

C H A P T E R

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## **Critical access hospitals**

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## Critical access hospitals

The Congress mandated that MedPAC study the effect of the critical access hospital (CAH) provisions in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA). The CAH program increases Medicare payments to small hospitals whose Medicare costs exceed prospective payment system (PPS) rates. The program has increased Medicare payments and the profitability of many small rural hospitals. Cost-based payments for those CAHs will total about \$5 billion in 2006, roughly \$1.3 billion more than under the PPS. The MMA changes will cause a few more hospitals to convert to CAH status this year but will also effectively stop conversions after 2005.

Some CAHs are quite close to other providers. In 2003, approximately 17 percent of cost-based Medicare payments went to CAHs that were 15 or fewer miles from another hospital. This raises an issue of competition between CAHs and providers paid under Medicare PPS. For example, Medicare payments to CAHs for post-acute patients in swing beds are higher than rates paid to competing SNFs. Payment modifications and other adjustments may be needed for fair competition.

### In this chapter

- Congressional mandate and background
- How does conversion to CAH status affect hospitals?
- Is quality of care at low-volume rural hospitals comparable to that of higher volume rural hospitals?
- MMA changes to the CAH program
- Summary of findings

## Congressional mandate and background

The Congress mandated that MedPAC “analyze the effect on total payments, growth in costs, capital spending, and such other payment effects” of a broad range of rural provisions in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA). This rural report is due in December 2006. As an interim step, the Congress also mandated that “The Commission shall submit to Congress an interim report on the matters...with respect to changes to the Critical Access Hospital provisions under section 405” of the MMA (see text box, p. 174). In this report, we describe the current state of the critical access hospital (CAH) program and then evaluate the current and future implications of the following four key aspects of section 405:

- removing states’ ability to waive the requirement that a CAH be located 35 miles by primary road and at least 15 miles by secondary road from another provider starting in 2006;
- increasing the maximum daily acute census from 15 to 25;
- allowing CAHs to operate PPS psychiatric and rehabilitation units, which do not count toward the 25-bed limit; and
- increasing CAH payments to 101 percent of costs.

## History

In 1988, the Montana Hospital Research and Education Foundation (an affiliate of the Montana Hospital Association) designed a demonstration of a type of hospital called a medical assistance facility (MAF) that received cost-based reimbursement from Medicare. MAFs were isolated, limited-service hospitals that could admit patients for up to a four-day length of stay. In 1989, the Congress authorized the Rural Primary Care Hospital (RPCH) program, a second demonstration program whereby small, rural hospitals would receive cost-based payments from Medicare. The Balanced Budget Act of 1997 (BBA) merged the MAF and RPCH programs into a new category of hospitals called critical access hospitals (CAHs). CAHs would receive cost-based inpatient and outpatient payments from Medicare. To qualify for the CAH program, a hospital had to be 15 miles by secondary

road and 35 miles by primary road from the nearest hospital or be declared a “necessary provider” by the state. Because states can waive the distance requirement, the CAH program became an option that could help almost all small rural hospitals, as opposed to being limited to helping isolated hospitals.

Following the BBA, the Congress approved a series of legislative and regulatory changes that made the program more beneficial for rural hospitals (Table 7-1). In 2000, the Congress categorized on-call payments to physicians as a reimbursable expense and provided CAHs with cost-based reimbursement for post-acute services in swing beds. Swing beds can be used for acute or post-acute care. The MMA reduced restrictions on CAHs by allowing them to treat up to 25 (rather than up to 15) acute patients at one time, and to operate psychiatric or rehabilitation units. The MMA also increased inpatient and outpatient payments to CAHs from 100 percent of costs to 101 percent of costs. Advocates have argued that CAHs need Medicare payments to be greater than costs so they can build reserves to replace buildings and equipment that continue to become more expensive. CMS restrained the program’s growth somewhat in 2004 when it clarified that observation beds that could also be used as inpatient beds would count toward the 25-bed limit. As a result, some hospitals that have a peak census above 25 patients may have decided not to convert to CAH status. Given current CAH payment policies, most rural hospitals that have a peak census of 25 or fewer patients will benefit from conversion to CAH status if they expect their Medicare prospective payments to be less than 101 percent of allowed Medicare costs.

CAH regulations also require that patients’ length of stay in CAHs be limited to an average of four or fewer days. If a CAH fails to meet the four-day rule (a rare case), CMS requires that the CAH develop and implement a plan of correction. The flexibility provided by swing beds makes it easier for CAHs to meet the four-day rule. Physicians can discharge their patients to post-acute status after three days of acute care if the patient meets the clinical requirements for being discharged to post-acute care. The patient can stay in the same swing bed and the CAH receives the same cost-based payment. The average Medicare acute length of stay at hospitals that converted to CAH status fell from 3.8 days in 1998 to 3.2 days in 2003. The sum of Medicare acute and post-acute days in swing beds per Medicare discharge increased from 6.0 days in 1998 to 6.4 days in 2003 for hospitals with swing beds.

**TABLE  
7-1**

**Legislation and changes in regulation make CAH conversions easier and increase payments**

<b>Legislation</b>	<b>Key aspects of CAH legislation and regulations</b>
BBA (1997)	The CAH program is enacted. It allows rural hospitals to choose cost-based payments for outpatient and acute inpatient services if the hospitals agree to the following limitations: <ul style="list-style-type: none"> <li>• 15 acute patients.</li> <li>• 25 total patients (including swing beds, excluding observation beds).</li> <li>• All patients' length of stay is limited to 4 days.</li> <li>• States can declare rural hospitals "necessary providers," removing the requirement that hospitals be isolated from other providers.</li> </ul>
BBRA (1999)	<ul style="list-style-type: none"> <li>• Length-of-stay restriction is changed to an average of 4 days.</li> <li>• States can declare hospitals "rural," allowing CAHs to exist in MSAs.</li> </ul>
BIPA (2000)	<ul style="list-style-type: none"> <li>• Medicare pays cost-based reimbursement of "on-call" payments to physicians. PPS hospitals do not receive this type of payment.</li> <li>• CAHs receive cost-based reimbursement for Medicare post-acute patients in swing beds.</li> </ul>
Cost accounting regulations (2001)	<ul style="list-style-type: none"> <li>• CMS increases CAH Medicare post-acute payments in rules regarding CAHs' swing-bed cost accounting methodology.</li> </ul>
MMA (2003)	<ul style="list-style-type: none"> <li>• Inpatient limit is expanded from 15 to 25 acute patients.</li> <li>• Rehabilitation and psychiatric units are allowed and do not count toward the 25-bed limit. They are still paid PPS rates.</li> <li>• Payments increased to 101 percent of costs.</li> <li>• Starting in 2006, new CAHs must be 35 miles by primary road or 15 miles by secondary road from another provider. States can no longer waive this requirement.</li> </ul>
CMS interpretive guidelines (2004)	<ul style="list-style-type: none"> <li>• CMS will count observation beds that could be used as acute beds toward the 25-bed limit.</li> </ul>

Note: CAH (critical access hospital), BBA (Balanced Budget Act of 1997), BBRA (Balanced Budget Refinement Act of 1999), MSA (metropolitan statistical area), BIPA (Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000), PPS (prospective payment system), MMA (Medicare Prescription Drug, Improvement, and Modernization Act of 2003).

