SECTION 2A

Hospital inpatient and outpatient services

RECOMMENDATIONS

2A-1 The Congress should increase payment rates for the inpatient prospective payment system by the projected increase in the hospital market basket index less 0.4 percent for fiscal year 2006.

COMMISSIONER VOTES: YES 15 • NO 1 • NOT VOTING 0 • ABSENT 1

2A-2 The Congress should increase payment rates for the outpatient prospective payment system by the projected increase in the hospital market basket index less 0.4 percent for calendar year 2006.

COMMISSIONER VOTES: YES 15 • NO 1 • NOT VOTING 0 • ABSENT 1

2A-3 The Congress should extend hold-harmless payments under the outpatient prospective payment system for rural sole community hospitals and other rural hospitals with 100 or fewer beds through calendar year 2006.

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

SECTION 2A

Section 2A: Hospital inpatient and outpatient services

In this section

- Are Medicare payments adequate in 2005?
- How should Medicare payments change in 2006?

The evidence on payment adequacy for hospitals is mixed. Beneficiaries' access to care, volume of services, and access to capital are positive, and the results on quality are mixed. However, unusually large cost increases recently have led to a downward trend in Medicare margins. Cost growth has been affected by unusual increases in some input prices, but costs are increasing faster than the market basket. A significant factor in this growth has been the recent increase in private payments to hospitals, which has lessened pressure on them to constrain costs. In addition, hospitals with consistently negative Medicare margins have higher costs and higher cost growth than their competitors; hospitals with high costs and cost growth pulled down the industry-wide margin. Update recommendations of market basket minus 0.4 percent for inpatient and outpatient payments will balance an incentive for fiscal discipline with concern for the trend in Medicare margins. We recommend that the Congress maintain outpatient hold-harmless payments for small and isolated rural hospitals for a year to provide time to consider the reasons some rural hospitals are projected to perform poorly when this policy ends.

Background

Hospitals provide Medicare beneficiaries with inpatient care for the diagnosis and treatment of acute conditions and manifestations of chronic conditions. They also provide ambulatory care through outpatient departments and emergency rooms. In addition, many hospitals provide home health, skilled nursing facility (SNF), psychiatric, or rehabilitation services. Medicare purchases inpatient and outpatient care, as well as other services, from short-term general and specialty hospitals that meet its conditions of participation and agree to accept the program's payment rates for care.

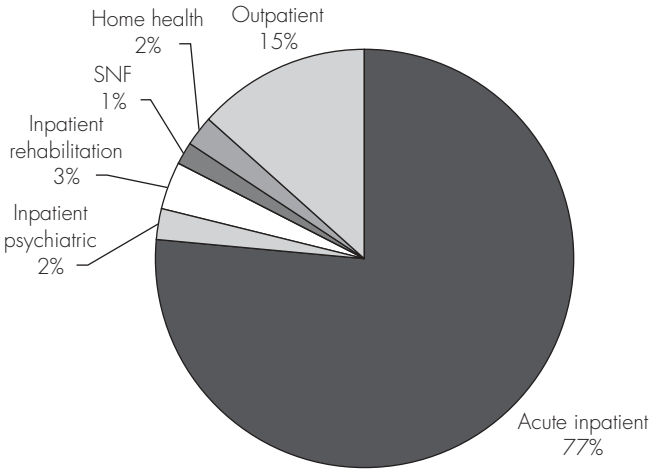
Medicare spending on hospitals

The bulk of Medicare spending on hospitals is for acute inpatient and outpatient care. Payments for acute inpatient care account for about three-quarters of all Medicare payments to prospective payment system (PPS) hospitals, while payments for outpatient care (including emergency room services) make up about 15 percent (Figure 2A-1).[1] Spending on inpatient and outpatient care for all participating hospitals increased from about $95 billion in 1994 to $142 billion in 2003, representing a 4.5 percent average annual growth rate during the decade (Figure 2A-2). From 1994 to 1997, total Medicare hospital spending grew 5.3 percent per year. Expenditures were nearly flat for three years after the Balanced Budget Act of 1997 (BBA) was enacted, and then spending growth accelerated to more than 8 percent in 2001 and 2002 before dropping to 5.7 percent in 2003.

Looking forward, CMS's Office of the Actuary (OACT) projects that hospital payments will increase at an annual rate of 5.1 percent from 2004 to 2014 (OACT 2004). But OACT projects that Medicare fee-for-service (FFS) payments to hospitals will decrease in 2006 and 2007 because of expected enrollment increases in Medicare Advantage (MA) plans. Hospital bills for beneficiaries who join MA plans will be paid directly by those plans, not through the Medicare fee-for-service hospital payment system (except for graduate medical education payments). The Congressional Budget Office (CBO), on the other hand, does not project a decline in fee-for-service enrollment and, consequently, expects FFS payments to hospitals to continue to increase.

The Medicare hospital spending presented above includes all outpatient services, not just those covered under the outpatient PPS.[2] Total spending under the outpatient PPS, which CMS implemented in August 2000, grew at an annual rate of 4.8 percent from 2001 to 2003 (the outpatient PPS operates on a calendar year, as opposed to the government fiscal year for the inpatient PPS). OACT estimates that outpatient spending will continue to increase through 2005, with an annual growth rate of 8.1 percent from 2003 to 2005. OACT projects that spending will decrease in 2006, because of the projected increase in MA enrollment, and then rise again in 2007 (OACT 2004). Under CBO's assumptions for fee-for-service enrollment, outpatient spending will continue to increase in 2006.

FIGURE 2A-1 **Acute inpatient services account for most Medicare hospital payments**



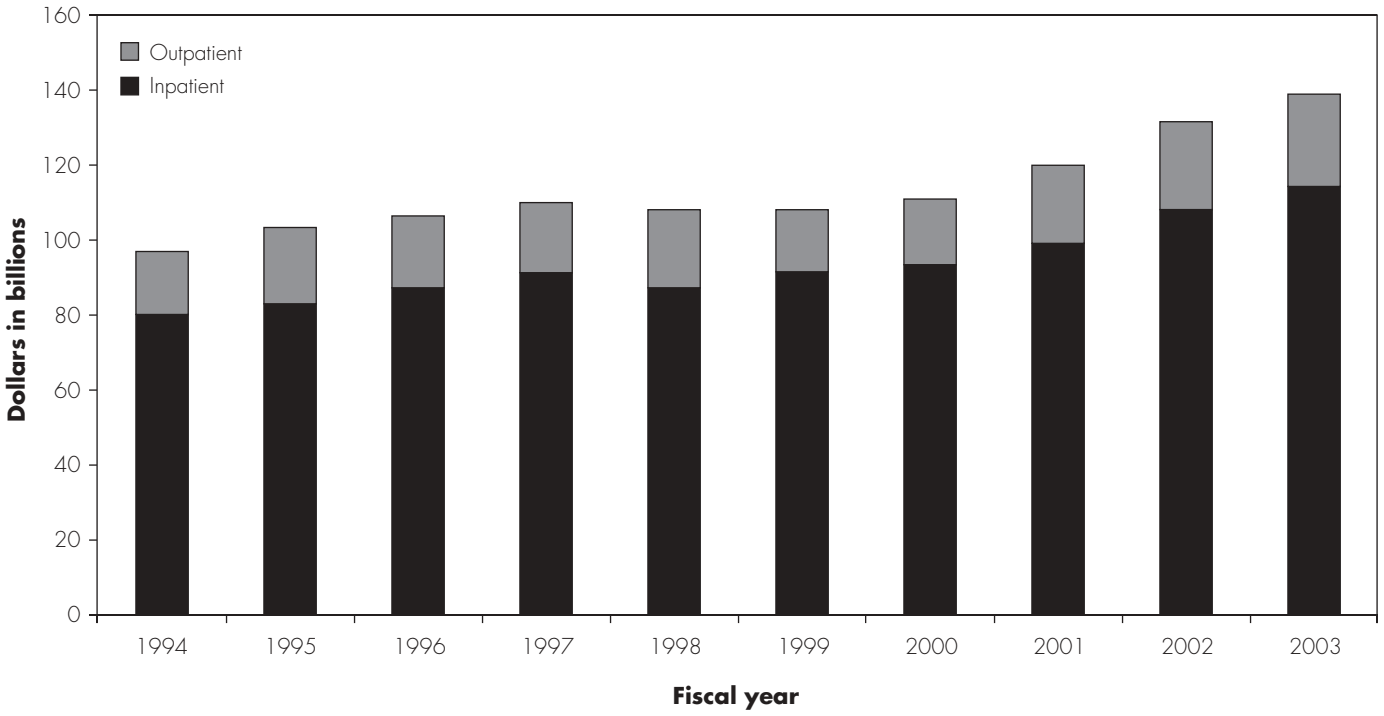
Note: SNF (skilled nursing facility). Data are for hospitals covered by Medicare acute inpatient prospective payment system. Data exclude graduate medical education as well as several services that account for smaller shares of payments, such as hospice and ambulance.

Source: MedPAC analysis of 2003 Medicare Cost Report file from CMS.

Medicare's payment systems for hospital inpatient and outpatient services

This section provides a brief overview of the inpatient and outpatient PPSs. These payment systems have a similar basic construct (a base rate modified for differences in mix of cases or services as well as geographic differences in wages) but use different sets of additional payment adjustments.

FIGURE 2A-2 **Growth in Medicare payments for hospital inpatient and outpatient services continues**



Note: Includes all Medicare participating hospitals. Includes acute inpatient services covered by the prospective payment system (PPS); other inpatient services (psychiatric, cancer, children's, rehabilitation, and long-term care hospitals); outpatient services covered by PPS; and other outpatient services. Payments include both program outlays and cost sharing incurred by beneficiaries.

Source: CMS, Office of the Actuary, 2004.

Acute inpatient payment system

Medicare's acute inpatient PPS pays hospitals a predetermined amount per hospital discharge. The diagnosis-related group (DRG) classification system sorts patients into more than 500 groups, which aggregate cases with related clinical problems that are expected to have similar costs.

Each DRG has a relative weight that is based on how charges for cases in the group compare with the national average of all groups. The base payment rate reflects the average costliness of Medicare inpatient cases nationwide, and the DRG payment rate is the product of this rate and the relative weight of the DRG. The portion of the DRG payment rate attributable to the cost of labor is further adjusted by the hospital wage index to account for differences in local input prices.

The inpatient PPS makes additional payments for certain cases and to hospitals with specific characteristics:

- supplemental outlier payments for cases with unusually high costs relative to the payment rate for the DRG;
- add-on payments for the costs of major new technologies used in acute inpatient care;
- an indirect medical education (IME) adjustment to account for the higher patient care costs of teaching hospitals;[3]
- a disproportionate share (DSH) adjustment to provide additional payment to hospitals that treat an unusually large share of low-income patients;

- options for higher payments for hospitals that qualify as sole community providers, rural referral centers, or small Medicare-dependent hospitals; and
- a low-volume adjustment for rural hospitals treating fewer than 200 admissions from all payment sources.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) called for several changes to these payment policies that increased payments to many rural hospitals and some urban facilities.[4]

Since 1997, certain small rural hospitals with 25 or fewer beds can qualify as critical access hospitals (CAHs). These hospitals are paid 1 percent more than their incurred costs for both inpatient and outpatient services and are not considered when we evaluate the adequacy of Medicare's prospective payments. There were 1,050 CAHs as of December 2004. (More information on this program will be provided in our forthcoming report to the Congress on the CAH program.)

Hospital outpatient payment system

The outpatient PPS pays hospitals a predetermined amount per service. Each service provided to a beneficiary is assigned to an ambulatory payment classification (APC) group. The APCs cover everything from simple X-rays and clinic visits to cataract surgeries and insertion of pacemakers. CMS has created approximately 800 APCs for 2005. Each APC has a relative weight based on its median cost of service compared with the national average, and a conversion factor translates relative weights into dollar payment amounts. The labor portion of the outpatient payment is adjusted by the hospital wage index to reflect differences in local input prices.

The outpatient PPS includes three payment adjustments:

- pass-through payments for new technologies when providers use certain drugs, biologicals, and devices in the delivery of services,
- outlier payments for individual services or procedures with unusually high costs relative to the payment rate for the APC, and
- hold-harmless payments to cancer, children's, small rural, and sole community hospitals if their outpatient PPS payments are lower than they would have been under prior policy. Hold-harmless payments to small rural and sole community hospitals end in 2005, however.

