SECTION 2G

Long-term care hospital services

RECOMMENDATION

The Secretary should update payment rates for long-term care hospitals for rate year 2009 by the projected rate of increase in the rehabilitation, psychiatric, and long-term care hospital market basket index less the Commission's adjustment for productivity growth.

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

SECTION 2G

Long-term care hospital services

Section summary

In this section, we present information on providers of long-term care hospital (LTCH) services. LTCHs furnish care to patients with clinically complex problems, such as multiple acute or chronic conditions, who need hospital-level care for relatively extended periods. Medicare is the predominant payer for LTCH services, accounting for about 70 percent of LTCH discharges.

Supply of facilities—The total number of LTCHs increased 1 percent between 2005 and 2006, after climbing an average 11.3 percent per year between 1992 and 2005. This slowing in growth is due to a decline in the number of long-term care hospitals within hospitals (HWHs), likely because of the 25 percent rule, which policymakers expected would slow entry of HWHs into the Medicare program. Freestanding facilities, by contrast, have begun to grow somewhat more rapidly than previously.

Volume of services and beneficiaries' access to care—In the early years of the LTCH prospective payment system (PPS), the number of cases

In this section

per fee-for-service (FFS) beneficiary grew an average 9 percent per year. Between 2005 and 2006, however, the number of cases per FFS beneficiary fell 0.4 percent. Medicare spending for LTCH services held steady at $4.5 billion between 2005 and 2006, although spending per FFS beneficiary and payments per case continued to increase (2.5 percent and 3.4 percent, respectively). We have no direct indicators of beneficiaries' access to LTCHs, but the number of beneficiaries using LTCHs—controlling for the change in the number of FFS beneficiaries—remained fairly steady between 2005 and 2006, suggesting that access to care was maintained.

Quality—The evidence on quality is mixed. Risk-adjusted rates of death in LTCHs and readmission to acute care hospitals have fallen, as have risk-adjusted rates of death within 30 days of discharge, albeit at a slower rate. Patients experienced fewer postoperative pulmonary embolisms and deep vein thromboses and more decubitus ulcers, infections due to medical care, and postoperative sepsis.

Access to capital—The indications regarding LTCHs' access to capital are difficult to interpret. Private equity firms now control a large portion of the for-profit segment of the market, but some financial analysts argue that even private equity firms might not have access to capital in the current financial environment and that some of the smaller chains are already highly leveraged. Uncertainty about potential changes to Medicare's payment policies may have heightened lenders' anxiety. But payment policy changes under the recently passed Medicare, Medicaid, and SCHIP Extension Act of 2007, applicable for the next three years, improve the financial picture considerably, at least for the short term, leading some financial analysts to predict that business will stabilize. LTCH companies are increasingly diversified, both vertically and horizontally, which may improve their ability to control their costs.

Payments and costs—Evidence from cost reports shows that growth in cost per case has increased rapidly since the PPS was implemented. This rise in

cost has roughly paralleled growth in payments per case, which climbed 13 percent between 2003 and 2004, 10 percent between 2004 and 2005, and 4 percent between 2005 and 2006. Some of the growth in payments has been due to improvements in documentation and coding that raise average case mix (and therefore payments) even though patients are no more resource intensive than they previously were.

The Medicare margin for LTCHs based on 2006 cost reports is 9.4 percent. CMS has since made a number of policy changes that reduce payments for LTCHs, including recalibrating relative weights in 2007, adjusting for coding improvements, implementing new ways to reimburse LTCHs for patients with the shortest lengths of stay, and reducing aggregate payments for high-cost outliers. Because of these changes, we estimate LTCHs' aggregate Medicare margin will be between –1.4 percent and –0.4 percent in 2008. This range is based on different assumptions about HWHs' behavior in response to the 25 percent rule. If HWHs do not change their behavior, the Medicare margin is estimated to be –1.4 percent. If they change their behavior to avoid payment reductions, the margin is estimated to be –0.4 percent. HWHs could change behavior in a number of ways to minimize the effect of the rule—for example, admitting more patients who were high-cost outliers in the acute care hospital and not subject to the rule, recruiting patients from a more diverse set of acute hospitals to minimize referrals from their host hospital, and organizing as freestanding LTCHs.

Assessing current payment adequacy in this sector is difficult. Growth in LTCH facilities, cases, and Medicare spending has slowed. However, it is difficult to determine when use of these services is appropriate and necessary. Frequently, LTCHs entering the program locate in market areas where LTCHs already exist, raising questions about whether there are sufficient numbers of very sick patients to support the number of LTCHs in the community. Seen in this light, recent slowing in growth of facilities, cases, and Medicare spending may indicate that the industry is approaching

equilibrium after a period of explosive growth spurred by overpayment and inappropriate admissions.

Nevertheless, our estimated Medicare margin for 2008 suggests that LTCHs may not be able to accommodate growth in the cost of caring for Medicare beneficiaries in 2009 without an increase in the base rate. Therefore, we recommend that the Secretary update payment rates for LTCH services by the market basket index, less the Commission's adjustment for productivity growth. We recommend to the Secretary rather than to the Congress because the Secretary has the authority to determine updates to payment rates for LTCHs. Under the current forecast of the rehabilitation, psychiatric, and LTCH market basket, the Commission's recommendation would update the LTCH payment rates by 1.6 percent in 2009. (The market basket is subject to change, resulting in change to the update amount.) ■

Recommendation 2G

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

The Secretary should update payment rates for long-term care hospitals for rate year 2009 by the projected rate of increase in the rehabilitation, psychiatric, and long-term care hospital market basket index less the Commission's adjustment for productivity growth.

What is long-term care hospital care and where is it provided?

Patients with clinically complex problems, such as multiple acute or chronic conditions, may need hospital-level care for relatively extended periods. Some are treated in long-term care hospitals (LTCHs). To qualify as an LTCH for Medicare payment, a facility must meet Medicare's conditions of participation for acute care hospitals and have an average length of stay greater than 25 days for its Medicare patients. Beginning January 1, 2008, LTCHs must also have a screening process to help ensure the appropriateness of patient admissions and stays (see text box on the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA)). Because of relatively long stays and the level of care provided, care in LTCHs is expensive.

The Medicare, Medicaid, and SCHIP Extension Act of 2007

The Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA) includes several provisions related to long-term care hospitals (LTCHs), including the application of facility criteria, changes to the 25 percent rule, and changes to the short-stay outlier policy.

Facility criteria

The MMSEA changes the definition of LTCHs to include some of the facility criteria recommended by the Commission (MedPAC 2004). In addition to meeting the conditions of participation applicable to acute care hospitals, LTCHs must meet the following criteria:

- LTCHs must have a patient review process that screens patients both before admission and regularly throughout their stay to ensure appropriateness of admission and continued stay. The MMSEA does not specify the admission and continued stay criteria to be used.
- LTCHs must have active physician involvement with patients during their treatment, with physician on-site availability on a daily basis to review patient progress and consulting physicians on call and capable of being at the patient's side within a period of time determined by the Secretary.
- LTCHs must have interdisciplinary treatment teams of health care professionals, including physicians, to prepare and carry out individualized treatment plans for each patient.