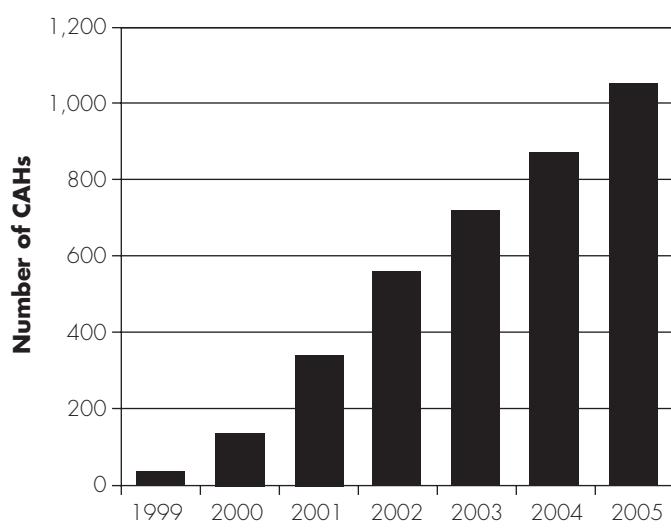
The increase in post-acute days per discharge may reflect longer post-acute stays at the CAH and an increase in patients transferred to the CAH for post-acute care.<sup>1</sup>

**The number of CAHs has grown rapidly**

As the series of legislative changes shown in Table 7-1 made CAH status more attractive, the CAH program grew from 41 hospitals on January 1, 1999, to 1,055 hospitals on January 1, 2005 (Figure 7-1). Most CAHs failed to meet the 35-mile criteria for being considered an isolated provider and entered the program based on state criteria that declared them necessary providers. A state can declare hospitals necessary providers only if it has an approved rural health plan that lists the criteria used to determine which hospitals are necessary providers. States have set the criteria so that most (and in some cases, all) of their small rural hospitals are declared necessary providers, and therefore are eligible to be helped by the CAH program. Criteria do not have to be closely related to access to care. For example, some states give necessary provider status to all rural hospitals in counties with an above-average percentage of people over age 65. One state declares hospitals necessary providers if they have a high risk of closure based on several considerations such as having a low occupancy rate and being located in an area with local

**FIGURE  
7-1**

**The CAH program is growing rapidly**

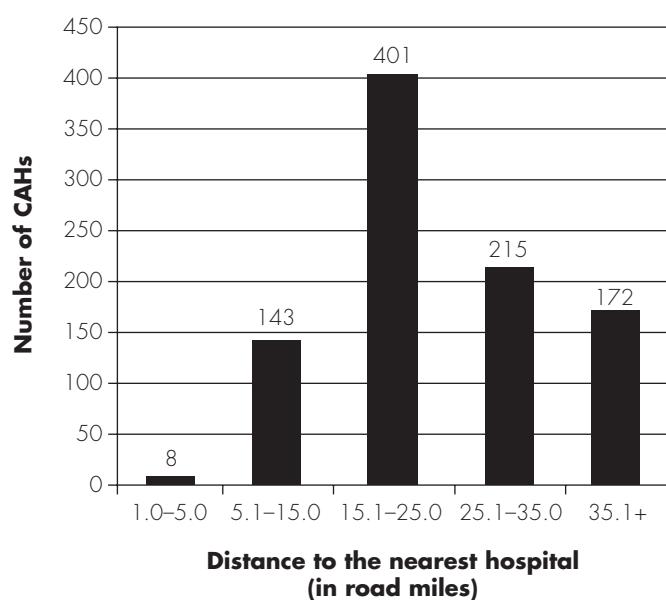


Note: CAH (critical access hospital). Number is as of January 1 of each year.

Source: The Rural Hospital Flexibility Tracking Project, 2003, and additional data from CMS.

**FIGURE  
7-2**

**Most CAHs are 15 to 35 miles from other hospitals**



Note: CAH (critical access hospital). Distances from 939 CAHs that were operating in fall 2004 are to the closest hospital, which may be another CAH. Indian Health Service CAHs and hospitals located closest to Indian Health Service hospitals are excluded from this analysis.

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

competition (Gale 2002). CMS gave states great flexibility in setting necessary provider criteria because CMS believed that the Congress intended to give the states almost total control over this issue.

In addition to the “necessary provider rule,” states can declare hospitals rural, even those within metropolitan statistical areas (MSAs). Due to the flexibility in the “necessary provider” and rural requirements, only 18 percent of CAHs are more than 35 road miles from another provider (Figure 7-2). We identified 151 hospitals that were located 15 or fewer road miles from another provider and 616 that were located 15 to 35 road miles from another provider.

### How does conversion to CAH status affect hospitals?

The CAH program is designed to increase Medicare payments to low-volume hospitals whose Medicare costs

exceed PPS payment rates. Hospitals project whether their costs (under CAH cost accounting) will exceed PPS payment rates by hiring consultants. The Federal Office of Rural Health Policy provides hospitals with grant funds to pay these consultants through the Rural Hospital Flexibility Grant program.<sup>2</sup> CAHs receive four key types of cost-based Medicare payments: (1) inpatient, (2) general outpatient, (3) post-acute (swing-bed), and (4) laboratory payments.<sup>3</sup> To estimate how the four types of payment changed following conversion, we examine changes in Medicare payments from 1998 (preconversion) to 2003 (postconversion) for hospitals that converted between 1999 and 2002. To control for industry-wide changes in the volume of services, we compare changes in Medicare payments for converting hospitals with changes in Medicare payments for a comparison group of similar hospitals that remained PPS hospitals during that timeframe.

Because all CAHs had 1,900 or fewer discharges in 2003, we limit the comparison group to hospitals that either became CAHs in 2004 or had fewer than 1,900 discharges in 2003. Because most CAHs are located in rural locations, we also limit the comparison group to hospitals outside core metropolitan areas, as defined by Rural-Urban Commuting Areas (RUCAs), which use census tracts (rather than counties) to evaluate the degree to which various areas are rural (Morrill et al. 1999). We further restricted CAHs and the comparison hospital sample to hospitals that filed a 12-month (as opposed to a partial-year) cost report in 1998 and 2003. The result is a set of 498 CAHs that converted to CAH status between 1999 and 2002 and 551 comparison hospitals that retained their PPS status through 2003. The 551 comparison hospitals are larger than the average existing CAHs, but they still fall within the size range for CAHs.<sup>4</sup> In fact, during the first nine months of 2004, 141 of the 551 comparison hospitals converted to CAH status. We expect that roughly half of the comparison hospitals will convert to CAH status by the end of 2005.

In the subsections below, we first discuss the benefits of cost-based inpatient, outpatient, and post-acute (swing-bed) payments. We then turn to the more difficult issue of laboratory payments.

**Inpatient Payments** Medicare cost reports indicate that converting CAHs had reported inpatient costs that exceeded PPS payments by an average of \$10,000 before conversion—indicating that for most hospitals, cost-based

inpatient reimbursement was a small incentive to convert. Following conversion, inpatient payments per CAH discharge increased from \$3,868 in 1998 to \$4,704 in 2003, a 4 percent annual rate of increase. This change exceeded the 2.3 percent annual increase at the comparison hospitals. The net annual average increase in inpatient payments was \$81,000 per hospital (Table 7-2, p. 164). Total inpatient payments to CAHs rose slower than the rate of cost growth per discharge due to a decline in the average number of Medicare acute discharges from 575 in 1998 to 499 in 2003 (Table 7-3, p. 166).

**Outpatient Payments** Converting hospitals reported total Medicare outpatient costs that exceeded Medicare payments by roughly \$100,000 in 1998 (before conversion). CAH conversion allowed these hospitals to eliminate the reported losses. In addition, conversion to CAH status allows on-call payments to physicians and other on-call providers to become a reimbursable outpatient cost. Elimination of losses on outpatient

services and higher outpatient volume contributed to CAHs increasing their outpatient payments more than comparison hospitals (an annualized rate of 15 percent compared with 5.7 percent per year [Table 7-2, p. 164]). Over five years, outpatient payments increased by an aggregate of 69 percentage points faster than at comparison hospitals. The one-time shift to cost-based reimbursement accounts for much of this jump in outpatient payments.

**Post-acute payments** When a hospital converts to CAH status, it qualifies for cost-based reimbursement for post-acute patients in swing-beds. The shift from receiving SNF rates for post-acute patients to receiving estimated costs (which assume post-acute routine costs equal acute routine costs) resulted in a dramatic increase in post-acute care payments from \$259 per day before conversion to \$1,016 per day after conversion (Table 7-2, p. 164). This compares to an increase from \$262 to \$270 at comparison hospitals that operated swing beds in 1998

## Swing-bed cost accounting rules result in higher post-acute payments

In fiscal years starting before December 21, 2000, Medicare paid critical access hospitals (CAHs) a fixed payment for the costs associated with routine care provided to post-acute patients in swing beds. This fixed payment equaled the average cost of routine care for post-acute patients in freestanding skilled nursing facilities (SNFs). Due to the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, CMS now uses a new method to calculate payments for routine services (HCFA 2001).