Under the outpatient PPS, beneficiaries must meet the deductible that applies to all Part B services ($110 in 2005) and also pay a pre-specified coinsurance for each service. In 2003, beneficiary coinsurance accounted for about 35 percent of total payments under the outpatient PPS, but the BBA established a system for reducing beneficiaries' coinsurance share over time until it reaches 20 percent.

Are Medicare payments adequate in 2005?

Each year, MedPAC makes payment update recommendations for hospital inpatient and outpatient services for the coming year. In our framework we address whether base payments for the current year (2005) are adequate and how much efficient providers' costs should change in the coming year (2006). Our determination of payment adequacy considers beneficiaries' access to care, changes in the volume of services, changes in the quality of care, hospitals' access to capital, and the relationship of Medicare payments and costs. In addition, the MMA requires that we consider the efficient provision of services in making update recommendations. We have previously established the importance of considering the appropriateness of providers' costs in assessing payment adequacy—that is, whether actual costs provide a reasonable representation of the costs of efficient providers (MedPAC 2003a).

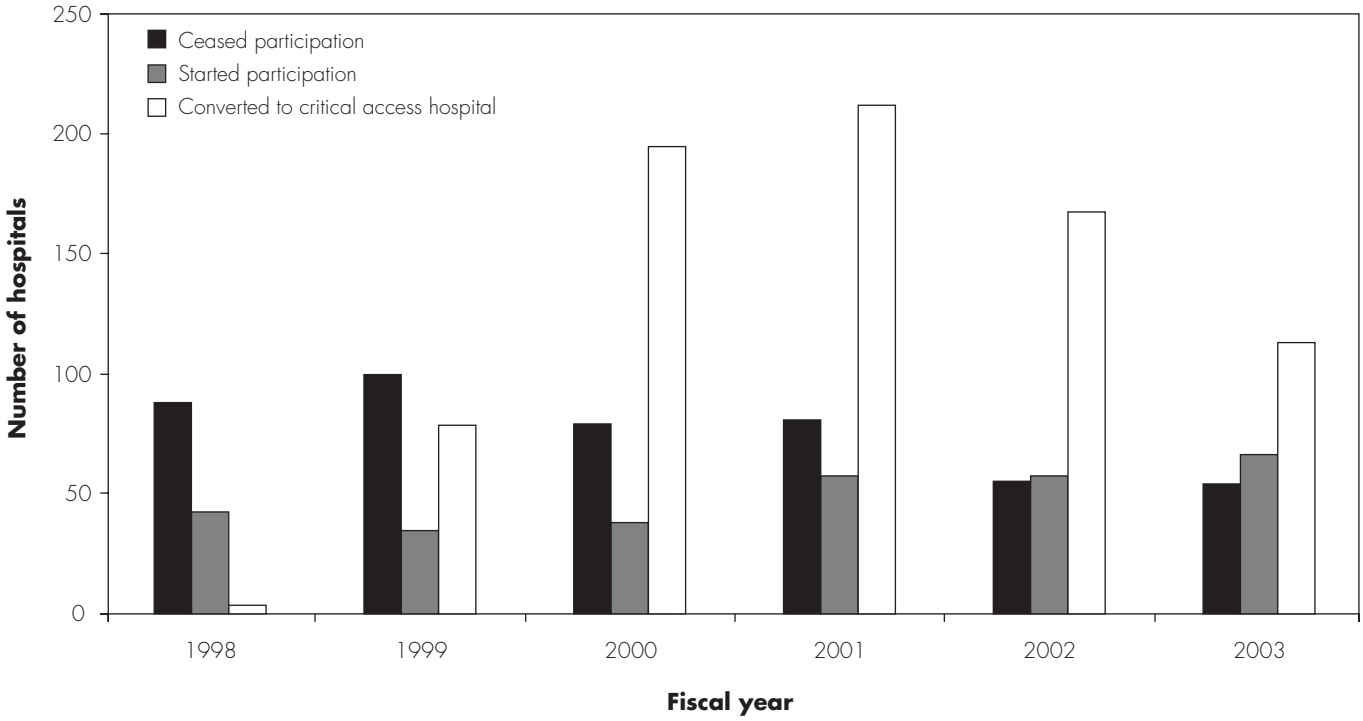
Beneficiaries' access to care and supply of providers

We assess beneficiaries' access to care through measures of the number of hospitals participating in the Medicare program, including critical access hospitals in rural areas, and the proportion of hospitals offering certain specialty and outpatient services. We found no indication of significant change in the capacity of hospitals to provide services to Medicare beneficiaries.

In 2003, 58 hospitals joined the Medicare program and 41 ceased operation, for a net gain of 17 (Figure 2A-3). More than half the new participants identified themselves by name as a specialty hospital (surgical, heart, orthopedic, or women's hospital). Of 157 facilities that dropped out of the acute inpatient PPS, 41 stopped participating in Medicare as mentioned and 116 converted to CAH status.

FIGURE 2A-3

Fewer hospitals are ceasing participation in Medicare, while many have become critical access hospitals



Source: MedPAC analysis of Provider of Services file from CMS.

The number of facilities exiting the Medicare program, as opposed to converting to CAH status, has dropped every year since 1999.

The share of hospitals offering most specialty services increased from 1998 to 2002 (Table 2A-1). The proportion offering trauma center services (level 1, 2, or 3) grew from 26 percent to 34 percent, and the proportion offering burn care increased from 3 percent to 4 percent. Trauma center and burn care services are often considered unprofitable for hospitals. The largest change was in MRI services, which increased from 50 percent to 59 percent.

The percentage of hospitals offering outpatient and emergency services has been fairly stable (Table 2A-2, p. 46). A small increase in the share of hospitals providing outpatient care followed the introduction of the outpatient PPS in August 2000. The only change since 2001 was a small increase in the percentage offering outpatient surgery.

TABLE 2A-1

The share of hospitals offering most specialty services has grown

Service	1998	2000	2002
Neonatal intensive care	19%	19%	20%
Burn care	3	3	4
Transplant services	6	9	9
Open heart surgery	20	22	22
Trauma center (levels 1–3)	26	33	34
Cardiac catheterization	37	38	40
Angioplasty	24	26	28
Hemodialysis	N/A	22	28
Psychiatric services	50	49	48
Radiation therapy	26	28	28
MRI	50	55	59

Note: N/A (not available). Includes services provided directly by community hospitals.

Source: American Hospital Association annual survey of hospitals.

TABLE 2A-2

The share of hospitals offering outpatient services has risen slightly

Service	1997	2001	2002	2003
Outpatient services	93%	94%	94%	94%
Outpatient surgery	81	84	84	86
Emergency services	92	93	93	93

Note: Includes services provided or arranged by short-term hospitals.

Source: Provider of Services file from CMS.

Changes in volume of services

Both inpatient and outpatient volume have increased in recent years. We use number of discharges and average length of stay as indicators of inpatient volume, while we measure outpatient volume by number of services.

Inpatient volume

The number of discharges, whether calculated for Medicare or all payers (which includes Medicare), increased every year from 1999 through 2003 (Figure 2A-4). For Medicare, the increases partly reflect growth in fee-for-service enrollment from beneficiaries leaving Medicare+Choice plans and returning to traditional Medicare, particularly in 2001 and 2002.

Medicare discharges grew more rapidly than fee-for-service enrollment from 1999 to 2001 and then kept pace with enrollment in 2002 and 2003. Discharges increased by 3.1 percent in 2002 and 2.4 percent in 2003, yielding a two-year increase that matches the two-year increase in enrollment.

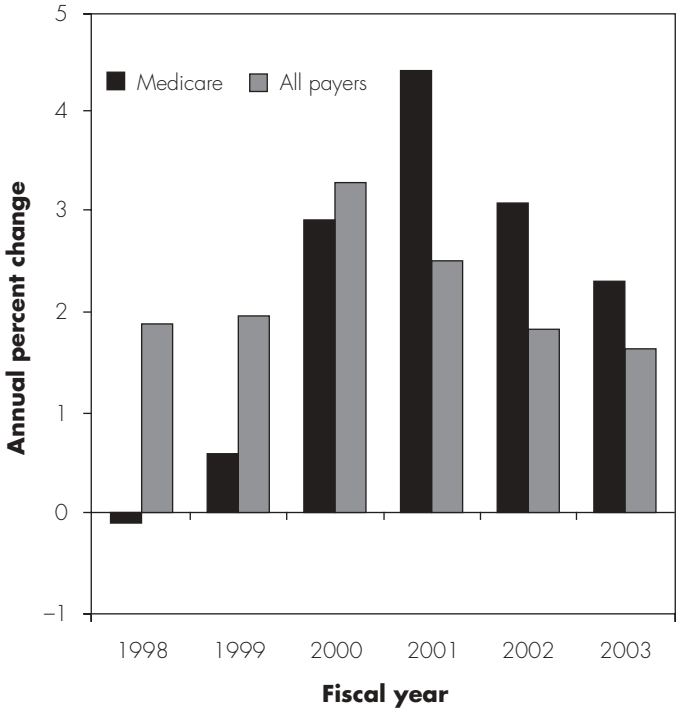
The average length of stay for Medicare patients fell more than 30 percent during the 1990s, with annual declines exceeding 5 percent from 1993 to 1996. The rate of decline then slowed to 1.3 percent in 2003 (Figure 2A-5).

Outpatient volume

We measure the volume of outpatient care as number of services provided because the outpatient PPS generally pays for individual services. Volume has grown rapidly since 2001—the first full year of the outpatient PPS—but the rate of increase has slowed. Analysis of claims data indicates that volume increased by 12.7 percent in 2002

FIGURE 2A-4

Hospital discharges continued to grow through 2003



Note: Data are for hospitals covered by the Medicare acute inpatient prospective payment system in 2003.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

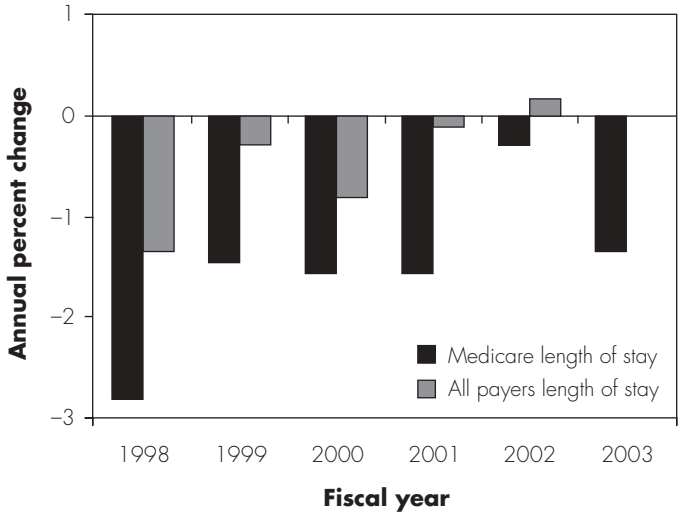
and by 8.5 percent in 2003. Our analysis excludes pass-through devices and drugs as well as other separately paid drugs.[5]

We found that 65 percent of the growth from 2002 to 2003 was due to increased volume per beneficiary who received a service covered by the outpatient PPS. Most of the remaining growth was due to an increase in the number of beneficiaries in FFS Medicare, with very little of it due to a greater percentage of beneficiaries receiving any outpatient PPS care.

Changes in quality of care

The quality of care hospitals provide to Medicare beneficiaries shows a mixed picture. Mortality rates have dropped and CMS's indicators of clinical effectiveness and appropriateness of care show improvement. But the rates of adverse events have generally increased. We

FIGURE 2A-5 **The decline in Medicare length of stay continued in 2003**



Note: The annual percent change in length of stay for all payers was zero in 2003. Data are for hospitals covered by the Medicare acute inpatient prospective payment system in 2003.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

discuss each of these indicators briefly below, and additional detail is available in our March 2004 report (MedPAC 2004).

Our measures of mortality and adverse events were developed by the Agency for Healthcare Research and Quality (AHRQ). We examined in-hospital mortality and mortality 30 days after admission to the hospital, and we analyzed the incidence of potentially preventable adverse events resulting from inpatient care to assess safety in hospitals. AHRQ chose these indicators after an extensive literature review, discussions with clinical and measurement experts, and empirical testing to explore the frequency and variation of the indicators and their potential biases.