The 25 percent rule

The MMSEA also rolls back the phased-in implementation of the 25 percent rule for hospitals within hospitals (HWHs) and satellites, limiting the proportion of Medicare patients who can be admitted from a HWH's or satellite's host hospital during a cost reporting period to no more than 50 percent and holding it at this level for three years. (The applicable threshold for HWHs and satellites in rural areas or in urban areas with a single or dominant acute care hospital is 75 percent.) The MMSEA prohibits the Secretary from applying the 25 percent rule to freestanding LTCHs for a period of three years. (See the text box, p. 222, for more information about the 25 percent rule.)

Short-stay outliers

As discussed in the text box (p. 224), Medicare applies different payment rules for LTCH cases with the shortest lengths of stay (so-called "very short-stay outliers"). The MMSEA prohibits the Secretary, for a three-year period, from applying these rules.

The MMSEA also imposes a three-year limited moratorium on new facilities and new beds in existing facilities, expands review of medical necessity, and reduces aggregate payments for fiscal year 2008 by implementing a zero update for discharges occurring during the final quarter of the fiscal year. In addition, the MMSEA requires the Secretary to conduct a study on the use of LTCH facility and patient criteria to determine medical necessity and appropriateness of admission to and continued stay at LTCHs, considering both the Secretary's ongoing work on this subject and MedPAC's 2004 recommendations. ■

TABLE 2G–1 **The top 15 LTC–DRGs made up more than 60 percent of LTCH cases in 2006**

LTC–DRG	Description	Discharges	Percentage
475	Respiratory system diagnosis with ventilator support	15,698	12.1%
271	Skin ulcers	7,056	5.4
416	Septicemia age >17	6,676	5.1
87	Pulmonary edema and respiratory failure	6,540	5.0
79	Respiratory infections and inflammation age >17 with CC	6,061	4.7
466	Aftercare, without history of malignancy	4,835	3.7
89	Simple pneumonia and pleurisy age >17 with CC	4,717	3.6
249	Aftercare, musculoskeletal system and connective tissue	4,613	3.5
88	Chronic obstructive pulmonary disease	4,594	3.5
12	Degenerative nervous system disorders	4,193	3.2
263	Skin graft and/or debridement for skin ulcer with CC	3,921	3.0
127	Heart failure and shock	3,531	2.7
462	Rehabilitation	2,977	2.3
418	Postoperative and post-traumatic infections	2,663	2.0
316	Renal failure	2,500	1.9
	Top 15 LTC–DRGs	80,575	61.9
	Total	130,164	100.0

Note: LTC–DRG (long-term care diagnosis related group), LTCH (long-term care hospital), CC (complication or comorbidity). LTC–DRGs are the case-mix system for these facilities. Column may not sum due to rounding.

Source: MedPAC analysis of MedPAR data from CMS.

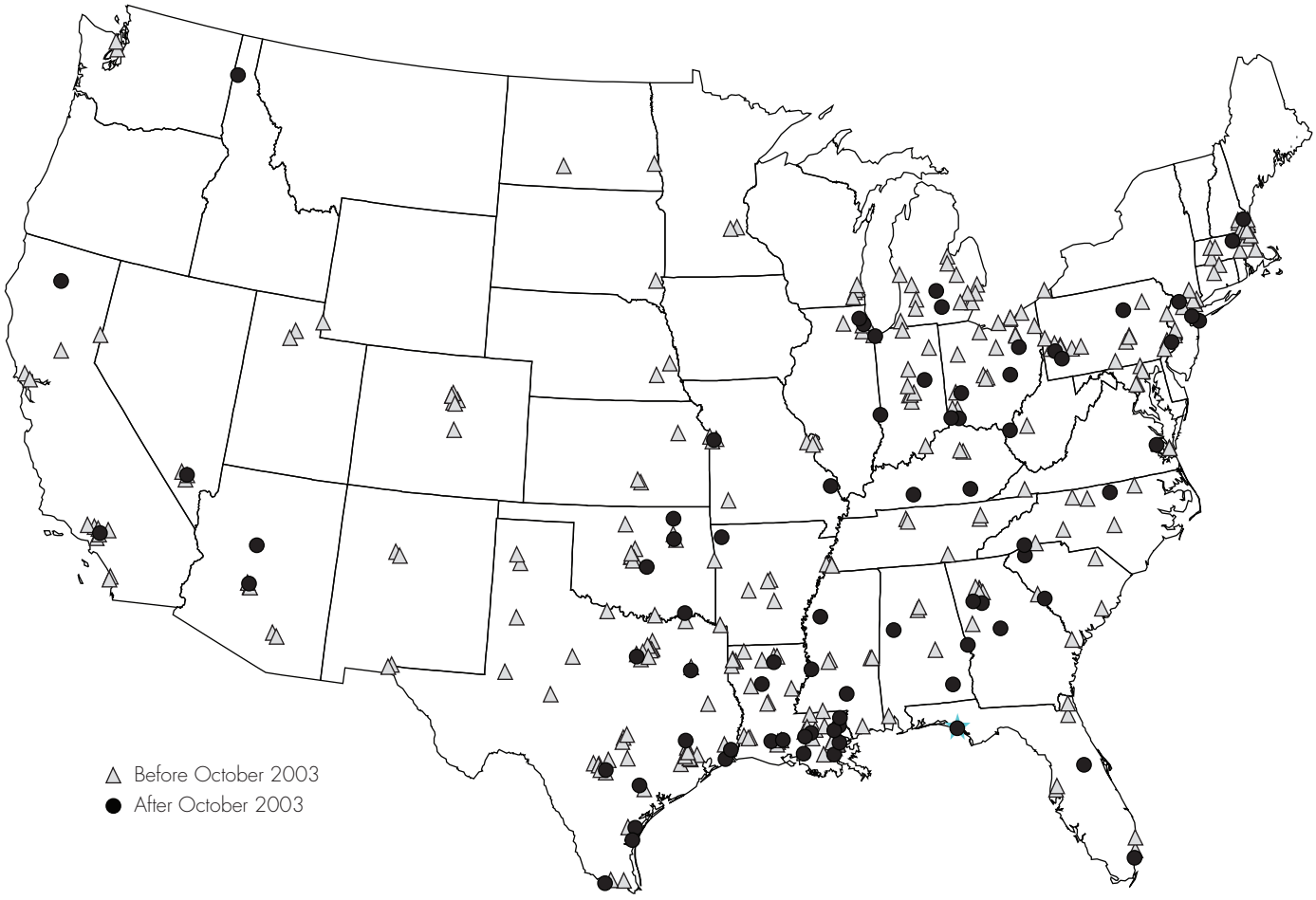
What conditions are treated in LTCHs?

LTCHs specialize in providing care to patients with a wide variety of complex conditions, such as respiratory problems and skin ulcers. About 80 percent of LTCH patients are admitted from acute care hospitals. The top 15 long-term care diagnoses made up more than 60 percent of all discharges from LTCHs in 2006 (Table 2G-1). The most frequently occurring long-term care diagnosis related group (LTC–DRG) is LTC–DRG 475, respiratory diagnosis with ventilator support. Five of the top 15 LTC–DRGs are respiratory conditions. A recent analysis by RTI International of LTCH claims from fiscal year 2004 found that respiratory cases tend to be among the more profitable cases in LTCHs (RTI 2007). RTI's analysis found that the aggregate margins earned from ventilator-dependent cases and from pulmonary edema and respiratory failure cases were 21 percent and 28 percent, respectively, compared with a margin of 12 percent for all LTCH claims. Aggregate margins for pneumonia and chronic obstructive pulmonary disease were also higher than average. By contrast, the aggregate margin for skin ulcer cases, the second most common type of case, was 4.5 percent, while the aggregate margin for rehabilitation cases was –0.1 percent. Since 2004, there have been several changes to the payment system for LTCHs that may have altered profitability across LTC–DRGs.

