3	4.6	4.2	4.7	5.5	5.7	5.4	3.8	3.1
Private	4.3	4.8	5.0	5.1	6.1	6.7	7.2	6.3	5.1	4.3
DSH										
In large urban areas	1.7	3.2	3.4	3.6	3.9	4.4	4.3	4.7	3.1	2.3
In other urban areas	5.3	5.9	5.6	5.5	6.3	6.9	7.3	7.2	5.2	4.5
Rural	5.4	7.2	7.5	5.8	6.1	7.2	7.9	7.0	4.9	5.1
Non-DSH	4.5	4.6	4.5	4.6	5.3	6.3	6.8	6.2	4.8	4.1
Teaching and DSH	2.6	4.0	4.0	4.0	4.2	4.8	4.9	5.5	3.6	2.9
Teaching and non-DSH	4.5	4.9	4.0	4.5	4.9	6.5	7.0	6.4	4.9	4.5
Non-teaching and DSH	4.2	5.1	5.2	5.3	6.3	6.7	7.2	6.3	4.9	4.2
Non-teaching and non-DSH	4.4	4.5	4.7	4.6	5.5	6.2	6.7	6.1	4.8	3.9
New England	2.0	2.2	2.2	3.1	2.6	3.0	4.0	4.7	2.8	1.3
Middle Atlantic	0.3	1.4	0.9	1.9	2.6	3.0	3.0	3.5	1.6	0.2
South Atlantic	4.6	6.0	6.2	5.7	6.6	7.5	8.4	7.9	5.6	5.6
East North Central	4.7	4.8	4.8	4.8	5.6	6.3	6.3	6.9	4.5	5.4
East South Central	6.4	6.4	5.6	4.9	5.2	6.6	7.3	5.0	3.5	3.1
West North Central	5.0	4.9	4.5	4.7	6.6	7.3	7.3	7.7	6.1	4.5
West South Central	4.3	5.8	7.4	6.2	6.7	7.4	7.2	6.3	5.5	4.3
Mountain	5.3	5.5	5.4	7.0	7.4	7.7	8.1	4.4	5.2	3.9
Pacific	2.8	4.7	4.1	4.1	3.6	4.4	4.4	5.2	4.4	3.8
Voluntary	3.8	4.3	4.1	4.1	4.7	5.7	5.8	6.2	4.1	3.1
Proprietary	4.0	5.0	6.3	6.9	8.9	8.3	10.1	5.4	6.1	8.9
Urban government	1.8	4.6	4.2	4.3	3.5	4.0	3.9	5.3	4.0	2.8
Rural government	3.8	4.6	5.0	4.5	4.7	5.8	5.9	4.8	3.3	3.4

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue.

Source: MedPAC analysis of Medicare cost report data from CMS.