We calculated the mortality and patient safety indicators from Medicare administrative data. Because of the low occurrence of some of the indicators, we examined all Medicare inpatient claims with specified conditions or procedures using CMS's MedPAR file. We risk-adjusted the data sets using an AHRQ methodology.

In-hospital mortality declined from 1998 to 2003 for each of the eight conditions or procedures we measured; rates for coronary artery bypass graft, congestive heart failure, and gastrointestinal hemorrhage fell by more than 20 percent. The 30-day mortality rate decreased for six measures from 1998 to 2003 but increased slightly for two, pneumonia and stroke. The 30-day rate reflects not only the in-hospital experience but often care experienced in post-acute and outpatient settings.

Data from the Quality Improvement Organization (QIO) program on the clinical effectiveness and appropriateness of care in hospitals show improvement for 18 of 25 measures.[6] Four indicators show deterioration, while data limitations prevent comparison for three indicators. Many beneficiaries still are not receiving clinically indicated services, however.

Adverse events reflect another dimension of quality: patient safety. The rate of adverse events increased for 9 of the 13 measures analyzed from 1998 to 2003. Although these are rare events, often with rates under 100 per 10,000 eligible discharges, collectively they affected approximately 375,000 cases in 2003. The most common is decubitus ulcer (bed sores), for which the rate increased over the period. The second most common, failure to rescue, results in death. But the rate for this measure decreased over the period, which is consistent with the decline in mortality rates.

In light of this mixed picture, we are concerned about the trend for some measures, particularly the patient safety indicators. None of these measures, however, seems to provide compelling evidence that payments are, or are not, adequate. Instead, the gap between actual and recommended care reflected in the QIO measures for some hospitals and the increase in adverse events make the case that further efforts to improve quality are needed, including linking payment to quality performance. As we discuss in Chapter 4, MedPAC recommends that the Congress establish a quality incentive payment policy for hospitals that participate in Medicare.

Hospitals' access to capital

Access to capital allows hospitals to maintain and modernize their facilities and capabilities for patient care. If hospitals were unable to access capital, it might in part reflect the adequacy of Medicare payments, although Medicare only makes up about a third of hospital

revenues. Access to capital is also influenced by other payers, changes in uncompensated care, management actions concerning the hospital and related businesses, and investors' perception of the regulatory environment, including the possibility of changes in federal and state hospital payment policies.

Indicators suggest that access to capital is good

Two major factors suggest that access to capital for the overall sector is good: the strength of hospital construction spending and bond issuances. Hospital construction spending increased 22 percent in 2002, 7 percent in 2003, and an estimated 12 percent in 2004 (Census 2004). The three major bond rating agencies report that the capital spending ratio—the ratio of capital spending to depreciation and amortization—was 1.3 or more, implying that hospitals are going beyond merely replacing worn-out plant and equipment (Moodys 2004, FitchRatings 2004, S&P 2004a). Tax-exempt municipal bond issuances for hospitals continue to increase from the 2000 level of under $15 billion to well over $25 billion projected for 2004. In addition, the amount of new money raised (as opposed to refinancing current debt) reached a record level of more than $20 billion (Thompson Financial data cited in BoA 2004).

Overall, 2004 bond ratings in this sector were similar to what they were in the previous year. In the Standard & Poor's ratings, for example, only about 10 percent were upgraded or downgraded. Although downgrades exceed upgrades, Standard & Poor's reports that in the latest quarter, the amount of upgrades ($1.32 billion) exceeded that of downgrades ($759 million) by more than 70 percent (S&P 2004b).

This stability is important because it occurs at the same time that hospitals have been making larger capital investments and borrowing more money to do so. The fact that few ratings have been lowered implies that hospitals' operating results and the increase in the market value of investments have been sufficient to offset higher debt and preserve key measures the ratings industry uses, such as debt service coverage ratios and days cash on hand. FitchRatings, for example, reports that days cash on hand increased from 133 days in 2002 to 150 days in 2003 and debt service coverage from 2.7 to 2.8 (FitchRatings 2004).[7]

Hospitals expect access to capital to remain good

Hospitals plan to continue to add capacity and increase capital spending, which implies that they expect to have continued access to capital. A recent survey of nonprofit hospitals found the following (BoA 2004):

- Nearly 82 percent of hospitals plan to add capacity over the next two years. Some 54 percent plan to add inpatient capacity. As a point of reference, 2001 was the first year licensed bed capacity increased since 1983 (Health Systems Change 2003b).
- The mean forecasted increase in 2004 capital spending is 10 percent, and 41 percent of hospitals expect to increase capital spending more than 15 percent. A Healthcare Financial Management Association survey shows an expected increase of 14 percent annually over the next five years, compared with an average 1 percent annual increase from 1997 to 2001 (HFMA 2004).
- Nearly 87 percent of hospitals reported that access to capital markets is either the same as or better than it was five years ago. Among rural hospitals, 94 percent reported access to be the same or better.

Access to capital for nonprofit hospitals is important because these facilities continue to make up the majority of hospitals in Medicare and account for the majority of discharges. Of approximately 3,800 hospitals, about 60 percent are nonprofit and account for more than 70 percent of discharges. For-profit hospitals make up less than 20 percent of hospitals and about 14 percent of discharges.

Is access to capital good for all hospitals?

Some in the industry are concerned about a divergence in access to capital between "haves" and "have-nots" and fear that hospitals with weaker credit will languish. A recent commentary, however, points out that over a longer time horizon, providers manage to access enough capital to stay in business as:

- they experience periods of strong as well as weak performance;
- the dynamics of the capital markets change (e.g., interest rates rise and fall); and
- government programs, such as the Federal Housing Administration 242 mortgage insurance program, make capital available (Cain Brothers 2004).

Among the "have-nots" may be those hospitals that are not rated, because hospitals that do not expect a favorable rating might not approach the public tax-exempt market at all. Other forms of financing appear to be on the rise, though, arguably allowing hospitals that are not rated to access capital as well. Commercial lenders—for example, banks—are reportedly taking more interest in the sector and are increasing loans, private placement of tax-exempt bonds is increasingly available, and leasing of equipment may be another alternative. Moreover, some hospitals have poor access to capital because they are failing institutions, with low occupancy, high unit costs, and other problems legitimately affecting their creditworthiness.

Is access to capital good for for-profit hospitals?

For-profit hospital chains have the advantage of being able to access capital through the equity markets as well as through the debt market. Stock prices for the eight largest for-profit chains have been mixed, with five showing an increase in price over the past year and three a decrease. Access to capital does not seem to be a pervasive problem, however, as most of the chains continue to acquire hospitals. For example, LifePoint Hospitals recently agreed to purchase Province Healthcare for $1.7 billion. And in another example of use of capital, the largest chain, HCA, recently announced that it will borrow as much as $2.5 billion to repurchase its shares (WSJ 2004).

Investors in this sector have some of the same concerns as in the nonprofit sector about cost increases, ability or willingness of payers to continue to increase payments, and bad debt. One analyst also raised the issue of capital competition with nonprofit hospitals—another indication of good access to capital for nonprofits. Thus, although some analysts are not bullish on the sector for investment, others feel that any bad news is already factored into the prices and room for appreciation exists if the economy continues to improve (Merrill Lynch 2004). Some private investors appear to share this more optimistic view, as evidenced by two recent leveraged buyouts of proprietary hospital companies and a total infusion of more than $1 billion in private equity over the past year—an all-time high (Citigroup 2004).

Payments and costs for 2005

In assessing payment adequacy, the Commission considers the estimated relationship between Medicare payments and costs in the current year, fiscal year 2005. We assess the adequacy of Medicare payments for the hospital as a whole, and thus our indicator of the relationship between payments and costs is the overall Medicare margin.[8] This margin includes payments and costs for the six largest services that hospitals provide to Medicare patients plus graduate medical education. We take this approach because hospitals have large amounts of overhead that they allocate across service lines. Only by combining data for all major services can we estimate Medicare costs for measuring the relationship between payments and costs without the influence of how overhead costs are allocated.

This section begins by presenting the trend in the overall Medicare margin, including our projection of the margin in fiscal year 2005. Then we discuss the unusually high cost growth of recent years as well as the numerous policy changes that have combined to produce the expected 2005 margin. Next we present evidence that hospitals' current rate of cost growth is linked to the absence of fiscal pressure from the private sector. Finally, we analyze the wide distribution of financial performance, finding that hospitals with both high costs and high cost growth have a significant negative effect on the industry-wide Medicare margin.

Trend in Medicare margins

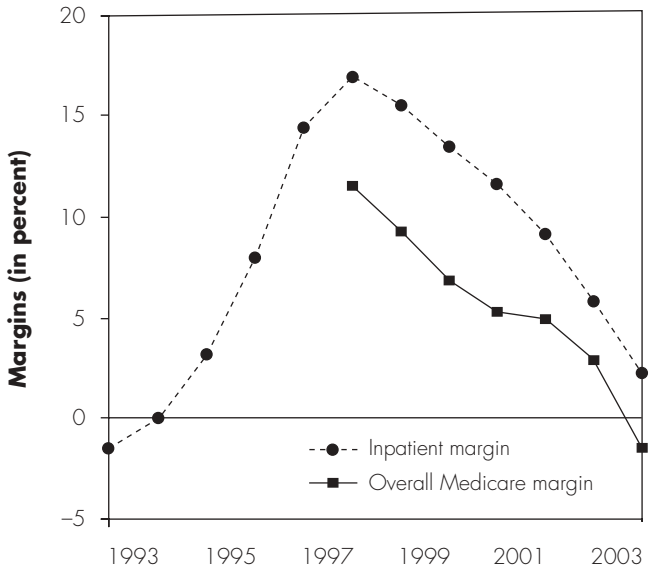
The overall Medicare margin has trended downward since 1998, falling to –1.9 percent in 2003 (Figure 2A-6, p. 50).[9] The drop from 2002 resulted mostly from high cost growth, but payment policy changes also played a role.

The decrease in the Medicare margin from 2002 to 2003 occurred across most lines of business. The Medicare inpatient margin dropped from 5.9 percent to 1.3 percent, and the outpatient margin also fell from –9.0 percent to –11.5 percent (Table 2A-3, p. 50). Margins for hospital-based SNFs and home health agencies also declined, but margins for inpatient rehabilitation facilities increased.

We estimate that the overall Medicare margin in 2005—reflecting 2006 payment polices—will increase slightly to –1.5 percent (Table 2A-4, p. 51). The improvement in the margin in part reflects MMA policy changes that increased inpatient payment rates to many rural and some urban hospitals. The following sections examine the role of cost growth and payment policy changes in the trend and distribution of margins.

FIGURE 2A-6

Trend in overall Medicare and Medicare inpatient margins



Note: A margin is calculated as payments minus costs, divided by payments. Data are based on Medicare-allowable costs. Analysis excludes critical access hospitals. Medicare inpatient margin includes services covered by the acute inpatient prospective payment system. Overall Medicare margin covers acute inpatient, outpatient, hospital-based skilled nursing facility and home health, and inpatient psychiatric and rehabilitation services, plus graduate medical education.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

Cost growth was unusually high in 2002 and 2003 In 2002, Medicare costs per discharge for acute inpatient services (adjusted for case-mix change) rose 7.4 percent, the largest annual increase since 1990 (Table 2A-5). This rate was near 6 percent (5.6 percent) in 2003, marking the largest increase since 1992.

TABLE 2A-3

Hospital Medicare margin, 2000–2003

Measure	2000	2001	2002	2003
Overall Medicare	5.2%	5.0%	2.3%	–1.9%
Inpatient	11.7	9.8	5.9	1.3
Outpatient	–14.3	–7.7	–9.0	–11.5

Note: Data are for all hospitals covered by Medicare acute inpatient prospective payment system in 2003. A margin is calculated as payments minus costs, divided by payments; margins are based on Medicare-allowable costs. Overall Medicare margin covers acute inpatient, outpatient, hospital-based skilled nursing facility and home health, and inpatient psychiatric and rehabilitation services, plus graduate medical education.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

At 2.5 percent, the rate of increase in Medicare's outpatient costs per unit of service in 2003 (adjusted for case-mix change) was less than half the increase for inpatient services. One of the key factors in this lower cost growth was the substantial increase in outpatient volume—almost 9 percent in 2003—which allows hospitals to spread fixed costs over more services. But the lower cost growth may also be linked to competition from other ambulatory care settings, such as ambulatory surgical centers and freestanding imaging facilities.

