SECTION 2G

Long-term care hospital services

RECOMMENDATION

The Secretary should update payment rates for long-term care hospitals for fiscal year 2010 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

Long-term care hospitals (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. 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. Medicare is the predominant payer for LTCH services, accounting for about 70 percent of LTCH discharges. The Commission examined indicators of payment adequacy for providers of LTCH services and found that, although projected margins are small, LTCHs appear to be able to operate within the current payment system. The supply of facilities and the number of LTCH cases per fee-for-service beneficiary have been stable, suggesting that access has been maintained. Growth in payments per case has slowed markedly but remains positive, while length of stay continues to decline. The evidence on quality is mostly positive. Access to capital is tight,

In this section

reflecting general uncertainty in the financial markets, not the adequacy of Medicare payments.

Supply of facilities—Growth in the number of LTCHs remained relatively flat between 2005 and 2007. The number of LTCHs increased just 1 percent per year during the period. For several years, LTCHs that were colocated with acute care hospitals as hospitals within hospitals (HWHs) or as satellites were growing at a faster rate than freestanding LTCHs, but since 2005 the number of HWHs has fallen an average of 2 percent per year. This turnaround is likely due to the 25 percent rule, under which Medicare generally pays less if more than a specified percentage of an HWH's or satellite's patients are referred from its host hospital. LTCHs continue to be distributed very unevenly across the nation, with some areas having many and others having none. The Medicare, Medicaid, and SCHIP Expansion Act of 2007 (MMSEA) imposed a three-year limited moratorium on new LTCHs, LTCH satellites, and new beds in existing LTCHs. Thus, growth in the number of facilities over the next few years will be limited by the moratorium and will not reflect the adequacy of Medicare's payments to LTCHs.

Volume of services and beneficiaries' access to care—We have no direct measures of beneficiaries' access to LTCH services, but beneficiaries' use of services suggests that access has not been a problem. Controlling for the change in enrollment in the traditional fee-for-service program, we found that the number of beneficiaries using LTCHs rose an average of 0.3 percent between 2005 and 2007, suggesting that access to care was maintained during the period.

Quality—The evidence on quality is mostly positive. Readmission rates for the top 15 LTCH diagnoses (which account for 60 percent of all LTCH patients) have been stable or declining. Rates of death in the LTCH and death within 30 days of discharge also have been declining for most diagnoses. Where death rates have risen, generally admissions have declined as well—sometimes markedly—so it is possible that severity of illness has

increased in these case types. LTCH patients appear to have experienced fewer infections due to medical care and fewer cases of postoperative sepsis. However, patients appear to have experienced more decubitus ulcers and more cases of postoperative pulmonary embolisms and deep vein thrombosis.

Access to capital—In the current economy-wide credit crisis, LTCHs' access to capital reveals little about Medicare payment adequacy. The MMSEA was expected to improve the industry's financial outlook, but the credit crisis deepened shortly after passage of the Act. The impact of the credit crisis will likely vary across the industry, depending in part on the degree to which providers are already leveraged. The three-year moratorium on new beds and facilities imposed by the MMSEA will reduce the need for capital by limiting opportunities for expansion.

Payments and costs—Since 2005, total payments to LTCHs have held steady at $4.5 billion annually due to changes in payment policies and growth in the number of beneficiaries enrolling in Medicare Advantage plans, whose LTCH use is not included in this spending total. Growth in cost per case has increased rapidly since the prospective payment system was implemented, climbing 9 percent between 2003 and 2004 and about 5 percent annually between 2004 and 2007. Payments grew even faster between 2003 and 2005, but since then the gap between payment and cost growth has narrowed.

LTCHs' Medicare margin for 2007 is 4.7 percent. Although implementation of the MMSEA significantly improved the financial outlook for LTCHs, reductions in payment are still likely to outweigh payment increases over the next few years. As a result, we estimate LTCHs' aggregate Medicare margin will be 0.5 percent in 2009.

These trends suggest that, although projected margins are small, LTCHs are able to operate within the current payment system. 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 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 2010. (The estimated 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 fiscal year 2010 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.

Background

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. (By comparison, the average Medicare length of stay in acute care hospitals is about five days.) Beginning January 1, 2008, LTCHs also must have a screening process to help ensure the appropriateness of patient admissions and stays. Because of the relatively long stays and the level of care provided, care in LTCHs is expensive.

Since October 2002, Medicare has paid LTCHs prospective per discharge rates based primarily on the patient's diagnosis and the facility's wage index.[3] The prospective payment system (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 very short stays in 2006 and again for a smaller group of the very shortest stays in 2007. The Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA) suspended the 2007 changes until December 29, 2010. (This policy is discussed in detail in the text box on payment for short-stay outliers.)

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 less than or equal to five-sixths of the geometric mean length of stay for the patient's long-term care diagnosis related group (LTC–DRG).[1] The SSO policy reflects CMS's contention that patients with lengths of stay similar to those in acute care hospitals should be paid at rates comparable to those under the acute care hospital prospective payment system. In 2007, about 32 percent of LTCH patients received payment adjustments for having shorter-than-average stays, but this share varied across types of cases. Approximately 90 percent of cases with psychiatric diagnoses received SSO adjustments (RTI 2007).

