

CHAPTER

3

**Hospital inpatient and
outpatient services**

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

- 3** The Congress should increase payment rates for the acute care hospital inpatient and outpatient prospective payment systems in 2012 by 1 percent. The Congress should also require the Secretary of Health and Human Services to make adjustments to inpatient payment rates in future years to fully recover all overpayments due to documentation and coding improvements.

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

Hospital inpatient and outpatient services

Chapter summary

From 2008 to 2009, Medicare payments per fee-for-service (FFS) beneficiary for hospital inpatient and outpatient services grew by 6 percent. As a result, the 3,500 hospitals paid under the hospital inpatient prospective payment system received \$148 billion for roughly 10 million Medicare inpatient admissions and 147 million outpatient services. To evaluate whether payments were adequate, we consider changes in beneficiaries' access to care, the volume of services provided, quality of care, hospitals' access to capital, and the relationship of Medicare's payments to the average cost of caring for Medicare patients. In addition to examining the costs of the average provider, we also compare Medicare payments with the costs of relatively efficient hospitals.

Assessment of payment adequacy

In considering its update recommendation, the Commission has struck a balance between a number of competing factors. On the one hand, average total Medicare margins are negative (–5 percent in 2009 and projected to reach –7 percent in 2011). On the other hand, our update framework indicators (access to care—including supply and service volume, quality of care, and access to capital) are positive. Furthermore, negative Medicare margins do not necessarily mean that payments are too low because low margins are due at least in part to the lack of private financial pressure for cost containment, and

In this chapter

- Are Medicare payments adequate in 2011?
- How should Medicare payments change in 2012?

the set of hospitals identified as efficient have a positive median Medicare margin of about 3 percent. Considering these circumstances, the Commission contemplated an update of 2.5 percent.

However, two additional considerations led the Commission to its recommended update of 1 percent. For inpatient services, the Commission and others have documented past and ongoing overpayments resulting from changes in documentation and coding after implementation of Medicare severity–diagnosis related groups (MS–DRGs) in 2008. Current law does not allow recovery of past overpayments for 2010 and 2011 and no action has been taken to stop the ongoing overpayments. The Commission believes that all overpayments should be recovered and that the most urgent step is to stop the ongoing overpayments. To accomplish this objective, the Commission would reduce the ongoing overpayment by 1.5 percentage points—that is, the difference between its contemplated update of 2.5 percent and its recommended update of 1 percent. This change would account for 1.5 percentage points of the 3.9 percent adjustment needed to fully prevent accumulation of further overpayments.

For outpatient hospital services, the Commission is concerned that significant payment disparities among Medicare’s ambulatory care settings (hospital outpatient departments, ambulatory surgical centers, and physicians’ offices) for similar services are fostering undesirable financial incentives. Physician practices and ambulatory surgical centers may reorganize as hospital outpatient entities in part to receive higher reimbursements. The Commission believes that Medicare should seek to pay similar amounts for similar services, taking into account differences in the quality of care and in the relative risks of patient populations. The Commission is concerned by the incentive to reorganize for higher reimbursement and will further examine this issue. However, in the interim, the modest update of 1 percent is warranted in the hospital outpatient setting to slow the growing payment rate disparities among ambulatory care settings.

Beneficiaries’ access to care—Access measures include the capacity of providers and changes in the volume of services over time.

- ***Capacity and supply of providers***—The supply of hospitals, range of services offered, and number of hospital employees all continue to grow.
- ***Volume of services***—The volume of hospital outpatient services per Medicare FFS beneficiary grew by 4 percent per year from 2005 to 2009. Part of the growth was due to a shift of services from the inpatient to the outpatient setting. As outpatient volumes have increased, we have seen a decline in inpatient admissions per beneficiary of 1 percent per year from 2005 to 2009. We are also

seeing a shift in the site of physician office visits from freestanding physician offices to hospital-owned physician offices that are deemed parts of outpatient departments. Hospital-based outpatient physician office visits grew by 9 percent from 2008 to 2009, representing a quarter of all outpatient volume growth.

Quality of care—Quality continues to improve on most measures. Hospitals reduced in-hospital and 30-day mortality rates across five prevalent clinical conditions. Patient experience measures have shown a slight improvement in recent years. But, patient safety indicators and readmission rates have not improved significantly.

Providers' access to capital—Access to capital has been volatile over the past three years but appears adequate at this time. Since the freeze of the credit markets in late 2008, credit has been increasingly accessible to hospitals each year. Interest rates paid by hospitals are at their lowest level in three years. Hospital bond offerings declined from 2008 to 2009, but they remain high. Hospital construction spending also remains at a high level. Hospital consolidation through mergers and acquisitions remains steady.

Medicare payments and providers' costs—In 2009, Medicare margins improved. Medicare payment growth outpaced cost growth for two reasons. First Medicare inpatient payments per discharge grew by 5.3 percent, which was the highest growth in payments in over a decade. The high increase in the average payment rate reflects the update in payment rates and the effect of hospitals' documentation and coding improvements interacting with the full phase-in of MS-DRGs and cost-based relative weights in 2009. Costs per discharge grew by 3.0 percent, which was the lowest cost growth since 2000. The lower cost growth reflects the hospital industry's response to the financial crisis that occurred in fall 2008, which increased pressure on hospitals to constrain their cost growth in 2009.

Efficient providers—A key question is whether current Medicare payments are adequate to cover the costs of efficient providers. To explore this question, we have examined financial outcomes for a set of hospitals that consistently perform relatively well on cost, mortality, and readmission measures. We found that Medicare payments cover the fully allocated costs of the median efficient hospital (median margin is 3 percent). While most of these relatively efficient hospitals generate profits on Medicare patients, about one-third do not.

Documentation and coding adjustment

As expected, implementation of MS-DRGs in 2008 gave hospitals a financial incentive to improve medical record documentation and diagnosis coding to more

fully account for each patient's severity of illness. While documentation and coding improvements (DCI) appropriately improve measurement of patient severity, they also can increase reported case mix under MS-DRGs even if patients' levels of illness and resource needs are not different from prior years. The result was strong growth in payments per case in 2008 and 2009. Analysis by CMS found (and our analysis concurred) that payments increased by a total of 5.8 percent over the two years due to coding improvements. Current law requires CMS to recover these overpayments during 2011 and 2012. CMS implemented a temporary 2.9 percent reduction in payments in 2011 to recover half the overpayments. CMS will have to keep this adjustment in place in 2012 so that all overpayments from 2008 and 2009 can be recovered.

While CMS is recovering past overpayments for 2008 and 2009, it chose not to reduce rates to prevent further overpayments in 2010 and 2011. The result is that overpayments of 3.9 percent occurred in 2010 and continue in 2011. To prevent the accumulation of further overpayments, CMS would have to permanently reduce payments by 3.9 percent. In our March 2010 report, we recommended that CMS reduce payment rates to prevent future overpayments due to DCI and that the Congress change the law to allow CMS to gradually recover all overpayments due to DCI. This policy would enable CMS to make the transition to MS-DRGs fully budget neutral while still providing hospitals with predictable annual payment updates. ■

**TABLE
3-1**

Growth in Medicare inpatient and outpatient spending

Hospital services	2004	2008	2009	Mean annual change 2004-2009	Change 2008-2009
Inpatient services					
Total FFS payments (in billions)	\$100	\$110	\$114	2.7%	3.7%
Payments per FFS enrollee	2,831	3,202	3,337	3.6	4.2
Outpatient services					
Total FFS payments (in billions)	24	31	34	8.6	11.2
Payments per FFS enrollee	723	988	1,104	10.6	11.7
Inpatient and outpatient services					
Total FFS payments (in billions)	124	140	148	3.8	5.3
Payments per FFS enrollee	3,554	4,191	4,441	5.0	6.0

Note: FFS (fee-for-service). Reported hospital spending includes all hospitals covered by Medicare’s inpatient prospective payment system along with critical access hospitals. Maryland hospitals are excluded. Fiscal year 2009 payments include partial imputation to account for hospitals that typically do not submit their cost reports to CMS before CMS makes the most recent year available to the public. Although the number of Medicare beneficiaries grew significantly from 2004 to 2009, the number of FFS beneficiaries declined over that time due to the shift of beneficiaries to the Medicare Advantage program. For the purposes of calculating payments per FFS beneficiary, we identified populations of FFS beneficiaries eligible for inpatient (Part A) and outpatient (Part B) coverage and excluded enrollees in Maryland. Due to rounding, totals may not equal the sum of their parts.

Source: MedPAC analysis of CMS hospital cost reports and MedPAR files.

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, psychiatric, and rehabilitation services. To be eligible for Medicare payment, short-term general and specialty hospitals must meet the program’s conditions of participation and agree to accept Medicare rates as payment in full.

Medicare spending on hospitals

In fiscal year 2009, Medicare spent \$114 billion on fee-for-service (FFS) inpatient care and \$34 billion on FFS outpatient care at acute care hospitals (Table 3-1). Acute inpatient and outpatient services represented more than 90 percent of Medicare FFS spending on acute care hospitals. Aggregate FFS spending growth slowed in recent years due to a shift in enrollment from FFS Medicare to Medicare Advantage. Still, on a per capita basis, Medicare inpatient spending per FFS enrollee—including spending at critical access hospitals (CAHs)—grew, on average, by 3.6 percent per year from 2004 to 2009. During the same six-year period, growth in outpatient spending per FFS