Rural hospitals had slightly lower inpatient cost growth than urban facilities in both 2002 and 2003, the first time this has ocurred in 12 years. This pattern did not carry over to outpatient services, however, where rural hospitals' per-unit costs grew 3.9 percent compared with 2.2 percent for urban facilities. Major teaching hospitals had lower cost growth than their counterparts for both inpatient services (in 2002) and outpatient services (in 2003).

The increase in cost per unit of output across *all services and all payment sources* was 6.0 percent in 2002 and 5.1 percent in 2003.[10] Recent evidence, however, suggests that the rate of increase may be moderating in 2004. A recent survey of 580 hospitals using the same cost measure found that unit costs grew only 3.4 percent in the year ending June 2004. This figure represents a drop of 1.7 percentage points from the industry-wide value for 2003.[11] In addition, data from the U.S. Bureau of Labor Statistics (BLS) show that growth in hospitals' labor costs is slowing. Labor costs are the largest single component of hospital costs and are driven primarily by compensation rates and the number of workers, although hospitals substituting workers of higher or lower skill level also may play a role.

The rate of increase in compensation peaked in mid-2002, during the time of major concern about the shortage of nurses and other professional workers. One study estimated that the hourly cost of compensating nurses at private hospitals grew by 8.8 percent during 2002, four times the average rate of increase during the last half of the 1990s (HSC 2003). This escalation may have been partly the result of hospitals increasing their number and proportion of RNs in response to quality-of-care concerns, after research established that better RN staffing is associated with lower rates of mortality and complications (Aiken et al. 2002, Needleman et al. 2002). But in the BLS

TABLE 2A-4 **Overall Medicare margins by hospital group, 2000–2003 and estimated 2005**

Hospital group	2000	2001	2002	2003	2005*
All hospitals	5.2%	5.0%	2.3%	–1.9%	–1.5%
Urban	6.2	5.8	3.0	–1.3	–1.3
Rural	–2.6	–1.3	–3.3	–6.2	–3.1
Major teaching	14.2	13.4	11.5	5.8	5.0
Other teaching	5.0	4.5	2.0	–1.9	–1.7
Nonteaching	0.3	0.6	–2.6	–5.8	–4.7

Note: Data are for all hospitals covered by Medicare acute inpatient prospective payment system in 2003. A margin is calculated as payments minus costs, divided by payments; margins are based on Medicare-allowable costs. Overall Medicare margin covers acute inpatient, outpatient, hospital-based skilled nursing facility and home health, and inpatient psychiatric and rehabilitation services, plus graduate medical education.
*2005 margins are projections that reflect the effects of policy changes to be implemented in 2006.

Source: MedPAC analysis of Medicare Cost Report file, MedPAR, and market basket file from CMS.

data, the 4.4 percent average growth in compensation for the four quarters ending in June 2003 declined to 3.9 percent for the four quarters ending in June 2004 (Figure 2A-7, p. 52). Similarly, the growth rate of hospital employment peaked at the beginning of 2002 and has since trended down. The average increase of 2.0 percent for the four quarters ending in June 2003 fell to 1.3 percent through June 2004 (Figure 2A-8, p. 53).

Because labor costs are the product of compensation and employment, the drop in rate of compensation growth in 2004 (0.5 percent) and the drop in employment growth (0.7 percent) together approximate the reduction in the growth of overall labor costs (1.2 percent).

The text box on page 54 summarizes the growth in hospital costs by cost component.

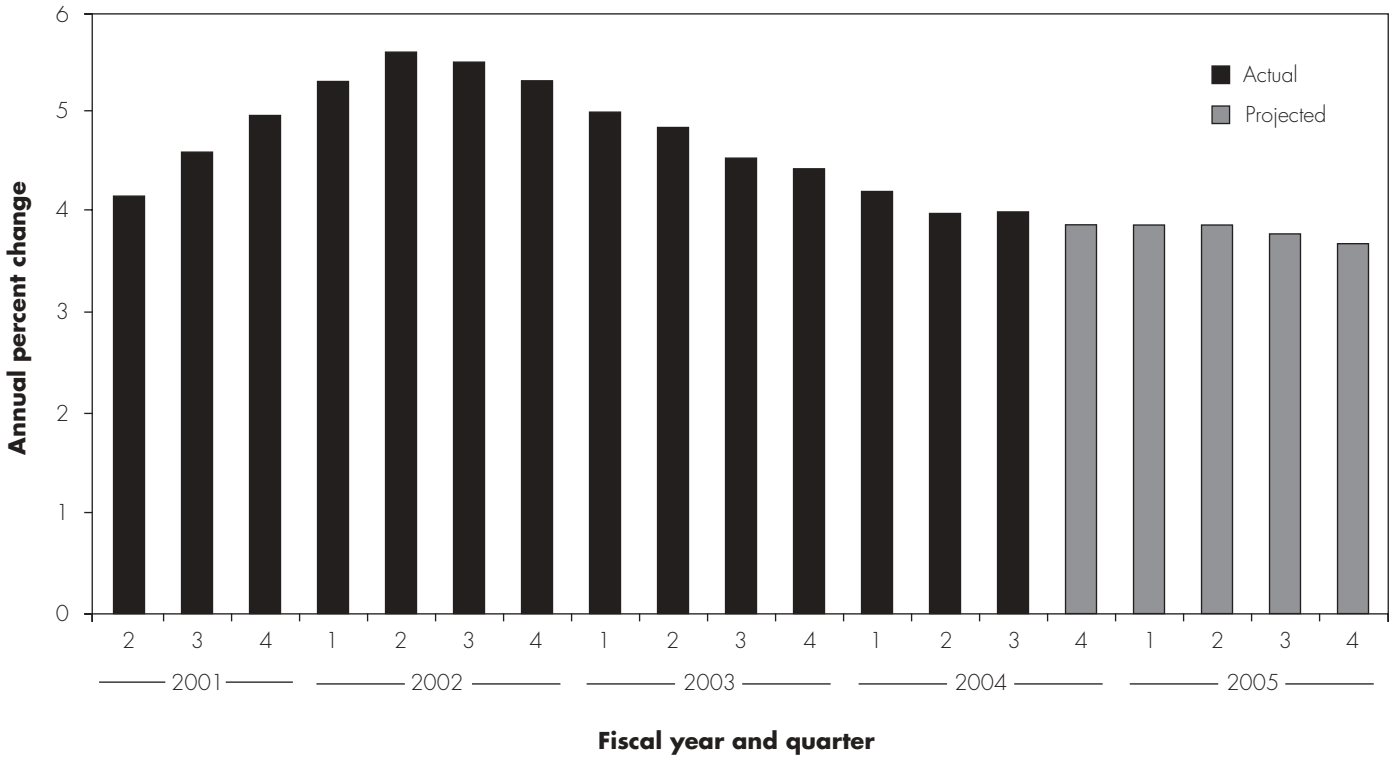
TABLE 2A-5 **High growth in Medicare costs per discharge in 2002 moderated only slightly in 2003**

	Inpatient costs per discharge				Outpatient costs per unit of service (case-mix adjusted)
	Unadjusted		Case-mix adjusted		
Hospital group	2002	2003	2002	2003	2003
All hospitals	8.3%	6.2%	7.4%	5.6%	2.5%
Urban	8.1	6.1	7.3	5.7	2.2
Rural	8.0	5.7	7.2	4.4	3.9
Major teaching	6.1	5.9	4.9	5.6	1.2
Other teaching	8.5	6.2	7.6	6.0	2.5
Nonteaching	8.9	6.3	8.1	5.3	3.1

Note: The results are adjusted to account for changes in hospitals' case mix (complexity of services provided) as measured by diagnosis-related groups for inpatient services and ambulatory patient classifications for outpatient services. Analysis excludes critical access hospitals.

Source: MedPAC analysis of Medicare Cost Report and claims files from CMS.

FIGURE 2A-7 **Increase in average compensation rate for hospital employees peaked in early 2002**



Note: Values are four-quarter averages ending in the quarter shown, including wages and benefits.

Source: Global Insights, third quarter 2004 baseline.

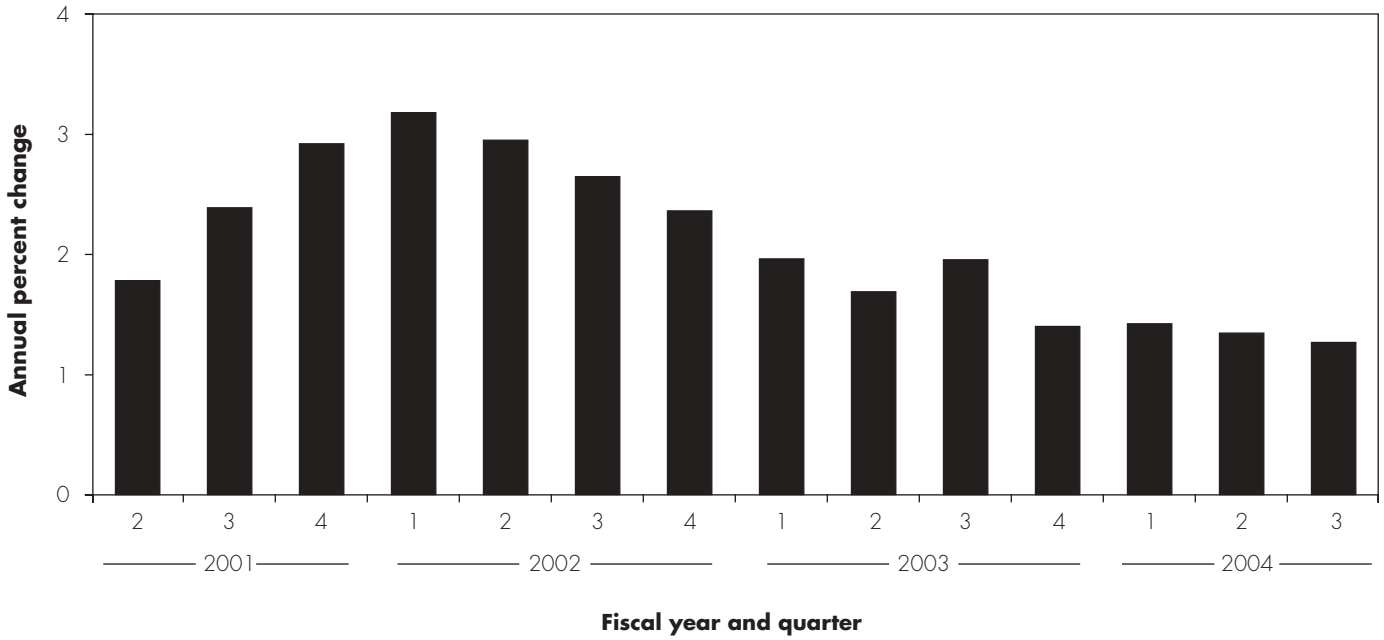
Policy changes increased some payments and decreased others Payment policy changes, along with high cost growth, contributed to the decline in the overall Medicare margin from 2002 to 2003. Specifically, policy changes affecting Medicare inpatient, outpatient, home health, and SNF payments all contributed to the decline.

For inpatient services, two policies substantially affected payments in 2003. One was a drop in outlier payments resulting from a 60 percent increase in the outlier threshold and changes CMS made toward the end of the year to address abuse of the outlier payment policy. Outlier payments were much higher than intended in 2001 and 2002. The other policy change was a 15 percent reduction in the indirect medical education adjustment paid to teaching hospitals (later reversed temporarily by the MMA). Under the outpatient payment system, the number and dollar value of items eligible for pass-through payments fell in 2003. In addition, transitional corridor payments were reduced as part of a three-year phaseout of these payments.

