

CHAPTER

11

**Long-term care
hospital services**

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

- 11** For 2020, the Secretary should increase the fiscal year 2019 Medicare base payment rates for long-term care hospitals by 2 percent.

COMMISSIONER VOTES: YES 17 • NO 0 • NOT VOTING 0 • ABSENT 0

Long-term care hospital services

Chapter summary

Long-term care hospitals (LTCHs) provide care to beneficiaries 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, for certain Medicare patients, have an average length of stay greater than 25 days. In 2017, Medicare spent \$4.5 billion on care provided in LTCHs nationwide. About 103,000 fee-for-service (FFS) beneficiaries had roughly 116,000 LTCH stays. On average, Medicare FFS beneficiaries accounted for about two-thirds of LTCHs’ discharges.

In fiscal year 2016, CMS began implementing a dual payment-rate structure for LTCHs that decreased payment rates for certain cases that do not meet criteria specified in the Pathway for SGR Reform Act of 2013. The extent to which LTCHs alter admission patterns for cases that meet the criteria and are thus paid the standard LTCH prospective payment system rate will ultimately determine the industry’s financial performance under Medicare. We focus some analyses on a cohort of LTCHs with a high share (85 percent or more) of cases meeting the criteria in 2017, consistent with the goals of the dual payment-rate policy.

Assessment of payment adequacy

Beneficiaries’ access to care—We have no direct measures of beneficiaries’ access to needed LTCH services. While we consider the capacity and supply

In this chapter

- Are Medicare payments adequate in 2019?
- How should Medicare payments change in 2020?

of LTCH providers and changes over time in the volume of services they furnish, we expect reductions in these metrics since the implementation of the new dual payment-rate structure that began in fiscal year 2016, as mandated by the Pathway for SGR Reform Act of 2013.

- **Capacity and supply of providers**—The number of LTCHs began to decrease in 2013, but the decline has been more rapid since the implementation of the dual payment-rate structure. We estimate that the number of LTCHs decreased by 4.1 percent from 2016 to 2017 and by an additional 2.3 percent from 2017 to 2018. However, the average LTCH occupancy rate was 64 percent in 2017, suggesting that LTCHs have adequate capacity in the markets they serve.
- **Volume of services**—From 2016 to 2017, the number of LTCH cases decreased by 7.3 percent, continuing a four-year trend that began in 2013. The number of LTCH cases per FFS beneficiary also declined during this period (2016 to 2017) by 7 percent. However, from 2016 to 2017, the number of LTCH cases that met the criteria per 10,000 FFS beneficiaries increased by 3.6 percent.
- **Marginal profit**—In 2017, marginal profit, an indicator of whether LTCHs with excess capacity have an incentive to admit Medicare patients, averaged about 14 percent across all LTCHs. The marginal profit in 2017 was about 6 percentage points lower than in 2016, reflecting payment reductions associated with the implementation of the dual payment-rate structure. For LTCHs with a high share (85 percent or more) of cases meeting the criteria specified in the Pathway for SGR Reform Act of 2013, marginal profit totaled 16 percent, about 1 percentage point lower than in 2016.

Quality of care—Consistent with prior years, non-risk-adjusted rates of direct LTCH to acute care hospital readmission, death in the LTCH, and death within 30 days of discharge were stable across all LTCH cases.

Providers' access to capital—LTCHs have begun altering their cost structures and referral patterns in response to the dual payment-rate structure, which reduces payment for cases that do not meet the criteria specified in law. This transition, coupled with payment reductions to annual updates required by statute, have limited opportunities for growth in the near term and reduced the industry's need for capital.