Under this new method, CMS pays for routine care based on hospitals' reported costs, averaged over acute and skilled nursing patients. To calculate the cost of a post-acute patient's routine care, CMS divides the hospitals' total inpatient routine costs (acute and post-acute) by the sum of acute and post-acute days to obtain an estimated routine cost per day. Because hospitals' routine costs per day exceed freestanding SNFs' routine costs per day, this change in payment methodology causes a significant increase in payments for post-acute care. In our sample of CAHs, payments for post-acute care (including ancillary services) rose from \$259 per

day before conversion to \$1,016 per day after conversion (Table 7-2, p. 164).

Relative to the old method, the new payment methodology increases payments for post-acute care and decreases payments for acute care. The changes reflect a shift in cost allocation from acute to post-acute care. To compute the routine costs allocated to acute patients, CMS starts with total inpatient routine costs and then "carves out" the payments for Medicare post-acute patients. CMS then allocates the remaining costs to acute patients. When post-acute payments increase, the amount that CMS carves out increases, and the costs remaining to be allocated to acute patients decrease. Although CAHs receive roughly \$1,000 in Medicare payments for every post-acute day, some of that gain is offset by a reduction in costs allocated to acute patients. For the marginal post-acute day, the net increase in Medicare payments may be only \$400 to \$500 rather than the full \$1,000. Net revenue per post-acute day of \$400 to \$500 is about \$100 to \$200 more than SNF payment rates of roughly \$300 per day. ■

and 2003. The increased payment rates—not utilization—were the primary reason that payments to converting hospitals increased by an average of \$463,000 per hospital (Table 7-2).

Most of the increased swing-bed revenue is offset by a decline in payments for Medicare acute patient days. Financial consultants to CAHs have informed us that some hospital administrators do not fully appreciate how this offset works. A more transparent pricing system may improve hospital administrators' ability to understand exactly how much their Medicare revenue will increase when they serve more Medicare post-acute patients in swing beds. We discuss the details of swing-bed cost accounting in the text box (p. 163).

The sum of inpatient, outpatient, and post-acute (swing-bed) payments rose by 9.5 percent per year at hospitals that converted to CAH status, compared with a 3.3 percent rise at the comparison group hospitals (Table 7-2). If the CAHs' Medicare revenues had grown at the comparison group's annual rate (3.3 percent) rather than at their actual rate (9.5 percent), Medicare payments per hospital for inpatient, outpatient, and post-acute services would have been approximately \$750,000 lower in 2003. It should be noted that the rate of cost growth at the comparison hospitals was roughly 1 percent above the rate of increase in PPS payments. Therefore, the difference between the 9.5 percent payment increase for CAHs and the 3.3 percent payment increase at PPS hospitals partially

**TABLE  
7-2**

**CAHs benefit from large increases in outpatient and swing-bed payments**

	<b>Medicare payments 1998</b>	<b>Medicare payments 2003</b>	<b>Change</b>	<b>Annualized growth rate</b>
<b>Total payments per hospital</b>				
<b>CAHs that converted after 1998 and before 2003</b>				
Inpatient	\$1,240,000	\$1,321,000	\$81,000	1.0 %
Outpatient	528,000	1,061,000	533,000	15.0
Post-acute (swing-bed)	+ 117,000	+ 580,000	+ 463,000	37.7
Total payments	1,885,000	2,962,000	1,077,000	9.5
<b>Comparison hospitals that did not convert</b>				
Inpatient	\$2,363,000	\$2,695,000	\$332,000	2.7 %
Outpatient	786,000	1,038,000	252,000	5.7
Post-acute (swing-bed)	+ 134,000	+ 122,000	+ -12,000	-1.9
Total payments	3,283,000	3,855,000	572,000	3.3
<b>Payments per unit of service</b>				
<b>CAHs that converted after 1998 and before 2003</b>				
Per acute discharge	\$3,868	\$4,704	\$836	4.0%
Per post-acute day	259	1,016	757	31.4
<b>Comparison hospitals that did not convert</b>				
Per acute discharge	\$4,166	\$4,670	\$504	2.3%
Per post-acute day	262	270	8	0.6

Note: CAH (critical access hospital). In this table, outpatient revenue in 1998 and 2003 does not include outpatient lab costs because fee schedule data were not readily available. The Medicare payments also do not include skilled nursing facility, home health, rehabilitation, or psychiatric unit payments, which are all paid based on prospective payment systems.

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

reflects the fact that updates in PPS payments were lower than increases in hospital costs from 1998 through 2003.

**Laboratory payments** Traditional hospitals receive payments for outpatient laboratory services based on a fee schedule. CAHs receive cost-based payments. We cannot precisely compute how much larger CAHs' cost-based laboratory payments are because we lack preconversion Medicare cost data on laboratory services. However, our discussions with CAH accountants, analysis of postconversion laboratory payments, and examination of total lab costs before conversion suggest that, on average, cost-based laboratory payments increase CAH payments by roughly \$100,000 per CAH.

**Net increase in Medicare payments** Converting hospitals reported over \$3 million per hospital in cost-based Medicare payments in 2003, which is roughly \$850,000 more per hospital than CAHs would have received if payments had risen at the same rate as that of the comparison hospitals. The \$850,000 consists of the estimated \$100,000 in additional laboratory payments plus the \$750,000 figure representing above-average growth in inpatient, outpatient, and post-acute (swing-bed) payments.

**The difference in PPS payment rates and cost-based payment rates** How much of the \$850,000 represents an increase in the payment rate, and how much represents an above-average increase in patient volume? To answer this question, we used patient-level claims data to model the payments that hospitals would have received under PPS in 2003 and compared those payments with the payments that CAHs actually received under cost-based reimbursement in 2003. We modeled outpatient payments by calculating ambulatory payment classification (APC) and hold-harmless payments based on Medicare claims and cost report data submitted by the hospitals. The difference between CAH payment rates and PPS payment rates provides a rough estimate of increased Medicare spending. In addition to modeling outpatient PPS payments, we modeled inpatient payments and swing-bed payments. Inpatient payments were modeled using the hospitals' 2003 case mix index derived from claims data using a 2003 diagnosis related group (DRG) grouper and any special payment status the hospital had, such as sole community hospital status prior to converting to CAH status. We modeled PPS swing-bed payments using the per diem rate received by the comparison group hospitals.

We found that roughly all of the \$850,000 represented increased payment rates to CAHs rather than volume increases.<sup>5</sup> While CAHs increased their volume of outpatient services and post-acute days following conversion, these increases were roughly offset by decreases in inpatient volume.<sup>6</sup> Averaging across inpatient and outpatient service lines, volume growth appears to be about equal in the two hospital groups from 1998 to 2003.

If the difference between CAH payments and PPS payment rates per hospital was roughly \$850,000 in 2003, what will the difference be in 2006? To answer this question, we needed to make four adjustments to the \$850,000 figure. First, we adjusted for the increases to PPS payment rates that were enacted as part of the MMA, including increases in disproportionate share payments, a lower labor share for hospitals with a below-average wage index, and a low-volume adjustment for isolated rural hospitals that will be in effect in 2006. Second, we accounted for the fact that CAHs will receive 101 percent of Medicare costs in 2006 rather than the 100 percent of costs received in 2003. Third, we modeled PPS payments with the hold-harmless provision extended and a second time assuming the hold harmless is allowed to expire prior to 2006. Fourth, we examined a range of potential cost increases at CAHs.

We found that if CAHs can restrain their cost growth to a level equal to increases in PPS payment rates and if the outpatient hold-harmless provision is extended, the net difference between CAH payment rates and PPS payment rates would grow from roughly \$850,000 in 2003 to slightly below \$1 million per CAH in 2006. However, if Medicare payments to CAHs continue to rise at historical rates or if the hold-harmless provision is allowed to expire, the difference between CAH payments and PPS payments would rise to over \$1 million per year in 2006. Given the range of potential differences between CAH payment rates and PPS payment rates, we estimate that 2006 payments per CAH will be roughly \$1 million higher under cost-based reimbursement than they would have been under PPS payment rates.