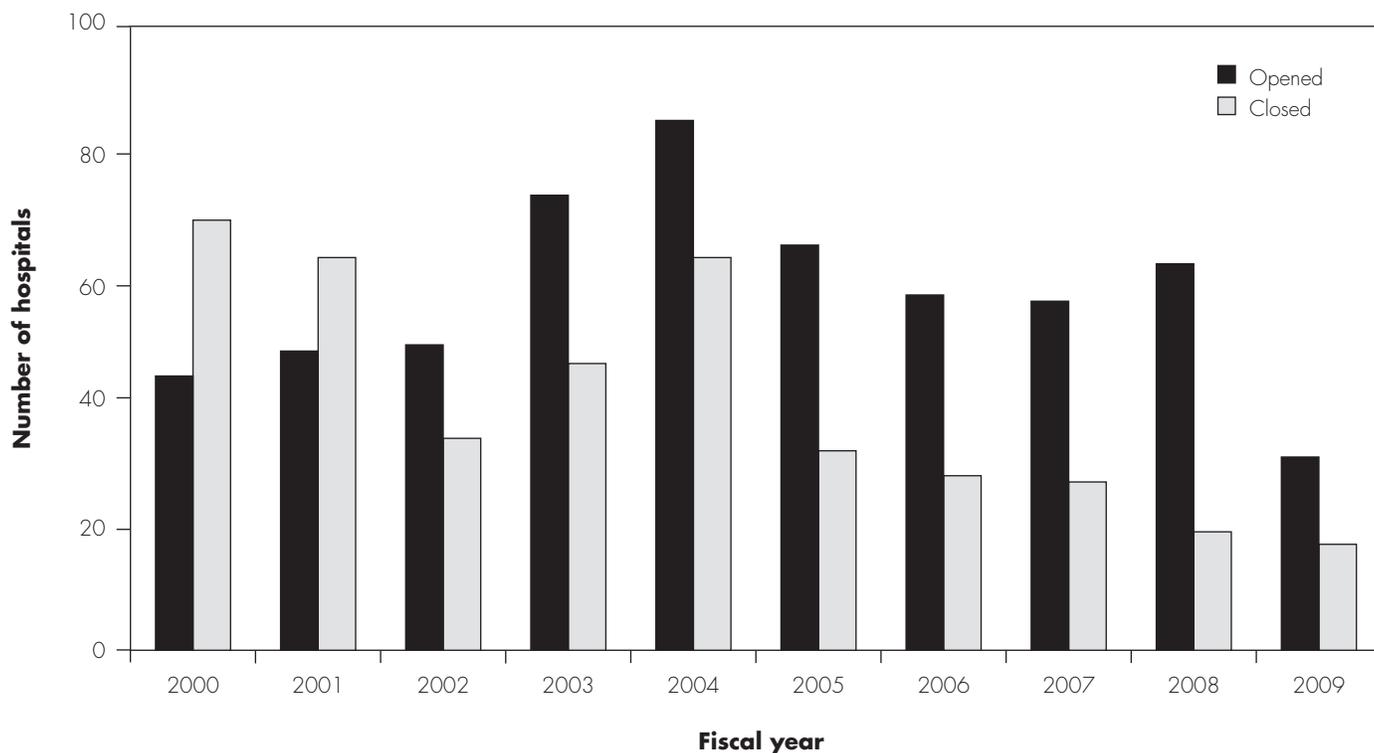
enrollee averaged 10.6 percent per year. The higher growth in outpatient spending reflects an ongoing shift of services from an inpatient to an outpatient setting, changes in available technology, and increases in outpatient payments to small rural hospitals as they converted to CAH status over the six-year period.

Medicare’s payment systems for inpatient and outpatient services

Medicare’s inpatient and outpatient prospective payment systems (PPSs) have a similar basic structure. Each has a base rate modified for differences in type of case or service as well as geographic differences in wages. However, in addition to different units of service, each PPS has a different set of payment adjustments.

Acute inpatient payment system

Medicare’s acute inpatient PPS (IPPS) pays hospitals a predetermined amount for most discharges. The payment rate is the product of a base payment rate and a relative weight that reflects the expected costliness of cases in a particular clinical category compared with the average of all cases. The labor-related portion of the payment rate is further adjusted by the hospital wage index to account for differences in area wages. Payment rates are updated annually.

**FIGURE
3-1****More hospitals opened than closed each year from 2002 to 2009**

Note: Hospitals refer to general short-term acute care hospitals.

Source: MedPAC analysis of CMS's Provider of Service file, IPPS Final Rule Impact file, and hospital cost reports.

In 2008, CMS implemented a new clinical categorization system called Medicare severity–diagnosis related groups (MS–DRGs). The MS–DRG system classifies patient cases in 1 of 747 groups, which reflect similar principal diagnoses, procedures, and severity levels. The new severity levels are determined according to whether patients have a complication or comorbidity (CC) associated with the base DRG (no CC, a nonmajor CC, or a major CC).

A more detailed description of the acute IPPS including payment adjustments can be found at: http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_hospital.pdf.

Hospital outpatient payment system

The outpatient PPS (OPPS) pays hospitals a predetermined amount per service. CMS assigns each outpatient service to 1 of approximately 800 ambulatory payment classification (APC) groups. Each APC has a relative weight based on its median cost of service compared with

the median cost of a midlevel clinic visit. A conversion factor translates relative weights into dollar payment amounts. A more detailed description of the OPSS can be found at: http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_OPD.pdf.

Are Medicare payments adequate in 2011?

To judge whether payments for the current year (2011) are adequate to cover the costs efficient hospitals incur, we examine several indicators of payment adequacy. We consider beneficiaries' access to care (as reflected in the supply of providers and in changes in the volume of services), changes in the quality of care, hospitals' access to capital, and the relationship of Medicare's payments to hospitals' costs for both average and relatively efficient hospitals. Most of our payment adequacy indicators for hospitals are positive, but profit margins on Medicare patients remain negative for 64 percent of hospitals.

**TABLE
3-2**

The share of hospitals offering specialized services grew from 2004 to 2008

Type of service	2004	2006	2008	Percentage point change 2004-2008
Translational	65%	72%	74%	9%
Robotic surgery	N/A	13	20	9*
Palliative care program	35	42	43	8
Adult interventional cardiac catheterization	35	39	43	8
Cardiac catheterization	43	48	50	7
Orthopedic	73	78	79	6
Neurological	51	55	57	6
Magnetic resonance imaging (MRI)	85	89	90	5
Open heart surgery	31	34	36	5
Case management	82	85	87	4
Cardiac rehabilitation	N/A	64	65	4*
Trauma center (level 1 to 3)	42	42	43	1
Urgent care center	35	34	34	-1

Note: N/A (not available). Data are for services available through the hospital or affiliated organization, which include critical access hospitals in addition to those covered by the acute inpatient and outpatient prospective payment systems. The American Hospital Association's annual survey has an 83 percent response rate overall, but response rates vary by line of service.

*Percentage point change is from 2005 to 2008, rather than from 2004 to 2008, because survey data were not available for 2004.

Source: American Hospital Association annual survey of hospitals.

Beneficiaries' access to care: Access remained positive as hospital capacity generally grew over the period reviewed

We assess beneficiaries' access to care by tracking the number of hospitals participating in the Medicare program, hospital employment, the proportion of hospitals offering certain specialty and outpatient services, and the volume of services received. In general, we find that hospitals' capacity to provide most services is increasing.

Capacity and supply of providers: Expanding number of hospitals and beds

For eight consecutive years (2002-2009), more Medicare-participating acute care hospitals opened than closed (Figure 3-1). In 2009, 31 acute care hospitals opened and 17 hospitals closed. Overall, approximately 4,800 acute care hospitals participated in Medicare; about 1,300 of them were CAHs (Flex Monitoring Team 2010).

The 31 hospitals that entered the program in 2009 had an average of 54 beds, adding about 1,600 acute care beds. The vast majority of these hospitals opened in urban areas, and just over half of them were for-profit hospitals. In contrast, the 17 hospitals that exited the program had an average of 190 beds, resulting in the closure of about 3,200 acute care beds. All closures were in urban locations,

and more than half were nonprofit hospitals. Despite the relatively larger size of the hospitals that closed in 2009, the aggregate number of acute care beds has increased in recent years due to the expansion of existing hospitals. From 2006 to 2008, the aggregate number of beds grew slightly, but the population of the country grew slightly faster, resulting in a slight decline in the number of beds per 1,000 residents—from 2.75 to 2.71. However, the beds per 1,000 residents ratio varies widely by state, from 5.5 in North Dakota to 1.8 in Washington.¹

Breadth of services: Specialized services continue to grow

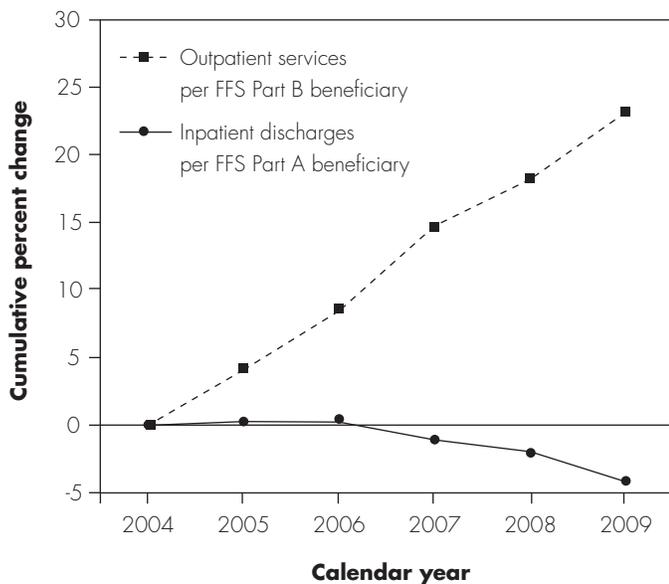
In recent years, short-term general acute care hospitals have continued to expand the scope of services they offer. Our analysis of more than 50 hospital services from 2004 to 2008 found that the share of hospitals and their affiliates providing each service increased for most services (Table 3-2).²

Volume of services: Outpatient grew, inpatient declined

To examine changes in volume of services, we used the number of discharges per FFS beneficiary as an indicator of inpatient volume and measured outpatient volume

**FIGURE
3-2**

Medicare outpatient services grew while hospital inpatient discharges per FFS enrollee declined from 2004 to 2009



Note: FFS (fee-for-service). Data are for short-term general and surgical hospitals, including critical access and children's hospitals.

Source: MedPAC analysis of MedPAR and hospital outpatient claims data from CMS.

by the number of services per FFS beneficiary. The measurement units differ because the IPPS generally pays for a bundle of services, while the OPSS generally pays for individual services.³ Although volume of services is not an ideal measure of access, increases in the volume of services provided per beneficiary suggest that access did not decline.

Outpatient and inpatient volume

From 2004 through 2009, the volume of Medicare outpatient services per FFS beneficiary increased at roughly a 4.3 percent annual rate for a cumulative increase of 23 percent over the six-year period (Figure 3-2). During the same period, Medicare inpatient discharge volume declined at roughly a 0.9 percent annual rate, and inpatient discharges per FFS Part A beneficiary decreased by about 4 percent from 2004 to 2009.

The rapid growth in outpatient services coupled with the decline in inpatient services is consistent with a shift in site of service from inpatient care units to outpatient departments. Many surgical procedures, such as

pacemaker implantation, that once were performed only as an inpatient service are now often done in an outpatient setting. In addition, from 2006 to 2008, the number of Medicare observation claims (an outpatient service) increased more than 26 percent per FFS Part B beneficiary. This change could in part reflect the substitution of observation stays for short (e.g., one day) inpatient stays.

The growth in number of outpatient services is not purely a shift in settings from inpatient to outpatient care. About a quarter of the increase in volume in outpatient departments is due to a shift in the site of physician office visits from freestanding offices to physician offices that are owned by the hospital and deemed part of the outpatient department. This situation is most likely due to hospitals' acquisition of physician practices. When patients visit a physician in a freestanding physician office, Medicare pays the physician based on the physician fee schedule that includes a professional component and a practice expense component. When patients visit a physician office that is part of a hospital's outpatient department, Medicare pays a facility fee to the hospital and a reduced fee for the physician's services. The combined fees paid for visits to hospital-based practices are often more than 50 percent greater than rates paid to freestanding practices. In 2009, we see that the volume of visits to the higher paid outpatient-based practices owned by hospitals grew by 9 percent, while visits to the lower paid freestanding practices grew by less than 1 percent.⁴ This finding suggests that the differentials in payment rates may be contributing to a shift in the site of service.