Medicare payments and providers' costs—From 2012 through 2015, Medicare payments increased, but more slowly than provider costs. Payments per case remained stable from 2015 through 2016, resulting in an aggregate 2016 Medicare margin of 3.9 percent across all cases. The first year that all LTCHs began transitioning to the dual payment-rate structure was 2017. The extent to which each

facility admits cases that meet the criteria directly impacts the Medicare payments it receives and may affect the costs incurred in providing care. In 2017, the aggregate Medicare margin was –2.2 percent. However, when we consider a cohort of LTCHs with a high share of cases that met the criteria, and thus admission patterns consistent with the goals of the dual payment-rate structure, the Medicare margin remained positive. Indeed, in 2017, LTCHs with 85 percent or more of Medicare cases that met the criteria had a Medicare margin of 4.6 percent. We expect continued changes in admission patterns and cost structures of LTCHs in response to the implementation of the dual payment-rate structure. We project that LTCHs’ aggregate Medicare margin for facilities with more than 85 percent of Medicare discharges that meet the criteria will be 1.2 percent in 2019.

On the basis of these indicators, and in the context of recent changes in payment policy, our recommendation for fiscal year 2020 would increase the 2019 LTCH payment rate by 2 percent. This update supports LTCHs in their provision of safe and effective care for Medicare beneficiaries meeting the criteria for payment at the standard LTCH prospective payment system rate. ■

Background

Patients with chronic critical illness—those who exhibit metabolic, endocrine, physiologic, and immunologic abnormalities that result in profound debilitation and often ongoing respiratory failure—frequently need hospital-level care for extended periods. Some are treated in long-term care hospitals (LTCHs). These facilities can be freestanding or colocated with other hospitals as hospitals within hospitals or satellites. To qualify as an LTCH for Medicare payment, a facility must meet Medicare’s conditions of participation for acute care hospitals (ACHs) and, for certain Medicare patients, have an average length of stay greater than 25 days.¹ In aggregate, LTCHs had an average length of stay of 26.3 days; by comparison, the average Medicare length of stay in ACHs is about 5 days. In 2017, Medicare spent \$4.5 billion on care provided in LTCHs nationwide. About 103,000 beneficiaries had roughly 116,000 LTCH stays. On average, Medicare fee-for-service (FFS) beneficiaries accounted for about two-thirds of LTCHs’ discharges.

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 Under this prospective payment system (PPS), LTCH payment rates are based on the Medicare severity long-term care diagnosis related group (MS–LTC–DRG) patient classification system, which groups patients primarily according to diagnoses and procedures. MS–LTC–DRGs include the same groupings used in ACHs paid under the inpatient PPS (IPPS) but have relative weights specific to LTCH patients that reflect the average relative costliness of cases in the group compared with that of the average LTCH case. The LTCH PPS has outlier payments for patients who are extraordinarily costly.³ The LTCH PPS pays differently for short-stay outlier cases (patients with shorter-than-average lengths of stay), reflecting CMS’s contention that Medicare should adjust payment rates for patients with relatively short stays to reflect the reduced costs of caring for them (see text box discussing short-stay outliers, p. 286).

LTCHs are not distributed uniformly across the country. Due in part to state certificate-of-need programs that prevent or limit the opening of certain types of health care facilities in some states, many areas have no LTCHs, while others have a high concentration of them, underscoring the fact that some medically complex patients can be treated appropriately in other settings.

LTCHs historically have constituted about 1 percent of post-acute care (PAC) use; however, this share varies substantially across ACH diagnoses. For example, about 60 percent of beneficiaries requiring a tracheostomy with more than 96 hours of ventilator support in an ACH were discharged to an LTCH, as were about 15 percent of beneficiaries discharged with either septicemia or respiratory failure requiring mechanical ventilation for more than 96 hours. The variation in LTCH use suggests that many Medicare beneficiaries receive care during an ACH stay or during an ACH stay that is subsequently followed by a PAC stay in a non-LTCH setting. However, in 2013, close to 80 percent of ventilator-dependent beneficiaries using PAC were treated in LTCHs compared with 14 percent in skilled nursing facilities (SNFs) (Medicare Payment Advisory Commission 2017a).