## **The hospital doors stay open**

One goal of the CAH program is to preserve access to care in isolated areas by improving the financial condition of isolated hospitals and preventing closures. The program has accomplished that mission. By converting to CAH status, converting hospitals have dramatically increased

their Medicare payments and improved their all-payer profit margins from -1.2 percent in 1998 to 2.2 percent in 2003.<sup>7</sup> This increase can be compared to the comparison hospitals' decline in all-payer margins from 2.2 percent in 1998 to -0.2 percent in 2003. As CAHs improved their profitability, CAH closures almost ceased. CMS reported that 15 CAHs closed from 1999 through 2003, and we have identified one additional closure in 2004. The hospital that closed in 2004 was approximately six miles away from two competing hospitals. A for-profit corporation is considering reopening the closed CAH.<sup>8</sup>

Many of the CAHs that are helped by the program are critical for beneficiaries' access to care. Some are in isolated areas of the West; others are located on islands (e.g., Martha's Vineyard; Kodiak, Alaska). In these isolated areas, the CAH may serve as the only source of care—not only for local citizens but also for individuals visiting the area or driving through on local highways. About 20 percent of CAHs (172 of the approximately 939) for which we have data are located more than 35 road miles from the closest hospital.

### **Why did some small hospitals choose not to convert?**

In most cases, hospitals do not convert to CAH status for one of two reasons:

- They do not want to be limited to 25 acute-care beds.
- They expect their Medicare PPS payment rates to be higher than their reported costs under CAH cost accounting.

Hospitals with above-average Medicare PPS payment rates are less likely to convert. The comparison hospitals received an average of \$298 more in payments per discharge in 1998 than converters (\$4,166 versus \$3,868, Table 7-2, p. 164). Payments differ in part because comparison hospitals were more likely to be Sole Community Hospitals and more likely to receive significant disproportionate share (DSH) payments. Sole Community Hospitals receive inpatient payment rates based on their historical costs when these cost-based payments exceed current payment rates. (DSH payments go to PPS hospitals with high shares of Medicaid and low-income Medicare patients.) Hospitals that did not convert received an average of \$113,000 in DSH payments in 2003; they would have lost these payments if they had converted.

Hospitals with below-average costs are also less likely to convert. After adjusting for case mix and wage levels, comparison hospitals tended to have lower costs per discharge (\$4,013 versus \$4,429 for CAHs in 1998).

### **Changes in service offerings follow national trends and financial incentives**

Following conversions, CAHs exhibited a change in their service mix and in their patient mix. Services shifted from acute inpatient services to post-acute care and outpatient

**TABLE  
7-3**

### **Changes in service volumes per hospital following conversion to CAH status**

	<b>1998</b>	<b>2003</b>	<b>Change</b>
<b>Total acute discharges</b>			
Converters (n=498)	575	499	-76*
Comparison group (n=551)	1,097	1,121	24*
<b>Medicare acute discharges</b>			
CAH converters	320	288	-32*
Comparison group	568	586	18*
<b>Medicare acute and swing-bed days</b>			
Converters' Medicare acute days	1,229	939	-290*
Comparison Medicare acute days	2,368	2,209	-159*
Converters' swing days	461	651	190*
Comparison swing days	537	461	-76*
<b>Medicaid acute days</b>			
Converters' Medicaid acute days	159	127	-32*
Comparison Medicaid acute days	401	427	26*
<b>Total acute and swing-bed days (all payers)</b>			
Converters	2,764	2,439	-325
Comparison group	4,563	4,314	-249
<b>Medicare percentage of all days (acute and swing-bed)</b>			
Converters	61%	65%	4%*
Comparison group	62%	62%	0%*

Note: CAH (critical access hospital). Values presented are unweighted means. An evaluation of medians found similar changes over time and similar differences between CAHs and comparison hospitals.

\* Indicates changes are significant using a  $p < .01$  criterion and a standard t-test.

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

services. The hospitals' inpatient payer mix shifted toward post-acute Medicare patients and slightly away from acute Medicare and Medicaid patients (Table 7-3). The increased payment rates for post-acute services in swing beds may have contributed to the decision by an additional 10 percent of CAHs to initiate swing-bed services (Table 7-4).

In contrast with swing beds, the profitability of operating home health and hospital-based SNFs is expected to decline slightly following conversion to CAH status. Home health and SNF profitability decline slightly because Medicare pays for these types of care on a prospective basis. Retaining these services causes some hospital overhead to be allocated to these services, resulting in less hospital overhead eligible for cost-based reimbursement. Cost-based reimbursement can slightly distort the decision to close a home health agency or a SNF by reducing the profitability of the services due to the allocation of overhead to these services. CAHs were only slightly more likely to close their SNFs (4 percent versus 3 percent) and their home health agencies (11 percent versus 9 percent) than comparison hospitals (Table 7-4). The differences are not statistically significant, suggesting that the small shift in incentives is not having a large effect on decisions to close services.

The Federal Office of Rural Health Policy has funded a multiyear study by a team of academic researchers to track conversions to CAH status as well as CAHs' activities and successes. The Flex Tracking Team found that between 2002 and 2004, 40 percent of CAHs significantly expanded radiology services and 20 percent expanded laboratory services (Casey and Klingner 2004). Nineteen percent of CAHs expanded their rehabilitation services and 12 percent expanded their emergency services. In contrast, 6 percent of CAHs dropped their obstetric services.

### Distribution of payments, by distance to other hospitals

Although the CAH program has helped preserve access to emergency and inpatient care in isolated areas, it may not have accomplished this goal in an efficient manner. In some cases, Medicare pays cost-based reimbursement to CAHs that are not critical for patients' access to care. In our sample of 623 CAHs (which includes hospitals with partial-year cost reports), 15 percent of cost-based payments (\$289 million) went to providers that were located more than 35 miles from another provider, and 17 percent of payments (\$320 million) went to hospitals that were located within 15 miles of another provider (Figure 7-3, p. 168). The remainder of the \$1.9 billion in payments went to hospitals that were located 15 to 35 miles from another provider.

Consultants who work with CAHs have noted a flurry of activity among hospitals that are deciding whether to convert to CAH status before the states lose their ability to declare necessary providers on January 1, 2006. Based on these conversations and an examination of cost-report data, we estimate that roughly 1,300 CAHs will exist by the start of 2006. Given recent cost growth trends and the projected number of CAHs, we expect Medicare's cost-based payments to CAHs to total roughly \$5 billion in 2006. We estimate that this \$5 billion in payments will represent between 3 and 4 percent of all Medicare inpatient and outpatient payments to hospitals in 2006. We expect the \$5 billion in cost-based payments to be roughly \$1.3 billion above PPS payment rates for those services.