The types of cases treated by LTCHs are often treated in alternative settings. The Commission's previous research found that, even among patients whose clinical characteristics placed them in the top 5 percent probability of using an LTCH, only 4 percent were admitted to these facilities in markets that had them (see text box on alternatives to LTCHs, p. 220). More recent research by RTI found that of all cases with an acute hospital discharge diagnosis of DRG 475—the most frequently occurring LTCH discharge—only 34 percent were treated in LTCHs. Virtually all the rest were treated in acute hospitals, 18 percent as outliers and 48 percent as nonoutlier cases (RTI 2007). RTI found that DRG 475 ranked 3rd among acute hospital outlier cases and 16th among acute hospital nonoutlier cases.

FIGURE 2G–1

New long-term care hospitals often enter areas with existing ones



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

Where are LTCHs located?

LTCHs can be either freestanding facilities or located within hospitals, in which case they are called hospitals within hospitals (HWHs). CMS has long been concerned that incentives under the acute care hospital prospective payment system (PPS) might encourage hospitals to make decisions about patient care on financial rather than clinical bases, resulting in inappropriate discharge of patients to LTCHs. In the short run, such inappropriate discharges create financial windfalls for hospitals engaging in the practice and increase costs to the Medicare program by triggering two payments (one for the acute care hospital stay and one for the LTCH stay) for what otherwise would be one inpatient stay. Over the longer term, such discharges distort the acute inpatient PPS relative weights by reducing the costs of some acute care hospitals. Accordingly, CMS has established several policies to ensure that LTCHs operate independently from acute care hospitals. CMS requires that a HWH or satellite facility be independent and not influenced by the host hospital or related organization. The agency also established the so-called 25 percent rule, under which Medicare pays less for certain patients a HWH or satellite LTCH admits from its host hospital (the text box on the 25 percent rule, p. 222, describes this policy).

LTCHs are not distributed evenly in the nation, as shown in Figure 2G-1. Some areas have many LTCHs; others have none. The five states with the largest number of

Alternatives to long-term care hospitals

In 2004, MedPAC conducted market-level analyses to compare characteristics of patients treated in markets with and without long-term care hospitals (LTCHs) and patient-level analyses to examine the impact of LTCH use on Medicare spending and outcomes. These analyses examined episodes of care created from 2001 claims data. Episodes began with admission to the acute hospital and ended with readmission to the acute hospital, 61 days without Medicare acute or post-acute care services, or death. MedPAC also created two subsamples of episodes for patients most likely to use LTCHs. The first subsample included patients who had a high probability (the top 5 percent) of using an LTCH based on their clinical characteristics. (Although these patients had the highest probability of using an LTCH, their likelihood of using one was still relatively small; only 4 percent of them used LTCHs.) The second subsample consisted of patients with an acute hospital diagnosis of tracheostomy with at least 96 hours of ventilator support. This group was the most strongly associated with using LTCHs; 23 percent were admitted to LTCHs.

We used the full sample and two subsamples to evaluate how LTCH use affected acute hospital length of stay; discharge destination after acute hospital stay; Medicare spending for post-acute care, including spending for LTCH care; Medicare spending for the episode of care (Part A services and home health care); readmission to acute hospitals; and mortality 120 days after acute hospital admission. We controlled for severity of illness using clinical variables available in administrative data and an instrumental variable approach to control for unmeasured severity of illness or "selection bias," which might arise if physicians refer sicker patients to LTCHs from the acute hospital.

RTI International performed a similar analysis of claims data from 2004, focusing on cases with an acute hospital discharge diagnosis related group (DRG) among the top 50 LTCH DRGs and a severity index score of 2 or greater (RTI 2007).

Both MedPAC and RTI found that patients who use LTCHs have shorter acute hospital lengths of stay than similar patients who do not use these facilities, suggesting that LTCHs substitute for at least part of the acute hospital stay.

MedPAC also found that, in areas without LTCHs, freestanding skilled nursing facilities (SNFs) were

continued next page

LTCH beds per thousand Medicare beneficiaries account for 40 percent of the available beds but only 12 percent of the Medicare beneficiary population.[1] Relatively new LTCHs—those that entered the Medicare program under the PPS—frequently have located in markets where LTCHs already existed instead of opening in new markets. This is somewhat surprising because these facilities are supposed to be serving unusually sick patients, and one would expect them to be rare. The clustering of LTCHs and the location of new facilities thus raise questions about the role these facilities play.

Medicare spending for long-term care hospital services

Since October 2002, Medicare has paid LTCHs prospective per discharge rates based primarily on the patient's diagnosis and the facility's wage index.[2] Before that, LTCHs were paid under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) on the basis of their average costs per discharge but no more than an annually adjusted limit calculated for each facility. The PPS pays differently for patients who are high-cost outliers and for those whose lengths of stay are substantially shorter than average. CMS reduced payment for short stays in 2006

Alternatives to long-term care hospitals (cont.)

the principal alternative. In areas without LTCHs, 25 percent of patients in the top 5 percent probability of using an LTCH were discharged from the acute hospital to a freestanding SNF, compared with 20 percent in areas with LTCHs. While this difference appears small, only 4 percent of these high-probability patients used LTCHs in market areas that had these facilities, as noted earlier. Among patients with tracheostomies in the acute hospital, 17 percent were discharged to freestanding SNFs in areas without LTCHs compared with 11 percent in areas with LTCHs. In both groups, the use of LTCHs was associated with a one-third reduction in the probability of using a freestanding SNF. We also found that beneficiaries in areas without LTCHs were not necessarily excluded from using LTCH services. Six percent of patients with tracheostomies who lived in areas without LTCHs used an LTCH in 2001.

We found that patients using LTCHs were less costly to Medicare during their acute hospital stays, principally because of shorter lengths of stay and lower outlier payments; the same patients, however, were more costly to the program during the post-acute phase of their episodes and were more costly for the total episode. The cost differences narrowed considerably when LTCH care was targeted to patients who were most likely to need this level of care. For example, among patients in the top 5 percent of probability of using an LTCH, we found that patients using LTCHs cost Medicare more than patients using alternative settings, but the difference was not statistically significant. For patients with tracheostomies, total episode spending was lower for those who used an LTCH than for those who did not. These findings suggest that LTCH use is best targeted to those patients who need and can benefit from the level of care provided in this setting.

Two caveats applied to our findings on Medicare payments because they are based on actual Medicare spending in 2001. First, acute hospital high-cost outlier payments were unusually high in 2001 (CMS 2003). As a result, we may have overstated the amount by which LTCHs reduced Medicare's spending on outlier payments. Second, 2001 preceded changes in the financial incentives and rates that occurred with implementation of the LTCH prospective payment system (PPS) in 2003. Consequently, Medicare PPS spending for LTCH patients in the top 5 percent and for LTCH patients with tracheostomies may have been significantly higher than actual payments in 2001 because of the combination of the PPS rates and improvements in coding. Therefore, our findings of savings may have been overstated. ■

and again for the shortest stays in 2007. The recently passed MMSEA will temporarily suspend the 2007 changes. (This policy is discussed in detail in the text box on payment for short-stay outliers, p. 224).