In fiscal year 2016, CMS began phasing in a payment change for LTCH cases that do not meet certain criteria specified in the Pathway for SGR Reform Act of 2013 (see text box on the development of the long-term care hospital dual payment-rate structure, pp. 288–289).⁴ Under this new dual payment-rate structure, Medicare cases are paid the standard LTCH PPS rate if the patient had an immediately preceding ACH stay that included 3 or more days in an intensive care unit (ICU) or if the patient received mechanical ventilation services for at least 96 hours in the LTCH. These cases are referred to as “cases meeting the criteria.” LTCH cases not meeting that specified criteria receive a “site-neutral” rate based on the lesser of an IPPS-comparable amount or 100 percent of the cost for the case. For the first four years of implementation, cases that do not meet the criteria receive payment of 50 percent of the standard LTCH PPS rate and 50 percent of the site-neutral rate. Given this phase-in period, the policy will not be fully in effect for all LTCH facilities until fiscal year 2021. However, data from fiscal year 2017 include the partial phase-in of the dual payment-rate structure across all LTCHs.

Because the impact of the dual payment-rate structure is expected to be substantial, we focus some analyses on LTCHs that have a high share of cases that meet the criteria, consistent with the goals of the dual payment-rate structure, which creates a financial disincentive for LTCHs to admit Medicare cases that do not meet the criteria. We define this subgroup of LTCHs as those with more than 85 percent of their Medicare cases meeting the criteria in 2017, accounting for about 30 percent of LTCHs.⁵

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

In the long-term care hospital (LTCH) payment system, Medicare adjusts payments for cases with short stays. CMS defines a short-stay outlier (SSO) case as having a length of stay less than or equal to five-sixths of the geometric mean length of stay for the case type. The SSO policy reflects CMS's contention that patients with lengths of stay similar to those in acute care hospitals (ACHs) should be paid at rates comparable with the cases paid under the ACH inpatient prospective payment system (IPPS).

Previously, the Commission expressed concern regarding the financial incentives associated with the payment structure of the SSO policy and the inherent payment cliffs it created. Historically, Medicare paid LTCHs for SSO discharges based on the lesser of four payment calculations, including up to the full LTCH standard payment amount.⁶ This payment structure created large differences between the SSO payment and the full LTCH payment, resulting in a strong financial incentive for LTCHs to keep patients until their lengths of stay exceed the SSO threshold for the relevant case type. In its March 2017 report to the Congress, the Commission stated that CMS could reduce the financial incentives to increase a beneficiary's length of stay beyond the SSO threshold by better aligning

the incremental payments for short-stay cases to the provider's incremental costs.

Beginning in fiscal year 2018, CMS changed how LTCHs are paid for SSOs. Instead of paying LTCHs for SSO cases based on the lesser of four payment rates, CMS now pays a rate equal to an amount that is a blend of the IPPS amount for the Medicare severity–diagnosis related group and 120 percent of the LTCH per diem payment amount up to the full LTCH prospective payment system (PPS) standard federal payment rate. As the length of stay for the SSO increases, the blended payment includes an increasing share of payment attributable to the LTCH per diem. The longer the length of stay, the more closely payment resembles the full LTCH PPS amount, greatly reducing the payment cliff that existed under the prior policy. CMS also updated this policy to no longer differentiate between the SSO cases and cases with “very short” lengths of stay.

In fiscal year 2017, the prior SSO structure remained in place. Under this structure, 32.8 percent of LTCH discharges received SSO payment adjustments, an increase from 2016. This increase in part reflects reductions in the length of stay for cases that do not meet the criteria under the dual payment-rate structure. ■

Are Medicare payments adequate in 2019?

To address whether payments for 2019 are adequate to cover the costs that providers incur in furnishing services to Medicare beneficiaries, we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to care (by examining the capacity and supply of LTCH providers, changes over time in the volume of services furnished, and providers' willingness to admit Medicare beneficiaries), quality of care, providers' access to capital, and the relationship between Medicare payments and providers' costs.