Before July 2007, the amount Medicare paid to LTCHs for an SSO case was the lowest 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 LTC–DRG per diem payment amount.[2]

Generally, for the same DRG, the LTCH payment is greater than the payment under the IPPS.

Effective July 2007, Medicare applied a different standard for the very shortest SSO cases ("very short-stay outliers"). These cases, representing about 16 percent of LTCH admissions, 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 were to be paid the lowest 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 prohibited the Secretary from applying the very SSO standard for a three-year period beginning December 29, 2007. Very SSO cases are now paid at the same rate as other SSO cases. ■

TABLE 2G–1 **The top 15 LTC–DRGs made up almost 60 percent of LTCH discharges in 2007**

LTC–DRG	Description	Discharges	Percentage
565	Respiratory system diagnosis with ventilator support 96+ hours	13,830	10.7%
87	Pulmonary edema and respiratory failure	7,386	5.7
576	Septicemia with mechanical ventilation <96 hours age >17	6,799	5.3
271	Skin ulcers	6,766	5.2
79	Respiratory infections and inflammation age >17 with CC	6,378	4.9
89	Simple pneumonia and pleurisy age >17 with CC	4,655	3.6
88	Chronic obstructive pulmonary disease	4,185	3.2
249	Aftercare, musculoskeletal system and connective tissue	3,915	3.0
466	Aftercare, without history of malignancy	3,836	3.0
263	Skin graft and/or debridement for skin ulcer with CC	3,749	2.9
12	Degenerative nervous system disorders	3,343	2.6
127	Heart failure and shock	3,328	2.6
462	Rehabilitation	3,066	2.4
418	Postoperative and post-traumatic infections	2,575	2.0
316	Renal failure	2,509	1.9
	Top 15 LTC–DRGs	76,320	59.1
	Total	129,202	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. Columns may not sum due to rounding.

Source: MedPAC analysis of MedPAR data from CMS.

Until 2007, LTCH payment rates were based on the long-term care diagnosis related group (LTC–DRG) patient classification system, which groups patients based primarily on diagnoses and procedures. In October 2007, CMS began replacing the LTC–DRGs with Medicare severity LTC–DRGs (MS–LTC–DRGs), which are intended to improve the accuracy of payments (CMS 2007a). MS–LTC–DRGs 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. Payments in 2009 are based entirely on MS–LTC–DRG weights.

LTCH discharges are concentrated in a relatively small number of diagnosis groups. In fiscal year 2007, the top 15 LTCH diagnoses made up almost 60 percent of all discharges from LTCHs (Table 2G-1). The most frequently occurring diagnosis was LTC–DRG 565, respiratory system diagnosis with ventilator support for 96 or more hours.[4] Five of the top 15 diagnoses, representing almost 30 percent of LTCH patients, were respiratory conditions.

Ensuring that appropriate patients are treated in LTCHs

Previous research by the Commission found that the types of patients LTCHs treat are often cared for in alternative settings, such as acute care hospitals and skilled nursing facilities (MedPAC 2004). The Commission found that Medicare pays more for patients using LTCHs than for similar patients using other settings; however, the payment differences narrowed considerably if LTCH care was targeted to the most severely ill patients.[5] The Commission has therefore argued that, 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).[6] As a result, in 2004, the Commission called for facility and patient criteria to

TABLE 2G–2

Growth in the number of LTCHs has slowed for most types

							Average annual change	
	2002	2003	2004	2005	2006	2007	2002–2005	2005–2007
Type of LTCH								
All	286	317	353	388	392	396	10.7%	1.0%
Urban	266	291	322	354	359	365	10.0	1.5
Rural	20	26	31	33	32	30	18.2	–4.7
Freestanding	137	142	146	157	165	175	4.6	5.6
Hospital within hospital	149	175	207	231	227	221	15.7	–2.2
Nonprofit	85	100	117	129	133	129	14.9	0.0
For profit	168	187	207	230	228	231	11.0	0.2
Government	33	30	29	29	31	36	–4.2	11.4
Total certified beds	21,834	23,317	24,526	25,899	25,982	26,526	5.9	1.2

Note: LTCH (long-term care hospital).

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

differentiate LTCHs from other settings that furnish less complex care and to ensure that only appropriate patients receive this level of care. In response, CMS contracted with RTI International to investigate the development of such criteria (see text box, p. 238–239). The MMSEA required the Secretary of Health and Human Services to study the use of LTCH facility and patient criteria to determine medical necessity and appropriateness of admission to and continued stay at LTCHs. A report to the Congress is due in June of this year. The LTCH industry is also sponsoring a study to establish criteria.

Because the types of patients treated by LTCHs can be (and are) treated in other settings, it would be impractical for CMS to develop criteria defining patients who can be cared for exclusively in LTCHs. Instead, CMS should seek to define the level of care typically furnished in LTCHs and other settings that provide similar services, such as step-down units of acute care hospitals and some specialized skilled nursing facilities and inpatient rehabilitation facilities.[7] To do so, CMS will need more data to compare types of patients, payments and costs, quality of care, and outcomes across these facilities. Such data would also provide the information needed to ensure that Medicare payments for the same types of patients are similar, regardless of setting. CMS's post-acute care demonstration, currently under way, will test the use of a single assessment tool in multiple post-acute care settings, including LTCHs.