Other measures of hospital inpatient utilization suggest stability. The share of Medicare FFS Part A beneficiaries with at least one inpatient hospital stay in a given year declined just 1 percentage point, from 23 percent in 2004 to 22 percent in 2009. During this period, the average number of inpatient stays per hospitalized beneficiary in a given year remained constant at 1.7 inpatient admissions per year. While the average length of a Medicare inpatient stay declined slightly from 5.1 days in 2004 to 4.8 days in 2009, the average hospital occupancy rate (average percent of staffed acute care beds filled each day) was essentially unchanged at approximately 59 percent.⁵ However, occupancy rates vary widely among hospitals.

Hospitals' access to capital appears adequate

Access to capital allows hospitals to maintain and modernize their facilities. If hospitals were unable to access capital, it might in part reflect problems with the

adequacy of Medicare payments, as Medicare provides about 30 percent of hospital revenues. Access to capital appears adequate because levels of hospital bond issuances and investment in hospital construction remain high and industry consolidation is steady.

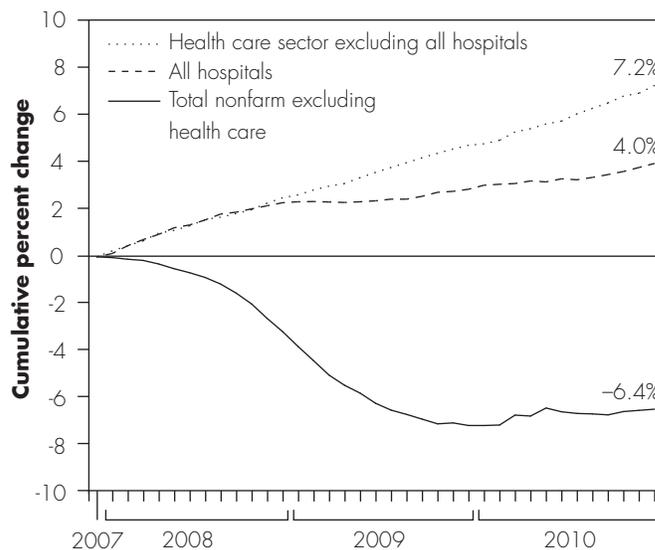
Through fall 2010, credit markets continued to improve, and interest rates on tax-exempt municipal bonds continued their steady two-year decline. As of October 2010, the interest rate on AA-rated tax-exempt 30-year hospital bonds was 4.7 percent. In October 2009, the interest rate for similarly classified bonds was approximately 5.1 percent, and it was approximately 7.3 percent in October 2008 (Cain Brothers 2010). The volume of hospital tax-exempt municipal bond issuances remained high in 2009 at nearly \$44 billion. This level was down from the decade high of \$51 billion in 2008 but similar to the level observed in 2007 and high relative to the rest of the decade.

In response to the recession of the last two years, many hospitals initiated cost-control strategies and reduced their capital expenditures. The financial rating agencies agree that nonprofit hospitals began controlling costs in part in 2009 by reducing their capital expenditures and refraining from issuing debt (Fitch Ratings 2010, Moody's Investors Service 2010a, Moody's Investors Service 2010b). Moody's and Fitch Ratings independently concluded that capital expenditures for their respective samples of nonprofit hospitals declined between 10 percent and 20 percent in fiscal year 2009, following increases in the previous two years. In a separate measure, Moody's concluded that in 2009 nonprofit hospitals spent slightly more than the amount necessary to maintain or replace their existing level of capacity. Specifically, Moody's found that median capital spending declined to 1.2 times depreciation expenses in 2009, which was down from 1.6 times depreciation in 2008. (If a hospital were to merely maintain its existing capacity in a given year, the ratio of capital expenses to depreciation would be approximately 1.0 times depreciation plus a small adjustment for changes in prices.) The Census Bureau reported that spending on hospital construction increased steadily from \$15 billion in 2000 to \$33 billion in 2007 and 2008 and then declined slightly to approximately \$32 billion in 2009.

The trend in consolidation of the hospital industry may be an indirect measure of hospitals' access to capital markets. The steady level of hospital merger and acquisition (M&A) activity over the last five years suggests that owning and operating hospitals remains

FIGURE 3-3

Hospital employment growth from December 2007 to December 2010



Note: Data are seasonally adjusted.

Source: Bureau of Labor Statistics, Current Employment Statistics data set.

an attractive use of capital. In 2009, the hospital sector saw 52 separate M&A deals; as a part of these deals, 80 individual hospitals were acquired. The number of M&A deals has remained relatively consistent at between 50 and 60 annually for the last five years. Data from the first eight months of 2010 suggest that the level of activity in 2010 was on par with 2009 levels. Through August 2010, 33 hospital M&A deals were completed involving 62 hospitals (Irving Levin Associates Inc. 2010b). In addition to hospitals and hospital systems acquiring hospital facilities in 2009, hospitals and systems also acquired other types of providers. Most of their acquisitions were physician group practices (Irving Levin Associates Inc. 2010a, PricewaterhouseCoopers' Health Research Institute 2010).⁶

Hospital employment grew in the last three years

Changes in hospital employment levels broadly reflect the capacity of the hospital sector to furnish care and may be a proxy for the sector's overall financial health (Figure 3-3). Over the past three years (December 2007 to December 2010), the Bureau of Labor Statistics reports that employment in hospitals increased 4.0 percent—to

more than 4.7 million employees—with all but five states showing increased hospital employment during the period. Occupational data from the last two years show that employment grew in both patient care and non-patient care occupations. Employment in computer science and math occupations increased 10 percent, pharmacists and management occupations both increased 9 percent, and imaging technicians increased 7 percent. In addition, the number of nurses increased 5 percent over the last two years, despite a decline in the number of licensed practical nurses and licensed vocational nurses. This trend may indicate that hospitals are moving toward hiring nurses with more advanced training.

Quality of care shows some improvement

Inpatient hospital quality-of-care measures are all either stable or showed improvement in recent years. From 2006 through 2009, risk-adjusted in-hospital and 30-day mortality rates declined for five major clinical conditions. Patient safety indicators did not improve significantly for the seven conditions we monitor, and readmission rates remained stable. Patient satisfaction has improved slightly in recent years. However, there is still room for improvement: in reducing readmissions, in eliminating errors that result in harm to patients, and in reducing rates of hospital-acquired conditions.

Our analysis of hospital quality as it relates to Medicare beneficiaries examines mortality rates for five major diagnoses. We look at the rates for deaths that occur during the hospital stay and within 30 days postdischarge after treatment of the targeted condition. We also examine trends in risk-adjusted rates of selected patient safety indicators, which measure the frequency of potentially preventable adverse events that can occur during an inpatient stay. The mortality measures are selected from the Agency for Healthcare Research and Quality (AHRQ) inpatient quality indicators (IQIs), and the adverse event measures are a subset of the AHRQ patient safety indicators (PSIs) (Agency for Healthcare Research and Quality 2007a, Agency for Healthcare Research and Quality 2007b). In our analysis, we use only the IQIs and PSIs that AHRQ has concluded have the strongest base of clinical and statistical evidence (Agency for Healthcare Research and Quality 2009a). We calculated the IQIs and PSIs using MedPAR inpatient hospital data files for 2006 through 2009 and version 4.1b of the AHRQ IQI and PSI software (Agency for Healthcare Research and Quality 2009b).

Mortality rates

From 2006 through 2009, risk-adjusted in-hospital and 30-day mortality rates declined by a statistically significant amount for all five conditions we measured: acute myocardial infarction, congestive heart failure, stroke, hip fracture, and pneumonia. This result extends a long trend of declining in-hospital and 30-day mortality. We also analyzed mortality rates for three complex and relatively infrequently performed surgical procedures—esophageal resection, pancreatic resection, and abdominal aortic aneurysm repair. While the risk-adjusted in-hospital and 30-day mortality rates declined in most instances for patients undergoing these procedures, none of the changes in these three rates was statistically significant because of the relatively small changes in the rates over time and the small number of cases with which to measure rates.

Patient safety indicators

Rates remained stable for 2006 through 2009 for the seven patient safety indicators we analyzed, including iatrogenic pneumothorax, postoperative pulmonary embolism or deep-vein thrombosis, and accidental puncture or laceration. The PSI rates are extremely small and must be interpreted with caution. Because they measure the rates of occurrence of very rare events, it is difficult to detect statistically significant changes in rates over time. In addition, AHRQ has noted that changes in provider coding practices over time and variations among providers in how patient safety events are captured and reported can affect the reported rates of the PSIs (Agency for Healthcare Research and Quality 2007a, Agency for Healthcare Research and Quality 2007b, Agency for Healthcare Research and Quality 2009a). Nonetheless, we monitor PSI rates because they represent injuries to patients or complications from clinical procedures that often can be avoided with adherence to known appropriate medical practices. CMS has recently begun requiring hospitals to identify conditions that are present on admission (POA), but data were not available for this analysis. Once we have several years of data with the new POA indicators, we should be able to better detect changes in patient safety. Starting in fiscal year 2015, the Secretary is mandated by the Patient Protection and Affordable Care Act of 2010 to reduce payments by 1 percent to IPPS hospitals that are in the top quartile, relative to the national average, of hospital-acquired conditions. (The list of conditions will be determined by the Secretary, presumably through future rule making.)

There is concern that hospitals have not made enough progress in improving patient safety (Landrigan et al. 2010). A recent report from the Department of Health and Human Services Office of Inspector General highlighted concerns that the overall incidence of patient safety errors and hospital-acquired conditions that result in harm to Medicare patients remains unacceptably high. According to clinical reviews of a nationally representative (though relatively small) random sample of Medicare beneficiaries discharged from acute care hospitals, the report found that an estimated 13.5 percent of hospitalized beneficiaries experienced serious adverse events during their hospital stays, including an estimated 1.5 percent of beneficiaries who experienced events that contributed to their deaths.⁷ Of all these events, physician reviewers estimated that almost half (44 percent) were clearly or likely preventable (Office of Inspector General 2010).

Patient experience measures

The Commission considers self-reported patient experience to be another important aspect of quality (Medicare Payment Advisory Commission 2005). AHRQ and CMS developed the Hospital Consumer Assessment of Healthcare Providers and Systems (H-CAHPS[®]) as a reliable and valid survey instrument to collect patients' assessments of health care services and providers (Elliott et al. 2010). The H-CAHPS survey captures patient experiences on measures such as quality of communication with doctors and nurses, responsiveness of hospital staff, pain management, communication about medicines, cleanliness and quietness of the hospital environment, and quality of information provided at discharge (Centers for Medicare & Medicaid Services 2010b). Beginning in July 2007, hospitals are required by law to submit H-CAHPS data from a sample of adult patients on a quarterly basis to avoid a 2 percentage point reduction in their IPPS annual payment update for the subsequent fiscal year. The quarterly H-CAHPS results for each applicable hospital are published on the Medicare Hospital Compare website.