Until 2007, LTCH payment rates were based on the LTC–DRG patient classification system. Patients were assigned to LTC–DRGs based primarily on diagnoses and procedures. In October 2007, CMS began replacing the LTC–DRG system with Medicare severity (MS) LTC–DRGs (CMS 2007a). These groups comprise base LTC–DRGs that have been subdivided into one, two, or three severity levels. As with the LTC–DRG system, the MS–LTC–DRGs are the same groups used in the acute inpatient PPS but have relative weights specific to LTCH patients, reflecting the average relative costliness of cases in the group compared with that for the average LTCH case. CMS is phasing in MS–LTC–DRGs, with payment weights equal to a 50/50 blend of LTC–DRGs and MS–LTC–DRGs in 2008. Payment will be based entirely on MS–LTC–DRG weights in 2009. MS–LTC–DRGs are intended to improve the accuracy of payments.

After the PPS was implemented, Medicare payments for LTCH services grew rapidly, climbing an average 29 percent per year between 2003 and 2005 (Table 2G-2, p. 223). In 2006, Medicare spending for care provided by LTCHs was virtually the same as in 2005, $4.5 billion.

The 25 percent rule

In fiscal year 2005, CMS established a new policy—the so-called 25 percent rule—to help ensure that hospitals within hospitals (HWHs) and long-term care hospital (LTCH) satellites do not function as units of host hospitals and that decisions about admission, treatment, and discharge in both the acute care hospital and the LTCH are made for clinical rather than financial reasons.

The 25 percent rule limits the proportion of Medicare patients who can be admitted from an HWH's host hospital during a cost reporting period. HWHs and satellites are paid LTCH prospective payment system (PPS) rates for patients admitted from the host acute care hospital when those patients are below the threshold that year. After the threshold is reached, the LTCH is paid the lesser of the LTCH PPS rate or an amount equivalent to the acute hospital PPS rate for patients discharged from the host acute care hospital.[3] Patients from the host hospital who are outliers under the acute hospital PPS before their transfer to the HWH do not count toward the threshold and continue to be paid at the LTCH PPS rate even if the threshold has been reached. The policy was to be phased in over three years, with the threshold set at 75 percent for fiscal year 2006, 50 percent for fiscal year 2007, and 25 percent for fiscal year 2008 and beyond. (Less stringent thresholds were applied to HWHs and satellites in rural areas or in urban areas where they are the sole LTCH or where there is a dominant acute care hospital.)

We estimated that this policy would reduce Medicare payments to LTCHs unless behavior changed. However, the impact of this policy could be reduced if HWHs and satellites admitted more patients who were high-cost outliers in their host hospitals, admitted patients from other acute hospitals, and reorganized as freestanding LTCHs. In addition, the impact of this policy may be blunted because, despite a regulatory requirement for HWHs and satellites to report their status to their fiscal intermediaries, CMS has had problems identifying HWHs and satellites.

Beginning in July 2007, CMS extended the 25 percent rule to apply to all freestanding LTCHs, limiting the proportion of patients who can be admitted to an LTCH from any one acute care hospital during a cost reporting period. The extended policy was to be phased in over three years, with the applicable threshold for non-HWHs and nonsatellites set at 75 percent for rate year 2008.

The Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA) substantially changed the 25 percent rule by rolling back the phased-in implementation of the 25 percent rule for HWHs and satellites, limiting the proportion of Medicare patients who can be admitted from an HWH's or satellite's host hospital during a cost reporting period to no more than 50 percent and holding it at this level for three years. (The applicable threshold for HWHs and satellites in rural areas or in urban areas with a single or dominant acute care hospital is 75 percent.) The MMSEA also reverses CMS's phase-in of the 25 percent rule for freestanding LTCHs, preventing the Secretary from applying the rule to freestanding LTCHs for three years. ■

However, because of growth in the number of beneficiaries enrolling in Medicare Advantage plans, Medicare spending per fee-for-service (FFS) beneficiary continued to rise, growing 2.5 percent between 2005 and 2006. CMS estimates that total Medicare spending for LTCHs will remain at $4.5 billion in 2008 and will reach $5.4 billion in 2012.

Ensuring that appropriate patients are treated in LTCHs

In response to Commissioners' questions about the rapid growth in the number of LTCHs, the uneven distribution of providers across geographic areas, and the role that LTCHs play, MedPAC conducted qualitative and quantitative research on these facilities using data from 2001 (before the PPS was implemented) (MedPAC 2004). As mentioned

TABLE 2G–2

Long-term care hospitals' spending increased rapidly under PPS

	TEFRA		Change 2001–2002	PPS				Average annual change 2003–2005	Change 2005–2006
	2001	2002		2003	2004	2005	2006		
Cases	85,229	98,896	16.0%	110,396	121,955	134,003	130,164	10.2%	–2.9%
Cases per 10,000 FFS beneficiaries	25.1	28.3	12.7	30.8	33.6	36.6	36.5	9.0	–0.4
Spending (in billions)	$1.9	$2.2	15.8	$2.7	$3.7	$4.5	$4.5	29.1	0.0
Spending per FFS beneficiary	$56.0	$63.0	12.5	$75.4	$101.9	$123.0	$126.1	27.7	2.5
Payment per case	$22,009	$22,486	2.2	$24,758	$30,059	$33,658	$34,859	16.6	3.4
Length of stay (in days)	31.3	30.7	–1.9	28.8	28.5	28.2	27.9	–1.0	–1.1

Note: PPS (prospective payment system), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), FFS (fee-for-service).

Source: MedPAC analysis of MedPAR data from CMS.

above, we found that the types of cases LTCHs treat are often treated in alternative settings, such as acute care hospitals and skilled nursing facilities. We also found that patients using LTCHs cost Medicare more than similar patients using other settings (see text box on alternatives to LTCHs, pp. 220–221). However, the cost differences narrowed considerably if LTCH care was targeted to patients who were most likely to need this level of care.

The Commission was unable to measure the value Medicare gets from LTCH purchases because data on outcomes are not available. We looked at readmission to the acute care hospital as a gross measure of outcomes and found that patients treated in LTCHs in 2001 tended to have fewer acute hospital readmissions than patients treated in other post-acute care settings (MedPAC 2004). However, using 2004 data, RTI found that having an LTCH admission was associated with a greater likelihood of an acute care readmission (RTI 2007). This could reflect poorer quality, but it also could be due to a sicker patient population in LTCHs or to patients being discharged too soon from the acute care hospital.

In 2004, the Commission called for facility and patient criteria to differentiate LTCHs from other post-acute care settings and ensure that appropriate patients are treated in these facilities. While LTCHs appear to have value for very sick patients, they are too expensive to be used for patients who could be treated in less intensive settings (MedPAC 2004). Recently, the Congress mandated that the Secretary of Health and Human Services study whether facility and patient criteria can be used to determine medical necessity and appropriateness of admission to and continued stay at LTCHs (see text box, p. 217).