Are Medicare payments adequate in 2009?

Each year, the Commission makes payment update recommendations for LTCH services for the coming year. In our framework, we estimate the adequacy of payments in the current year and then consider how much we expect providers' costs to change in the coming policy year (2010). To judge payment adequacy, we consider the supply of facilities, changes in the volume of services and beneficiaries' access to care, changes in the quality of care, LTCHs' access to capital, and the relationship between Medicare's payments and LTCHs' costs.

Supply of providers has remained stable

Growth in the number of LTCHs participating in the Medicare program has remained relatively flat. After a period of rapid growth, the number of LTCHs increased just 1 percent per year between 2005 and 2007 (Table 2G-2). The MMSEA imposed a three-year limited

RTI International major findings and recommendations

In 2004, the Commission recommended the use of facility and patient criteria to define long-term care hospitals (LTCHs) and ensure that they treat appropriate patients (MedPAC 2004). In response, CMS contracted with RTI International to investigate the development of such criteria. As part of their work for CMS, RTI analyzed claims data from 2004 to identify variations in LTCH patients as well as differences between the LTCH population and the population of patients treated in short-term acute care hospitals (particularly those qualifying for outlier payments) (RTI 2007).

RTI's analyses yielded a number of useful findings, some of which are similar to the Commission's findings from our earlier study of claims data from 2001 (before the LTCH prospective payment system was implemented) (MedPAC 2004). RTI found that:

- The two most important factors in predicting LTCH admission were severity of illness and whether the beneficiary lived in a state where many LTCHs were available. Having an all patient refined diagnosis related group (DRG) severity score of 4 (most severely ill) more than doubled the probability of an LTCH admission relative to having a severity level of 2. Patients in high LTCH states—such as Indiana, Louisiana, Massachusetts, Michigan, Pennsylvania, Ohio, and Texas—were almost three times more likely to be admitted to an LTCH than patients in other states.
- Having an LTCH admission was associated with a 1.4-day shorter length of stay on average in the general acute care hospital, all else equal, suggesting that LTCH care may be substituting for some of the later days of short-term acute hospital care.
- Margins varied substantially across DRGs, even after stratifying to remove the effects of the prevalence of high-cost or short-stay outliers. Across the 10 most common reasons for admission, average margins were lowest for rehabilitation (–0.1 percent) and highest for ventilator support (21.3 percent). This variation in profitability across DRGs stemmed from bias in the DRG weights that caused systematic understatement of costs for cases using relatively more ancillary services.
- In areas with LTCHs, use of LTCHs by the most complex ventilator patients may be associated with the same or lower costs but better clinical outcomes (Dalton and Gage 2008a). By contrast, use of LTCHs by the least complex ventilator patients may be associated with higher Medicare payments and similar or worse outcomes.
- LTCH supply (i.e., the availability of LTCHs in a geographic area) may be associated with fewer days per episode of illness for ventilator patients (Dalton and Gage 2008b). However, there appear to be no significant differences between LTCH areas and non-LTCH areas in ventilator patients' mortality and readmissions, or in their Part A costs per episode.

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moratorium, effective December 29, 2007, on new LTCHs and on new beds in existing LTCHs.[8] Thus, growth in the number of facilities over the next few years will be more a function of the moratorium than of the adequacy of Medicare's payments to LTCHs.

LTCHs can be either freestanding facilities or colocated within other hospitals as hospitals within hospitals (HWHs) or as satellites. For several years, HWHs were growing at a faster rate than freestanding LTCHs—about 16 percent annually from 2002 to 2005, compared with about 5 percent for freestanding facilities. But since 2005, the number of HWHs has fallen an average 2 percent per year. This turnaround is likely due to the 25 percent rule, which CMS established to discourage patient shifting from acute care hospitals to colocated LTCHs.[9] Under the 25 percent rule, Medicare makes an adjusted payment for certain patients that an HWH or satellite LTCH admits from its host hospital once an applicable percentage threshold has been exceeded (see text box, p. 241). Policymakers expected the rule would reduce the profitability of HWHs, slowing entry of new HWHs into the Medicare program and resulting in the closure of some existing facilities. Of the 15 LTCHs that closed in 2007, all but two were HWHs or satellites.

RTI International major findings and recommendations (cont.)

The results of the study led RTI to make several recommendations for identifying appropriate LTCH cases and payment levels. These recommendations included:

- restricting LTCH admissions to cases that meet certain medical conditions (not physical functioning or psychiatric) that are medically complex (defined broadly to include a wide range of conditions but all with severe medical complications, comorbidities, or system failures) (RTI 2007);
- requiring LTCH admissions to be discharged if not having diagnostic procedures or improving with treatment;
- developing a list of criteria to measure medical severity for hospital admissions;
- establishing a technical advisory panel to recommend a small set of criteria for defining medically complex patients appropriate for LTCH admissions and recommend measurement levels for each item that identify medically complex patients;
- establishing a data collection mechanism to collect this information;
- requiring LTCHs to collect and submit functional impairment measures as well as physiologic measures on all patients receiving physical, occupational, and speech–language pathology services;
- standardizing conditions of participation and setting staffing requirements to ensure appropriate staff for treating medically complex cases;
- establishing transfer rules to provide a disincentive for LTCHs to transfer cases early to other post-acute settings; and
- conducting additional research to examine the adequacy of payment under the LTCH and acute care hospital PPSs for medically complex patients.