### Will CAH costs continue to grow rapidly?

The PPS was implemented in the early 1980s to increase hospitals' incentive to control costs. Now that CAHs have reverted back to cost-based reimbursement, there is a concern that CAHs will have a reduced incentive to

<b>TABLE 7-4</b>			
<b>Changes in service offerings</b>			
	<b>1998</b>	<b>2003</b>	<b>Change</b>
<b>Swing-bed services are offered</b>			
Converters	85%	95%	10%*
Comparison group	74	77	3*
<b>SNF services are in a distinct-part unit</b>			
Converters	32	28	-4
Comparison group	26	23	-3
<b>Home health agency services are offered</b>			
Converters	49	38	-11
Comparison group	56	47	-9

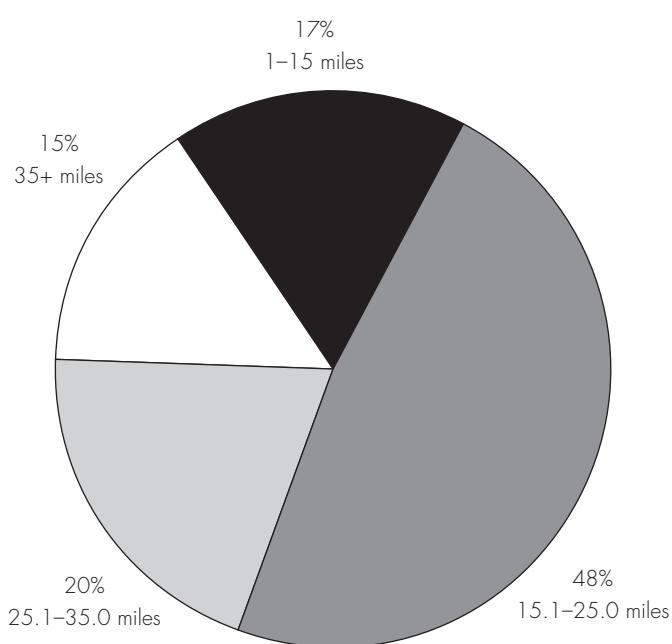
Note: SNF (skilled nursing facility).

\* Indicates changes are significant using a  $p < .01$  criterion and a standard t-test.

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

**FIGURE  
7-3**

**CAH payments, by distance from the nearest hospital**



Note: CAH (critical access hospital).

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

control costs. Although cost-based reimbursement does reduce hospitals' incentive to control costs, it does not eliminate that incentive. Three important points frame our thinking about CAHs' incentives to cost control costs:

- All hospitals have some incentive to control costs.
- The incentive is weaker under cost-based reimbursement.
- Factors other than cost-based reimbursement affect the hospitals' incentive to control costs.

Non-Medicare patients represent 35 percent of CAHs' inpatient days, and CAHs need to keep their costs below the rates they receive from private payers to remain profitable. Technically, CAHs need to keep their costs per unit of service on all non-Medicare patients (including indigent patients) lower than their income per unit of service, including nonoperating income such as government support, investment income, and charitable contributions. Although the need to make money on private-payer patients gives CAHs some incentive to

control costs, CAHs can increase spending more easily than similar PPS hospitals can, all else being equal. When a PPS hospital purchases additional labor or equipment, it must pay for those inputs with cash flow from existing sources or through increased patient volume. In contrast, when a CAH purchases additional labor or equipment, its Medicare payment per unit of service increases (assuming that volume does not change). For example, assume Medicare patients account for 50 percent of a CAH's charges. If that CAH hires a full-time pharmacist for a total cost of \$100,000 per year, the hospital must absorb \$50,000 of the cost, but increased Medicare reimbursements will pay for the remaining \$50,000. The effective price of the pharmacist drops from \$100,000 to \$50,000. If the employee's value to the community exceeds 50 percent of his or her cost, the hospital would hire that individual.

So why do some CAHs choose not to hire full-time pharmacists? Some CAH administrators may feel that they cannot afford the 50 percent of the cost that Medicare does not cover. Factors such as uncompensated care costs can place pressure on hospitals to control costs, making the hospitals more reluctant to make expenditures with a negative return on investment. In summary, cost-based reimbursement reduces hospitals' incentive to control costs, but it does not eliminate that incentive.

### **Costs per unit of service grow at CAHs**

To test for differences in cost growth between CAHs and our comparison group of similar small hospitals, we examined costs per inpatient day. We focus on inpatient days because this unit of output covers both Medicare acute-care days and post-acute (swing-bed) days. We have to combine acute-care and post-acute costs because the cost accounting rules for allocating costs between the two categories change when hospitals convert to CAH status.

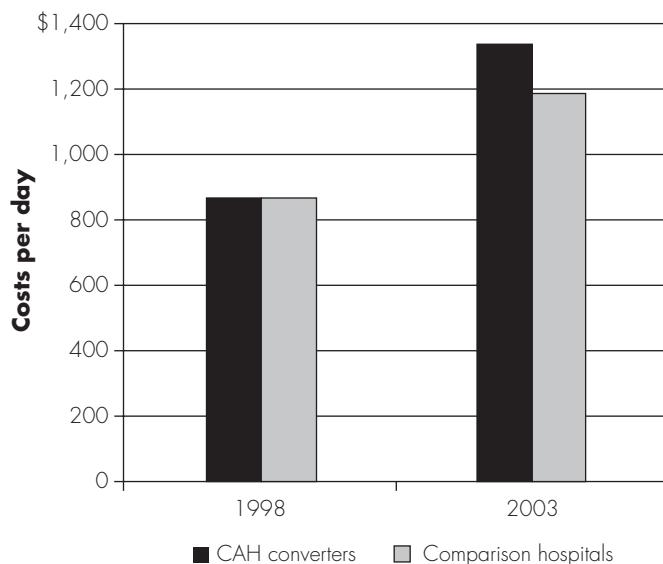
From 1998 to 2003, costs at converting hospitals rose by an average of \$461 per day, from \$869 to \$1,330 per day (a 53 percent increase) compared to a \$318 per day increase (37 percent) for the comparison group (Figure 7-4). This measure should be viewed with caution for three reasons. First, this measure is influenced by changes in total patient days and the ratio of post-acute days to acute days from 1998 to 2003. As we noted above, CAHs had a larger reduction in total days and a shift toward post-acute swing-bed patients. CAHs' reduction in total inpatient days will push costs per day upward, while the shift toward post-acute days may slightly push costs per day downward. Second, this cost increase may be a one-

time phenomenon associated with the conversion to CAH status. For example, if a hospital closes its SNF and home health agency, overhead costs may be allocated back to inpatient and outpatient services—therefore, the shift upward in costs may be a one-time event. Third, we cannot be sure about causation. Hospitals that experienced (or expect to experience) an increase in costs are more likely to convert because cost-based reimbursement is more advantageous for high-cost hospitals. Causation is likely flowing both ways: Cost growth can drive conversion and conversion can drive cost growth.

When we looked at cost growth of CAHs that had converted by 2001, we found that older CAHs actually reported lower cost growth per inpatient day from 2002 to 2003. These older CAHs showed an increase in costs per inpatient day of 7 percent (\$84) from 2002 to 2003, while the comparison hospitals reported cost increases of 9 percent (\$101) per day. The lower cost growth per day at CAHs could partially reflect the steady increase in post-acute Medicare days without an increase in Medicare acute discharges. The lower cost growth could also reflect a moderation in cost growth at CAHs following an initial jump in costs associated with conversion to CAH status.

**FIGURE  
7-4**

**CAH costs per inpatient day rose faster than those of comparison hospitals**



Note: CAH (critical access hospital). Days includes both acute and post-acute days.

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

**After conversion, Medicare payments to CAHs continue to grow**

To get an idea of how fast payments will continue to grow in years after conversion has been completed, we examined changes in payments to CAHs that converted by 2001. We found that Medicare payments for inpatient, outpatient, and post-acute services at CAHs increased by 16 percent from 2001 to 2002 and by 12 percent from 2002 to 2003—compared with 4 percent and 1 percent, respectively, for hospitals in the comparison group. The payment increases result from increases in costs and increases in the volume of services at CAHs.

**Is quality of care at low-volume rural hospitals comparable to that of higher volume rural hospitals?**

The CAH program helps small hospitals remain financially viable, even when they are located in close proximity to other small hospitals. A key policy issue is whether patients are better served by two small hospitals located in close proximity to one another or by one merged hospital. On the one hand, low-volume hospitals have limited resources. For example, a recent survey found that most CAHs do not employ a full-time pharmacist; 40 percent have a pharmacist on site for 10 or fewer hours per week (Casey et al. 2004). A lack of resources and a lack of experience seeing patients with similar conditions could affect outcomes at low-volume hospitals. On the other hand, patients at low-volume hospitals may receive more personal attention. The combination of less sophisticated resources and more personalized attention may affect outcomes differently, depending on the type of services that a hospital provides.