**TABLE  
B-14****Number of hospitals and distribution of hospital  
total margins, by hospital group, 1999**

Hospital group	Number of hospitals		Percentile					Percent with negative margins
	Total	Sample	10th	25th	50th	75th	90th	
All hospitals	4,883	3,798	-9.1%	-2.4%	2.5%	7.0%	12.0%	35.1%
Urban	2,707	2,065	-9.3	-2.6	2.4	7.3	13.0	35.8
Rural	2,176	1,731	-8.5	-2.2	2.6	6.7	10.9	34.1
In large urban areas	1,545	1,171	-11.1	-3.3	1.9	6.9	13.3	39.1
In other urban areas	1,162	894	-7.9	-1.6	3.1	7.9	12.7	31.5
Rural referral	230	203	-2.0	2.4	6.0	10.1	15.3	13.8
Sole community	659	526	-9.0	-1.5	2.0	6.8	10.6	34.4
Small rural Medicare- dependent	353	277	-9.9	-4.4	0.8	4.7	9.3	44.4
Other rural <50 beds	523	398	-11.7	-3.1	1.9	5.6	10.5	37.9
Other rural ≥ 50 beds	411	327	-6.9	-1.8	3.0	7.0	10.8	32.7
Major teaching	302	235	-6.6	-2.7	0.8	4.9	10.7	43.0
Other teaching	805	617	-7.0	-1.5	3.1	7.3	12.3	31.1
Non-teaching	3,776	2,944	-9.6	-2.6	2.6	7.1	11.9	35.2
Major teaching								
Public	86	59	-8.4	-3.1	0.8	3.6	10.7	42.4
Private	211	169	-6.0	-2.2	1.1	5.3	11.2	40.8
Other teaching								
Public	70	48	-8.4	-2.3	2.5	5.8	9.9	33.3
Private	731	569	-6.9	-1.5	3.1	7.4	12.4	31.3
Non-teaching								
Public	1,120	902	-8.6	-2.9	2.0	5.9	10.0	37.4
Private	2,527	2,026	-9.7	-2.2	2.8	7.7	13.3	34.1
DSH								
Large urban	809	614	-11.2	-3.5	1.3	6.0	12.7	42.2
Other urban	605	471	-7.6	-0.7	3.4	8.3	13.1	28.7
Rural	416	306	-10.6	-2.7	3.0	7.3	11.2	36.3
Non-DSH	3,053	2,405	-8.6	-2.3	2.6	6.8	11.7	34.3
Teaching and DSH	735	572	-7.3	-2.4	1.9	6.2	11.6	37.6
Teaching and non-DSH	372	280	-5.9	-0.8	3.6	8.0	12.2	27.9
Non-teaching and DSH	1,095	819	-11.5	-2.7	2.9	8.0	13.3	35.4
Non-teaching and non-DSH	2,681	2,125	-9.1	-2.5	2.4	6.7	11.6	35.2
New England	198	167	-7.6	-1.2	2.4	5.5	10.3	30.5
Middle Atlantic	501	457	-11.1	-4.5	0.1	3.3	7.9	49.2
South Atlantic	682	547	-9.6	-1.6	3.8	9.3	16.7	31.3
East North Central	746	617	-6.1	-0.9	3.5	7.8	12.2	28.7
East South Central	428	345	-10.6	-3.7	1.2	5.5	10.7	41.4
West North Central	690	528	-6.3	-1.3	3.0	7.0	10.6	30.5
West South Central	697	509	-12.3	-4.5	2.4	7.1	12.6	38.3
Mountain	355	257	-8.5	-1.7	4.1	8.5	12.7	30.4
Pacific	586	370	-9.1	-2.4	2.4	7.9	13.0	35.1
Voluntary	2,773	2,275	-8.4	-1.9	2.6	6.8	11.0	33.7
Proprietary	696	489	-13.6	-3.0	4.1	14.3	22.1	35.0
Urban government	379	271	-7.4	-2.7	1.9	5.6	9.8	36.5
Rural government	897	738	-9.0	-2.9	1.9	5.9	10.1	37.8

Note: DSH (disproportionate share). 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. A margin is calculated as revenue minus costs divided by revenue.

Source: MedPAC analysis of Medicare cost report data from CMS.

A P P E N D I X

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**Commissioners' voting  
on recommendations**

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# Commissioners' voting on recommendations

In the Medicare, Medicaid and SCHIP Benefits Improvement and Protection Act of 2000, the Congress required MedPAC to call for individual Commissioner votes on each recommendation, and to document the voting record in its report. The information below satisfies that mandate.