The Commission has also pointed out the need to monitor compliance of LTCHs with any new facility-level and patient-level criteria. Currently, quality improvement organization (QIO) reviews determine whether an LTCH patient required hospital-level care. Past QIO reviews found that a relatively large proportion of LTCH cases did not. In fiscal year 2005, a review of a national sample of 1,392 LTCH claims—about 1 percent of all LTCH claims—found that 7.9 percent of cases were not medically necessary (CMS 2006b). (By comparison, 4.7 percent of Medicare claims made by acute care hospitals were denied during the same period.) But the QIO review process does not distinguish whether a patient needed LTCH care as opposed to acute hospital care (CMS 2007b). Thus, there is no systematic way to determine whether LTCH admissions are appropriate. The MMSEA expands review of the medical necessity of admissions to, and continued stays at, LTCHs beginning in October 2007, but it remains to be seen whether this process will improve the program's ability to identify whether a patient needed LTCH care as opposed to acute hospital care or other post-acute care.

Payments for short-stay outliers in long-term care hospitals

A short-stay outlier (SSO) is a patient with a shorter-than-average length of stay. In the long-term care hospital (LTCH) payment system, lower payments are triggered for patients with a length of stay equal to or less than five-sixths of the geometric mean length of stay for the patient's long-term care diagnosis related group (LTC–DRG).[4] About 35 percent of all LTCH cases received payment adjustments for having shorter-than-average stays in 2006, but this varies across types of cases. RTI analysis of 2004 data found, for example, that approximately 90 percent of psychiatric cases (LTC–DRG 430: psychoses, and LTC–DRG 429: organic disturbances and mental retardation) received SSO adjustments (RTI 2007).

Before July 2006, Medicare paid LTCHs the least of: 120 percent of the cost of the case, 120 percent of the LTC–DRG specific per diem amount multiplied by the patient's length of stay, or the full LTC–DRG payment. Beginning in July 2006, CMS added another alternative for payment and changed an existing alternative to pay less for these cases. These changes reflected CMS's belief that SSO cases with lengths of stay similar to those in acute care hospitals should be paid at rates comparable to those under the acute care hospital PPS. For an SSO patient, Medicare pays LTCHs the least of:

- 100 percent of the cost of the case,
- 120 percent of the LTC–DRG specific per diem amount multiplied by the patient's length of stay,
- the full LTC–DRG payment, or
- a blend of the inpatient prospective payment system (IPPS) amount for the DRG and 120 percent of the per diem payment amount.

For the new alternative, the blended payment, the LTCH per diem payment amount makes up more of the amount as the patient's length of stay comes closer to the geometric mean length of stay for the LTC–DRG. For example, if the geometric mean for a specific LTC–DRG is 25 days, payment for an SSO patient classified in the LTC–DRG who stays 20 days would be composed of a greater share of the LTCH payment than for a similar patient who stays 16 days. Generally, for the same DRG, the LTCH payment is greater than the payment under the IPPS.

Beginning in July 2007, Medicare applied a different standard for the shortest SSO cases ("very short-stay outliers"). These cases are those in which length of stay is less than or equal to the average length of stay for the same DRG at acute care hospitals paid under the IPPS plus one standard deviation. For SSO cases that meet this "IPPS comparable threshold," LTCHs are paid the least of:

- 100 percent of the cost of the case,
- 120 percent of the LTC–DRG specific per diem amount multiplied by the patient's length of stay,
- the full LTC–DRG payment, or
- the IPPS per diem amount multiplied by the length of stay for the case, not to exceed the full IPPS payment amount.

The Medicare, Medicaid, and SCHIP Extension Act of 2007 prohibits the Secretary from applying the very short-stay outlier standard for a three-year period beginning on the date of enactment. Very short-stay outlier cases will be paid at the same rate as other SSO cases. ■

CMS has contracted with RTI to study the feasibility of implementing our recommendations on criteria for LTCHs. In a report released in January 2007, RTI reported findings from its site visits and data analyses. RTI recommended steps to better define LTCHs and to identify patients who are better suited to other settings (RTI 2007). RTI's recommendations are similar to MedPAC's recommendations, but CMS and RTI are continuing to explore the issue of whether clear patient criteria can be established.

With the support of RTI, CMS has convened two technical expert panels (TEPs) composed of clinicians from LTCHs, acute care hospitals with ventilator units, inpatient rehabilitation facilities, and skilled nursing facilities to discuss differences in the populations admitted to each setting and begin to identify critical differences in populations and facilities that would be associated with inappropriate admissions. At the most recent TEP meeting, held in November, small groups of clinicians used case studies to identify patient populations (with a particular focus on ventilator-dependent patients, the most frequently occurring LTCH diagnosis) and discuss the types of resources needed to treat these types of cases and the relative costliness and outcomes of treating them in LTCHs versus alternative sites of care.

TEP participants discussed facility-level criteria that could be used to define LTCHs. All agreed that a critical mass of patients with the targeted conditions was required to ensure that health providers had adequate experience treating the conditions. If this is the case, then the proliferation of LTCHs in some markets might be cause for concern. TEP participants also determined that structure and process standards were required to further ensure quality of care.

TEP participants agreed that one of the most consistent identifying features of critically ill patients is the need for intensive nursing care. For example, LTCHs and acute care hospital step-down units often have a RN-to-patient ratio of 1 to 4 or 5, compared with the typical ratio of 1 to 12 on an acute care medical/surgical floor. However, participants also agreed that LTCHs treat patients that are also appropriately cared for in other settings. That fact may complicate the development of useful and appropriate patient-level criteria for LTCHs.

That similar patients are treated in different settings also raises questions about parity across providers. The Commission has long held that payment for the same set of services should be the same regardless of where the services are provided. If LTCH patients can be (and are) appropriately treated in other facilities, then Medicare's payments should be neutral with respect to setting. More research and better data are needed to compare types of patients, payments and costs, quality of care, and outcomes across acute and post-acute care settings to determine whether payments in each setting are sufficient.

Are Medicare payments adequate in 2008?

We examine the following factors in determining the adequacy of Medicare payments to LTCHs:

- supply of facilities
- volume of services and access to care
- quality
- access to capital
- payments and costs

Conflicting findings make it difficult to assess current payment adequacy in this sector. Recent slowing in growth of LTCH facilities, cases, and Medicare spending may be cause for concern. Alternatively, the industry may be approaching equilibrium after a period of explosive growth spurred by overpayment and inappropriate admissions.

Our indicators of adequacy are mixed. The total number of LTCHs is holding fairly steady after a long period of rapid growth, as are both the total number of cases per FFS beneficiary and Medicare spending. Although we have no direct evidence on beneficiaries' access to LTCH care, the steady use of this type of care suggests that access is being maintained. Quality indicators are mixed. Indications regarding LTCHs' access to capital are unclear, although the MMSEA significantly alters Medicare payment policies for LTCHs, brightening the financial picture considerably. Aggregate Medicare margins for 2006 are 9.4 percent. Because of changes in payment policies and increases in costs, the estimated margin for 2008 ranges from –1.4 percent to –0.4 percent.