Beneficiaries' access to care: Expected reductions in supply and volume continue, without affecting access to care

We have no direct measures of beneficiaries' access to needed LTCH services. The absence of LTCHs in many areas of the country does not necessarily indicate an inadequacy of supply since beneficiaries in areas without LTCHs have access to similar services in other settings, including ACHs and some skilled nursing facilities (SNFs). However, in 2013, among PAC users requiring mechanical ventilation, close to 80 percent of these beneficiaries were treated in LTCHs (Medicare Payment Advisory Commission 2017a). In 2018, LTCHs were located in just 8.5 percent of counties, but these LTCHs

**TABLE
11-1**

The number of LTCHs decreased in 2017

Type of LTCH	Congressionally imposed moratorium		Congressionally imposed moratorium				Average annual change	
	2012	2013 ^a	2014 ^a	2015 ^a	2016	2017	2012-2016	2016-2017
LTCHs paid under the LTCH PPS ^b	421	416	413	412	411	394	-0.6%	-4.1%
LTCHs with valid cost reports ^b	426	411	399	392	407	398	-1.1	-2.2
Urban	401	385	373	373	389	378	^c	-2.8
Rural	25	26	26	19	18	20	^c	11.1
Nonprofit	78	78	73	66	71	71	-2.3	0.0
For profit	328	315	307	309	320	312	-0.6	-2.5
Government	20	18	19	17	16	15	-5.4	-6.3

Note: LTCH (long-term care hospital), PPS (prospective payment system). The Medicare, Medicaid, and SCHIP Extension Act of 2008 and subsequent legislation imposed a moratorium on new LTCHs and new LTCH beds in existing facilities from December 29, 2007, through December 28, 2012. The Pathway for SGR Reform Act of 2013 and subsequent legislation implemented a new moratorium from April 1, 2014, through September 30, 2017.

^aData for 2013 through 2015 should not be compared with prior or subsequent years because of an anomalous number of facilities that underwent an acquisition and changes in the cost reporting period.

^bData for hospitals paid under the LTCH PPS are from the Provider of Services file based on the applicable fiscal year. The count of hospitals with valid cost reports is based on each hospital's cost reporting period that most aligns with the fiscal year; however, this timing contributes to differences between the two facility counts.

^cIn addition to the anomalous numbers of facilities that underwent an acquisition and changes in the cost reporting period, there were new core-based statistical area codes for LTCHs that CMS adopted beginning fiscal year 2015. This change reclassified as urban several facilities previously classified as rural, and therefore the number of facilities between 2014 and 2015 should not be compared.

Source: MedPAC analysis of cost report data and the Medicare Provider of Services file from CMS.

served beneficiaries from over 90 percent of counties nationwide. A recent study found that 80 percent of Medicare beneficiaries reside in a hospital referral region with at least one LTCH (National Association of Long Term Care Hospitals 2017). At the median, beneficiaries traveled about 17 miles to receive LTCH care. About 10 percent of beneficiaries traveled in excess of 90 miles. While changes in the overall capacity and supply of LTCH providers and in the volume of services they furnish might typically suggest declining access to care, we fully expect reductions in these metrics following the implementation of the dual payment-rate structure that began in fiscal year 2016.

Capacity and supply of providers: Number of LTCHs began to decrease in 2013

The Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA) and subsequent legislation imposed

a limited moratorium on new LTCHs and new beds in existing LTCHs from December 29, 2007, through December 28, 2012. During that time, new LTCHs were able to enter the Medicare program only if they met specific exceptions to the moratorium.⁷ The Pathway for SGR Reform Act of 2013 and subsequent legislation implemented a new moratorium from April 1, 2014, through September 30, 2017.⁸

We examined Medicare cost report data to assess the number of LTCH beds and facilities. Growth in the number of LTCHs filing Medicare cost reports slowed considerably in the later years of the moratorium (Table 11-1). Between 2012 and 2015, a larger-than-usual number of facilities made changes to their cost reporting period, thereby affecting the number of facilities with sufficient cost report data to be used for this payment adequacy analysis.⁹ Between 2012 and 2017, the number