## Chapter 1: How Medicare pays for services: an overview

No recommendations

## Chapter 2: Assessing payment adequacy and updating payments in traditional Medicare

### Section 2A: Accounting for changes in input prices

- 2A** The Secretary should use the wage and benefit proxies that most closely match the training and skill requirements of health care occupations in all input price indexes used for updating payments. In determining index weights, measures specific to the health sector and to occupation categories in which health care plays a major role should be emphasized.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Smith, Stowers, Wakefield*

*Absent: Rosenblatt, Rowe*

### Section 2B: Hospital inpatient and outpatient services

- 2B-1** The Congress should gradually eliminate the differential in inpatient payment rates between hospitals in large urban and other areas.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

- 2B-2** The Congress should increase the base rate for inpatient services covered by Medicare's prospective payment system in fiscal year 2003 by market basket minus 0.55 percent for hospitals in large urban areas and by market basket for hospitals in all other areas.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

**2B-3** For calendar year 2003, the Secretary should increase the payment rates for services covered by the outpatient prospective payment system by the rate of increase in the hospital market basket.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

## **Section 2C: Physician services**

**2C-1** The Congress should repeal the sustainable growth rate system and instead require that the Secretary update payments for physician services based on the estimated change in input prices for the coming year, less an adjustment for growth in multifactor productivity.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

**2C-2** The Secretary should revise the productivity adjustment for physician services and make it a multifactor instead of labor-only adjustment.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

**2C-3** The Congress should update payments for physician services by 2.5 percent for 2003.

*Yes: Braun, Burke, DeBusk, Feezor, Hackbarth, Loop, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Rosenblatt*

## **Section 2D: Skilled nursing facility services**

**2D-1** The Secretary should develop a new classification system for care in skilled nursing facilities.

*Yes: Braun, Burke, DeBusk, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Feezor, Loop, Newport, Rosenblatt*

**2D-2** If the Centers for Medicare & Medicaid Services refines the classification system for care in skilled nursing facilities, the temporary payment increase, previously implemented to allow time for refinement, will end. The Congress should retain this money in the base payment rate for skilled nursing facilities.

*Yes: Braun, Burke, DeBusk, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*Absent: Feezor, Loop, Newport, Rosenblatt*

**2D-3** For fiscal year 2003, the Congress should update payments to skilled nursing facilities as follows. For freestanding facilities, no update is necessary. For hospital-based facilities, update payments by market basket and increase payments by 10 percent until a new classification system is developed.

*Yes: Braun, Burke, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield*

*No: DeBusk*

*Absent: Feezor, Loop, Newport, Rosenblatt*

## Section 2E: Home health services

**2E-1** The Congress should extend for two years the 10 percent add-on payments for home health services provided in rural areas.

*Yes:* Braun, Burke, DeBusk, Feezor, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Smith, Stowers, Wakefield

*Absent:* Loop, Rosenblatt, Rowe

**2E-2** The Congress should update home health payments by market basket for fiscal year 2003.

*Yes:* Braun, Burke, DeBusk, Feezor, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Smith, Stowers, Wakefield

*Absent:* Loop, Rosenblatt, Rowe

**2E-3** The Congress should eliminate the payment cut for home health services scheduled for October 2002 in current law.

*Yes:* Braun, Burke, DeBusk, Feezor, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Smith, Stowers, Wakefield

*Absent:* Loop, Rosenblatt, Rowe

## Section 2F: Outpatient dialysis services

**2F** For calendar year 2003, the Congress should update the composite rate payment for outpatient dialysis services by 2.4 percent.

*Yes:* Braun, Burke, DeBusk, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield

*Not Voting:* Feezor

*Absent:* Loop, Rosenblatt

## Chapter 3: Paying for new technology in the outpatient prospective payment system

**3A** The Congress should:

- Replace hospital-specific payments for pass-through devices with national rates.
- Give the Secretary authority to consider alternatives to average wholesale price when determining payments for pass-through drugs and biologicals.

*Yes:* Braun, Burke, DeBusk, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield

*Absent:* Feezor, Loop, Rosenblatt

**3B** The Secretary should:

- Ensure additional payments are made only for new or substantially improved technologies that are expensive in relation to the applicable ambulatory payment classification payment rate.
- Avoid basing national rates only on reported costs.
- Ensure that the same broad principles guide payments for new technologies in the inpatient and outpatient payment systems.