A recent journal article analyzed the first two complete years of H-CAHPS data reported by hospitals to CMS and found small but significant improvements in almost all measures of patient experience examined (Elliott et al. 2010). The analysis found that participation in the public reporting of H-CAHPS results increased from 61 percent of all acute care hospitals to 84 percent between March 2008 and March 2009. Using H-CAHPS data from these two reporting periods, the analysis found small but statistically significant increases in patient

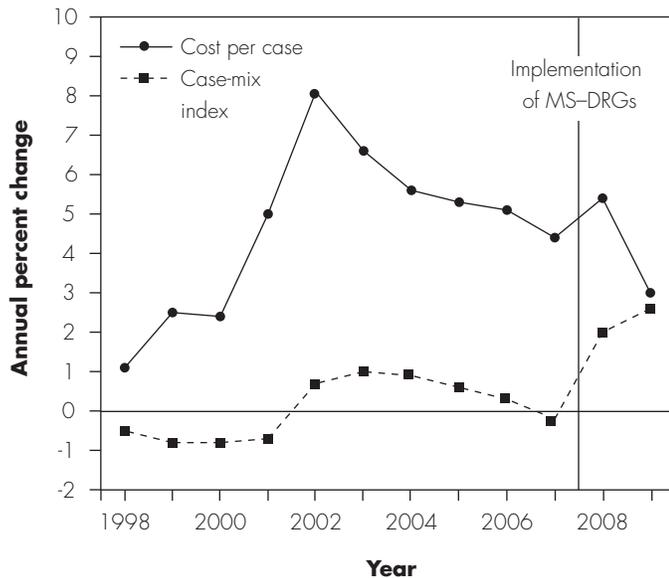
satisfaction for eight of the nine survey measures for the hospitals that submitted data in both periods. The one exception was doctor communication, in which there was no significant change. Improvement was greatest for discharge information, staff responsiveness, and quietness. The study also compared results for the almost 2,800 hospitals that submitted data for both periods with the almost 1,100 hospitals that began reporting data in the second period. On seven of the nine measures examined, the average March 2009 scores were higher for the newly reporting group of hospitals than for the original group of hospitals. The authors attribute this difference in part to the addition of a large number of smaller hospitals—which tend to have higher patient experience scores than larger hospitals—in the second reporting period.

Readmission rates

In 2010, CMS reported that 30-day readmission rates remained high at 18 percent for pneumonia, 20 percent for acute myocardial infarction, and 25 percent for heart failure (Department of Health and Human Services 2010). The Commission has previously discussed how readmissions rates should and can decline given better discharge planning and care transitions (Medicare Payment Advisory Commission 2007, Medicare Payment Advisory Commission 2008b). However, our analysis found no improvement in the potentially preventable 30-day readmission rates from 2006 through 2009.⁸ To stimulate greater improvement in readmission rates, the Congress enacted a financial penalty for hospitals with above-average risk-adjusted rates of readmissions for three conditions. CMS will begin to apply the penalty in fiscal year 2013. The literature suggests that financial incentives can induce changes in quality and that progress can be made on readmissions (Jha et al. 2010).

Relationship between hospital process measures and outcomes

Our analyses of hospital quality, both in the aggregate and in our “efficient provider” analysis, are based primarily on outcome measures such as mortality and readmission rates. The Commission also has supported the use of process measures to evaluate quality of care when there is evidence that the processes being measured increase the chances of positive patient outcomes, such as decreased mortality and readmission rates (Medicare Payment Advisory Commission 2005). Some of the literature examining the relationship between hospitals' performance on Medicare's publicly reported process measures and mortality rates—either across hospitals (Jha

**FIGURE
3-4****Comparison of growth in inpatient case mix and cost per case**

Note: MS-DRG (Medicare severity–diagnosis related group). Changes in case mix are based on national aggregate case-mix indexes calculated for the cohorts of hospitals included in the inpatient prospective payment system (IPPS) in each pair of years. Case-mix index is computed for each year’s inpatient claims using the Medicare grouper and weights in place for that year.

Source: MedPAC analysis of Medicare cost reports and annual MedPAR claims for IPPS hospitals for fiscal years 1997–2009 from CMS.

et al. 2007) or over time (Werner and Bradlow 2010)—has found that hospitals with better process measure performance tend to have better patient outcomes and vice versa. However, a growing body of literature suggests that at least some of the process measures currently used to measure hospital quality in Medicare capture only a small proportion of the variation in hospital mortality rates or have little or no association with mortality or readmission rates (Bradley et al. 2006, Fonarow et al. 2007, Fonarow and Peterson 2009, Nicholas et al. 2010, Ryan et al. 2009, Werner and Bradlow 2006).

A recent commentary by leading experts in hospital quality measurement suggested a set of criteria that CMS could apply to identify Medicare process measures that “focus explicitly on maximizing health benefits to patients”; CMS could replace those criteria that do not comply (Chassin et al. 2010). Outcome measures such as mortality and readmission rates enable us to compare quality across hospitals to define “efficient providers.” We also have recommended the use of outcome measures to compare quality across health plans in the Medicare

Advantage (MA) program and between MA and the traditional FFS Medicare program (Medicare Payment Advisory Commission 2010c).⁹ We will continue to review the evidence on the relationships between process and outcome measures and use the results to inform the evolution of measures for assessing the quality of hospital care provided to Medicare beneficiaries.

Value-based incentive payments

Starting in fiscal year 2013, a portion of hospitals’ payments (1 percent growing to 2 percent) will be withheld to fund incentives for higher quality care. Over the next two years, industry and government officials will need to work to develop and refine measures that accurately reflect value to the patient. Applying a final set of measures in 2013 may redistribute payments significantly among hospitals. In 2008, the Commission suggested measures that should be included in the hospital value-based purchasing (VBP) program—including a robust set of patient safety measures—and risk-adjusted outcome measures, such as mortality rates, and efficiency measures (Medicare Payment Advisory Commission 2008a). The measures used in the VBP program, and the weighting that different measure domains contribute to a hospital’s performance score, should evolve to reflect the program’s quality improvement priorities. This progression would involve giving more weight to patient safety and outcome measures. By tying quality metrics to Medicare payments, incentives to improve care processes would be strengthened.

Medicare payments and providers’ costs

In assessing payment adequacy, the Commission also considers the estimated relationship between Medicare payments for and hospitals’ costs of furnishing care to Medicare patients. We assess the adequacy of Medicare payments for the hospital as a whole, and thus our primary indicator of the relationship between payments and costs is the overall Medicare margin. This margin includes all payments and Medicare-allowable costs attributable to Medicare patients for the six largest services that hospitals provide plus graduate medical education payments and costs.

We report the overall margin on services to Medicare patients across service lines because no hospital service is a purely independent business. For example, operating a skilled nursing facility (SNF) can improve the profitability of acute care services when an in-hospital SNF allows hospitals to safely discharge patients sooner from their

acute care beds. In addition, there are potential cost allocation issues. For example, under current cost-accounting rules hospitals may allocate too much of their administrative costs to a home health subsidiary, which can distort the apparent profit margins of both the home health agency and the hospital. Only by combining data for all major services can we estimate Medicare margins without the influence of how overhead costs are allocated.

The hospital update recommendation in this chapter is intended to apply to hospital inpatient and outpatient payments. Payments for the other distinct units of the hospital, such as SNFs, are addressed by our update recommendations for those payment systems, which apply to both hospital-based and freestanding providers.

Documentation and coding improvements contributed to a rise in payments per discharge in 2009

Growth in Medicare hospital payments per discharge under the IPPS depends primarily on the annual payment updates and changes in reported case mix. In 2009, IPPS hospitals received a 3.6 percent payment update for operating rates and a 0.9 percent update for capital rates. These updates were reduced by 0.9 percentage point to offset part of the expected increase in payments due to hospitals' documentation and coding improvements (DCI) in response to the second year of implementation of MS-DRGs. The net effect was that hospitals received an average payment update of 2.5 percent in 2009.

What was extraordinary in 2008 and 2009 was the rapid increase in the reported case-mix index of 2 percent in 2008 and 2.6 percent in 2009—after implementation of the new MS-DRG system in 2008 (Figure 3-4). This increase followed a decade in which the case-mix index declined in 5 of the 10 years and never grew by more than 1 percent in any year.

Analyses by both CMS and the Commission have concluded that the increases in case mix reported in both 2008 and 2009 resulted from hospitals' DCI in response to the adoption of MS-DRGs in 2008 (Medicare Payment Advisory Commission 2010a). Before the adoption of MS-DRGs in 2008, annual case-mix increases ranged from -0.8 percent to 1.0 percent and on average reflected a 0.1 percent year-to-year change. With the introduction of MS-DRGs, however, reported case mix jumped substantially, increasing by 2.0 percent in 2008 and by 2.6 percent in 2009. Our analysis suggests that the jump in reported case mix reflected improvements in coding and

**TABLE
3-3**

Cost growth slowed in 2009

Cost measure	Annual cost growth			
	2006	2007	2008	2009
Inpatient costs per discharge	5.1%	4.2%	5.5%	3.0%
Outpatient costs per service	2.6	5.6	5.1	4.8
Weighted average	4.6	4.5	5.4	3.3
Input price inflation	4.2	3.4	4.3	2.6

Note: Cost growth numbers are not adjusted for reported changes in case mix. Analysis excludes critical access hospitals and Maryland hospitals. The weighted average is based on hospitals' inpatient and outpatient Medicare costs.

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

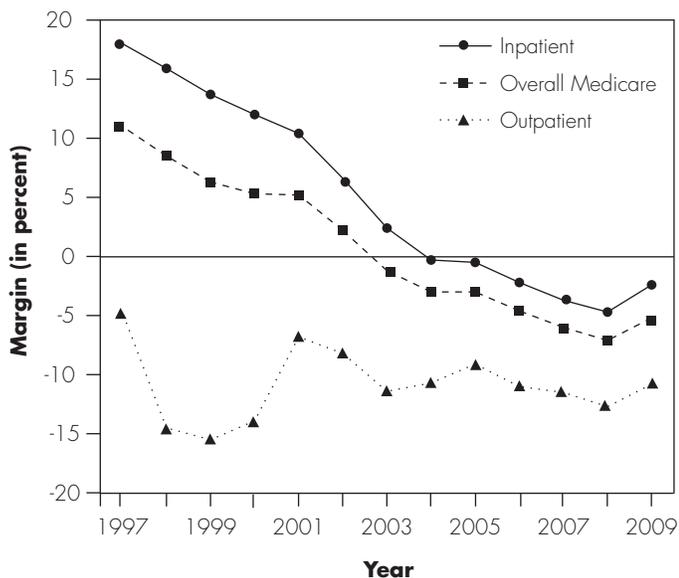
not an actual shift toward patients whose care required greater resources. This explanation shows how hospitals could record high case-mix growth in 2009 without a corresponding increase in cost growth. In fact, the rate of cost growth declined in 2009 for the reasons discussed below.

Hospital cost growth slowed in 2009 as hospital input prices rose at their slowest rate of increase in over a decade

A combination of economic pressure and lower input price inflation led to lower cost growth in 2009. Medicare inpatient costs per discharge grew just 3.0 percent in 2009, the slowest rate of increase since 2000 (Table 3-3). The lower cost growth in 2009 was partly due to lower input price inflation facing hospitals, reflected in the increase of 2.6 percent in the CMS hospital market basket index in 2009, down from 4.3 percent in 2008. In contrast, outpatient costs per service grew by 4.8 percent in 2009, faster than the increase in inpatient costs. Much of the high growth in outpatient costs may be attributable to increases in service mix in the outpatient setting, which grew 2.5 percent in 2009.