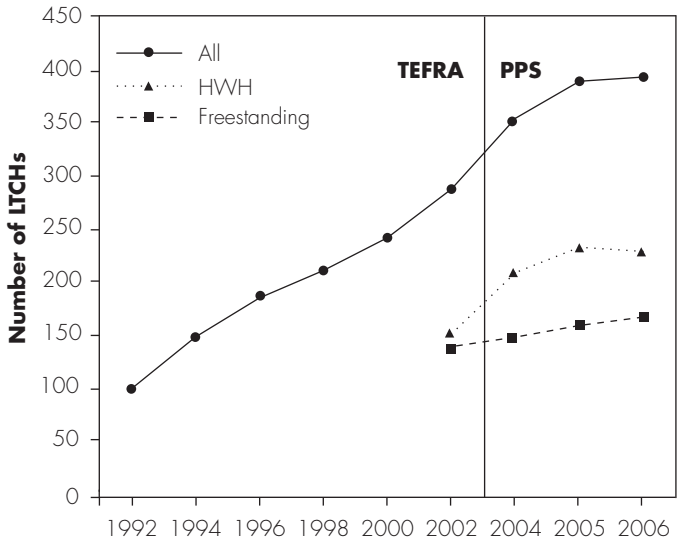
Change in supply of facilities

After a long period of rapid growth, the increase in the number of LTCHs participating in the Medicare program has slowed dramatically. From 1992 to 2005, the number of LTCHs quadrupled from 97 to 388, climbing an average 11.3 percent per year (Figure 2G-2, p. 226). Between 2005 and 2006, however, there was a net increase of just four LTCHs participating in Medicare (Table 2G-3, p. 227). Preliminary data suggest a stable situation for 2007.

For several years, HWHs were growing at a faster rate than freestanding LTCHs—about 16 percent annually from 2002 to 2005, compared with an average 4.6 percent

FIGURE 2G–2

Growth in the number of LTCHs has leveled off



Note: LTCH (long-term care hospital), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system), HWH (hospital within hospital).

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

for freestanding facilities. Between 2005 and 2006, the total number of HWHs fell almost 2 percent. This turnaround is likely due to the 25 percent rule, which policymakers expected would slow down entry of HWHs into the Medicare program. Freestanding facilities, by contrast, grew somewhat more rapidly (5 percent) than they had previously.

Nationwide, there were approximately 26,000 Medicare-certified LTCH beds in 2006, or 0.73 bed per 1,000 FFS Medicare beneficiaries. However, as mentioned previously, the geographic distribution of LTCH beds is very uneven, with some areas having many and some having none.

The MMSEA imposes a three-year limited moratorium on new LTCHs and new beds in existing LTCHs.

Change in volume of services and access to care

We have no direct indicators of beneficiaries' access to LTCH services. Controlling for the change in the number of FFS beneficiaries, the number of beneficiaries using LTCHs remained constant between 2005 and 2006, suggesting that access to care was maintained during the period. But assessment of access is difficult both because there are no criteria for LTCH patients and because it is not clear whether the patients treated in LTCHs require that level of care.

The number of LTCH cases grew an average 10.2 percent per year between 2003, when the PPS was implemented, and 2005 (Table 2G-2, p. 223). In 2006, almost 116,000 FFS beneficiaries had about 130,000 admissions to LTCHs, a decrease in admissions of 2.9 percent from the previous year. Most of this decrease can be explained by a 2.5 percent decline in the number of FFS beneficiaries, resulting from growth in the number of beneficiaries enrolling in Medicare Advantage plans. Medicare payments per case increased 3.4 percent between 2005 and 2006, after growing at an annual rate of 16.6 percent between 2003 and 2005. Since 2003, length of stay has declined about 1 percent per year, on average.

Change in quality of care

We use four types of measures of quality for LTCHs that can be calculated from routinely collected administrative data: death in the LTCH, death within 30 days of discharge from the LTCH, readmissions to acute care hospitals, and selected Agency for Healthcare Research and Quality (AHRQ) patient safety indicators (PSIs) that measure adverse events. The evidence based on these measures is mixed.

Death in the facility, death within 30 days of discharge, and readmission to the acute care hospital are generally used as gross indicators of quality. We focus on examining trends in these indicators, rather than levels, because levels can reflect both planned procedures and unplanned incidents as well as coding practices. The risk-adjusted share of patients who died in the LTCH and the share of those who died within 30 days of discharge continued to decline (Table 2G-4). After rising from 2004 to 2005, the risk-adjusted share of patients readmitted to the acute care hospital decreased in the next period.

AHRQ publishes 25 hospital-level PSIs to identify potentially preventable adverse events resulting from acute hospital care (AHRQ 2007). Four of them appear to be most appropriate for LTCHs—decubitus ulcers, infection due to medical care, postoperative pulmonary embolism (PE) or deep vein thrombosis (DVT), and postoperative sepsis. Patients in LTCHs frequently have lengthy stays and may be more likely to develop decubitus ulcers than patients in some other settings. Five of the 10

TABLE 2G–3

Growth has slowed for most types of LTCHs

Type of LTCH	2002	2003	2004	2005	2006	Average annual change 2002–2005	Change 2005–2006
All	286	317	353	388	392	10.7%	1.0%
Urban	266	291	322	354	359	10.0	1.4
Rural	20	26	31	33	32	18.2	–3.0
Freestanding	137	142	146	157	165	4.6	5.1
Hospital within hospital	149	175	207	231	227	15.7	–1.7
Nonprofit	85	100	117	129	133	14.9	3.1
For profit	168	187	207	230	228	11.0	–0.9
Government	33	30	29	29	31	–4.2	6.9

Note: LTCH (long-term care hospital).

Source: MedPAC analysis of Provider of Service files from CMS.

most frequent LTCH diagnoses are respiratory related, so postoperative PE and DVT can be risks for these patients. We calculated the change in the rates per 1,000 LTCH patients for the four PSIs; results are shown in Table 2G-5 (p. 228).[5] The rates for one of the four PSIs—postoperative PE or DVT—declined from 2005 to 2006, indicating improved quality, while the rates for decubitus ulcer, infection due to medical care, and postoperative sepsis increased, indicated worsening quality. However, we need to be cautious about interpreting the PSIs, as they were developed for acute hospital care, not for LTCHs.

Additional measures of quality for LTCHs are needed. The AHRQ PSIs can be calculated for overall industry safety in LTCHs, but because the incidence of these problems is relatively low, they may not be suitable for measuring quality in individual hospitals. Further, data on patient outcomes are currently not available. Measures of quality at the hospital-specific level could come from the industry. For example, the National Association of Long Term Hospitals has begun collecting outcomes and other performance measurement data from participating LTCHs. The measures include rates of weaning from ventilators, pneumonia contracted while on a ventilator, decubitus ulcers acquired in the LTCH, falls, and use of restraints (Kalman 2007). CMS could use a patient assessment instrument to collect similar data to monitor LTCH care. In addition, industry efforts to study the characteristics, treatments, and outcomes of LTCH patients such as those dependent on ventilators could lead to the development of evidence-based practice guidelines for some conditions (Scheinhorn et al. 2007).

TABLE 2G–4

LTCH deaths and readmissions to acute care hospitals are declining

	2004	2005	2006	Average annual change 2004–2006
Death in LTCH	12.8%	12.3%	11.1%	–6.9%
Death within 30 days of LTCH discharge	22.8	22.6	22.1	–1.5
Readmission to acute care hospital	11.5	11.9	10.1	–6.1

Note: LTCH (long-term care hospital). Rates are adjusted to reflect 2001 case mix.

Source: MedPAC analysis of MedPAR data from CMS.