We have limited information on the quality of care in low-volume rural hospitals. The Institute of Medicine (IOM) notes a general absence of studies on patient safety in rural settings (IOM 2005). The Agency for Healthcare Research and Quality (AHRQ) reports patient safety indicator (PSI) rates for all-payer discharges in national, metropolitan, and micropolitan areas; however, it does not report PSI measures at small rural hospitals (AHRQ 2004). Romano and colleagues studied all-payer data for 1.1 million hospitalizations in 14 states in 2000. They found that rural hospitals reported fewer patient safety problems on 12 of 19 PSIs than urban nonteaching hospitals (Romano et al.

2003). Coburn and colleagues compared reported PSI rates for rural hospitals by size. Rural hospitals with fewer than 50 beds reported lower rates of postoperative hip fracture and postoperative hemorrhage or hematoma compared with rural hospitals with 50 to 99 beds. The hospitals with under 50 beds also reported lower rates of iatrogenic pneumothorax, infection due to medical care, and postoperative hemorrhage or hematoma, compared with rural hospitals with 100 or more beds (Coburn et al. 2004). This limited literature suggests that the smaller hospitals report fewer patient safety problems.

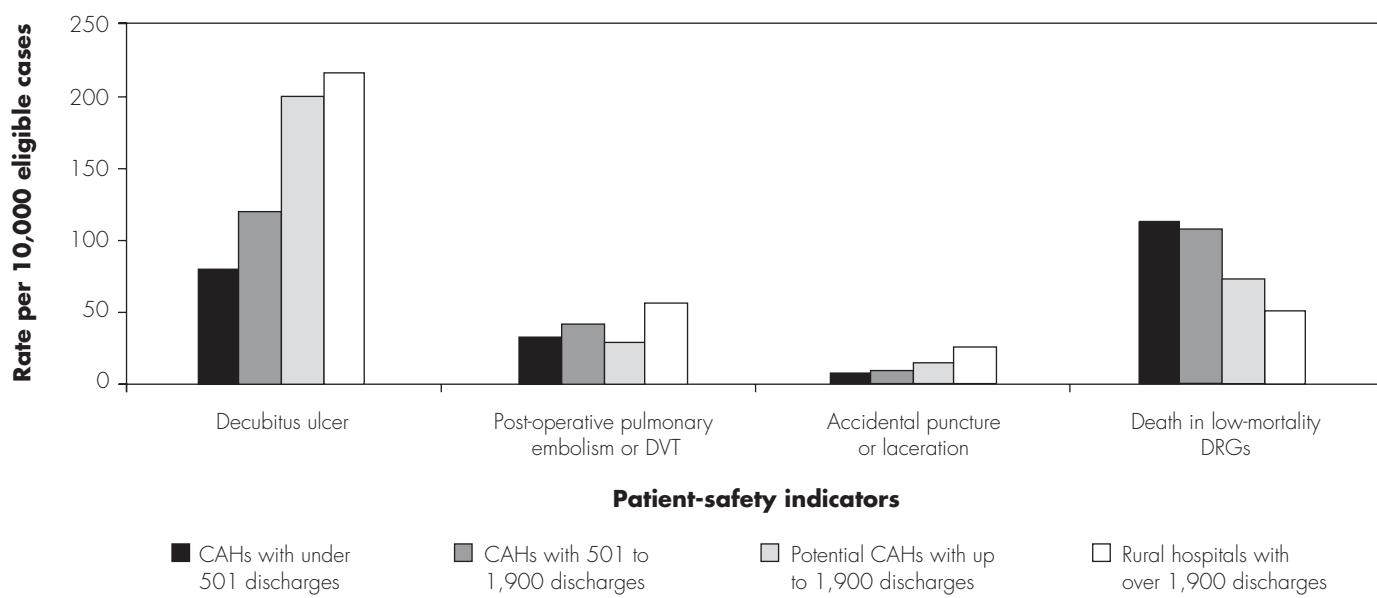
MedPAC presented information on hospitals' patient safety indicators and risk-adjusted mortality in our last two March reports (MedPAC 2004, MedPAC 2005). Due to the small number of discharges at CAHs, we limited our examination to the five most common patient safety issues at rural hospitals and the five DRGs with the largest number of deaths in rural hospitals. The small number of discharges at each individual CAH prevented us from accurately commenting on the quality of individual CAHs or even commenting on the variance in quality across

CAHs. We were limited to examining the average quality of care at different categories of hospitals. We compared small CAHs (500 or fewer discharges per year), larger CAHs (more than 500 discharges per year), our list of 551 potential CAHs (our comparison hospitals), and all other rural hospitals. We split CAHs into two categories—hospitals with more than 500 discharges and hospitals with fewer than 500 discharges—because prior research has indicated that the smaller CAHs are less likely to be accredited by the Joint Commission on Accreditation of Healthcare Organizations and less likely to employ a pharmacist for 40 or more hours per week (Casey et al. 2004).

We examined risk-adjusted rates of patient safety indicators for the most common adverse events in rural hospitals in 2003 (Figure 7-5). We risk adjust rates for age, sex, modified DRG, and comorbidity using AHRQ's methods (AHRQ, 2005). Although small CAHs reported higher mortality in low-mortality DRGs than other rural hospitals, these small CAHs (with 500 or fewer discharges) reported better rates than larger hospitals

**FIGURE  
7-5**

**Patient-safety scores, other than death in low-mortality DRGs, are better in smaller rural hospitals**

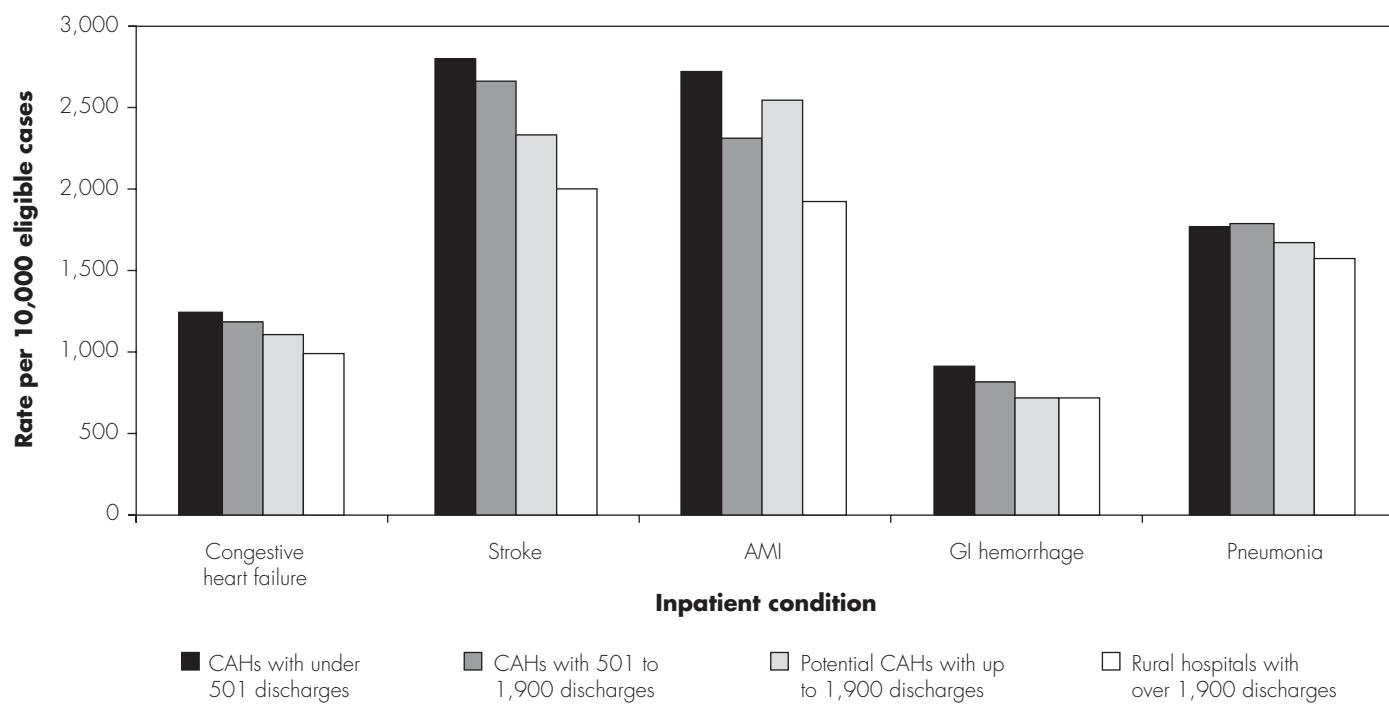


Note: DRG (diagnosis related group), DVT (deep vein thrombosis), CAH (critical access hospital). Rate is risk adjusted per 10,000 eligible cases by hospital size using 2003 data. Differences between rates for CAHs and rural hospitals with more than 1,900 discharges are statistically significant using a  $p < .5$  criterion.