*Yes:* Braun, Burke, DeBusk, Hackbarth, Muller, Nelson, Newhouse, Newport, Raphael, Reischauer, Rowe, Smith, Stowers, Wakefield

*Absent:* Feezor, Loop, Rosenblatt

## Chapter 4: What next for Medicare+Choice?

The Congress should set payments to Medicare+Choice plans at 100 percent of per capita local fee-for-service spending as soon as possible, and an adequate risk-adjustment mechanism should be phased in at least as rapidly as called for in current law.

*Yes:* Braun, Burke, DeBusk, Feezor, Hackbarth, Muller, Newhouse, Newport, Raphael, Reischauer, Rowe, Stowers

*No:* Nelson, Smith

*Not Voting:* Wakefield

*Absent:* Loop, Rosenblatt



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# Acronyms

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## Acronyms

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<b>AHA</b>	American Hospital Association
<b>AMA</b>	American Medical Association
<b>AMP</b>	average manufacturer price
<b>APC</b>	ambulatory payment classification
<b>APR-DRG</b>	all patient refined diagnosis related group
<b>ASC</b>	ambulatory surgical center
<b>AWP</b>	average wholesale price
<b>BBA</b>	Balanced Budget Act of 1997
<b>BBRA</b>	Balanced Budget Refinement Act of 1999
<b>BIPA</b>	Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000
<b>BLS</b>	Bureau of Labor Statistics
<b>CC</b>	comorbidity or complication
<b>CMG</b>	case-mix group
<b>CMS</b>	Centers for Medicare & Medicaid Services
<b>COLA</b>	cost of living adjustment
<b>CPI</b>	consumer price index
<b>CPI-U</b>	consumer price index—all urban consumers
<b>DME</b>	durable medical equipment
<b>DRG</b>	diagnosis related group
<b>DSH</b>	disproportionate share
<b>ECI</b>	employment cost index
<b>ESRD</b>	end-stage renal disease
<b>FFS</b>	fee-for-service
<b>FSS</b>	federal supply schedule
<b>FY</b>	fiscal year
<b>GAO</b>	General Accounting Office
<b>GDP</b>	gross domestic product
<b>GME</b>	graduate medical education
<b>GPCI</b>	geographic practice cost index
<b>HCFA</b>	Health Care Financing Administration
<b>HCPCS</b>	HCFA Common Procedure Coding System
<b>HHA</b>	home health agency
<b>HHRG</b>	home health resource group
<b>HHS</b>	U.S. Department of Health and Human Services
<b>HMO</b>	health maintenance organization
<b>HPSA</b>	Health Professional Shortage Area
<b>HWH</b>	hospital within hospital
<b>HWI</b>	hospital wage index
<b>HWIr</b>	hospital wage index with geographic reclassification
<b>HWIu</b>	hospital wage index unreclassified
<b>IIC</b>	inflation indexed charge

<b>IME</b>	indirect medical education
<b>IRF</b>	inpatient rehabilitation facility
<b>LTC</b>	long-term care
<b>LUPA</b>	low utilization payment adjustment
<b>M+C</b>	Medicare+Choice
<b>MB</b>	market basket
<b>MDC</b>	major diagnostic category
<b>MedPAC</b>	Medicare Payment Advisory Commission
<b>MEI</b>	Medicare Economic Index
<b>MSA</b>	metropolitan statistical area
<b>NHIS</b>	national hospital indicators survey
<b>NKF</b>	National Kidney Foundation
<b>NLA</b>	national limitation amount
<b>OIG</b>	Office of Inspector General
<b>OMB</b>	U.S. Office of Management and Budget
<b>OPD</b>	outpatient department
<b>OSCAR</b>	Online Survey, Certification and Reporting system
<b>PAR</b>	participating physician and supplier program
<b>PIP-DCG</b>	principal inpatient diagnostic cost group
<b>PLI</b>	professional liability insurance
<b>PPI</b>	producer price index
<b>PPO</b>	preferred provider organization
<b>PPS</b>	prospective payment system
<b>ProPAC</b>	Prospective Payment Assessment Commission
<b>RUG-III</b>	resource utilization group, version III
<b>SCHIP</b>	State Children's Health Insurance Program
<b>SGR</b>	sustainable growth rate
<b>SNF</b>	skilled nursing facility
<b>TEFRA</b>	Tax Equity and Fiscal Responsibility Act of 1982
<b>tPA</b>	tissue plasminogen activator
<b>UK</b>	United Kingdom
<b>U.S.</b>	United States
<b>VA</b>	Department of Veterans Affairs