Hospital-based SNF and home health payment rates also declined in 2003 as payment add-ons expired and the home health base payment was reduced, although these changes had limited effects because SNF and home health together account for only about 3 percent of Medicare's payments to hospitals. For SNFs, two temporary add-ons ended at the close of fiscal year 2002. One was a 4 percent add-on to base payment rates, and the other a 16.7 percent add-on to the nursing component of the resource utilization group (RUG) rates. For home health care providers, a 10 percent add-on for care provided to rural beneficiaries expired (later replaced by a 5 percent add-on). In addition, home health payment rates were set about 5 percent lower in 2003 than in 2002 because of a large reduction in home health payment rates that the BBA had

FIGURE 2A-8

The rate of increase in hospital employment has slowed since early 2002



Note: Values are for four-quarter averages ending in the quarter shown, covering employment of nonsupervisory paid workers.

Source: MedPAC analysis of current employment survey series, 2000–2004, from Bureau of Labor Statistics.

required but which had been put off for several years by intervening legislation.[12] In contrast to these payment reductions, rehabilitation units' payments increased substantially in 2003 after coming under the new PPS for inpatient rehabilitation services.

Our projection of the 2005 margin is affected by a number of payment policy changes, particularly provisions adopted in the MMA. These include provisions scheduled for implementation in 2006. Medicare acute inpatient margins are expected to increase as a number of provisions add money to the system. Many of the provisions primarily affect rural hospitals; these include:

- increasing the base rate for hospitals in rural and small urban areas by 1.6 percent to match the rate for hospitals in large urban areas;
- raising the maximum DSH add-on to 12 percent (from 5.25 percent) for most rural hospitals and urban hospitals with less than 100 beds;
- increasing payments to hospitals in low-wage areas by reducing the labor share from 71 percent to 62 percent in areas with wage indexes below 1.0;
- creating a low-volume adjustment that provides an add-on of up to 25 percent for hospitals with less than 200 total inpatient discharges; and
- allowing critical access hospitals to use up to 25 beds for acute inpatient care.[13]

The outpatient margin, on the other hand, is expected to fall, as two payment policies that were in place in 2003 expire. The first was the removal of transitional corridor payments at the end of 2003. The second is the removal of the hold-harmless provision, which applies to small rural and sole community hospitals, at the end of 2005. The hold-harmless provision pays hospitals the maximum of outpatient PPS payments or payments they would have received under the system that preceded the outpatient PPS.

Most cost components have risen rapidly

The high cost growth of 2003 is broad based, with most components of hospital costs rising faster than the hospital market basket. Growth differs across major service categories, however, with the rate of increase for some cost elements far exceeding the current growth trend and others rising more slowly.

Malpractice costs, as reported on the Medicare cost reports, were the fastest growing component of hospital costs in 2003, rising 34 percent per adjusted discharge, up from 26 percent in 2002. Malpractice insurance expenses account for only 1 percent of total hospital costs, but even with the very high growth rate, this cost element added only 0.3 percent to the total increase in costs per adjusted discharge in 2003. This component varies over time, however; it decreased in 2000.

Salaries and benefits paid by hospitals account for 52 percent of expenses and grew 5.2 percent per adjusted discharge in 2003. This growth was close to the average for all services but still about 2 percentage points above the market basket increase. But benefits alone grew by 10.5 percent. The large increase in the cost of benefits may be attributable to hiring bonuses to help alleviate labor shortages, particularly for nurses and pharmacists, as well as to higher costs for health insurance.

Despite major increases in construction spending by hospitals, capital expenses—composed mostly of depreciation and interest—grew only 1.1 percent per adjusted discharge in 2003, down from a 2.4 percent increase in 2004.[14] Capital costs tend to change more slowly than other components because of the long time horizon for depreciation of plant and equipment (typically 40 years for plant). So the full acquisition costs of capital assets are spread over many years and are not reflected immediately in hospital expenses. Lower growth in 2003 is also likely due to hospitals taking advantage of historically low interest rates to refinance debt. Despite what appears to be slow growth in capital costs, the 1.1 percent increase was actually 0.5 percentage points above the increase in the capital market basket for hospitals in 2003.[15]

Spending on medical supplies grew 10.9 percent per adjusted discharge in 2003—one of the few expense categories to see an increase in growth rate over 2002. The increase in medical supply costs, which account for 5 percent of hospital spending, may be fueled by a combination of growth in the number of devices used and increased use of high-cost devices that recently came to market, such as drug-eluting stents and implantable cardiac defibrillators. Drug costs grew 5.0 percent in 2003, down from 8.0 percent in 2002.

The remaining hospital expenses, such as utilities, food, maintenance, and contracted services, grew more than a percentage point faster than the hospital market basket in 2003, contributing to the broad-based pattern of growth in hospital costs.

Administration and general (A&G) expenses account for about 15 percent of hospital costs and include most of hospitals' main administrative functions.[16] A&G was one of the fastest growing cost components in 2003, rising 7.5 percent per adjusted discharge. A substantial portion of this increase, 1.9 percentage points, was due to malpractice insurance expenses. The rest of A&G grew 5.4 percent, which still is substantially above the increase in the hospital market basket. ■

Distribution of margins expected to change Overall Medicare margins fell across all hospital groups between 2002 and 2003 (Table 2A-4, p. 51). The drop was greatest for major teaching and urban hospitals because outlier payments were reduced and the IME adjustment for teaching hospitals was lowered. The overall Medicare margin dropped 4 percentage points for urban hospitals, compared with 3 points for rural facilities.

For 2005, the overall Medicare margin for rural hospitals is projected to increase but still remain negative at –3.1 percent, even with implementation of the MMA provisions designed to help these hospitals. The margin for urban hospitals is expected to hold at –1.3 percent.

Last year the Commission projected that the overall Medicare margin for rural hospitals would surpass the margin for urban hospitals. That estimate, however, was

for 2004, reflecting 2005 payment policies. Our current estimate for 2005, reflecting payment policies going into effect in 2006, shows that rural hospitals' margin will remain below the urban hospital margin. The change from last year is due primarily to the outpatient hold-harmless provision, which expires at the end of 2005. This change will affect only rural hospitals.

Overall Medicare margins for major teaching hospitals will remain much higher than other hospitals at 5.0 percent in 2005, roughly 10 percentage points above the margin for nonteaching hospitals. The difference between these groups, though, has narrowed slightly, partly because of MMA payment provisions that helped raise margins for nonteaching hospitals in rural and small urban locations, but also due to pre-MMA policies that reduced outlier overpayments for teaching hospitals in 2003.

Financial pressure affects cost growth

We have shown that a large part of the rapid decline in Medicare inpatient margins is due to costs per discharge rising at a faster rate than hospital input prices. But why have hospital costs risen faster than the prices of goods and services that go into producing patient care?

To some extent, the rapid growth in costs reflects unusual cost pressures, such as large percentage increases in malpractice expenses and labor cost increases in response to shortages of nurses as well as pressure to improve the quality of care. Another possible answer, however, is that hospital costs rise faster during periods when hospitals are under less pressure to cut costs. We found that over the past two decades, hospital costs grew slowly when hospitals were under significant pressure to cut costs and grew faster when that financial pressure diminished. Moreover, data from a cross section of hospitals show that hospitals under financial pressure had smaller cost increases during the past five years (1998–2003). Although hospitals that were under financial pressure had below-average cost growth, even they experienced rates of increase that slightly outpaced the growth rate of input prices. Taken together, the data suggest that financial pressure can explain some, though clearly not all, of the rapid cost growth that has driven down Medicare margins.

Market factors affect financial pressure Financial pressure on hospitals will lessen when private-payer revenues increase. Revenues from private-payer patients (which in aggregate match hospitals' revenues from Medicare) may have risen in recent years partly due to consolidation of competing hospitals into hospital systems that own the hospitals and negotiate with insurance companies. Provider consolidation has compounded the effects of plans having to respond to consumers' strong preference for choice of providers. The Federal Trade Commission (FTC) (2004) and the Blue Cross and Blue Shield Association (2002) have argued that industry consolidation forces private insurers to pay higher prices for hospital services. The general hypothesis is that for-profit and nonprofit hospitals will negotiate higher prices with insurers when they have market power (Keeler et al. 1999).

Although the FTC contends that less competition leads to higher prices, hospital advocates often disagree. Hospital advocates contend that consolidations can create efficiencies, and these efficiencies will allow the hospitals to hold down prices charged to private insurers. This claim may be correct, at least in the short run, when the merger of two hospitals results in the partial or full closure of one hospital. When one hospital closes, the remaining hospital may experience a one-time gain in occupancy and efficiency. This gain may slowly erode, however, if there is not enough competition in the market to restrain cost growth. A second type of consolidation involves hospitals joining systems without merging operations. This type of consolidation may be motivated primarily by hospitals' desire to gain negotiating leverage over suppliers and insurers, and does not appear to generate any efficiency gains (Dranove and Lindrooth 2003).

If industry consolidation leads to higher hospital profits, what do hospitals do with the extra revenue? One scenario is that they expand their volume of services (Newhouse 1970). Another scenario is that hospital costs per unit of service rise (Gaskin and Hadley 1997). Gaskin and Hadley concluded that financial pressure through mechanisms such as managed care penetration in the early 1990s could restrain cost growth. A lack of financial pressure could mean greater cost growth.

Hospital profits can lead to higher costs for at least three reasons. First, labor unions may be in a stronger bargaining position when they are negotiating with a highly profitable hospital. They may be able to convert a share of hospital revenue increases into higher salaries for nurses and other employees. Second, hospital boards may approve larger compensation increases or other benefits for employees when their hospital is profitable. The possibility of extra compensation gives employees an incentive to work toward improving their hospital's profitability. Finally, because nonprofit hospitals have

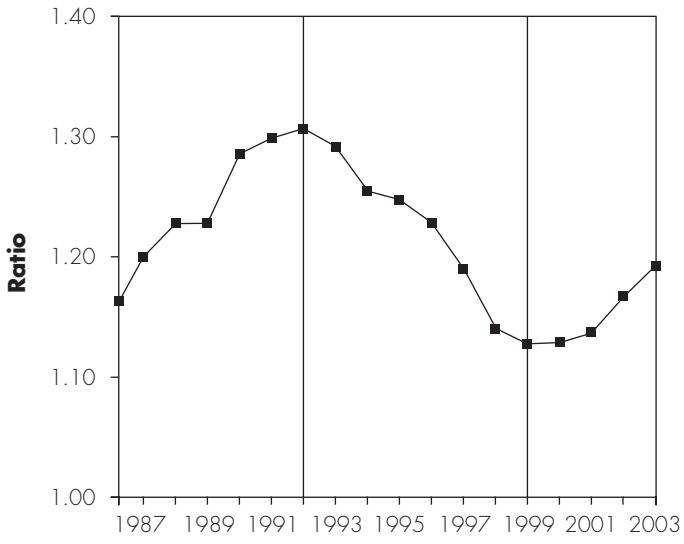
missions that are broader than profit maximization, they may construct new buildings, buy new equipment, and fund quality-enhancing but unprofitable services as their revenues increase. Because the impact of "charitable missions" on costs will be stronger for nonprofit hospitals, we expect the relationship between financial pressure and costs to be stronger for nonprofit hospitals.

If financial pressure does restrain cost growth, we should see industry-wide cost containment during the years when the industry is under financial pressure. On an individual hospital level, we should see slower cost growth at hospitals facing financial difficulty and faster cost growth at highly profitable hospitals. The following sections present the results of analyses addressing these hypotheses.

Cost growth follows changes in private sector profitability

Over the 17-year period from 1986 through 2003, pressure on hospitals' revenues from private insurers has gone through three distinct phases (Figure 2A-9).[17] The pattern of industry-wide growth in Medicare costs per discharge over this period makes it clear that hospitals have responded strongly to the incentives posed by the rise and fall of financial pressure.

FIGURE 2A-9 **Three distinct periods in the private payer payment-to-cost ratio**



Note: Data include all inpatient, outpatient, and post-acute hospital services.

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

In the first period, 1986 through 1992, payments from private insurers rose much faster than the costs hospitals incurred in treating these insurers' patients. The payment-to-cost ratio for private payers increased by 1.9 percentage points a year, leading to a 16-percentage point increase in hospitals' profits from treating privately insured patients (Table 2A-6 and Figure 2A-9). Most insurers still paid hospitals on the basis of their charges at this point, and they engaged in little price negotiation or selective contracting. With the almost complete lack of pressure from private payers, hospitals' costs per discharge rose an average of 8.3 percent per year, exceeding the increase in Medicare's market basket index, on average, by more than 3 percentage points per year (Table 2A-6 and Figure 2A-10).