Source: MedPAC analysis of 100 percent MedPAR data using Agency for Healthcare Research and Quality indicators and methods.

**FIGURE  
7-6**

**Mortality rates are higher in smaller rural hospitals**



Note: AMI (acute myocardial infarction), GI (gastrointestinal), CAH (critical access hospital). The total number of eligible cases at CAHs ranges from 1,946 for AMI to 17,180 for pneumonia. The number of eligible cases at potential CAHs ranges from 4,739 for AMI to 35,645 for pneumonia. Rate is risk adjusted per 10,000 eligible cases by hospital size using 2003 data. Differences between rates for CAHs and rural hospitals with more than 1,900 discharges are statistically significant using a  $p < .5$  criterion.

Source: MedPAC analysis of 100 percent MedPAR data using Agency for Healthcare Research and Quality indicators and methods.

for failure to rescue, accidental puncture or laceration, postoperative pulmonary embolism or deep vein thrombosis, and decubitus ulcer.

The limited literature on risk-adjusted mortality at rural hospitals is dated, reports mixed findings, and fails to separately examine hospitals as small as CAHs (Schlenker et al. 1996; Keeler et al. 1992). Our analysis of risk-adjusted mortality may be the first national study that compares risk-adjusted mortality in hospitals with 25 or fewer beds to that of other rural hospitals. We examined all Medicare inpatient claims (the 100 percent MedPAR file) and risk-adjusted rates for age, sex, and severity of patients' conditions based on all patient refined diagnosis related groups (APR-DRGs). Smaller CAHs reported higher risk-adjusted 30-day mortality rates than larger CAHs, potential CAHs, and all rural hospitals for congestive heart failure, stroke, acute myocardial infarction (AMI), and gastrointestinal hemorrhage.

Other than for pneumonia, the 30-day risk-adjusted mortality rates generally declined as hospital volume increased (Figure 7-6). We examined the risk of death for the 30 days following admission to control for the fact that CAHs may be more likely to transfer patients that develop complications and need more intensive services. Studies examining in-hospital mortality (as opposed to 30-day mortality) or that focus on non-Medicare patients may yield different findings.

Why do patient safety measures look better at smaller hospitals and risk-adjusted mortality measures look worse? One possibility is that small hospitals perform well with some aspects of quality and not as well with other aspects of quality. It is also possible that small hospitals do not fully code the complications that patients experience. Once Medicare pays a hospital based on costs, that hospital may lack an incentive to code complications that do not affect charges and payments. When hospitals

code poorly, they may not report complications that in turn make their patient mix look less sick and increase their risk-adjusted mortality. To gain some insight into whether poor coding and hence poor risk adjustment is driving higher risk-adjusted mortality rates at smaller hospitals, we also examined 30-day mortality without risk adjustment. The raw mortality data tell a similar story. Other than for pneumonia, unadjusted mortality tends to fall as patient volume increases.

Without reviewing the patients' charts, we will not know whether this higher mortality reflects poorer quality of care at CAHs, or if the CAHs have patients with a higher risk of mortality and that risk is not picked up in our administrative data. It is possible that patients with a high risk of mortality—due to factors not detected by our risk-adjustment model—might choose the local CAH over a distant hospital if they thought they were too ill to be assisted by a larger hospital. In other words, CAHs may attract Medicare beneficiaries who expect to die if the patients see the CAH as a more comforting environment than a larger hospital. CAHs may thus have a higher quality of care than is indicated purely by the mortality statistics shown in Figure 7-6 (p. 171).

In our June 2001 report on Medicare issues in rural areas, we noted that peer review organizations—now known as quality improvement organizations (QIOs)—faced incentives to target quality improvement efforts to large and usually urban providers. We recommended that the Secretary require peer review organizations to work with more rural providers when carrying out their quality improvement activities (MedPAC 2001). In the eighth scope of work for the QIOs—which begins in 2005—the Secretary requires that QIOs recruit CAHs to participate in reporting 13 quality improvement measures specified for CAHs. The QIOs will be evaluated based on CAH reporting of the CAH quality measures and CAH conduct of local quality improvement projects (CMS 2005). This changes the incentives faced by QIOs and may lead to increased efforts to measure and improve the quality of care in CAHs.

One tool for monitoring quality of care at CAHs that is currently missing is the Minimum Data Set (MDS) patient assessment instrument for post-acute patients. While the MDS is an imperfect instrument, the Secretary could consider requiring CAHs to assess patients using the MDS or developing an alternative assessment instrument that could be used for post-acute patients in SNFs and swing beds.

## MMA changes to the CAH program

Now we turn to looking at a series of changes in the MMA that affected CAHs. We are often limited to projecting the effects of these MMA changes, because some of the changes have not yet become effective and we do not yet have 2004 financial data from hospitals.

### States lose their ability to declare new "necessary providers"

The most important recent change to the CAH program is the elimination of states' ability to declare additional hospitals "necessary providers" starting in 2006. As a result, the CAH program will essentially cease to add additional hospitals at the start of 2006. Almost all hospitals that would meet the criteria of being 15 miles by secondary road and 35 miles by primary road have already converted to CAH status. The Congress grandfathered existing CAHs into the program.

How will this 2006 change affect Medicare beneficiaries? Because most hospitals have already converted, the impact will be limited. However, a few hospitals may be forced to close or merge with neighboring facilities when their patient volume declines, if they do not meet the distance criteria for the CAH program. Closures can result in increased travel times for patients and increased volumes at the remaining hospitals in the market. The net effect on patients is unclear. Although the general belief is that shorter travel times will improve outcomes, the magnitude of that travel-time effect is not clear from the limited literature on the topic (Lerner et al. 2003). There is also the question of whether hospital consolidation will improve quality. Although patient mortality is lower in larger hospitals, it is not clear that the AHRQ risk-adjustment model adequately adjusts for the health status of patients who choose to go to very small hospitals. Given that the law will affect very few existing hospitals and that each closure is expected to have a limited effect on patient travel times, this new provision of the MMA should have a small impact on Medicare beneficiaries.

There is a question of whether Congress went far enough to restore the focus of the CAH program on isolated hospitals. If having two neighboring providers is not clearly better than having one provider with higher volumes, then it may not be justified to continue providing cost-based payments to the two providers when they are

within 15 miles from one another. If all CAHs were required to be 15 miles from another provider to maintain their necessary provider status, neighboring low-volume hospitals would face financial pressure to consolidate. It may be difficult to overcome local political tensions between two communities and merge hospitals, but the mergers could result in having a higher volume facility with more resources.

There is also a concern that Medicare will have roughly 1,300 hospitals that receive higher payment rates than PPS hospitals and SNFs that compete with them. The PPS hospitals may feel they should receive the same payment rates as a CAH if they compete in the same market for employees, physician loyalties, and patients. The problem of a nonlevel playing field exists primarily because CAHs are allowed to be in close proximity to other hospitals.

### **Limit on acute patients increases from 15 to 25**

Prior to the MMA, CAHs could use only 15 of their 25 beds for acute care. When CAHs operated under this constraint in 2003, the largest number of discharges at a CAH was 1,900. Will this legislative change result in significantly more conversions to CAH status or significantly more discharges at existing CAHs?