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## **More about MedPAC**

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## Commission members

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**Robert D. Reischauer, Ph.D., vice chairman**

*The Urban Institute*  
Washington, DC

*Term expires April 2002*

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## Commissioners' biographies

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**Beatrice S. Braun, M.D.**, is a member of the Board of Directors of AARP. She is also 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, N.Y. 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.

**Sheila P. Burke, M.P.A., R.N., F.A.A.N.**, is the Smithsonian Institution's undersecretary for American Museums and National Programs. Before joining the Smithsonian, she was executive dean and lecturer in public policy at the John F. Kennedy School of Government, Harvard University, Boston. From 1986 to 1996, Ms. Burke was chief of staff for former Senate Majority Leader Bob Dole and was elected secretary of the Senate in 1995. She currently serves as a board member of the Kaiser Family Foundation, the Kaiser Commission on the Future of Medicaid and Uninsured, the Center for Health Care Strategies, Inc., the American Board of Internal Medicine Foundation, Wellpoint Health Networks, Chubb Insurance, and Community Health Systems. She also sits on the national advisory council at the Center for State Health Policy and has chaired the National Academy of Social Insurance's study panel on Restructuring Medicare for the Long Term. Ms. Burke holds a B.S. in nursing from the University of San Francisco and an M.P.A. from Harvard University.

**Autry O.V. "Pete" DeBusk** is chairman, chief executive officer, and founder of DeRoyal, a global supplier of medical products and services in the acute care, patient care, wound care, and OEM (original equipment manufacturing) markets. Mr. DeBusk formed his first company in 1970 with a patent he received on an orthopedic product. In 1976 he consolidated his many product lines into one company, DeRoyal Industries. A member of several community organizations, Mr. DeBusk is also chairman of the Board of Trustees at Lincoln Memorial University in Harrogate, Tenn., as well as a founder and board member of the Autry O.V. DeBusk Boys and Girls Club in Hall, Tenn. As an innovative leader in the medical industry, he received a prestigious award from Duke University in 2000 recognizing his original contributions to orthopedic surgery. He received his B.S. degree from Lincoln Memorial University and attended graduate school at the University of Georgia.

**Allen D. Feezor** is assistant executive officer, Health Benefit Services, California Public Employees' Retirement System (CalPERS). Previously, Mr. Feezor was vice president for planning, marketing, and managed care for University Health Systems of East Carolina in Greenville, N.C. From 1985 to 1995, he was chief deputy commissioner for the North Carolina Department of Insurance, where he chaired two national task forces that pioneered state health insurance and small group reform. He has headed the 430,000-member North Carolina Teachers', State Employees' and Retirees' Health Plan and has served as Senior Representative in Washington, D.C. for the Blue Cross/Blue Shield Association. He was a founding faculty member of the National Academy for State Health Policy and a contributor to two Institute of Medicine studies—one on the future of health benefits and another on improving Medicare. He currently serves on the boards of Pacific Business Group on Health and the Integrated Health Association. Mr. Feezor earned his B.A. and M.A. degrees in political science from Duke University.