TABLE 2G–5

Three of four patient safety indicators for long-term care hospitals worsened from 2005 to 2006

Patient safety indicator	Risk-adjusted rates per 1,000 eligible discharges			Change in rate, 2005–2006	Observed adverse events, 2006	Total number of patients, 2006
	2004	2005	2006			
Decubitus ulcer	98.49	137.56	152.3	10.7%	16,593	103,975
Infection due to medical care	21.41	24.98	25.57	2.4	2,444	91,934
Postoperative PE or DVT	35.61	38.89	34.79	–10.5	560	15,940
Postoperative sepsis	81.68	74.18	75.58	1.9	286	3,158

Note: PE (pulmonary embolism), DVT (deep vein thrombosis). To control for patient condition on admission to the long-term care hospital, eligible discharges include only those with a previous acute hospital stay.

Source: MedPAC analysis of MedPAR data from CMS.

Long-term care hospitals' access to capital

Almost three-quarters of LTCHs are proprietary, and roughly two-thirds of these are owned by one of two chains: Kindred Healthcare, Inc. and Select Medical Corp. For-profit chains can access capital through the equity market as well as by borrowing. Private equity firms control a large portion of the for-profit segment of the market. Several small chains, in addition to Select Medical, are controlled by private equity firms. Most recently, the private equity firm Highland Capital Management acquired Cornerstone Health Group, an owner of nine LTCHs, in October 2007.

The indications regarding LTCHs' access to capital are difficult to interpret. Some financial analysts argue that even private equity firms might not have access to capital in the current environment and that some of the smaller chains are already highly leveraged. Uncertainty about potential changes to Medicare's payment policies may heighten lenders' anxiety.

On the other hand, some financial analysts believe that dire predictions about Medicare payment reductions have not come to pass and that business should stabilize over the next year. The publicly traded Kindred announced in early November 2007 that its third-quarter results exceeded expectations. Several analysts recently awarded the company's stock "buy" and "market perform" ratings. In addition, private equity investment in the industry suggests that LTCHs have access to capital. LTCH companies are also increasingly diversified, both vertically and horizontally, which may improve their ability to control costs. Kindred, for example, owns more than 200 nursing facilities, a contract rehabilitation business providing rehabilitation services primarily in long-term care settings, and a pharmacy division operating more than 40 pharmacies and a pharmacy management business servicing most of its LTCHs. Select Medical is a leading operator of outpatient rehabilitation facilities in the United States and Canada. Most recently, the company announced an agreement to acquire CORA Health Services, an outpatient rehabilitation company with 95 clinics in Florida, Michigan, and Pennsylvania, for $46 million. Payment policy changes under the MMSEA improve the industry's financial picture considerably.

Payments and costs

To assess the adequacy of Medicare payment, we examine payments to and costs of LTCHs. We also calculate an aggregate Medicare margin for LTCHs.

Evidence from cost reports suggests that growth in cost per case has increased rapidly since the PPS was implemented, climbing 9 percent between 2003 and 2004 and 6 percent annually between 2004 and 2006 (Figure 2G-3). When considering LTCH costs, note that LTCHs have considerable discretion in determining which patients to admit. Therefore, LTCHs may be very responsive to changes in payments, adjusting their costs per case when payments per case change. The rise in cost per case has roughly paralleled growth in payments per case, which climbed 13 percent between 2003 and 2004, 10 percent between 2004 and 2005, and 4 percent between 2005 and 2006.

Much of the growth in payments since the PPS was implemented has been due to an increase in the reported case mix of patients. When it first implemented the LTCH PPS, CMS expected that coding under the new classification system would improve. History suggests that the introduction of new case-mix classification systems and subsequent refinements to those systems usually lead to more complete documentation and coding of the diagnoses, procedures, services, comorbidities, and complications that are associated with payment. That can raise the average case-mix index (CMI) under the new or refined classification system, even though patients are no more resource intensive than they previously were. Changes to a classification system can therefore lead to unwarranted increases in payments to providers. For example, CMS found that between 2003 and 2004 LTCH improvements in coding and documentation resulted in an apparent CMI increase of 4.0 percent (CMS 2006b).[6]

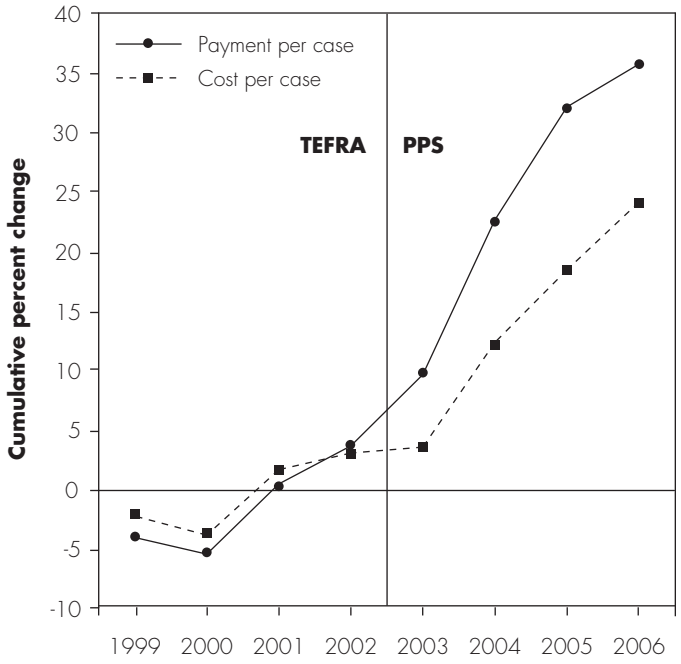
Improvements in documentation and coding can be expected to decline over time, as LTCHs become familiar with the classification system. This may have helped to dampen recent growth in payments per case. However, on October 1, 2007, Medicare implemented a refined case-mix classification system, the MS–LTC–DRGs. The MS–LTC–DRGs comprise the base LTC–DRGs previously used for payment that have been subdivided into one, two, or three severity levels. MS–LTC–DRGs are the same groups used in the acute inpatient PPS, but they have relative weights specific to LTCH patients. Consistent with our analysis of changes to the acute care hospital PPS, we expect LTCHs will improve their documentation and coding of diagnoses and procedures and that this change in behavior will lead to increases in reported case mix (MedPAC 2007). Without an offsetting adjustment, increased case mix will lead to growth in payments per case.

The Medicare margin is the difference between Medicare payments and costs, as a percentage of Medicare payments. Conceptually, this margin represents the percentage of revenue that providers keep. LTCHs' Medicare margins under TEFRA were often less than zero (Table 2G-6, p. 230). After CMS implemented the PPS in 2003, margins rose rapidly for all groups of LTCHs, climbing from 0.4 percent in 2002 to 11.8 percent in 2005. The 2006 Medicare margin for LTCHs is 9.4 percent.

HWHs and for-profit LTCHs have higher margins than freestanding and nonprofit LTCHs (Table 2G-6). (Government-owned LTCHs are relatively few in number, have few Medicare patients, and operate under different budget and economic constraints than other LTCHs.)

FIGURE 2G–3

LTCHs' payments have risen faster than their costs since the PPS



Note: LTCH (long-term care hospital), PPS (prospective payment system), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982). Data are from consistent two-year cohorts of LTCHs.