Even with the option of using all 25 beds for acute care, it will be difficult for a hospital to have significantly more than 1,900 discharges. A hospital with 2,000 discharges would have an 88 percent occupancy rate if its patients stayed four days on average and a 66 percent occupancy rate if its patients stayed three days (acute plus post-acute). It may be difficult for CAHs to reduce patients' lengths of stay (acute plus post-acute) below four days. After examining Medicare margins for hospitals with close to 2,000 discharges, we believe that allowing CAHs to have up to 25 acute-care patients will generate less than 100 additional conversions to CAH status.

Will admissions per CAH and the cost (to Medicare) of CAH conversions increase? Hospitals that downsized to become CAHs may slightly increase their inpatient admissions. However, the payment rates for acute inpatient care at CAHs tend to be only slightly higher than payment rates at PPS hospitals. It is the payment rates for outpatient and post-acute services at CAHs that are significantly higher than PPS payment rates. Raising the limit on acute patients from 15 to 25 does not affect the number of post-acute patients or the volume of outpatient services a CAH can provide. Therefore, we

do not expect this provision to have a major effect on the average cost (to Medicare) of each CAH conversion. The average conversion is still expected to result in Medicare payments that are roughly \$1 million more than PPS rates per hospital in 2006.

### **CAHs can have distinct-part psychiatric and rehabilitation units with up to 10 beds**

Prior to the passage of the MMA, the Government Accountability Office (GAO) studied the potential impact of allowing CAHs to have distinct-part units. The GAO suggested that the provision may result in an additional 47 conversions. As of January 1, 2005 (12 months after Congress passed the MMA), 15 CAHs have distinct-part psychiatric units and 4 CAHs have distinct-part rehabilitation units. Among our list of 551 comparison hospitals, 74 had distinct-part psychiatric or rehabilitation units. Given our review of the data, the GAO's prediction of roughly 50 additional conversions due to allowing distinct-part units appears to be correct.

The shortage of mental health professionals in rural areas is well documented (IOM 2005). The distinct-part psychiatric units in CAHs may allow some mental health patients to stay closer to home and may help in the retention of mental health professionals in rural areas. Little research exists regarding how well the mental health services provided by these distinct-part units match rural communities' needs. The Maine Rural Health Research Center is planning to conduct a study of mental health services at small rural hospitals in 2006 and should be able to shed some light on the degree to which the services provided at these distinct-part units meet the needs of rural communities.

The cost of this MMA provision has been modest. Medicare pays prospective payment rates for services provided in distinct-part units, and fewer than 50 CAHs are expected to have distinct-part units.

### **Payments rise to 101 percent of costs**

The MMA increased payments to CAHs from 100 percent of allowable costs to 101 percent of allowable costs. The average CAH allocated roughly \$3 million of costs to cost-based Medicare services in 2003. The net impact of allowing a 1 percent profit margin is roughly \$30,000 per hospital in 2003. By the time conversions cease in 2006, we expect that average costs per CAH will have grown by slightly more than 12 percent annually due to historical

rates of growth in payments to CAHs and larger CAHs entering the program. In 2006, we expect that a 1 percent increase in Medicare payments will be roughly \$40,000 to \$50,000 per hospital, equivalent to between \$52 million and \$65 million total for the projected 1,300 CAHs.

## Summary of findings

The CAH program has successfully helped low-volume hospitals remain financially viable. In 2003, Medicare payments grew by roughly \$850,000 per CAH more than they would have if payments had grown at the rate of competing hospitals. Higher Medicare revenues led to improved profit margins, and CAH closures have almost ceased.

Although it is important to have a program that provides isolated rural hospitals with enough funding to cover the cost of efficiently delivering high-quality care, there are several drawbacks to the current system of cost-based Medicare payments:

- Cost-based payments can distort the financial incentives to close services and reduce hospitals' incentives to control costs.
- Cost-based payments can differ from the prospective payment rates Medicare pays to nearby competitors for similar or identical services. For example, the current system pays much higher rates for post-acute care in CAHs than it does for post-acute care in competing SNFs.

- Some low-volume hospitals are receiving cost-based reimbursement when they are not critical for beneficiaries' access to care.

These three troubling aspects of the CAH program need further research. MedPAC will continue to track cost growth at CAHs to see whether cost-based reimbursement leads to above-average cost growth.

There may also be a need for research that evaluates whether CAHs are gaining market share in services where their payment rates are substantially above the rates paid to competitors. For example, if CAHs are gaining market share in post-acute services due to being paid significantly higher rates than SNFs, paying CAHs a fixed payment rate for post-acute care that is closer to the rate paid to their competitors might be appropriate. In the case of hospitals, there is a need to evaluate whether paying CAHs higher payment rates than competing PPS hospitals creates an unlevel playing field when hospitals compete for employees, physician loyalties, and patients.

In addition, given the CAH program's ability to preserve hospitals with low patient volumes, there is a need for further research that examines whether Medicare beneficiaries are better served by (a) having two low-volume hospitals in close proximity to each other or (b) having those neighboring hospitals merge into one larger hospital. Policy makers may wish to balance the desire to keep care local with the goals of improving the quality of care and restraining cost growth. ■

## Section 433 of the MMA

(a) In General.—The Medicare Payment Advisory Commission shall conduct a study of the impact of sections 401 through 406, 411, 416, and 505. The Commission shall analyze the effect on total payments, growth in costs, capital spending, and such other payment effects under those sections.

(b) Reports.—

(1) Interim Report. —Not later than 18 months

after the date of the enactment of the Act, the Commission shall submit to Congress an interim report on the matters studied under subsection (a) with respect only to changes in the critical access hospital provisions under section 405.

(2) Final Report.—Not later than 3 years after the date of enactment of this Act, the Commission shall submit to Congress a final report on all matters studied under subsection (a). ■

## Endnotes

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- 1 In the case of certain DRGs, Medicare pays a reduced PPS payment rate if the patient is discharged to a SNF for post-acute care and had an unusually short hospital stay. However, Medicare does not reduce payments if the patient is discharged to a CAH's swing bed (Schoenman 2004).
- 2 The Rural Hospital Flexibility Grant program gives states grants that can be used for the following purposes: to assist rural hospitals in assessing conversion to Critical Access Hospital status, network development, and integration of emergency medical services. The program is authorized under section 1820 of the Social Security Act.
- 3 CAHs also benefit from being paid 115 percent of the physician fee schedule if physicians assign their billing rights to the CAH. This benefit was not included in our estimate of the benefits of conversion to CAH status.
- 4 CAH conversion is not a random event. Hospitals choose to convert. Therefore, any comparison group will differ from converting hospitals. Almost all of the smallest rural hospitals (fewer than 500 discharges) have chosen to convert to CAH status. Therefore, our comparison hospitals tend to be the size of larger CAHs (500 to 1,900 discharges). While all CAHs had 1,900 or fewer discharges after conversion, it should be noted that some hospitals had more than 1,900 discharges prior to conversion, but were willing to downsize to 25 beds to obtain higher payment rates as a CAH. Some hospitals have more discharges prior to conversion than they do after conversion.
- 5 The actual difference between cost-based payments and payment under PPS rates could range anywhere between \$800,000 and \$900,000 in 2003. We can only present a rough estimate (\$850,000) of the difference due to our inability to precisely estimate what outpatient therapy payments and outpatient hold harmless payments would have been if the CAHs had been paid fee schedule rates for therapy services and had reported their outpatient costs using PPS cost-accounting rules.
- 6 Consultants have informed us that the projected benefits of conversion are usually lower than \$850,000 per hospital. However, most consultants project benefits of conversion based on preconversion service volumes. We examine the difference between PPS payments and cost-based payments using hospitals' postconversion service volumes. Following conversion, CAHs have tended to expand their volume of services in areas where they received substantially higher payments than neighboring PPS hospitals, specifically outpatient services and post-acute care in swing beds.
- 7 We report all-payer margins because they are not affected by the changes in Medicare cost accounting rules that occur when a hospital converts to CAH status. In contrast, overall Medicare margins are affected by the differences between CAH cost accounting rules and PPS cost accounting rules.
- 8 In our sample of 498 CAHs, 18 are for-profit hospitals.

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