Finally, RTI contended that the major issues at hand are whether LTCH and short-term acute care hospital payments are appropriate for medically complex patients who need intensive treatment programs and whether provider staffing policies are appropriate for the care of these patients. In addition, RTI raised concerns that hospitals (both short-term acute care hospitals and LTCHs) are unbundling services for which they have already been paid and discharging patients to the next level of care. ■

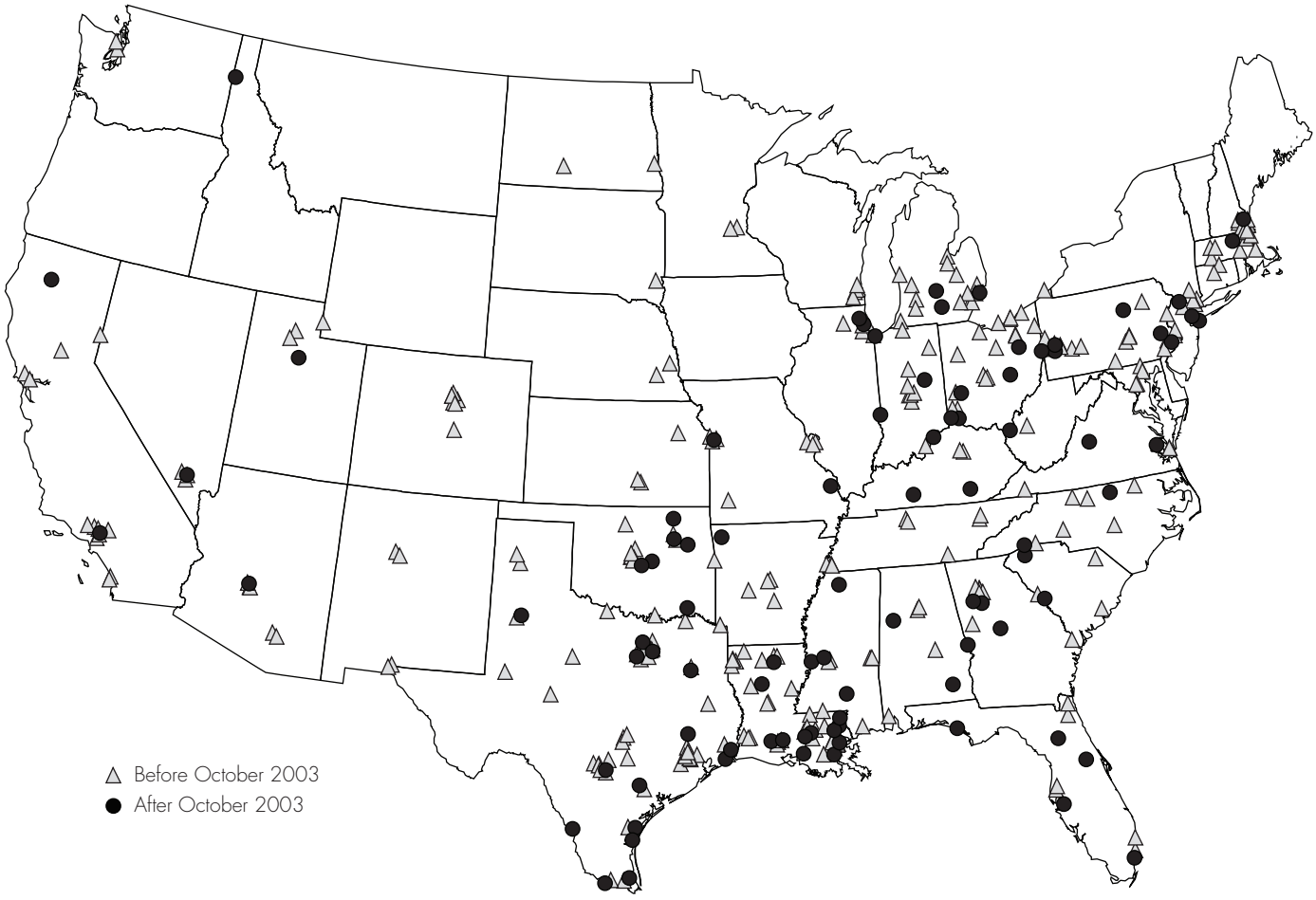
LTCHs are not distributed evenly across the nation, as shown in Figure 2G-1 (p. 240). Some areas have many LTCHs; others have none. Nationwide, there were approximately 26,500 Medicare-certified LTCH beds in 2007, or less than 1 bed per 1,000 Medicare beneficiaries. The five states with the largest number of LTCH beds per beneficiary accounted for 38 percent of the available LTCH beds but only 11 percent of the Medicare beneficiary population. 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, which is somewhat surprising because these facilities are supposed to be serving unusually sick patients, and one would expect such patients to be relatively rare. The clustering of LTCHs and the location of new facilities thus raise questions about the role these facilities play in the continuum of care.