Development of the long-term care hospital dual payment-rate structure

The Pathway for SGR Reform Act of 2013 mandated changes to the long-term care hospital (LTCH) prospective payment system, including limiting the standard LTCH payment rate to cases that spent at least three days in an intensive care unit (ICU) during an immediately preceding acute care hospital (ACH) stay or to discharges that received an LTCH principal diagnosis indicating prolonged mechanical ventilation. In March 2014, the Commission recommended that the LTCH payment system be reformed to better align payments for both chronically critically ill (CCI) and non-CCI cases across LTCH and ACH settings.

Defining an LTCH patient

For almost two decades, given the variation in LTCH use across the country and the relatively high cost of providing care to Medicare beneficiaries in LTCHs, policymakers and researchers alike have attempted to define the type of patient most appropriate for the LTCH setting. Recent research using data from 2012 showed that, after adjusting for case mix, about half of the variation in LTCH use is explained by patient factors, including the presence of a tracheostomy. This research found that the remaining variation in LTCH use is explained by regional and hospital factors, including the proximity of a beneficiary's discharging ACH to an LTCH (Makam et al. 2018).

Defining the most medically complex patients who might be the most appropriate for LTCH-level care has been elusive. Some clinicians have described CCI patients as exhibiting metabolic, endocrine, physiologic, and immunologic abnormalities that result in profound debilitation and often ongoing respiratory failure (Nierman and Nelson 2002). Many of these abnormalities and debilities in hospital patients are not readily identifiable using available administrative data. However, the research literature is consistent in describing such patients as having long ACH stays with heavy use of intensive care services. Another study defined LTCH-appropriate patients as ventilator-dependent with major comorbidities, patients who

have multiple organ failures, and patients with septicemia and other complex infections (Dalton et al. 2012).

Analysis of findings from the Post-Acute Care Payment Reform Demonstration, which tested the use of a standardized patient assessment tool in various post-acute care settings, revealed meaningful differences in the intensity of nursing care and nutritional, rehabilitation, and physician services between LTCH users and other post-acute care (PAC) users. Length of time in an ICU during an immediately preceding ACH stay was a distinguishing characteristic of patients who used LTCHs as opposed to patients who used only skilled nursing facilities, inpatient rehabilitation facilities, or care provided by home health agencies. Post-acute care episodes that had a preceding ACH ICU stay of seven days or more were found only among LTCH users (Gage et al. 2011).

LTCH care is commonly used for other, less acutely ill, patients as well. These patients may require lengthy hospitalizations and subsequent post-acute care, but they do not have (or no longer have) intensive nursing care needs (Centers for Medicare & Medicaid Services 2013). Research has consistently shown that caring for these lower acuity patients in LTCHs increases Medicare expenditures without demonstrable improvements in quality of care or outcomes (Koenig et al. 2015). Yet such patients have historically made up a substantial share of cases in most LTCHs.

Commission recommendation for long-term care hospitals

The Commission has maintained that LTCHs should serve only the most medically complex patients and has determined, with general agreement from industry representatives, that the best available proxy for intensive resource needs in LTCH patients is ICU length of stay during an immediately preceding ACH stay. The Commission has also long held that payments to providers should be properly aligned with patients' service needs. Further, subject to risk differentials, payment for the same services should

(continued next page)

Development of the long-term care hospital dual payment-rate structure (cont.)

be comparable regardless of where the services are provided.

The Commission recommended that the Congress limit standard LTCH payments to cases that spent eight or more days in an ICU during an immediately preceding ACH stay (Medicare Payment Advisory Commission 2014). The Commission's analysis of inpatient prospective payment system (IPPS) claims data found that cases with eight or more days in an ICU accounted for about 6 percent of all Medicare IPPS discharges and had a geometric mean cost per discharge that was four times that of IPPS cases with seven or fewer ICU days. Further, these cases were concentrated in a small number of Medicare severity–diagnosis related groups that correspond with descriptions of LTCH patients provided by critical care clinicians (Dalton et al. 2012).