In contrast, the payment-to-cost ratio for private payers declined by 2.2 percentage points annually in the second period, 1993 through 1999, with hospitals' profitability on their private sector business falling 19 percentage points (Table 2A-6 and Figure 2A-9). HMOs and other private insurers began to negotiate harder with hospitals, and the majority switched to paying for inpatient services on the basis of DRGs or flat per diems for broad types of services, rather than charges.

As private payers began exerting pressure during this period, the rate of cost growth plummeted. Over a six-year period, the growth rate dropped from nearly 10 percent to

TABLE 2A-6 **Cost growth has been large when private payers exert little financial pressure**

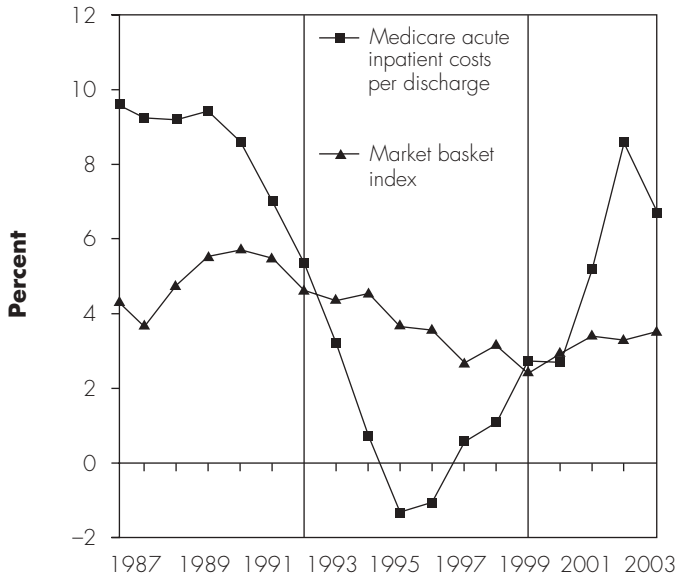
	1986–1992	1993–1999	2000–2003
Change in private payer payment-to-cost ratio	1.9%	–2.2%	1.3%
Change in Medicare cost per discharge	8.3	0.8	5.6
Change in market basket index	4.7	3.3	3.3
Actual update	2.5	1.5	2.6

Note: Values shown are average annual changes.

Source: MedPAC analysis of American Hospital Association annual survey of hospitals, Medicare Cost Report file from CMS, and CMS's rules for the acute inpatient prospective payment system.

FIGURE 2A-10

Cost growth exceeded market basket growth in the late 1980s and recently



Source: MedPAC analysis of Medicare Cost Report file from CMS and CMS's rules for the acute inpatient prospective payment system.

below zero (Figure 2A-10). On average, from 1993 through 1999, the annual increase in cost per discharge was only 0.8 percent, more than 2 percentage points a year below the increase in the market basket. One of the industry's key tools for cutting costs was reducing length of stay, largely by discharging patients to various forms of post-acute care earlier in their stays. But they also cut costs in other ways, such as reducing staffing levels, providing smaller increases in compensation, and substituting less skilled workers (such as nurse aides for RNs).

In 2000, private payer payments once again began rising faster than costs. The payment-to-cost ratio for private payers rose 1.3 percentage points per year through 2003—almost as rapidly as in the late 1980s—and hospitals' profits from privately insured patients have already gone up by 6 percentage points (Table 2A-6 and Figure 2A-9). Health plans continue to negotiate prices with hospitals, but many providers have gained the upper hand in these negotiations. The primary leverage payers have in price negotiations is the threat of selective contracting, but their use of this tool has been limited by both hospital consolidation and consumers' reluctance to accept limitations on their choice of providers. Pressure from private payers has waned considerably (Nichols et al. 2004).

As the payment-to-cost ratio for private payers turned up slightly in 2000, the rate of cost growth stayed at about the level of the market basket. But as provider pushback lessened the financial pressure from private payers over the next three years, the rate of hospital cost growth climbed back to levels not seen since the early 1990s and once again exceeded growth in the market basket, on average, by more than 3 percentage points a year.

During the first period of our analysis, which saw rapidly rising costs per discharge, the Prospective Payment Assessment Commission (ProPAC)—one of MedPAC's two predecessor commissions—continued to develop update recommendations anchored by the market basket. ProPAC's recommendations (ignoring adjustments made to offset the base payment rates having been set too high in the first PPS year) averaged market basket minus 0.7 percent, even as the Medicare inpatient margin dipped below zero for three consecutive years. The actual updates averaged 2.5 percent, which was below the increase in the market basket and well below the rate of growth in hospitals' Medicare costs per case.

During the second period, with unusually low cost growth, ProPAC recommended updates that exceeded the rate of increase in hospitals' costs, on average, by a full percentage point per year. In the continuing third period, policymakers once again face an environment of rapidly rising costs much like that of the late 1980s and early 1990s.

Market characteristics and hospital characteristics affect cost growth Now we shift from looking at trends over time to examining individual hospitals and the hospital characteristics that may affect cost growth. We test whether financial pressure, as measured by the profitability of serving non-Medicare patients, affects hospital cost growth. Medicare cost report data allow us to divide hospital profits into two categories: profits on Medicare patients and profits from all other sources. Non-Medicare revenue is primarily from private payers but also includes revenue from Medicaid, self-payment, and investments.

First, we show that hospitals facing financial pressure tend to have lower cost growth. Second, we show that nonprofit hospitals in competitive markets tend to have lower cost growth. This second finding could be due to high levels of competition constraining non-Medicare profit margins, which forces hospitals to limit costs. We measured competition using a standard Herfindahl index, which is the sum of the squares of each hospital system's market share.[18]

Nonprofit hospitals may behave differently from for-profit hospitals because they are required to reinvest their profits into their mission and do not have the option of returning profits to shareholders. We present data on nonprofit hospitals in Tables 2A-7 and 2A-8. Financial pressure also appeared to restrain cost growth among our fairly small sample of for-profit hospitals, but we did not find a relationship between competition and cost growth. The for-profit data should be taken with some caution given the small sample size and dramatic changes in some hospitals' charging practices during the 1998 to 2003 period.

Hospitals with low profits on non-Medicare patients had below-average rates of cost growth (Table 2A-7). We see that not only is cost growth lower but standardized costs per discharge tend to be lower. Standardized costs per discharge are adjusted for case mix, severity level, teaching costs, disproportionate share program costs, and area wages. We also examined differences in costs by only adjusting for area wages and reached a similar finding—that financial pressure is associated with lower costs per discharge. These findings assume that lower costs did not come at the expense of lower quality of care.

TABLE 2A-7

Hospitals with lower non-Medicare margins tend to have lower rates of Medicare cost growth

Nonprofit hospitals' mean non-Medicare margin 1999–2002	Growth in Medicare costs per discharge* 1998–2003	Medicare costs per discharge in 2002
Over 5% margins (n=834)	11.7%**	$5,345
0–5% margins (n=347)	7.9**	5,003
Losses (n=643)	4.6**	4,750

Note: Costs are standardized for the all patient refined diagnosis related group (APR–DRG) severity level of patients, wage levels, and the estimated effect of medical education and disproportionate share payments on Medicare costs.
*Growth is adjusted for inflation using the hospital market basket index.
**The differences in the rate of cost growth and costs per discharge among the three categories are all statistically significant, using a p =.05 criterion.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

TABLE 2A-8

Higher rates of competition are associated with lower rates of Medicare cost growth in nonprofit hospitals

Level of competition 1999–2002	Growth in Medicare costs per discharge* 1998–2003	Medicare costs per discharge in 2002
Low (n=361)	10.1%	$5,041
Moderate (n=972)	8.9	5,034
High (n=491)	6.7**	5,162

Note: Standardized costs do not differ significantly by level of competition. Low competition refers to markets with a Herfindahl index above 4,800; high competition refers to markets with a Herfindahl index below 1,800.
*Growth is adjusted for inflation using the hospital market basket index.
**Cost growth among nonprofit hospitals was significantly lower in markets with high levels of competition than in markets with low or moderate competition, using a p=.05 criterion.

Source: MedPAC analysis of Medicare Cost Report file from CMS.

If competition reduces non-Medicare margins and low non-Medicare margins reduce cost growth, we would expect to see competition reducing cost growth. As expected, hospitals in competitive markets had lower levels of growth in Medicare costs per discharge (Table 2A-8); however, hospitals' ending level of costs per discharge was not significantly different from the costs of hospitals in less competitive markets. This finding suggests that hospitals in low-competition markets were starting from a lower level of costs in our base year of 1998. The finding is consistent with the literature which suggests that low-competition markets tended to have lower costs in the 1980s, but in recent years costs in these markets have been growing faster than in other markets.

Hospitals' financial performance and cost growth vary

Both hospitals' Medicare margins and their rates of cost growth vary considerably. In this section we explore the characteristics of hospitals with consistently negative Medicare margins, showing that their poor financial performance is linked to factors their managers have

considerable influence over. Then we show that very high cost growth for some hospitals can lower the aggregate Medicare margin for the industry.

Hospitals with consistently negative Medicare margins have high costs Provider financial performance can vary substantially from one year to the next. For half of all hospitals the overall Medicare margin differs by 4 percentage points or more from one year to the next, and for a quarter of hospitals the difference exceeds 8 percentage points. Year-to-year differences can occur, for example, because hospitals change the services they offer, change ownership or system affiliation, or are affected by neighboring hospitals opening or closing. Because of this variation, a single-year margin may not best represent an individual hospital's performance. In this analysis, therefore, we compare the performance of hospitals that have had consistently good or poor financial performance under Medicare over a four-year period. The analysis focuses primarily on the role various cost factors play in providers' financial performance.[19]

The Commission previously presented an analysis showing that about half the variation in inpatient margins in 1998 was attributable to components of the payment formula, such as the IME and DSH adjustments (MedPAC 2003a). About one-fifth of the variation was related to hospital operating characteristics that were thought to be at least partially under management control, such as occupancy rates and length of stay.

Between 1999 and 2002, about 29 percent of hospitals had consistently negative overall Medicare margins, while more than two-thirds had either consistently positive margins or margins that were intermittently positive and negative (Table 2A-9). The largest fraction, 37 percent, had consistently positive margins. A small subset of hospitals—less than 2 percent—had consistently negative Medicare and consistently negative total (all payer) margins.

Hospitals with consistently negative margins tended to perform poorer on two key cost-influencing factors compared with hospitals that consistently perform well under Medicare—namely occupancy rate and length of

TABLE 2A-9

Hospitals with consistently negative overall Medicare margins tend to have above-average costs

Hospital characteristic	Negative Medicare margin hospitals	Positive Medicare margin hospitals	All hospitals
Hospitals in group	861	1,106	2,991
(Share of total)	(29%)	(37%)	(100%)
Occupancy rate	46%	57%	51%
Annual change in length of stay (1994–2002)			
Medicare	–2.9%	–3.2%	–2.9%
All payers	–1.2	–1.4	–1.3
Average age of plant (years)	9.5	10.1	9.8
Medicare share of patient days	54%	48%	52%
Medicaid share of patient days	10	13	11
Medicare costs per discharge (2002)*	$5,934	$4,792	$5,315
Annual change in Medicare costs per discharge (1999–2002)	5.1%	4.8%	5.1%

Note: Values shown are medians for all hospitals with positive or negative margins for four consecutive years, 2000–2003. Data are for 2002 unless otherwise noted.
*Standardized for differences in case mix and wage index.

Source: MedPAC analysis of prospective payment system impact file, MedPAR, and Medicare Cost Report file from CMS.

stay. The negative margin group had much lower occupancy rates, which should translate into higher unit costs because fixed costs (such as plant and equipment) are spread over fewer units of output. Similarly, Medicare length of stay dropped more for the positive margin group than for the negative margin group, which should result in lower costs per discharge because the drop in days of care reduces variable costs such as nursing time and meals.