Trend in overall Medicare margin

We define Medicare profit margins as Medicare payments minus the allowable costs of treating Medicare patients, all divided by Medicare payments. In analyzing hospital margins, we exclude CAHs, which are paid based on their incurred costs, and hospitals located in Maryland, which are excluded from the IPPS and paid under a statewide PPS. The overall Medicare margin has trended

**FIGURE
3-5****Hospital Medicare margins:
inpatient, outpatient, and overall**

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

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

downward from 1997 through 2008 and has been negative since 2003 (Figure 3-5).¹⁰ From 2008 to 2009, however, the overall Medicare margin went up from -7.1 percent to -5.2 percent. The overall margin is dominated by inpatient and outpatient services, which represent 92 percent of hospitals' Medicare revenues. Both inpatient and outpatient margins improved in 2009, although both remain negative. Between 2008 and 2009, the margin on Medicare inpatient services rose from -4.7 percent to -2.4 percent, and the margin on Medicare outpatient services went up from -12.7 percent to -10.8 percent. The increase in margins is primarily due to increases in reported case mix. Cost growth, however, continues to be marginally higher than underlying input price inflation as measured by the hospital market basket index.¹¹

2009 Medicare margins by hospital type

We examined further breakouts of the overall Medicare margin by hospital type. In 2009, the overall Medicare

margin for rural hospitals was higher (less negative) than the margin for urban hospitals (Table 3-4). Rural hospital margins, once below urban hospital margins, are now higher for several reasons. First, many small, low-margin rural hospitals are no longer included in the analysis because they converted to CAH status, under which they are paid on the basis of costs plus 1 percent for inpatient and outpatient services. If we include CAHs in our overall margin calculation, the overall Medicare margin for rural hospitals in 2009 would be 1.6 percentage points higher, or -3.3 percent. Second, payments to a large share of rural hospitals—sole community hospitals and small rural Medicare-dependent hospitals—are based at least partially on their updated historic costs. Changes made to Medicare disproportionate share payments have also increased payments to many rural hospitals.

Overall Medicare margins at for-profit hospitals continued to remain above those at nonprofit hospitals. In 2009, for-profit hospitals' Medicare margins were -0.1 percent compared with -6.3 percent at nonprofit hospitals. For-profit hospitals have had slower growth in costs per discharge than nonprofit hospitals for the past three years.

The overall Medicare margin for major teaching hospitals fell below zero (-1.7 percent) for the first time in 2008. In 2009, major teaching hospitals saw both inpatient and outpatient Medicare margins increase, but the overall margin remained slightly negative, at -0.6 percent. Major teaching hospitals have higher overall Medicare margins than the average IPPS hospital in large part due to the extra inpatient payments they receive through the indirect medical education and disproportionate share adjustments in the IPPS. Commission analysis shows that both adjustments provide payments substantially larger than the estimated effects that teaching intensity and service to low-income patients have on hospitals' average costs per discharge. Non-teaching hospitals, most of which are in urban areas, had the lowest Medicare margins of any hospital group. In June 2010, the Commission made recommendations to use teaching hospital payments as incentives to train physicians for the skill sets needed by future Medicare beneficiaries (Medicare Payment Advisory Commission 2010b).

Historically, other hospital-based units—SNFs, home health agencies, inpatient rehabilitation units, and inpatient psychiatric units—have lower Medicare margins than their freestanding counterparts. However, hospitals with these units have higher overall Medicare margins than hospitals

without them. For example, in 2009, the overall Medicare margin for hospitals with a SNF unit was -4.6 percent compared with -5.3 percent for hospitals without a SNF unit—despite a -66 percent margin for hospital-based SNFs. Similarly, the overall margin for hospitals with an inpatient rehabilitation unit was -4.5 percent compared with -5.7 percent for hospitals that did not have such a unit. In aggregate, hospitals with some type of post-acute care unit had higher overall Medicare margins than hospitals that had no units, -4.8 percent compared with -7.4 percent. This finding could be due to patients being discharged earlier where hospital-based post-acute care services are available.

Projected margins under current 2011 payment policies

Payment growth will be slower in 2011 than in earlier years As discussed above, inpatient payments rose in 2008 and 2009 due to coding improvements. CMS is required to recover those overpayments by adjusting payments downward in 2011 and 2012. The downward adjustment is -2.9 percent in 2011, which will result in lower overall payment rates in 2011. The -2.9 percent adjustment is expected to continue until the end of fiscal year 2012.

Hospital cost growth appears steady in 2010 and 2011

As expected, due to financial pressure from the economy and investment losses, hospital cost growth slowed between 2008 and 2009 from 5.5 percent to 3 percent per discharge. While 2010 Medicare cost report data are not yet available, we have partial-year data from the Census Bureau through June 2010 and from certain hospital systems with publicly traded stocks and bonds for the nine months ending in September 2010.¹² These data sources suggest that cost growth per discharge remained in the 2 percent to 4 percent range during the first nine months of 2010. Looking forward to 2011, we expect 3 percent to 4 percent cost growth as input prices rise by a forecasted 2.6 percent and hospitals increase their information technology spending to qualify for substantial payments for adopting meaningful electronic medical records (see text box, p. 52–53).

We expect the net effect of low growth in inpatient payment rates in 2011, health information technology payments, and cost growth of 3 percent to 4 percent will be a decline from 2008 to 2009 in hospital profit margins from -5.2 percent to roughly -7 percent. That is, profit margins will revert to where they were in 2007.

**TABLE
3-4**

Overall Medicare margins by hospital group

Hospital group	2005	2006	2007	2008	2009
All hospitals	-3.1%	-4.7%	-6.0%	-7.1%	-5.2%
Urban	-3.1	-4.7	-6.0	-7.2	-5.2
Rural					
Excluding CAHs	-2.8	-4.5	-5.3	-6.3	-4.9
Including CAHs	-2.4	-3.3	-3.9	-4.4	-3.3
Nonprofit	-3.7	-5.3	-6.7	-8.1	-6.3
For profit	-1.4	-2.5	-3.5	-2.8	-0.1
Government*	N/A	N/A	N/A	N/A	N/A
Major teaching	4.0	2.3	0.2	-1.7	-0.6
Other teaching	-3.6	-5.2	-6.9	-7.4	-5.2
Nonteaching	-6.6	-8.2	-9.1	-10.0	-7.9

Note: CAH (critical access hospital), N/A (not available). Data are for all hospitals covered by the Medicare acute inpatient prospective payment system in 2009. 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 (including swing bed), home health, and inpatient psychiatric and rehabilitation services, plus graduate medical education. *Margins for government-owned providers are not shown. They operate in a different context from other providers, so their margins are not necessarily comparable.

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

Cycles of private-payer profits, financial pressure, and cost growth

The level of hospitals' cost growth has cycled up and down through different time periods (Figure 3-6, p. 54). During the first time period (1986–1992), most insurers still paid hospitals on the basis of their charges, with little price negotiation or selective contracting. With limited pressure from private payers, hospital margins on private-payer business increased rapidly. In the second cycle (1993–1999), HMOs and other private insurers began to negotiate more assertively with hospitals, and most insurers switched to paying for inpatient services on the basis of DRGs or flat per diem amounts for broad types of services. As a result, hospitals' payment-to-cost ratio for private payers declined by 16 percentage points. Because managed care restrained private-payer payment rates, hospitals were under pressure to constrain their costs and the rate of cost growth was below input price inflation from 1994 through 2000.

Policy changes between 2009 and 2012 increase some payments and decrease others

A number of payment policy changes in recent years affect our projection of 2011 hospital margins as well as payments to hospitals in 2012.

Inpatient payments

CMS and the Congress made a variety of policy changes affecting the acute inpatient prospective payment system (IPPS) for fiscal year (FY) 2010 and FY 2011. CMS completed its implementation of Medicare severity–diagnosis related groups (MS–DRGs) and cost-based relative weights in FY 2009. CMS and the Commission found that hospitals responded to the financial incentives of the MS–DRG system by improving medical record documentation and diagnosis coding, which resulted in assignment of cases to higher weighted MS–DRGs in 2009. Because this change in assignments increased payments without an accompanying increase in resources used, it resulted in an unintended increase in payments. As a part of the TMA, Abstinence Education, and QI Programs Extension Act of 2007 (TMA), the Congress mandated payment reductions of 0.6 percent in 2008 and an additional 0.9 percent in 2009 to offset the effects of documentation and coding improvements (DCI) projected by the CMS Office of the Actuary. To the extent that the TMA reductions differ from the actual effects of hospitals' coding improvements, the Secretary of the Department of Health and Human Services is required by law to adjust hospital payments in 2010, 2011, and 2012 to recover any overpayments that occurred in 2008 and 2009. The Secretary is also required to adjust payment rates further to prevent overpayments from continuing. Analyses by both CMS and the Commission found that hospitals' DCI increased payments by 2.5 percent in 2008 and by a cumulative 5.4 percent by 2009. After accounting for the adjustments mandated in the TMA, the net overpayments to hospitals were 1.9 percent in 2008 and 3.9 percent in 2009 (more DCI in 2009), or 5.8 percent in total. In the FY 2011 IPPS final rule, CMS decided to make a temporary adjustment of –2.9 percent to FY 2011 payments to recover half of the net overpayments that occurred in FY 2008 and FY

2009. CMS also suggested in the 2011 final rule that it would consider a similar adjustment for FY 2012 to recover the remaining overpayments by the end of 2012, as required by law. CMS has stated it needs to reduce payments by 3.9 percent in future years to prevent further overpayments due to DCI, but it has not stated when or how rapidly it will take the 3.9 percent reduction.

The Patient Protection and Affordable Care Act of 2010 (PPACA) mandated six policy changes that affect inpatient payments for FY 2010 and FY 2011. First, the Congress mandated a 0.25 percentage point reduction in the payment update for the second half of FY 2010 and for all of FY 2011. For example, the forecasted 2.6 percent market basket increase for FY 2011 was partially offset by the 0.25 percentage point adjustment, resulting in a payment update of 2.35 percent (not including the temporary –2.9 percent DCI recovery adjustment). The remaining PPACA policy changes are likely to be budget neutral or to increase hospital payments. PPACA temporarily expanded (through 2012) the policy providing additional payments to hospitals that have a low volume of Medicare (not all payers) inpatient discharges and are 15 miles or more from the nearest PPS hospital. We estimate that this policy change will add approximately \$380 million in new payments, mainly to rural hospitals, in FY 2011. The law also mandated a new two-year program to provide additional payments to hospitals located in counties with relatively low levels of Medicare spending. Hospitals located in low-spending counties will receive a share of \$150 million reserved for this policy in FY 2011 and \$250 million in 2012.¹³ PPACA also extended for all of FY 2010 the provision in Section 508 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, which gave eligible hospitals an opportunity for a one-time reclassification to a different labor market and allowed this change to increase their payments. CMS estimated that the Section 508 extension will increase payments in FY 2010 by \$200 million. Finally, PPACA mandated two policy changes related

(continued next page)

Policy changes between 2009 and 2012 increase some payments and decrease others (cont.)

to hospital wage indexes. One is a frontier wage index floor: Hospitals in Montana, North Dakota, Nevada, South Dakota, and Wyoming will maintain a wage index equal to no less than 1.0. For the 51 urban and rural hospitals affected by this policy, CMS estimated payments will increase \$48 million in aggregate. The other wage-related change is that beginning in FY 2011 a rural-floor budget-neutrality adjustment will be applied on a national level, rather than on a state level. CMS estimated that this policy change will increase payments for urban hospitals whose wage index is raised up to the state's rural level and will decrease payments for other hospitals (including all rural hospitals), which pay for the floor through a budget-neutrality adjustment.