Setting the ICU length of stay threshold for CCI cases at eight days captures a large share of LTCH cases requiring prolonged mechanical ventilation—a service specialty of many LTCHs. However, the Commission was concerned that LTCH care could be appropriate for some patients requiring mechanical ventilation even if they did not spend eight or more days in an ICU during an immediately preceding ACH stay. The Commission therefore recommended that patients requiring prolonged ventilation care qualify for CCI status. For LTCH cases that did not spend eight or more days in an ICU during an immediately preceding ACH stay, the Commission recommended that the Secretary of Health and Human Services set the payment rates equal to those of ACHs. The Commission recommended that savings from this policy be used to create additional inpatient outlier payments for CCI cases in IPPS hospitals.

Congressionally mandated patient-level criteria

The Pathway for SGR Reform Act of 2013 established “site-neutral” payments for certain cases in LTCHs, beginning in fiscal year 2016. Under the law, the LTCH payment rate applies only to qualifying LTCH discharges (cases that meet the criteria) that had an

ACH stay immediately preceding LTCH admission and for which:

- the ACH stay included at least 3 days in an intensive care unit or
- the discharge was assigned to the Medicare severity long-term care diagnosis related group (MS–LTC–DRG) based on the receipt of mechanical ventilation services for at least 96 hours.

All other LTCH discharges (cases that do not meet the criteria)—including any discharges assigned to psychiatric or rehabilitation MS–LTC–DRGs, regardless of intensive care unit use—are paid a site-neutral amount (an amount based on either Medicare's IPPS or 100 percent of the costs of the case, whichever is lower). These site-neutral payments are being phased in over a four-year period. In cost reporting periods starting fiscal year 2016, cases that do not meet the criteria receive a blended rate of one-half the standard LTCH payment and one-half the site-neutral payment. In cost reporting periods starting on or after October 1, 2019, these cases will receive 100 percent of the site-neutral payment rate. Given LTCHs' varying cost reporting periods, the Commission expects fiscal year 2021 to be the first full year in which this policy is completely phased in.

Congressionally mandated facility-level criteria

To qualify as an LTCH for Medicare payment, a facility must meet Medicare's hospital conditions of participation and certain Medicare patients must have an average length of stay greater than 25 days. The Pathway for SGR Reform Act of 2013 loosens these criteria such that, beginning in fiscal year 2016, CMS calculates the LTCH average length of stay only for Medicare fee-for-service cases that are not paid the site-neutral rate. However, the Pathway for SGR Reform Act of 2013 requires that, for cost reporting periods starting on or after October 1, 2019, at least half of an LTCH's cases meet the criteria to continue to be paid the standard LTCH prospective payment system rate. ■

**TABLE
11-2**

The number of Medicare LTCH cases and users continued to decrease between 2016 and 2017

	2012	2013	2014	2015	2016	2017	Average annual change		
							2012-2015	2015-2016	2016-2017
Cases	140,463	137,827	133,984	131,129	125,586	116,424	-2.3%	-4.2%	-7.3%
Cases per 10,000 FFS beneficiaries	37.7	36.6	35.4	34.4	32.5	30.2	-3.0	-5.7	-7.0
Spending per FFS beneficiary	\$148.78	\$146.64	\$141.61	\$140.17	\$131.94	\$115.44	-2.0	-5.9	-12.5
Payment per case	\$39,493	\$40,070	\$40,015	\$40,719	\$40,656	\$38,253	1.0	-0.2	-5.9
Average length of stay (in days)	26.2	26.5	26.3	26.6	26.8	26.3	0.4	1.1	-2.2
Users	123,652	121,532	118,288	116,088	111,171	103,322	-2.1	-4.2	-7.1

Note: LTCH (long-term care hospital), FFS (fee-for-service).