Other factors, including aging infrastructure and payer mix, had little effect on profitability. It is often thought that an aging plant may raise a hospital's operating costs and thus reduce its profitability. On the other hand, newer plant and equipment may increase capital costs (measured as depreciation plus interest expenses), thereby raising overall costs and lowering margins. The analysis showed only small differences by age of plant between the negative and positive margin groups, with the negative margin hospitals having slightly younger plants. Similarly, only small differences distinguished the groups by payer mix. Medicare patient share was slightly higher in the negative margin group, while the reverse was true for Medicaid patient share.

In addition to examining specific factors that affect costliness, we also directly compared the costs of consistently negative and positive margin hospitals, using a measure of Medicare costs per discharge that standardizes for differences among hospitals in case mix and input prices.

Negative margin hospitals had above-average costs, while positive margin ones had below-average costs. Specifically, the median costs per discharge of the negative margin group was 12 percent above the national median and 24 percent above the median of the positive margin group.

In addition, the costs of positive margin hospitals have continued to increase more slowly over the past four years; thus the difference in performance between the two groups continues to grow.

Finally, we compared hospitals with consistently negative or positive margins to their competitors, defined as hospitals covered by Medicare's acute inpatient PPS that are located within 15 miles. Almost all of the hospitals studied had such competitors. The typical positive margin hospital has three competitors, the closest of which is about four miles away. In contrast, the typical negative margin hospital has one PPS hospital competitor about 12 miles away. Negative margin hospitals are frequently located in rural areas, and so some have critical access hospitals within their service areas as well. A third comparison group was used for this part of the analysis: the subset of hospitals with negative Medicare margins that also had negative total margins. This group accounts for only about 2 percent of all hospitals, and the typical hospital in the group has four competitors.

Facilities with negative Medicare and total margins had even lower occupancy than those with negative Medicare margins alone (42 percent compared with 46 percent) (Table 2A-10). They also had even higher costs (about $6,000 compared with $5,900). Both groups of hospitals have considerably lower occupancy and higher costs than their competitors, and those with negative Medicare and total margins compared worst with their competitors on these measures. The positive margin hospitals, on the other hand, had close to the same occupancy rates as, and lower costs than, their neighboring facilities.

TABLE 2A-10

Hospitals with consistently negative Medicare margins have poorer competitive position in their markets

Group of hospitals	Occupancy rate (2002)	Costs per discharge (2001)*
Hospitals with consistently negative Medicare and total margins	42%	$6,012
Competitors within 15 miles	57	5,630
Hospitals with consistently negative Medicare margins only	46	5,934
Competitors within 15 miles	55	5,654
Hospitals with consistently postitive Medicare margins	57	4,792
Competitors within 15 miles	59	5,182

Note: Hospitals with mixed performance are excluded from this table. Values shown are medians for all hospitals with consistently positive or negative margins for four consecutive years, 2000–2003.
*Costs per discharge are Medicare costs, standardized for differences in case mix and wage index.

Source: MedPAC analysis of impact file, MedPAR, and Medicare Cost Report file from CMS.

We conclude that higher costs—and cost growth—play a major role in explaining the differences in financial performance under Medicare. Of course, various features of the payment system also play a role, as noted earlier, but the implication of this analysis is that hospitals have substantial influence over their own financial performance under Medicare.

We also conclude that hospitals with consistently negative Medicare margins generally have a poor competitive stance in their market areas. They do not attract as many patients, which then contributes to higher unit costs and ultimately to lower Medicare margins. But a negative Medicare margin usually does not mean a negative total margin; in fact, Medicare margins have little relation to total margins (MedPAC 2004). The small subset of hospitals that have both a negative Medicare margin and a negative total margin exhibit the same market problems as those with only negative Medicare margins, but to a greater extent. In the end, they are even less competitive in their market areas.

Hospitals with high costs and high cost growth drive down margins Hospitals exhibit a wide range of cost growth for Medicare inpatient services, even when measured over four years to eliminate the effect of short-term fluctuations and adjusted to reflect changes in case mix. Cost growth averaged 11 percent a year between 2000 and 2003 for hospitals in the top quartile of cost growth, compared with just 1 percent for those in the bottom quartile. Hospitals with the highest cost growth, however, tended to start the period with below-average standardized costs, and hospitals with the lowest cost growth tended to start the period with above-average costs.

This movement from below-average to above-average costs and vice versa may just reflect a long-run cyclical pattern that will push most hospitals to the average over time (regression to the mean). But other forces at play may explain some of the variation. For example, hospitals with low cost growth appeared to have much larger increases in patient volume, indicating that their ability to spread fixed costs over more patients may have contributed to their lower cost growth.

Hospitals that had both high costs and high cost growth contributed substantially to the recent industry-wide drop in margin. The Medicare inpatient margin in 2003, for example, would have been 2.3 percentage points higher if hospitals with above-average costs in 2000 had held their annual cost growth from 2000 to 2003 to no more than the hospital market basket plus 2 percentage points. If this dynamic had carried through all patient care services, then, all else being equal, the aggregate overall Medicare margin in 2005 would have been slightly positive, rather than negative. Thus, efficient hospitals are not performing as poorly as the average margin would suggest.

How should Medicare payments change in 2006?

When we consider whether Medicare's aggregate payments are adequate, we look at most hospital service lines—inpatient, outpatient, rehabilitation, home health, psychiatric, and SNF. We make separate update recommendations, though, for services covered by Medicare's inpatient operating PPS and for those covered by the outpatient PPS.[20] What are the appropriate payment updates for inpatient and outpatient services in 2006?

For the inpatient PPS, the update in current law for fiscal year 2006 is the forecasted increase in the hospital market basket index. For 2005 to 2007, current law requires CMS to reduce inpatient PPS payments by 0.4 percent for hospitals that fail to provide data to CMS on specified quality indicators. For the outpatient PPS, current law provides an update for calendar year 2006 equal to the forecasted increase in the market basket.

To help guide our thinking about update recommendations, our update framework combines the Commission's judgments on the adequacy of current payments (including the appropriateness of hospitals' costs) and on how much Medicare costs per unit of output for efficient hospitals should change in 2006. As discussed below, the judgment about efficient providers' cost growth focuses on two factors that are likely to affect future costs: the projected increase in input prices and whether to apply a policy goal for improving productivity.

Changes in input prices

CMS measures price inflation for the goods and services that hospitals use in producing inpatient and outpatient services with the hospital operating market basket index. CMS's latest forecast of this index for fiscal year 2006 is 3.2 percent, although the forecast will be updated twice before it is used for updating payments in 2006.

Technology

Technological advances may lower or raise the costs hospitals incur in providing care to Medicare beneficiaries. Hospitals facing fixed payment rates have a strong financial incentive to adopt new technologies that help lower costs while maintaining or improving the quality of care. Adopting these technologies should improve productivity. By the same reasoning, providers have a financial disincentive to adopt new technologies that increase costs even if they improve quality—although competitive pressures may lessen that incentive. Our inpatient recommendation in the past has included an explicit allowance for cost-increasing and quality-enhancing new technologies. But in the MMA, the Congress broadened and liberalized the mechanisms in the inpatient and outpatient payment systems for making additional payments for new technologies.

Inpatient technology payments

Since fiscal year 2003, new technology pass-though payments have supplemented the base DRG payment rates in the acute inpatient PPS. In 2003 and 2004 those payments were made on a budget-neutral basis, but the MMA removed the budget-neutrality constraint starting in 2005.

To date, CMS has approved pass-through payments for four new technologies. The MMA, however, liberalized the criteria that new technologies must meet to qualify for pass-through payments. The revised mechanism provides a direct funding source for cost-increasing technologies—one that improves hospitals' accountability by providing extra funds only when a new technology is in place and actually used in treating patients. Consequently, we do not include a technology allowance in the update for the acute inpatient PPS.

While new technology add-on payments address new technologies in patient care, they do not provide funding for investment in information technology (IT). Information technology has the potential to improve the quality of patient care as we discuss in Chapter 4, and so we recommend that the Congress direct CMS to include measures of functions supported by the use of IT in measures used for pay for performance. Pay for performance will give providers the "business case" to adopt IT and allow them to reap rewards from payments for quality that flow from better clinical information.

Outpatient technology payments

In previous years, MedPAC has not adjusted the outpatient payment update for cost-increasing, quality-enhancing new technology, and we will continue that policy. The outpatient PPS has two mechanisms to directly account for new technology.

One mechanism is new technology APCs. These are completely new services, such as positron emission tomography (PET) scans, for which CMS does not yet have adequate data to establish payment rates. CMS places such services in new technology APCs on the basis of their expected costs. The number of services covered under new technology APCs has remained fairly constant since 2002: 77 in 2002, 78 in 2003, 88 in 2004, and 73 in 2005.

The services covered under new technology APCs generate payments for each service rendered, resulting in increased expenditures. Consequently, the costs of new technology APCs are reflected in the payment system and do not need to be factored into the update. New technology APCs accounted for about 1.1 percent of outpatient PPS spending in 2001 and 1.7 percent in 2002 and 2003.

The second mechanism is pass-through payments for new inputs to a service, such as a drug or medical device. Pass-through payments are added to the base APC payment for the applicable service; these payments are budget neutral.

Productivity

One of the Commission's key policy principles is that Medicare's payment systems should encourage efficiency. Hospitals and other health care 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.

MedPAC includes a target for productivity improvement in its framework for updating payments to provide a mechanism for encouraging efficiency. Payment rates for health care providers should be set so that the federal government benefits from providers' productivity gains, just as private purchasers of goods in competitive markets benefit from the productivity gains of their suppliers. Market competition constantly demands improved productivity and reduced costs from other firms; as a prudent purchaser, therefore, Medicare should also require some productivity gains each year from its providers.

MedPAC's approach links the target for efficiency improvement to the gains achieved by firms and workers who pay the taxes and premiums that fund Medicare benefits. Our target is set equal to the Bureau of Labor Statistics' estimate of the 10-year average growth rate of multifactor productivity in the general economy, which currently equals 0.8 percent. When included in our update recommendation, the 0.8 percent is a policy objective, not an empirical estimate. To the extent that hospitals fail to fully achieve our productivity target in a given year, the causes and consequences are considered in our analyses of payment adequacy in following years.

Conclusion

Our indicators of payment adequacy present a mixed picture. Most important, access to care remains strong, as exhibited by a small net increase in the number of hospitals participating in the Medicare program and an increase in the share of hospitals offering a representative set of inpatient, outpatient, and ancillary services. In addition, the volume of both inpatient and outpatient services continues to rise. In the quality area, a number of patient safety indicators have not shown progress, but mortality rates as well as the indicators of clinically appropriate care developed by CMS's quality improvement organizations have shown improvement. Access to capital is generally good, as evidenced by increases in construction spending, bond issuances, and plans for continued expansion. In reviewing the appropriateness of hospitals' costs, however, we found that unusually large cost increases have lowered reported Medicare margins.

Our analysis shows that, on the one hand, the rate of cost growth may have been affected by unusual cost pressures, such as escalating malpractice costs and additional labor costs to meet demands for quality care. But on the other hand, the increases were likely influenced by management decisions and the lack of fiscal pressure from the private sector. Hospitals with consistently negative Medicare margins have lower occupancy, higher costs, and higher cost growth than other hospitals in their markets—all factors subject to management influence. Moreover, hospitals with high costs and cost growth have played a substantial role in bringing down the industry's average margin. If hospitals with above-average costs as of 2000 had held their cost growth to just 2 percentage points above the market basket since then, the overall Medicare margin in 2005 likely would have been positive rather than negative.

Private payers' bargaining power with hospitals has deteriorated in recent years due to provider consolidation and the emphasis on products that give consumers a relatively free choice of providers. As was the case in the late 1980s and early 1990s—the last period when private payers did not exert fiscal pressure on hospitals—the rate of increase in Medicare costs per discharge has escalated. In addition, individual hospitals that have not experienced financial pressure and hospitals in less competitive markets have had larger cost increases.

On the one hand, the Commission is concerned about the trend in Medicare margins, which may leave hospitals with a limited monetary cushion for dealing with pressures that may arise in the coming year. On the other hand, the current cost trend is unsustainable and may be driven by a lack of cost-containment pressure. Moreover, the MMA requires that we consider the efficient provision of services in making update recommendations, and some facilities' cost levels and growth have been excessive, pulling down industry margins. Beyond cost considerations, the other indicators of payment adequacy we consider are mostly positive. On balance, these findings have led us to conclude that updates of market basket minus 0.4 percent are appropriate for both the inpatient and outpatient PPS. These updates should be considered in the context of other important policy changes MedPAC is recommending, as we discuss below.