Volume of services and access to care have remained stable

We have no direct measures of beneficiaries' access to LTCH services, but beneficiaries' use of services suggests that access has not been a problem. Controlling for the change in the number of fee-for-service beneficiaries, we found that the number of LTCH cases rose an average of 0.3 percent per year between 2005 and 2007 and the number of beds and facilities remained relatively constant, 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 all patients treated in LTCHs require that level of care.

FIGURE 2G–1

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



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

Quality of care measures mostly positive

We use 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, and readmission to acute care hospitals for each of the top 15 LTCH diagnoses. In addition, we monitor selected Agency for Healthcare Research and Quality (AHRQ) patient safety indicators (PSIs) that measure adverse events. The evidence based on these measures is mostly positive.

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 readmissions and unplanned incidents as well as coding practices. We consider these indicators for the top 15 LTCH diagnoses. These diagnoses account for almost 60 percent of all LTCH patients. We found that readmission rates have been stable or declining for virtually all these diagnoses. Rates of death in the LTCH and death within 30 days of discharge also have been declining for most diagnoses. Where death rates have risen, for all but one diagnosis the number of admissions has declined as well—sometimes markedly—so it is possible that severity of illness has increased for these diagnoses.

The 25 percent rule

In fiscal year 2005, CMS established a new policy—the so-called 25 percent rule—to discourage patient shifting between host hospitals and their colocated long-term care hospitals (LTCHs) (called hospitals within hospitals or HWHs) or satellites. CMS wanted to discourage this shifting so that decisions about admission, treatment, and discharge in both the acute care hospital and the LTCH are made for clinical rather than financial reasons and so that HWHs and satellites are not functioning as long-stay units of host hospitals.

The 25 percent rule uses payment adjustments to limit the percentage of Medicare patients who are admitted from an HWH's or satellite's host hospital and paid for at full LTCH payment rates. HWHs and satellites are paid LTCH prospective payment system (PPS) rates for patients admitted from the host acute care hospital until the percentage of discharges from the host hospital exceeds 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.[10] Patients from the host hospital who are outliers under the acute hospital PPS before their discharge 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. The impact of the 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 care hospitals, and reorganized as freestanding LTCHs. In addition, the impact of this policy might 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 July 2007, CMS extended the 25 percent rule to apply to LTCHs not previously governed by the 25 percent threshold, thus limiting the percentage of patients who could be admitted to an LTCH from any one referring hospital during a cost-reporting period without being subjected to a payment adjustment. The extended policy was to be phased in over three years, with the applicable threshold 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 many HWHs and satellites, limiting the percentage of Medicare patients who can be admitted from most HWHs' and satellites' host hospitals during a cost-reporting period without a payment adjustment to no more than 50 percent and holding it at that level for three years. (The applicable threshold for most HWHs and satellites in rural areas or in urban areas with a single or dominant acute care hospital is 75 percent.) The MMSEA also prevents the Secretary from applying the 25 percent rule to freestanding LTCHs for three years. ■

AHRQ publishes 25 hospital-level PSIs to identify potentially preventable adverse events resulting from acute hospital care (AHRQ 2007). Four of them appear most appropriate for LTCHs—decubitus ulcers, infection due to medical care, postoperative pulmonary embolism (PE) or deep vein thrombosis (DVT), and postoperative sepsis.[11] 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 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; the results are shown in Table 2G-3 (p. 242).[12] The incidence rates for two of the PSIs—infection due to medical care and postoperative sepsis—declined from 2006 to 2007, indicating improved quality, while the

TABLE 2G–3

Two of four patient safety indicators for LTCHs improved from 2006 to 2007

Patient safety indicator	Risk-adjusted rates per 1,000 eligible discharges				Change in rate, 2006–2007	Observed adverse events, 2007	Total number of patients, 2007
	2004	2005	2006	2007			
Decubitus ulcer	48.75	50.01	49.32	50.61	2.6%	3,160	21,840
Infection due to medical care	8.50	9.25	9.85	8.88	–9.9	2,857	96,310
Postoperative PE or DVT	17.44	17.83	16.39	16.80	2.5	911	16,184
Postoperative sepsis	20.01	17.64	17.63	15.36	–12.9	610	4,031

Note: LTCH (long-term care hospital), PE (pulmonary embolism), DVT (deep vein thrombosis). Due to changes in the software used to calculate patient safety indicators, the risk-adjusted rates above cannot be compared with numbers published in previous MedPAC reports.

Source: MedPAC analysis of MedPAR data from CMS.

rates for decubitus ulcer and postoperative PE or DVT increased, indicating worsening quality. However, we need to be cautious about interpreting the results from the PSI analysis, as the PSIs were developed for acute hospital care, not LTCHs. Further, the rates could be affected by changes in coding practices and not just changes in the underlying quality of care (AHRQ 2007).

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 are not suitable for measuring quality in individual hospitals. CMS does not collect information on patient outcomes in LTCHs. Without such data, it is difficult to compare care across settings and measure the value Medicare gets from the money it spends.

CMS's post-acute care demonstration is testing a uniform patient assessment instrument across post-acute care settings, including LTCHs. The demonstration provides an opportunity for CMS to observe and analyze the use of quality measures in LTCHs and to compare costs and outcomes across providers. However, results will not be available for several years.