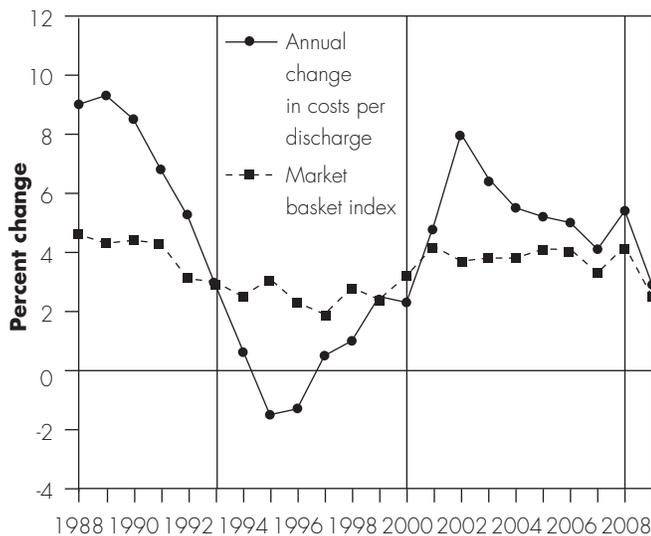
Outpatient payments

Rural hospitals with 100 or fewer beds receive hold-harmless outpatient payments through 2011. Payment rates for these hospitals were based on the higher of current outpatient PPS rates or the hospital's historic payment-to-cost ratio applied to its current reported outpatient costs. For example, if a hospital received 95 percent of its costs for care before implementation of the outpatient PPS, it would receive hold-harmless payments sufficient to bring its total payments for outpatient services up to 95 percent of its current costs if its outpatient PPS payments were lower. Starting in January 2012, these adjustments are set to expire, which will result in a decline in outpatient payments for some rural hospitals.

Health information technology

The American Recovery and Reinvestment Act of 2009 provided payment incentives to encourage hospitals and other providers to adopt electronic health record (EHR) technology. These health information technology (HIT) payments will begin in FY 2011 and continue each year until FY 2017. Under the law, a hospital will receive an incentive payment for each year it is deemed a meaningful user of EHRs—based on meeting specified criteria concerning the capabilities of its EHR system released in CMS's Medicare and Medicaid EHR Incentive Program Final

Rule (Centers for Medicare & Medicaid Services 2010a).¹⁴ The hospital HIT incentive payment will equal the sum of an initial payment amount per hospital (\$2 million base amount) plus a discharge-related amount of \$200 per patient discharge for all discharges between the 1,150th and 23,000th discharge, both multiplied by the hospital's share of Medicare days. Therefore, hospitals' EHR incentive payments will vary with the shares that their Medicare inpatient admissions represent of their total admissions. According to this mandated formula and assumptions we have made about the share of hospitals that will meet the EHR meaningful use criteria by the end of FY 2011, we estimate that hospitals paid under the IPPS will receive roughly \$3 billion in additional payments by the end of FY 2011 from the HIT incentive program. We estimate that the average large hospital (more than 400 beds) will receive payments of \$2.7 million in 2011 and the average smaller hospital will receive payments of about \$1.6 million if it meets the meaningful use criteria. Our assumptions concerning the share of hospitals that will meet the meaningful use criteria for the first fiscal year of the program were derived from a variety of sources. These sources include a recent news release from the Department of Health and Human Services, which stated that a survey conducted by the American Hospital Association in 2010 projected that 65 percent of hospitals will enroll in the HIT incentive program by the end of FY 2012. In addition, a survey conducted by the College of Healthcare Information Management Executives in 2010 found that 89 percent of the hospital chief information officers they surveyed believe their hospital will meet the meaningful use criteria by the end of FY 2012 and that 20 percent of respondents believe their chances of meeting the criteria were greatly improved by the changes CMS made in its final regulations on this subject (College of Healthcare Information Management Executives 2010a, College of Healthcare Information Management Executives 2010b, Department of Health and Human Services 2011, Healthcare Information and Management Systems Society 2010). The law also stipulates that, in FY 2015, hospitals that fail to meet the meaningful use criteria will be penalized through the IPPS. ■

**FIGURE
3-6****Cost growth falls in 2009
as financial pressure increases**

Note: The market basket index measures annual changes in the prices of the goods and services hospitals use to deliver care. Cost growth refers to annual change in inpatient allowable costs per discharge.

Source: Medicare analysis of Medicare Cost Report files from CMS and CMS final rules for the inpatient prospective payment system in years 1988 through 2009.

However, by 2000, hospitals had regained the upper hand in price negotiations because of hospital consolidations and consumer backlash against managed care. In the third cycle (2000–2007), private-payer payment rates rose rapidly and hospitals’ payment-to-cost ratio for private payers increased more than 16 percentage points. Due to high private-payer payments, all-payer margins for hospitals reached 6.0 percent in 2007, the highest level recorded since 1997. As expected, cost growth was high in 2008 (5.5 percent) as many hospitals started the year with little pressure to constrain costs. As we have discussed in the past, when profits on privately insured patients are high, hospitals face less pressure to constrain costs (Medicare Payment Advisory Commission 2009, Stensland et al. 2010).

However, the picture changed rapidly in September 2008 with the collapse of the bond and stock markets. Total all-payer margins in 2008 fell to 1.8 percent, the lowest level in more than two decades. Operating margins fell, investment income declined dramatically, some defined benefit pension plans needed larger contributions from their hospital sponsors, and there was a great deal of uncertainty about the future of the economy. This situation

created financial pressure to constrain costs in 2009. In response, hospitals pulled back from the high levels of capital expenditures and employment growth seen in 2007 and 2008 to more moderate levels of capital expenditures and employment growth. The result was the drop in cost growth between 2008 and 2009 from 5.5 percent to a more moderate 3.0 percent. Looking forward, if hospitals’ financial condition continues to improve and their expectation of future revenue growth does not decline, we expect to see increased cost growth in 2011.

Hospital-level financial pressure and hospital costs

The effect of financial pressure on hospitals’ costs is not only evident over time; it is also evident when comparing hospitals facing different levels of financial pressure to constrain costs. Some hospitals have strong profits on non-Medicare services and investments and are under little pressure to constrain their costs. Other hospitals, with thin profits on non-Medicare services, face overall losses (and possibly closure) if they do not constrain costs and generate profits on Medicare patients. To determine the effect of financial pressure on costs, we grouped hospitals into three levels of financial pressure from private payers: high, medium, and low. We then tested whether hospitals under high levels of financial pressure from 2004 to 2008 ended up with lower Medicare standardized inpatient costs per discharge in 2009 than hospitals under medium and low levels of financial pressure during the same six-year period.

We defined high-pressure hospitals as those that met two criteria:

- Median non-Medicare profit margin was 1 percent or less from 2004 through 2008. Non-Medicare margins reflect the sum of net profit (or loss) on private-payer, Medicaid, self-pay, and charity cases, as well as nonpatient revenues and costs.
- Net worth would have grown by less than 1 percent per year from 2004 through 2008 if the hospital’s Medicare profits had been zero. This condition would indicate that the hospital depended on Medicare profits to grow its net worth.

We defined low-pressure hospitals as those that could grow their net worth even if they suffered Medicare losses. Low-pressure hospitals met the following two criteria:

- Median non-Medicare margin was greater than 5 percent from 2004 through 2008.

**TABLE
3-5**

High financial pressure leads hospitals to constrain costs

Level of financial pressure 2004 to 2008

	High pressure (non-Medicare margin ≤1%)	Medium pressure	Low pressure (non-Medicare margin >5%)
2009 financial characteristics (medians)			
Non-Medicare margin (private, Medicaid, uninsured)	-3.8%	2.7%	10.7%
Overall 2009 Medicare margin	4.7	-1.1	-10.2
Total (all-payer margin)	-0.7	1.7	5.4
Standardized cost per Medicare discharge (as a share of the national median)			
All (for-profit and nonprofit) hospitals	92%	96%	104%
Nonprofit hospital	92	96	105
For-profit hospital	92	92	99
Growth in cost per discharge 2006 to 2009	4.3	4.2	4.6
Patient characteristics (2009 medians)			
Total hospital discharges	5,113	8,183	7,292
Medicare FFS share of inpatient days	43%	42%	43%
Medicaid share of inpatient days	12	11	10
Medicare case-mix index	1.33	1.45	1.45
Hospital characteristics			
Number of:			
All hospitals	756	390	1,747
Rural hospitals	242	104	489
For-profit hospitals	205	50	371
Major teaching hospitals	112	38	92
Share of:			
All hospitals	26%	13%	60%
Rural hospitals	29	12	59
For-profit hospitals	33	8	59
Major teaching hospitals	46	16	38

Note: FFS (fee-for-service). Standardized costs are adjusted for case mix, wage index, outliers, transfer cases, interest expense, and the empirically estimated effect of teaching and low-income Medicare patients on costs per discharge.

Source: MedPAC analysis of Medicare Cost Report and claims files from CMS available as of October 2010.

- Net worth would have grown by more than 1 percent per year if the hospital's Medicare profits were zero. This condition would indicate that the hospital did not depend on Medicare profits to grow its net worth.

Findings on financial pressure We found that hospitals under high financial pressure from 2004 through 2008 restrained their Medicare standardized costs per discharge in 2009 to 92 percent of the national median,

while hospitals under low financial pressure had median standardized costs in 2009 equal to 104 percent of the national median (Table 3-5). Lower costs resulted in a higher median Medicare margin of 4.7 percent for those under pressure.