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

A number of payment policy changes affect our estimate of the 2008 Medicare margin. In general, these changes decrease payments for LTCHs. The changes include:

- a market basket increase of 3.4 percent for 2007, offset by an adjustment for past coding improvement for a net update of zero (CMS 2006b);
- changes in the short-stay outlier policy in 2007;
- changes to the case-mix groups and relative weights in 2007, implemented in a non-budget-neutral manner (CMS 2006a);
- for 2007 through 2010, setting the 25 percent rule at 50 percent for HWHs and satellite LTCHs and at 75 percent for rural facilities and for those in urban areas with a single or dominant acute care hospital (see text box, p. 217);

TABLE 2G–6

All types of LTCHs' Medicare margins increased under PPS

	TEFRA					PPS			
Type of LTCH	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
All	0.2%	–1.6%	–1.7%	–1.6%	0.4%	5.3%	8.9%	11.8%	9.4%
Urban	–0.7	–1.7	–1.3	–1.2	0.0	5.4	7.9	10.9	9.6
Rural	1.7	–1.6	–2.1	–2.1	–0.5	5.1	9.7	12.8	2.9
Freestanding	0.6	–1.6	–1.6	–1.6	–0.2	5.4	9.0	11.8	8.3
Hospital within hospital	–18.8	–5.7	–3.4	–3.2	–3.1	1.3	5.1	12.5	10.5
Nonprofit	–0.8	–1.1	–2.5	–1.5	0.2	2.1	6.4	9.3	5.7
For profit	2.5	–1.0	–1.0	–1.5	–0.2	6.4	10.1	13.1	10.8
Government	–19.1	–15.7	–8.0	–4.8	–3.0	0.5	–4.9	–1.5	–1.7

Note: LTCH (long-term care hospital), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). Government-owned LTCHs are relatively few in number, have few Medicare patients, and operate under different budget and economic constraints compared with other LTCHs.

Source: MedPAC analysis of cost report data from CMS.

- a market basket increase of 3.2 percent for 2008, offset by an adjustment for coding improvement for a net update of 0.71 percent;
- an adjustment to the high-cost outlier fixed loss amount for 2008;
- implementation of MS–LTC–DRGs in 2008, which we expect will result in improved coding and documentation; and
- payment policy changes due to implementation of the MMSEA, including a 0 percent update for services furnished between April and July 2008.

We estimate LTCHs' aggregate Medicare margin will be between –1.4 percent and –0.4 percent in 2008. This range is based on two different assumptions about LTCHs' behavior in response to the 25 percent rule. If HWHs do not change their behavior, we estimate the Medicare margin will be –1.4 percent. If they change their behavior to avoid payment reductions, we estimate the margin will be –0.4 percent. There are a number of ways LTCHs could change behavior to minimize the effect of the rule—for example, admitting more patients who were high-cost outliers in the acute care hospital and not subject to the rule, recruiting patients from more acute hospitals to minimize referrals from their host hospital, and organizing as freestanding LTCHs. Furthermore, CMS has had problems enforcing the 25 percent rule because of difficulties identifying HWHs and satellites.

How should Medicare payments change in 2009?

The Secretary has the discretion to update payments for LTCHs; there is no congressionally mandated update. As noted above, LTCHs tend to be very responsive to changes in payments, adjusting their costs per case when payments per case change. Therefore, we expect growth in costs will continue to slow as growth in payments has been contained. CMS's latest forecast of cost growth (the market basket) for 2009 is 3.1 percent.

MedPAC's update framework reflects the expectation that, in the aggregate, providers should be able to reduce the quantity of inputs required to produce a unit of service while maintaining service quality. Prospective payment is designed to promote efficiency, and providers should be expected to increase productivity. To estimate productivity increases, MedPAC uses the 10-year moving average of multifactor productivity in the economy as a whole, which is 1.5 percent for 2007.

Update recommendation

On the basis of our review of payment adequacy for LTCHs, the Commission recommends that the Secretary update LTCH payment rates by the rehabilitation, psychiatric, and LTCH market basket index less the Commission's adjustment for productivity growth (1.5 percent). Under current market basket assumptions, this recommendation would update the LTCH payment rates by 1.6 percent.

RECOMMENDATION 2G

The Secretary should update payment rates for long-term care hospitals for rate year 2009 by the projected rate of increase in the rehabilitation, psychiatric, and long-term care hospital market basket index less the Commission's adjustment for productivity growth.

RATIONALE 2G

Conflicting findings make it difficult to assess current payment adequacy in this sector. Growth in LTCH facilities, cases, and Medicare spending have slowed, which could call into question the adequacy of payments and access to care. However, it is difficult to determine when use of these services is appropriate and necessary. Frequently, LTCHs entering the program locate in market areas where LTCHs already exist, raising questions about whether there are sufficient numbers of very sick patients to support the number of LTCHs in the community. Seen in this light, recent slowing in growth of facilities, cases, and Medicare spending may be desirable. Further, payment policy changes to be implemented under the MMSEA improve the financial outlook for LTCHs considerably. Nevertheless, our estimated Medicare margin for 2008 suggests that LTCHs may not be able to accommodate the cost of caring for Medicare beneficiaries in 2009 without an increase in the base rate.

IMPLICATIONS 2G

Spending

- This recommendation decreases federal program spending by between $50 million and $250 million in one year and by less than $1 billion over five years.

Beneficiary and provider

- This recommendation is not expected to affect Medicare beneficiaries' access to care or providers' ability to furnish care. ■

Endnotes

1 The five states with the largest number of beds per 1,000 Medicare beneficiaries are Massachusetts, Louisiana, Rhode Island, Texas, and Connecticut.

2 For more detail on the PPS for LTCHs, see http://medpac.gov/documents/MedPAC_Payment_Basics_07_LTCH.pdf.

3 During the year, the HWH will be paid the LTCH rate. During retrospective settlement at the end of an HWH's cost report year, if the HWH is determined to be overpaid, CMS will collect the overpayment from future payments.

4 A geometric mean is derived by multiplying all numbers in a set and raising that product to the exponent of one divided by the number of cases in the set.

5 We used LTCH claims for 2003 through 2006 to identify patients with the four PSIs. We excluded patients from the analysis who had any diagnosis before transfer to the LTCH that would trigger the PSIs. (LTCH patients who did not have a prior acute care hospital stay were excluded from the analysis because we could not determine whether they had a diagnosis before admission to the LTCH that would trigger the PSIs.) Therefore, observed changes in rates are not the result of LTCHs admitting more patients who already had these conditions. The PSIs are also risk-adjusted so changes should not reflect a changing patient population over time.

6 CMS found that the observed average CMI increased 6.75 percent between fiscal year 2003 (when the PPS was implemented) and fiscal year 2004 (CMS 2006b). A previous 3M analysis suggested that, in the years immediately preceding implementation of the PPS, the increase in real CMI (that is, the increase due to treatment of more resource-intensive patients rather than to improvements in documentation and coding) was 2.75 percent (CMS 2006b). CMS assumed that the real CMI increase remained relatively constant into fiscal year 2005 and concluded that, between 2003 and 2004, improvements in coding and documentation resulted in an apparent CMI increase of 4.0 percent (6.75 percent minus 2.75 percent). Since this 4.0 percent was considerably higher than the 0.34 percent originally estimated by CMS actuaries, CMS concluded that an additional 3.66 percent adjustment (4 percent minus 0.34 percent) should be made to the federal payment rate for rate year 2007 to account for improvements in coding. For fiscal year 2007, CMS implemented a zero update, subtracting 3.66 percent from the applicable market basket increase of 3.4 percent.

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