LTCHs' access to capital is limited, but moratorium on growth restricts opportunities for expansion

The current economy-wide credit crisis means that LTCHs' access to capital tells us little about Medicare payment adequacy. Most businesses, both inside and outside the health care sector, face rising capital costs and have less access to capital. For the LTCH industry in particular, analysts report that some smaller LTCH chains continue to be highly leveraged, which further limits (or eliminates) their access to capital markets. Some smaller chains and those that are fiscally challenged may need to seek partnerships to acquire necessary capital (Fitch Ratings 2008).

The economy-wide credit crisis emerged shortly after passage of the MMSEA, which made important changes in Medicare's payment for LTCH services. The MMSEA rolled back the phased-in implementation of the 25 percent rule for certain HWHs and satellites and prohibited the Secretary from applying the 25 percent rule to freestanding LTCHs for three years. For the same period, the law also prohibited the Secretary from applying different payment rules for LTCH patients with the shortest lengths of stay. These changes prevented CMS from reducing payment for a significant number of LTCH patients, thereby improving the industry's financial outlook. That improved outlook has likely changed because of the current economic situation, but the three-year moratorium on new beds and facilities also imposed by the MMSEA will reduce the need for capital by limiting opportunities for expansion.

Payments and costs

Between 2003 and 2005, Medicare payments for LTCH services grew rapidly after the LTCH PPS was first implemented, climbing an average of almost 29 percent per year (Table 2G-4). Since 2005, payments have held steady at $4.5 billion due to previously mentioned changes in payment policies and growth in the number of beneficiaries enrolling in Medicare Advantage plans,

TABLE 2G–4

Medicare LTCH spending per FFS beneficiary continues to rise

	TEFRA			PPS					Average annual change	
	2001	2002	Change 2001–2002	2003	2004	2005	2006	2007	2003–2005	2005–2007
Cases	85,229	98,896	16.0%	110,396	121,955	134,003	130,164	129,202	10.2%	–1.8%
Cases per 10,000 FFS beneficiaries	25.1	28.6	14.0	31.3	33.9	37.0	36.7	37.3	8.8	0.3
Spending (in billions)	$1.9	$2.2	18.6	$2.7	$3.7	$4.5	$4.5	$4.5	28.5	–0.2
Spending per FFS beneficiary	$56.0	$64.3	14.9	$77.5	$101.8	$124.6	$128.0	$129.6	26.8	2.0
Payment per case	$22,009	$22,486	2.2	$24,758	$30,059	$33,658	$34,859	$34,769	16.6	1.6
Length of stay (in days)	31.3	30.7	–1.9	28.8	28.5	28.2	27.9	26.9	–1.0	–2.3

Note: LTCH (long-term care hospital), FFS (fee-for-service), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). Numbers may not sum due to rounding. Growth in cases and spending was slowed in 2006 and 2007 by large increases in the number of Medicare Advantage enrollees, whose LTCH use is not included in these totals.

Source: MedPAC analysis of MedPAR data from CMS.

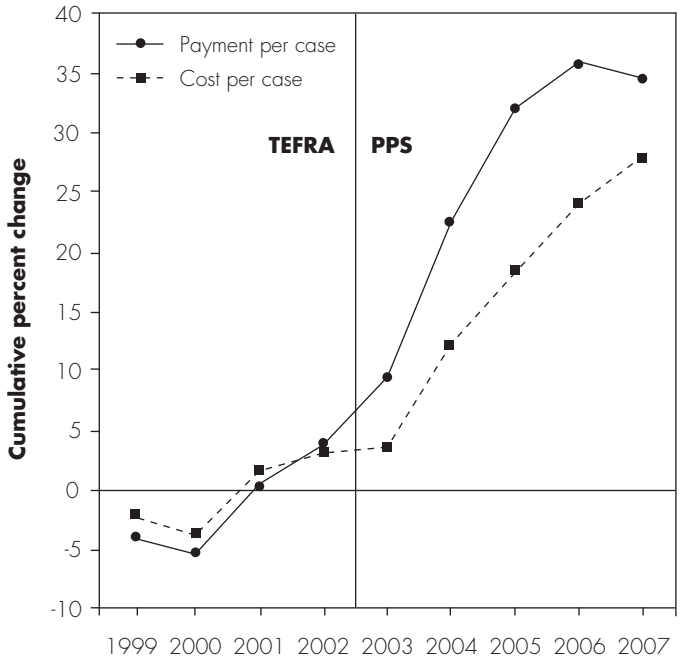
whose LTCH use is not included in these totals. Medicare spending per fee-for-service beneficiary continued to rise, growing an average 2 percent per year between 2005 and 2007. CMS estimates that total Medicare spending for LTCHs will be $4.8 billion in 2009 and will reach $5.7 billion in 2013 (CMS 2008).

Growth in cost per case has increased rapidly since the PPS was implemented, climbing 9 percent between 2003 and 2004 and about 5 percent annually between 2004 and 2007 (Figure 2G-2, p. 244). LTCHs seem to be responsive to changes in payments, adjusting their costs per case when payments per case change. Although payments were significantly higher than costs, the rise in cost per case from 2000 to 2006 roughly paralleled growth in payments per case. The gap between payment and cost growth narrowed in 2007.