**Glenn M. Hackbarth, J.D.,** is chairman of the Commission and an independent consultant living in Bend, Ore. He has experience as a healthcare executive, government official, and policy analyst. He was chief executive officer and one of the founders of Harvard Vanguard Medical Associates, a multispecialty group practice in Boston that serves as a major teaching affiliate of Harvard Medical School. Harvard Vanguard was created from the staff-model delivery system that was the original core of Harvard Community Health Plan. Mr. Hackbarth previously served as senior vice president of Harvard Community Health Plan. From 1981 to 1988, Mr. Hackbarth held positions at the U.S. Department of Health and Human Services, including deputy administrator of the Health Care Financing Administration. Mr. Hackbarth received his B.A. from Penn State University and his M.A. and J.D. from Duke 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 has served on the American Board of Thoracic Surgery, chaired the Residency Review Committee, and has been president of the American Association for Thoracic Surgery. He received a medical degree from The George Washington University and completed surgical residencies at The George Washington University and the Cleveland Clinic.

**Ralph W. Muller** is currently on sabbatical at the King's Fund in London. Until July 2001, he was president and chief executive officer of the University of Chicago Hospitals and Health Systems (UCHHS), a position he has held since 1985. As deputy dean of the University of Chicago's Pritzker School of Medicine, he guided the creation of the UCHHS as a corporation separate from the university, where he had been budget director. Before joining the university, he held senior positions with the Commonwealth of Massachusetts, including deputy commissioner of the Department of Public Welfare. Mr. Muller is immediate past chairman of the Association of American Medical Colleges, past chairman of the Council of Teaching Hospitals and Health Systems, and past vice-chairman of the University Health System Consortium. He is chairman of the National Opinion Research Center, a social service research organization. Mr. Muller received his B.A. in economics from Syracuse University and his M.A. in government from Harvard University.

**Alan R. Nelson, M.D.,** is an internist-endocrinologist who was in private practice in Salt Lake City until becoming chief executive officer of the American Society of Internal Medicine (ASIM) in 1992. Following the merger of ASIM with the American College of Physicians (ACP) in 1998, Dr. Nelson headed the Washington Office of ACP-ASIM until his semi-retirement in January 2000 and now serves as special advisor to the executive vice president and chief executive officer. Dr. Nelson also serves on the Board of Trustees of Intermountain HealthCare, a large integrated health system headquartered in Salt Lake City. A member of the prestigious Institute of Medicine of the National Academy of Sciences (IOM), he serves on the IOM Roundtable on Environmental Health Sciences Research and Medicine and is chair of the study committee on Rural and Ethnic Disparities in Health Care. Dr. Nelson, who grew up in Logan, Utah and attended Utah State University, received his M.D. from Northwestern University.

**Joseph P. Newhouse, Ph.D.,** 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 Corp. 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 the International Health Economics Association and has been elected to the American Academy of Arts and Sciences. Dr. Newhouse is editor of the *Journal of Health Economics*. 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's policy development and strategic response on health care issues, support of the entity's Ethics and Legal Operations 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 Centers for Medicare and Medicaid Services (CMS) Medicare Council. She has also served as an industry representative on internal CMS technical committees. She has more than 25 years of public affairs experience, including over 10 years directing the Washington, D.C., office of another major Medicare risk contractor. Ms. Newport received a political science degree from The 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. Her responsibilities include managing its post-acute, long-term care, maternal and child health, high-tech, rehabilitation, hospice, mental health and public health programs and its Centers of Excellence in cardiopulmonary, diabetes, asthma, and cancer care. Under Ms. Raphael's leadership, VNS created VNS Choice, a Medicaid long-term care health plan, the Medicare Community Nursing Organization, and multicultural programs to ensure access for the Hispanic and Asian populations. 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. Previously, Ms. Raphael served as the executive deputy commissioner of the New York City Human Resources Administration in charge of the Income and Medical Assistance Administration. Ms. Raphael has served on several Robert Wood Johnson Foundation advisory committees and New York State panels, including the New York State Hospital Review and Planning Council, for which she chairs the Fiscal Policy Committee. She has an M.P.A. from Harvard University's Kennedy School of Government.