Nonprofit hospitals under low pressure had median Medicare standardized costs of 105 percent of the national median, while for-profit hospitals under low financial

**TABLE
3-6**

Performance of relatively efficient hospitals

	Type of hospital	
	Relatively efficient during 2006–2008	Other hospitals
Number of hospitals	219	1,952
Share of hospitals	10%	90%
Relative historical performance, 2006–2008		
Risk-adjusted:		
Composite 30-day mortality (AHRQ)	82%	104%
Readmission rates	97	101
Standardized cost per discharge, 2005–2008	91	102
Relative mortality metrics, 2009		
Risk-adjusted:		
Composite 30-day mortality (AHRQ)	85	104
30-day AMI mortality (CMS)*	97	101
30-day CHF mortality (CMS)*	96	101
30-day pneumonia mortality (CMS)*	92	101
Relative readmission metrics, 2009		
Risk-adjusted:		
Composite 30-day readmission (3M)	96	101
30-day AMI readmissions (CMS)*	99	100
30-day CHF readmissions (CMS)*	96	100
30-day pneumonia readmissions (CMS)*	100	100
Relative percent of patients highly satisfied, 2009 (H-CAHPS®)	103	100
Relative standardized Medicare costs per discharge, 2009	90	102
Median:		
Overall Medicare margin, 2009	3%	–6%
Non-Medicare margin, 2009	3	6
Total (all payer) margin, 2009	3	3

Note: AHRQ (Agency for Healthcare Research and Quality), AMI (acute myocardial infarction), CHF (congestive heart failure), H-CAHPS® (Hospital Consumer Assessment of Healthcare Providers and Systems). Relatives are the median for the group as a percentage of the median of all hospitals. Per case costs are standardized for area wage rates, case-mix severity, prevalence of outlier and transfer cases, interest expense, low-income shares, and teaching intensity. Composite mortality was computed using the AHRQ methodology to compute risk-adjusted mortality for six conditions (AMI, CHF, pneumonia, gastrointestinal hemorrhage, stroke, and hip fracture). We then weighted the scores for each type of discharge by the share of discharges in that particular hospital. We removed hospitals with low Medicaid patient loads (the bottom 10 percent of hospitals) and hospitals in markets with high service use (top 10 percent of hospitals) due to concerns that socioeconomic conditions and aggressive treatment patterns can influence unit costs and outcomes.
* CMS computes mortality and readmission rates using three years of data (2007 to 2009).

Source: MedPAC analysis of impact file, MedPAR, and Medicare cost report data from CMS, and CMS Hospital Compare data.

pressure had standardized costs equal to 99 percent of the national median. This finding suggests that for-profit hospitals constrain costs more than nonprofits when they are under little financial pressure to do so. Put differently, if both types of hospitals receive high payment rates from private payers, the higher revenues tend to be reflected as higher costs in nonprofit hospitals, but in for-profit

hospitals a larger share of the revenue is retained as profit for shareholders.

Hospitals under high financial pressure tend to be those with smaller operations, a lower case-mix index, and a larger share of patients covered by Medicaid, which can force hospitals to constrain costs. As we found last year, the set of hospitals under a high level of financial pressure

includes hospitals in different locations (rural and urban) and teaching as well as nonteaching hospitals. Comparing this year's findings about hospitals under financial pressure with the last three years' work, we find consistent results—hospitals under financial pressure tend to have lower costs.

One limitation of this method is that it captures only the long-term effects of pressure over five years. Therefore, the one-year increase in financial pressure in 2008 did not have much effect on this cross-sectional analysis. However, our longitudinal analysis of cost growth clearly shows the effect of the financial crisis on hospital cost growth in 2009.

Payments and costs of efficient providers

The goal of our analysis of relatively efficient hospitals is to examine payment adequacy for the group of hospitals that perform relatively well on both cost and quality metrics while serving a broad spectrum of patients. The variables we use to identify relatively efficient hospitals are hospital-level mortality, readmission, and inpatient cost metrics; providers' payer mix; and the annual level of total FFS Medicare service use per capita in the county where the hospital is located. As data and risk-adjustment methodologies improve, our measures of efficiency will continue to evolve.

Ideally, we would limit our set of efficient hospitals to those that not only had high in-hospital quality and low unit costs but also helped their patients transition to good post-acute care outcomes and helped restrain overall costs to the Medicare system during the year. However, we are limited to using county-level annual Medicare service use as a second-best proxy for how aggressive a hospital is in generating admissions. To avoid having hospitals from high-use systems in our analysis, we removed hospitals from the population studied if they were located in counties in the top 10 percent of annual Medicare FFS service use per FFS beneficiary.¹⁵ This method reduces the chance that a hospital will appear to have low unit costs of service simply because it is located in an area with a high volume of admissions of low-cost patients that could be treated on an outpatient basis. To allay concerns that our method does not account for the effect that low-income patients could have on the results, we further restricted the population of hospitals that we evaluated for efficiency by removing the 10 percent of hospitals with the smallest shares of Medicaid patients. This process reduces the likelihood that hospitals in our efficient group got there simply because they had a favorable selection of patients.

Our goal in this screening process is to improve our ability to identify hospitals that can provide good outcomes at a reasonable cost while serving a broad spectrum of patients (including Medicaid) without driving up the overall volume of hospital and nonhospital services provided.

Categorizing hospitals as relatively efficient We assigned hospitals to the relatively efficient group or the control group according to each hospital's performance on a set of risk-adjusted cost and quality metrics during the period 2006 through 2008. We then examined the performance of the two hospital groups during fiscal year 2009.

Hospitals were identified as relatively efficient if they met the four criteria every year of the 2006 to 2008 period:

- Risk-adjusted mortality levels were in the best two-thirds.
- Risk-adjusted readmission rates were in the best two-thirds.
- Standardized costs per discharge were in the best two-thirds.
- Risk-adjusted mortality rates or standardized costs were in the best one-third.

The objective is to identify hospitals that consistently performed at an above-average level on at least one measure (cost or quality) and that always performed reasonably well on all three measures. The rationale for this methodology is discussed in detail in our March 2010 report (Medicare Payment Advisory Commission 2010c).

Examining performance of relatively efficient and other hospitals in 2006 to 2008 Of the 2,171 hospitals that met our screening criteria, 219 were found to be relatively efficient during 2006 through 2008. The set of relatively efficient providers was a diverse array of hospitals, including large teaching hospitals and smaller rural hospitals. CAHs were excluded from the analysis because they are not paid under the IPPS.

We examined the performance of relatively efficient hospitals for 2006 through 2008 on three measures by reporting the group's median performance divided by the median for the set of 2,171 hospitals in our analysis (Table 3-6). The median efficient hospital's relative risk-adjusted 30-day mortality rate from 2006 through 2008 is 82 percent of the national median, meaning that the typical hospital in the efficient group had a risk-adjusted 30-day mortality rate that was 18 percent below the national

Characteristics of relatively efficient providers

Over the past few years, we have identified relatively efficient hospitals (those that perform well on quality and cost) and conducted site visits to a sample of top performers. These site visits serve as hypothesis-gathering interviews. From interviews and data analysis, we hypothesized that large hospitals, those with post-acute care facilities (e.g., skilled nursing facilities, inpatient rehabilitation facilities, home health units), those that were integrated with their physician staffs, and those under financial pressure were more likely to be in our efficient group based on performance in 2006 through 2008. We also hypothesized that hospitals focusing on revenue growth were less likely to be top performers in terms of efficiency. In this text box we show the results from a logistic regression used to test these hypotheses. It may appear counterintuitive that these five hypotheses do not include the quality of management, the quality of physician–hospital relationships, and the patient safety culture of the hospital. We are not questioning the importance of management, physician–hospital relationships, and a patient safety culture (they may all be more important than any structural factor), but this analysis is limited to characteristics that are quantifiable with available data.

We found that no single structural factor guarantees or precludes top performance, but our logistic regression

model suggests that certain structural factors appear to increase the odds of being a top performer:

- Larger hospitals were more likely to be in the efficient group ($p < 0.01$). This finding is consistent with the literature, which has consistently found an inverse relationship between volume and mortality (Birkmeyer et al. 2002, Halm et al. 2002, Keeler et al. 1992, Ross et al. 2010, Silber et al. 2010).
- Having a skilled nursing facility may have increased the odds of being in the efficient group because of lower inpatient costs and fewer readmissions. But the evidence is not statistically significant ($p = 0.08$). Given our site visits, we expected hospitals with post-acute care facilities to discharge their patients sooner and to have lower inpatient costs. While owning a skilled nursing facility may have some effect on being an efficient group, we found no effect from owning an inpatient rehabilitation facility or a home health agency.
- Physician integration improved the odds of being in our efficient group ($p = 0.02$). We expected this result, because integrated physicians appear to be more willing to spend time with the hospital staff standardizing care protocols.

(continued next page)

median. Likewise, the efficient group had a median standardized cost per discharge that was 9 percent below the national median during 2006 through 2008. Median readmission rates for the efficient group were 3 percent of the national median during 2006 through 2008.

Historically strong performers had lower mortality and readmissions in 2009 Because no method of risk adjustment is perfect, we examined the performance of the relatively efficient hospitals using an array of risk-adjusted mortality measures (Table 3-6). The composite mortality levels remained 15 percent below the national median in 2009. In addition to the composite AHRQ 30-day mortality measure, we reported three risk-adjusted 30-day

mortality rates developed by CMS (for acute myocardial infarction, congestive heart failure, and pneumonia), which are computed by using three years of data (2007–2009). The mortality levels for the specific conditions measured by CMS were 3 percent to 8 percent lower for the historically efficient group. Readmission rates were up to 4 percent lower in the efficient group, depending on the measure used (Table 3-6). The relatively efficient group also performed similarly to other hospitals on patient satisfaction. The share of patients who gave the median hospital a top rating was 66 percent for the relatively efficient group and 64 percent for the comparison group.

Characteristics of relatively efficient providers (cont.)

- Hospitals that historically faced financial pressure from 2003 through 2005 were more likely to be in the efficient group from 2006 through 2008 ($p < 0.01$). This result is consistent with our finding that financial pressure leads to lower costs; however, hospitals under high pressure tended to have more readmissions.
- Hospitals with strong revenue growth were not significantly more or less likely to be in the high-performing group. In our site visits to hospitals, some managers appeared to place greater emphasis on volume growth than others. This tendency may distract some of the organization's attention away from cost and quality metrics. Using volume growth as a proxy for managerial focus on volume, we hypothesized that hospitals in the top third of historic revenue growth would be less likely to be in our efficient group because of a greater managerial focus on volume. However, we found no difference in the likelihood of being in the efficient group ($p = 0.62$). Hospitals with strong volume growth tended to have higher costs, but they also tended to have lower mortality, resulting in no net difference in the odds of being in our efficient group.

We also controlled for potential confounding factors such as a hospital's Medicaid and Medicare share of patient days, the share of Medicare patients eligible for

Supplemental Security Income benefits, the share of the county population that was uninsured, whether the hospital was in a system, whether the hospital had one or more approved resident training programs, whether it had electronic medical records, whether it was for profit, whether the hospital was located in an urban area, and per capita income in the county where the hospital was located. None of these control variables is statistically significant in the multivariate model.

To look more closely at the driving forces behind the relationship between the structural variables and assignment to the efficient group, we also ran a series of ordinary least-squares regressions in which the dependent variables were relative performance on our measures of standardized costs per discharge, risk-adjusted mortality, and risk-adjusted readmissions. These analyses generally supported our hypotheses that larger hospitals tend to have lower mortality and that hospitals with skilled nursing facilities tend to have lower inpatient costs and readmissions. We also found that hospitals under financial pressure tended to have lower costs. However, we found that hospitals under high financial pressure tended to have higher readmission rates. We cannot be sure if the high level of financial pressure influences readmissions, or if other factors such as economic distress among the patient population contributed to both the hospitals' financial stress and their high readmission rates (Medicare Payment Advisory Commission 2010b). ■

Historically strong performers continue to have lower cost in 2009 Hospitals that were low-cost and low-mortality providers from 2006 through 2008 continued to have lower costs in 2009. The median standardized Medicare cost per discharge in the efficient group was 10 percent lower than the national median, compared with 2 percent higher for the other group. The lower costs allowed the relatively efficient hospitals to generate higher overall Medicare margins. The median hospital in the efficient group had an overall Medicare margin of 3 percent, while the median hospital in the other group had an overall Medicare margin of -6 percent. Among the relatively efficient hospitals, 65 percent had positive Medicare margins compared with 34 percent in the other group. The distribution ranged from -3

percent at the efficient groups' 25th percentile to 7 percent at the 75th percentile. For the comparison group, the 25th percentile was -17 percent and the 75th percentile was 3 percent.