Much of the growth in payments since the PPS was implemented has been due to an increase in the reported patient case-mix index, which, in principle, measures the expected costliness of a facility's patients. CMS estimated an increase in the observed case-mix index of 6.75 percent between fiscal years 2003 and 2004, 3.5 percent in 2005, and 1.9 percent in 2006 (CMS 2008, CMS 2007b, CMS 2006). Not all the growth in observed case mix was due to changes in the intensity and complexity of patients admitted to LTCHs. Some of the observed case-mix growth was due to improvements in documentation and coding that were unrelated to changes in intensity and complexity. 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 under the new or refined classification system, even though patients are no more resource intensive than they were previously. Changes to a classification system can therefore lead to unwarranted increases in payments to providers.

Increases in the case-mix index due to documentation and coding improvements can be expected to plateau over time, as LTCHs become familiar with the classification system. Facilities' experience with the system may have helped to dampen recent growth in payments per case. However, with introduction of the MS–LTC–DRGs, Medicare's refined case-mix classification system, in October 2007, we expect that improvements in LTCHs' documentation and coding of diagnoses and procedures will lead to increases in reported case mix (MedPAC 2007).

FIGURE 2G–2 **The gap between LTCH payment and cost growth narrowed in 2007**



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

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

After peaking in 2005, growth in LTCHs' Medicare margin (the difference between Medicare payments and costs) declined but remained positive. Under the pre-PPS payment system for LTCHs, LTCHs' Medicare margins were often less than zero (Table 2G-5). After the LTCH PPS was implemented in 2003, margins rose rapidly for all LTCH provider types, climbing from –0.2 percent in 2002 to 11.9 percent in 2005. At that point, Medicare margins began to decline, as growth in payments per case leveled off. The 2007 Medicare margin for LTCHs was 4.7 percent.

For-profit LTCHs had higher margins in 2007 than nonprofit LTCHs. (Government-owned LTCHs are relatively few in number, have few Medicare patients, and operate under different budget and economic constraints than other LTCHs). In 2007, in a trend reversal, freestanding LTCHs had higher margins than HWHs. This change was likely due to the 25 percent rule, which can reduce payments for some patients in HWHs (see text box, p. 241).

A number of payment policy changes affect our estimate of the 2009 Medicare margin, including:

- a market basket increase of 3.7 percent for 2008, offset by an adjustment for past coding improvement for a net update of 0.6 percent;[13]
- a market basket increase of 3.5 percent for 2009, offset by an adjustment for past coding improvements and an adjustment to account for changes in law that reduced payments for rate year 2008, for a net update of 1.9 percent;[14]
- implementation of the MS–LTC–DRGs in 2008, which we expect will result in improved coding and documentation and thus increase payments;
- adjustments to the high-cost outlier fixed loss amount for 2008 and 2009, which decrease payments; and
- changes to the wage index in 2008 and 2009, which decrease payments.

In recent years, CMS made several changes to the 25 percent rule to limit the percentage of total patients HWHs and satellites can admit from their host hospitals for full Medicare payment. In fiscal year 2007, the threshold was set at 50 percent; in 2008, the threshold was 25 percent. In addition, effective July 2007, CMS extended the 25 percent rule to apply to 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. For rate year 2008, the threshold for freestanding LTCHs was 75 percent. But the MMSEA substantially changed the 25 percent rule by rolling back the threshold for most HWHs and satellites to 50 percent (the level it was in fiscal year 2007) and preventing the Secretary from applying the rule to freestanding LTCHs. Our model assumes that providers' response to the 25 percent rule going forward will be the same as it was in 2007. We estimate LTCHs' aggregate Medicare margin will be 0.5 percent in 2009.

How should Medicare payments change in 2010?

The Secretary has the discretion to update payments for LTCHs; there is no congressionally mandated update. In view of LTCHs' responsiveness to changes in payments, we expect growth in costs will continue to slow if

TABLE 2G–5

Medicare margins, by type of LTCH

	TEFRA				PPS				
Type of LTCH	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
All	–1.7%	–1.7%	–1.6%	–0.2%	5.2%	9.0%	11.9%	9.7%	4.7%
Urban	–1.5	–1.5	–1.5	–0.1	5.3	9.3	12.0	10.0	5.1
Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Freestanding	–1.7	–1.5	–1.3	0.1	5.4	8.1	11.2	8.9	5.1
Hospital within hospital	–1.6	–1.9	–2.1	–0.5	5.0	9.9	12.5	10.6	4.3
Nonprofit	–1.3	–2.9	–1.8	0.1	1.9	6.8	9.1	6.5	1.5
For profit	–0.9	–0.9	–1.4	–0.1	6.3	10.0	13.1	11.0	5.8
Government	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: LTCH (long-term care hospital), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system), N/A (not available). Rural facilities' margins are not presented because the number of rural facilities is very small. Government-owned providers operate in a different context from other providers, so their margins are not necessarily comparable.

Source: MedPAC analysis of cost report data from CMS.

Medicare continues to put fiscal pressure on LTCHs. CMS's latest forecast of cost growth (the market basket) for 2010 is 2.9 percent.