Payment for performance and PPS refinements

MedPAC has concluded that Medicare should take the lead in developing incentives for high-quality care, and in Chapter 4 we recommend that the Congress establish a quality incentive payment policy under Medicare for hospitals. A number of accepted quality measures are available, enabling CMS to implement the program fairly quickly and then to enhance and expand the set of measures used in future years.

Payment for performance would result in a larger share of payments going to hospitals that achieve high quality scores or improve their quality substantially from one year to the next. We suggest that the pool of money to support hospital pay for performance be set initially at around 1 percent of aggregate payments. This means that most hospitals would receive a net increase in payments from the update and pay for performance of around 2 percent, sending a strong signal to restrain cost growth. But Medicare would be providing many high-quality hospitals

with a net increase in payments higher than the update alone, which would provide a strong incentive to improve quality. Our recommended update of market basket minus 0.4 percent and the pay-for-performance program for hospitals would replace the current law provision that reduces a hospital's update by 0.4 percent if it fails to report required quality data to CMS.

In our forthcoming Congressional report on physician-owned specialty hospitals, MedPAC is recommending several refinements to the acute inpatient PPS that will improve the accuracy of payments at the case level (MedPAC 2005). These include:

- refining the current DRGs to more fully capture differences in severity of illness among patients;
- basing the DRG relative weights on the estimated cost of providing care, rather than on charges;
- basing the weights on the national average of hospitals' relative costs in each DRG; and
- adjusting the DRG relative weights to account for differences in the prevalence of high-cost outlier cases.

Our recommendations for the update, pay for performance, and PPS refinements will together improve the effectiveness of the PPS in matching payments to the costs of efficient providers. The update recommendations coupled with pay for performance will provide a sufficient overall level of funding, encourage fiscal discipline, and allocate payments according to the quality of the services provided. The case-mix refinements will improve the accuracy of payments, encouraging hospitals to compete with each other based on cost and quality, not on the types of patients they treat.

Update recommendations

This section presents our update recommendations for both inpatient and outpatient payments, along with a summary of our rationale and implication of the recommendations. For outpatient payments, our update recommendation and our recommendation on hold-harmless payments for certain rural hospitals (in the next section) will together define the funds available for providing hospital outpatient care in fiscal year 2006.

RECOMMENDATION 2A-1

The Congress should increase payment rates for the inpatient prospective payment system by the projected increase in the hospital market basket index less 0.4 percent for fiscal year 2006.

RECOMMENDATION 2A-2

The Congress should increase payment rates for the outpatient prospective payment system by the projected increase in the hospital market basket index less 0.4 percent for calendar year 2006.

RATIONALE 2A-1 AND 2A-2

Our assessments of beneficiaries' access to care, service volume growth, and access to capital are positive, while the results on quality are mixed. But hospitals' average margins under Medicare have fallen. The key factor in the decline in Medicare margins through 2003 was unusually large cost growth. To some extent, this growth reflects unusual cost pressures, but it also was influenced by the lack of financial pressure to constrain costs. In addition, hospitals with both high costs and high cost growth helped pull down the industry-wide margin. Balancing these considerations, we conclude that an update of market basket minus 0.4 percent—approximately a 2.8 percent increase in payments—is appropriate for both inpatient and outpatient services.

IMPLICATIONS 2A-1 AND 2A-2

Spending

- These recommendations would decrease federal program spending relative to current law. Inpatient payments would decline by $200 million to $600 million in the first year and by $1 billion to $5 billion over five years. Outpatient payments would decline by $50 million to $200 million the first year and by less than $1 billion over five years.

Beneficiary and provider

- These recommendations should have no impact on beneficiaries or providers.

Outpatient hold-harmless payments

Rural hospitals' financial performance under the outpatient PPS is expected to decline by 2006. Much of this change is attributable to the expiration of two special payment policies under the outpatient PPS. These are hold-harmless payments, which expire at the end of

calendar year 2005, and transitional-corridor payments, which expired at the end of calendar year 2003. Hold-harmless payments are targeted to rural sole community hospitals and other rural hospitals with 100 or fewer beds.[21] To determine a hospital's hold-harmless payments, CMS first estimates for a given year the payments the hospital would have received under the payment system that preceded the outpatient PPS.[22] Qualifying hospitals receive the greater of the estimated payments from the previous system or the actual outpatient PPS payments.

Transitional corridor payments were targeted to hospitals not eligible for hold-harmless payments. This policy also compared a hospital's PPS payments with the payments the hospital would have received under the preceding system. In this case, however, if the PPS payments were smaller, the hospital received the PPS payments plus transitional corridor payments equal to a fraction of the difference between payments under the previous system and PPS payments.[23]

Extending either of these policies would improve the financial performance of rural hospitals. But the hold-harmless policy is the better of the two to extend because it targets the specific rural hospitals most affected by the two policy changes. Still, we recommend limiting the extension of the hold-harmless policy to one year because it has imperfections. Hold-harmless payments are directly linked to hospital costs, so they reduce a hospital's incentive to hold down its costs. In addition, the hold-harmless policy does not specifically target hospitals with relatively poor Medicare performance. Consequently, hospitals with good financial performance can receive these extra payments.

Extending the hold-harmless policy for one year provides MedPAC—and other analysts—time to better determine the reasons that some rural hospitals are not performing as well under Medicare. Once identified, policies can be developed, if necessary, to address the issues these hospitals face. For example, MedPAC research indicates that low-volume hospitals have relatively high costs per case because they cannot take advantage of economies of scale to the extent that higher-volume hospitals can (MedPAC 2001). Most low-volume hospitals are rural, and many are isolated.

The MMA directed CMS to study whether rural hospitals' costs under the outpatient PPS are higher than those of urban hospitals. If CMS finds that rural hospitals do incur greater costs, the Secretary is required to recommend payment policy adjustments by January 2006. We will consider CMS's findings as we conduct our own analysis.

RECOMMENDATION 2A-3

The Congress should extend hold-harmless payments under the outpatient prospective payment system for rural sole community hospitals and other rural hospitals with 100 or fewer beds through calendar year 2006.

RATIONALE 2A-3

Rural hospitals' financial performance under Medicare is expected to decline by 2006. This reduction is attributable primarily to transitional corridor and hold-harmless payments being eliminated. Continuing hold-harmless payments for isolated and small rural hospitals would maintain their financial circumstances while the Commission considers the reasons some rural hospitals are projected to perform poorly when this policy ends.

IMPLICATIONS 2A-3

Spending

- This recommendation would increase federal program spending by $50 million to $200 million for 2006. The policy would not affect program spending after 2006.

Beneficiary and provider

- This policy would help ensure access to hospital care among rural beneficiaries and increase Medicare's payments to isolated and small rural hospitals. ■

Endnotes

1 PPS hospitals refer to those whose inpatient payments are determined by Medicare's acute inpatient prospective payment system (PPS). PPS hospitals now account for about 3,500 of the approximately 5,000 short-term hospitals. They do not include the 1,050 critical access hospitals and others that are paid partly based on their costs.

2 Most services provided in the hospital outpatient department are now covered under the outpatient PPS, including clinic and emergency visits, procedures, imaging, and most ancillary services. Outpatient services not covered by the outpatient PPS include: (1) those paid on a separate fee schedule (such as clinical laboratory, ambulance, rehabilitation and other therapies, and durable medical equipment), and (2) those still reimbursed on a cost basis (such as organ acquisition and, beginning in 2003, some vaccines). In 2003, spending under the outpatient PPS represented 91 percent of all outpatient spending, excluding clinical laboratory services. We exclude clinical laboratory services in this calculation because the laboratory claims data include non-hospital-based as well as hospital-based services.

3 This payment adjustment is set at a much higher level than MedPAC's estimate of the impact of teaching on hospital inpatient costs per discharge.

4 MedPAC's March 2004 Report to the Congress, page 73, has a summary of the MMA provisions affecting outpatient and acute inpatient payment policies.

5 We made this exclusion because most of the drugs and devices eligible for pass-through payments in 2002 had their pass-through eligibility expire at the end of 2002. In 2003, all of these devices and more than half of these drugs were packaged with a procedure and were not paid separately (GAO 2004). This packaging prevents us from counting the volume of those devices and drugs in 2003.

6 These indicators are taken from the medical records of Medicare beneficiaries and compare care in 2000 and 2001 with care in 2003 and 2004.

7 Earnings before interest, taxes, depreciation, and amortization (EBITDA) divided by maximum annual debt service.

8 A margin is calculated as the difference between payments and costs divided by payments.

9 Although the overall Medicare margin has only been available since 1996, its trend is similar to that of the inpatient margin, because inpatient services account for about three-quarters of Medicare's payments to hospitals.

10 This measure is known as costs per adjusted discharge. Adjusted discharges are calculated as number of discharges times the ratio of total charges to inpatient charges. The data for this analysis are from Medicare cost reports.

11 This survey, known as the National Hospital Indicators Survey (NHIS), is sponsored by CMS and MedPAC and conducted by the American Hospital Association and the Lewin Group. The survey found that costs per adjusted discharge grew 5.3 percent in 2003 in contrast to our finding of 5.1 percent in 2003 using Medicare cost report data. In addition to employing a sample in contrast to near universe coverage for the cost report data, NHIS covers a consistent time period for all hospitals (calendar year 2003) in contrast to varying time periods for the cost reports. The weighted midpoint of our 2003 cost report data is about March 1, 2003.

12 The BBA required that home health payment rates under prospective payment be set to 85 percent of what would have been paid under cost-based reimbursement. Rates under the new home health PPS were estimated to be about 7 percent above this level, so base payment rates were reduced by about 7 percent to reflect final implementation of this cut. The net effect for 2002 was a 5 percent reduction in payment rates, as home health providers received an update of 2.0 percent in 2003.

13 The CAH provision will not affect the margin of hospitals remaining under the PPS, but likely will raise the average of all rural hospitals by removing facilities with negative margins from the calculation.

14 In addition to depreciation and interest, capital expenses include lease and rental expenses for facilities and equipment as well as taxes, insurance, license, and royalty fees on depreciable assets.

15 CMS maintains separate hospital market basket indexes for operating and capital expenses.

16 Specific cost elements within the administrative and general category include top management; accounting; budgeting and reimbursement; billings and collections; data processing, including IT; legal affairs; and malpractice insurance.

17 We began the analysis in 1986 because that is when MedPAC's predecessor, the Prospective Payment Assessment Commission, began to issue update recommendations. However, beginning the analysis in 1984, when the PPS was implemented, would have made less than a half percentage point difference in the rate of growth in costs per discharge in the first of our three periods of measurement.

18 In this study, markets with a Herfindahl score below 1,800 are deemed highly competitive. A cutoff of 1,800 was chosen to match a Federal Trade Commission (FTC) threshold regarding competition. Markets with scores between 1,800 and 4,800 are considered moderately competitive. Markets with scores above 4,800 are considered to have a low level of competition, corresponding to the level at which the FTC has litigated in an attempt to stop mergers in the past (Cueller and Gertler 2003).

19 The analysis examines hospital margin data from 1999 through 2002, using Medicare cost reports. Hospitals included in the analysis had to have complete Medicare and total (all payer) margin data in all four years and not have converted to CAH status as of September 30, 2003. More than 80 percent of inpatient PPS hospitals are included in the analysis. In order to be identified as consistently negative (positive), a hospital had to have negative (positive) margins in all four years of the analysis.

20 The Congress sets the updates for payment rates under the inpatient operating PPS and the outpatient PPS. The update for the inpatient capital PPS is not specified by law; rather, it is set annually by CMS.

21 Two other hospital types have permanent hold-harmless status, cancer hospitals and children's hospitals.

22 The payment a hospital would have received under the previous payment system is estimated by applying its payment-to-cost ratio in 1996 to current year costs.

23 The fraction used to determine transitional corridor payments declined over time. In the final year of the corridors (2003), if PPS payments were between 90 percent and 100 percent of what they would have been in the system preceding the outpatient PPS, transitional corridor payments were 60 percent of that difference. If PPS payments were less than 90 percent of payments under the previous system, transitional corridor payments were 6 percent of the payments from the previous system.

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