We also examined relatively efficient hospitals that faced consistent overall financial losses (including revenues and costs from all payers and all lines of business) to see if any of these hospitals were in danger of closure. Among the efficient group, 2 percent (four hospitals) consistently had negative total (all payer) margins from 2006 through 2009. Among these four hospitals, one has since partnered with a larger facility, one is contemplating offers to be purchased, and one is planning to tear down the existing facility and

its parent system will build a more efficient facility at the same location. The fourth is a teaching hospital that appears to have financial resources from a foundation that supports the hospital. Therefore, we find that consistent all-payer losses are rare among the relatively efficient hospitals, and we expect closures to be a very rare event. Among the less efficient hospitals, a much larger share (8 percent) faced consistent financial losses during the 2006 through 2009 period. This loss could stem from their higher cost structures.

Continuing improvement in methods used to identify efficient providers Our current measures of hospital costs and outcomes focus on inpatient care. Because we expect to see continual improvement in risk-adjustment methodologies, the measures we use to identify efficient providers will evolve and may eventually include outpatient metrics. We may also break down our analysis to focus more narrowly on the lowest cost providers that can generate high-quality outcomes. Finally, we may examine the potential for looking at combined readmission and mortality measures because some mortality and readmission metrics tend to be negatively correlated.

How should Medicare payments change in 2012?

Each year, we provide update recommendations for services covered by Medicare's operating IPPS and OPSS.¹⁶ These recommendations apply only to acute care inpatient and outpatient services; update recommendations for services furnished in hospital-owned rehabilitation, home health, and skilled nursing units are based on separate analyses for those types of Medicare services. For both the acute IPPS and OPSS, the update in current law for fiscal year 2012 equals the projected increase in the hospital operating market basket index minus an adjustment equal to the Secretary's forecast of the 10-year average productivity growth in the country and a -0.1 percent budgetary adjustment.

CMS measures price inflation for the goods and services hospitals use in producing inpatient and outpatient services with the hospital operating market basket index. CMS's latest forecast of the change in this index for fiscal year 2012 is 2.6 percent, but it will update the forecast twice before using it to revise payments in 2012. The productivity forecast is currently 1.3 percent. The net result is a current law update of at most 1.2 percent (2.6 - 1.3 - 0.1). The 1.2

percent rate is an upper bound under current law because CMS has stated that it also must eventually make a -3.9 percent adjustment to inpatient payments to prevent further overpayments due to DCI. If CMS took some of the DCI adjustment in 2012, updates would be lower than 1.2 percent.

Update recommendation

RECOMMENDATION 3

The Congress should increase payment rates for the acute care hospital inpatient and outpatient prospective payment systems in 2012 by 1 percent. The Congress should also require the Secretary of Health and Human Services to make adjustments to inpatient payment rates in future years to fully recover all overpayments due to documentation and coding improvements.

RATIONALE 3

In considering its update recommendation, the Commission has struck a balance between a number of competing factors. On the one hand, average total Medicare margins are negative (-5 percent in 2009 and projected to reach -7 percent in 2011). On the other hand, our update framework indicators (access to care, including supply and service volume; quality of care; and access to capital) are positive. Furthermore, the negative Medicare margins are due at least in part to the lack of private financial pressure for cost containment, and the set of hospitals identified as efficient have a median Medicare margin of about 3 percent. On the basis of these circumstances, the Commission contemplated an update of 2.5 percent.

However, two additional considerations led the Commission to its recommended update of 1 percent. For inpatient services, the Commission and others have documented past and ongoing overpayments resulting from changes in documentation and coding after implementation of MS-DRGs in 2008. Current law does not allow full recovery of past overpayments and no action has been taken to stop the ongoing overpayments. The Commission believes that all overpayments should be recovered and that the most urgent step is to stop the ongoing overpayments. To accomplish this objective, the Commission would reduce the ongoing overpayment by 1.5 percentage points—that is, the difference between its contemplated update of 2.5 percent and its recommended update of 1 percent. This adjustment would account for 1.5 percentage points of the 3.9 percent adjustment needed to fully prevent accumulation of further overpayments.

For outpatient hospital services, the Commission is concerned that significant payment disparities among Medicare's ambulatory care settings (hospital outpatient departments, ambulatory surgical centers, and physician offices) for similar services are fostering undesirable financial incentives. Physician practices and ambulatory surgical centers are being reorganized as hospital outpatient entities in part to receive higher reimbursements. The Commission believes that Medicare should seek to pay similar amounts for similar services, taking into account differences in quality of care and in the relative risks of the patient populations. The Commission is concerned by the trend to reorganize for higher reimbursement and will examine this issue. However, in the interim, the modest update of 1 percent is warranted in the hospital outpatient setting to slow the growing payment rate disparities among ambulatory care settings.

We also recommend recovering all overpayments due to DCI. This is necessary to make the transition to MS-DRGs budget neutral. The Secretary is currently required to recover overpayments from 2008 and 2009, but current law does not permit the Secretary to recover overpayments that occurred in 2010 and that will continue to accumulate in 2011 and 2012 until CMS makes an offsetting adjustment of -3.9 percent.

Spending

- This recommendation would increase Medicare spending by between \$250 million and \$750 million in 2012 and would save between \$1 billion and \$5 billion over five years as past overpayments are recovered in future years.

Beneficiary and provider

- This recommendation should have no negative impact on beneficiary access to care and is not expected to affect providers' willingness and ability to provide care to Medicare beneficiaries.

The transition to MS-DRGs should be budget neutral. To accomplish this transition, future adjustments will be needed to prevent further overpayments and recover past overpayments. The speed at which these adjustments take place can be evaluated each year. Next year, when the Commission makes recommendations for 2013, we will again have to evaluate the degree to which payments should be adjusted to prevent further overpayments and recover past overpayments. This evaluation is necessary because of the overpayments that occurred in 2010 and will continue in 2011 and 2012 because CMS has not yet adjusted the 3.9 percent DCI effect. ■

Endnotes

- 1 National and state-level ratios of hospital beds per capita were calculated using staffed inpatient bed data from the American Hospital Association's "Annual Survey of Hospitals," population data from the U.S. Census Bureau, and Medicare enrollment data from CMS's Denominator file.
- 2 The share of hospitals and their affiliates providing each service was calculated as the percentage of hospitals indicating availability of the services within the hospital, network, system, or joint venture.
- 3 Outpatient service volume is measured by counting the number of separately payable Healthcare Common Procedure Coding System (HCPCS) codes. HCPCS definitions can change over time as can the HCPCS codes that are paid separately and the ones that are bundled, which can have some effect on annual changes in volume.
- 4 The data on visits to hospital-based practices come from outpatient claims files. Data on visits to freestanding physician offices come from physicians' Medicare claims. The physician claims file shows that billings for visits to hospital-based clinics grew by roughly 10 percent compared with 1 percent growth at freestanding offices.
- 5 Data concerning the share of beneficiaries with at least one inpatient hospital stay, the average number of inpatient stays per hospitalized beneficiary, and the average beneficiary length of stay were calculated using Medicare inpatient claims data from CMS's MedPAR files and beneficiary enrollment data were calculated from CMS's denominator file. Hospital occupancy rates were calculated using the total bed days and staffed beds variables from the American Hospital Association's "Annual Survey of Hospitals."
- 6 Data from the American Hospital Association 2010 annual hospital survey also illustrate the trend toward hospital consolidation and the involvement of physicians in this trend. From 2004 to 2008, the number of hospitals that were members of a hospital system increased from 52 percent to nearly 56 percent, while the share of hospitals with an integrated physician employment model increased from 31 percent to 38 percent.
- 7 These events included those on the National Quality Forum's list of serious reportable events, Medicare's list of hospital-acquired conditions, and the four highest levels of the National Coordinating Council for Medication Errors Reporting and Prevention Index for Categorizing Errors (in all cases these are events in which harm reaches the patient).
- 8 The 3M software identifies readmissions that are potentially preventable by first excluding certain types of readmissions that are not related, such as an admission for trauma surgery or hip replacement following a pneumonia admission. To adjust for patient risk, the software compares the actual readmission rate with rates for patients in similar resource use categories (all patient refined-DRGs). A key difference from the Hospital Compare measures is that the 3M measure examines readmissions across all conditions rather than only the three used by CMS.
- 9 Similarly, the Commission has found that the measures currently reported by CMS for short-stay skilled nursing facility (SNF) patients have a number of limitations, including sample bias and evidence that the measures are not valid; therefore we instead use two outcome measures in our annual analysis of SNF quality because they capture important outcomes for patients admitted for a Medicare-covered SNF stay (Medicare Payment Advisory Commission 2007).
- 10 A margin is calculated as the difference between Medicare payments and Medicare costs divided by payments. The services included in the overall margin are Medicare acute inpatient, outpatient, graduate medical education, Medicare SNF (including swing beds), Medicare home health care, Medicare inpatient psychiatric, and Medicare inpatient rehabilitation.
- 11 In 2009, there was a substantial difference between the forecasted market basket used to set payment updates, projected to increase by 3.6 percent, and the actual increase of 2.6 percent, measured after the year is completed. Payment updates were set based on the forecasted market basket increase. Inpatient cost growth per discharge was roughly in between the actual and forecasted increase in the market basket. On a case-mix-adjusted basis, outpatient costs grew at underlying input prices.
- 12 The most recent cost growth data available at the time of this analysis were for the nine months ending September 30, 2010, from certain for-profit systems that report quarterly results. We compared 2009 and 2010 costs for Hospital Corporation of America, Community Health Systems, Lifepoint, Health Management Associates, Tenet, and Universal Health Services.
- 13 Hospitals located in counties with relatively low levels of spending will receive a share of the fixed \$150 million reserved for 2011 and \$250 million reserved for FY 2012 based on their relative proportion of IPPS operating payments. The Patient Protection and Affordable Care Act of 2010 set the two-year payment total at \$400 million.

- 14 The American Recovery and Reinvestment Act of 2009 mandates that HIT payments also be made to hospitals through the Medicaid program.
- 15 Medicare spending varies in part because of the factors Medicare uses to account for differing wages, payment rates, and health status. We adjust for those factors to arrive at service use. A discussion of our methods to compute regional variation in service use is available at: http://www.medpac.gov/documents/Dec09_RegionalVariation_report.pdf.
- 16 Our update recommendations focus on inpatient operating payment rates and payment rates for outpatient services (which encompass both operating and capital costs of outpatient services). The Secretary of Health and Human Services makes a separate evaluation of updates to per discharge payment rates for inpatient capital costs.

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