In assessing projected increases in providers' costs, the Commission also takes into account improvements in productivity. Competitive markets demand continual improvements in productivity from workers and firms. These workers and firms pay the taxes used to finance Medicare. Medicare's payment systems should exert the same pressure on providers of health services. The Commission begins its deliberations with the expectation that Medicare should benefit from productivity gains in the economy at large (the 10-year average of productivity gains in the general economy, currently 1.3 percent). This factor links Medicare's expectations for efficiency to the gains achieved by the firms and workers who pay taxes that fund Medicare. The Commission's assessment of LTCHs' historical responsiveness to changes in payments, along with the other components of the update framework discussed above, suggests that it is reasonable to apply a productivity adjustment to the LTCH update to encourage LTCHs to produce a unit of service as efficiently as possible while maintaining quality.

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 (1.3 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 fiscal year 2010 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

In sum, growth in the number of LTCH cases per fee-for-service beneficiary has been stable, suggesting that access has been maintained. Growth in payments per case has slowed markedly but remains positive, while length of stay continues to decline. The evidence on quality is mostly positive. We are little concerned about access to

capital because of the moratorium on growth. These trends suggest that, although projected margins are small, LTCHs are able to operate within the current payment system.

IMPLICATIONS 2G

Spending

- Because CMS typically uses the market basket as a starting point for establishing updates to LTCH payments, 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 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. This statistic is useful for analyzing data that are skewed.

2 For the blended alternative, the LTCH per diem payment amount makes up more of the total payment amount as the patient's length of stay comes closer to the geometric mean length of stay for the LTC–DRG.

3 More information on the prospective payment system for LTCHs is available at http://medpac.gov/documents/MedPAC_Payment_Basics_08_LTCH.pdf.

4 Before fiscal year (FY) 2007, patients diagnosed with respiratory conditions requiring ventilator support were classified as LTC–DRG 475. Beginning in FY 2007, LTC–DRG 475 was deleted and replaced by LTC–DRG 565 and LTC–DRG 566 (respiratory system diagnosis with ventilator support for less than 96 hours).

5 In the Commission's analysis, episodes did not include the costs of readmission to the acute care hospital. That could have resulted in an understatement of the average costs of patients who did not use LTCHs, because these patients were more likely than LTCH users to be readmitted to the hospital. However, we compared LTCH users and nonusers without a readmission and found similar results: LTCH users without readmissions cost Medicare more for the total episode than patients without readmissions who used alternative settings. Among patients most likely to use LTCHs, we found a positive but statistically insignificant difference in total episode spending between LTCH users and nonusers without readmissions.

6 CMS has long been concerned that incentives under the acute care hospital PPS encourage hospitals to discharge costly patients to LTCHs—especially if an LTCH is located within the acute care hospital. Discharge of patients to LTCHs increases costs to the Medicare program by triggering two inpatient payments (one for the acute care hospital stay and one for the LTCH stay) for what otherwise might have been one inpatient stay (or one inpatient stay and one less costly stay in a skilled nursing facility or other post-acute setting). The Commission found that patients who use LTCHs have shorter acute care hospital stays than similar patients who do not use these facilities, suggesting that LTCHs substitute for at least part of the acute hospital stay. Early discharges may distort the acute inpatient PPS relative weights by reducing the costs of acute care hospitals that routinely discharge to LTCHs. To the extent that such distortion occurs, even after recalibration acute care hospital payments may be too low for some patients in areas without LTCHs.

7 Step-down units in acute care hospitals are generally described as able to furnish care for patients who need more monitoring than is typically provided in a medical or surgical unit but do not require the intensity of care provided in an intensive care unit.

8 New LTCHs and satellite facilities that were authorized by a certificate of need or that expended $2.5 million (or 10 percent) of new hospital construction costs before December 29, 2007, are exempt.

9 CMS also requires that an HWH or satellite facility be independent and not influenced by the host hospital or related organization.

10 During the year, the HWH or satellite is paid the LTCH rate. If the facility is found to have been overpaid during retrospective settlement at the end of the cost report year, CMS collects the overpayment from future payments.

11 In some cases, septicemia may be developing in an acute care hospital patient but not diagnosed until after the patient is admitted to an LTCH. In such cases, the diagnosis of sepsis may be inappropriately attributed to the LTCH.

12 We used LTCH claims for 2004 through 2007 to identify patients with the four PSIs. Where relevant, the PSI software excludes patients who had any diagnosis before transfer to the LTCH that would trigger the PSI. The PSIs are risk adjusted so changes should not reflect a changing patient population.

13 About a third of all LTCH cases receive reduced payments under the short-stay outlier policy. Therefore, we assume that an increase in aggregate LTCH PPS payments due to changes in the federal rate will be less than CMS's update to the federal rate of 0.71 percent.

14 The MMSEA specified that the base rate for LTCH discharges occurring on or after April 1, 2008, and before July 1, 2008, would be the same as the base rate for discharges for the LTCH occurring during rate year (RY) 2007, thereby eliminating the 0.71 percent increase for the fourth quarter of RY 2008. CMS therefore applied the market basket increase for RY 2009 to the base rate that was in effect during the fourth quarter of RY 2008.

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