**Robert D. Reischauer, Ph.D.,** is vice chairman of the Commission and president of The Urban Institute. Previously, he was a senior fellow with the Brookings Institution and from 1989 to 1995 was the director of the Congressional Budget Office. Dr. Reischauer currently serves on the boards of the Academy of Political Sciences, the Center on Budget and Policy Priorities, and the Committee for a Responsible Federal Budget. He also serves on the editorial board of *Health Affairs*, chairs the National Academy of Social Insurance's project on Restructuring Medicare for the Long-Term, and is a member of the Institute of Medicine and the Medicare Competitive Pricing Advisory Commission. Dr. Reischauer received his A.B. degree from Harvard College and his M.I.A. and Ph.D. from Columbia University.

**Alice Rosenblatt, F.S.A., M.A.A.A.,** is chief actuary and senior vice president of Integration Planning and Implementation 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 chairman, president, and chief executive officer of Aetna Inc., the nation's largest healthcare insurer. Prior to joining Aetna, Dr. Rowe served as president and chief executive officer of Mount Sinai NYU Health. Prior to the Mount Sinai NYU Health merger, Dr. Rowe was president of The Mount Sinai Hospital and the Mount Sinai School of Medicine in New York City, where he currently is a professor 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 over 200 scientific publications, mostly on the physiology of the aging process, as well as a leading textbook of geriatric medicine. Dr. Rowe 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 and as president of the Gerontological Society of America, and is a member of the Institute of Medicine of the National Academy of Sciences.

**David A. Smith** is senior policy advisor to the president of the AFL-CIO, where he previously served as director of the Public Policy Department. Prior to joining the AFL-CIO, he served as senior deputy budget director and as Commissioner of Economic Development for the City of New York. Mr. Smith spent most of the 1980s in Washington as an aide to Senator Edward M. Kennedy and as a senior economist at the Joint Economic Committee. Mr. Smith has taught economics and public policy at the University of Massachusetts and the New School for Social Research, and is a senior fellow at the Century Foundation. He is a member of the Board of Directors of Public Campaign and of the National Bureau of Economic Research, a fellow of the National Academy of Social Insurance, and a member of the Advisory Committee to the Export-Import Bank. Mr. Smith attended Tufts University and received a M.Ed. from Harvard University.

**Ray E. Stowers, D.O.,** is the director of the Oklahoma Rural Health Policy and Research Center as well as director of rural health in the Department of Family Medicine at Oklahoma State University College of Osteopathic Medicine. He was in private rural practice for 25 years at Family Medicine Clinics, Inc. in Medford, Okla. and is a member of the National Rural Health Association. Dr. Stowers is first vice president of the American Osteopathic Association and has served that organization in many capacities, including several related to physician coding and reimbursement issues. He has been on the Physician Payment Review Commission and was a founding member of the American Medical Association's Relative Value Update Committee. Dr. Stowers received his B.S. and B.A. from Phillips University in Okla. and his D.O. from the University of Health Sciences College of Osteopathic Medicine in Kansas City, Mo.

**Mary K. Wakefield, PhD., R.N., F.A.A.N.,** is director, Center for Rural Health at the University of North Dakota. Previously, she was 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 has held administrative and legislative staff positions in the U.S. Senate and 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. Dr. Wakefield is a member of the Institute of Medicine's Committee on Quality Health Care in America and a fellow in the American Academy of Nursing. In 2000, she was appointed to the National Advisory Committee on Rural Health, Office of Rural Health Policy, Health Resources and Services Administration. Dr. Wakefield received her B.S. in nursing from the University of Mary, Bismarck, N.D., and her M.S. and Ph.D. from the University of Texas at Austin.



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