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS and the annual reports of the Boards of Trustees of the Medicare trust funds.

of LTCHs with valid cost reports decreased by about 7 percent from 426 to 398, or about a 1.4 percent average annual decrease, roughly consistent with the 1.3 percent average annual decrease in hospitals paid under the LTCH PPS in the Provider of Services file.¹⁰ From 2017 to 2018, the number of LTCHs decreased by another 2.3 percent (data not shown), totaling a nearly 10 percent decline since 2012. Cost report data indicate that the number of LTCH beds nationwide decreased about 2.1 percent annually from 2012 through 2017 (data not shown).

Consistent with historical trends, the Commission estimates that, in 2017, more than 75 percent of LTCHs were for profit, and 95 percent were located in urban areas. In our analysis of urban and rural facilities, the data presented in Table 11-1 (p. 287) beginning in 2015 are not comparable with prior years because CMS adopted new core-based statistical area codes based on the 2010 census for LTCHs that year, in addition to the aforementioned anomalous cost reporting trends. This change reclassified as urban several facilities previously classified as rural.

Aggregate occupancy rates for LTCHs from 2012 through 2016 remained largely unchanged at 66 percent, and, historically, occupancy rates for for-profit LTCHs have

been 1 percentage point to 2 percentage points higher than for nonprofit LTCHs. However, in 2017, occupancy rates dropped to 64 percent, and the difference between occupancy rates at for-profit and nonprofit LTCHs widened. For-profit LTCHs had an occupancy rate of 65 percent compared with 59 percent for nonprofit LTCHs (data not shown). In aggregate, LTCHs with a high share of Medicare cases meeting the criteria had an occupancy rate of 69 percent in 2017.

Volume of services: Number of LTCH users decreased

Beneficiaries' use of LTCH services suggests that access is adequate. The volume of services provided by LTCHs has fluctuated in response to payment policy changes. Following a moratorium on new facilities and new beds in existing facilities, from 2012 through 2015, the number of LTCH cases per capita decreased by 3.0 percent (Table 11-2). From 2015 to 2016, as the new dual payment-rate structure was implemented, LTCH cases per 10,000 FFS beneficiaries further dropped by 5.7 percent and by 7.0 percent from 2016 to 2017. These decreases occurred, in part, because LTCHs changed their admitting practices to admit fewer cases that do not meet the criteria to be paid the standard LTCH PPS rate.

**TABLE
11-3**

The volume and share of cases meeting the criteria for the standard LTCH PPS rate increased from 2016 to 2017

	2015	2016	2017	Percent change	
				2015-2016	2016-2017
Cases meeting the criteria	72,429	72,318	74,666	-0.2%	3.2%
Share of all LTCH cases	55%	58%	64%		
Cases per 10,000 FFS beneficiaries	19.0	18.7	19.4	-1.7	3.6
Spending (in billions)	\$3.3	\$3.3	\$3.4	-0.1	3.0
Spending per FFS beneficiary	\$87.90	\$86.40	\$89.30	-1.7	3.4
Payment per case	\$46,217	\$46,223	\$46,127	0.0	-0.2
Length of stay (in days)	28.5	27.9	27.9	-2.0	-0.1

Note: LTCH (long-term care hospital), PPS (prospective payment system), FFS (fee for service). "Cases meeting the criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to be paid the standard LTCH PPS rate.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS and the annual reports of the Boards of Trustees of the Medicare trust funds.

Since 2015, the share of Medicare cases in LTCHs meeting the criteria increased by 9 percentage points to 64 percent in 2017, driven primarily by a reduction in volume of cases not meeting the criteria (Table 11-3). From 2012 through 2017, the total number of cases meeting the criteria in LTCHs remained stable, with a decrease occurring between 2014 and 2015 but an increase between 2016 and 2017. Controlling for changes in the number of FFS beneficiaries, we found the number of LTCH cases meeting the criteria increased by 3.6 percent from 2016 to 2017.

In 2017, Medicare FFS beneficiaries accounted for 63 percent of LTCH discharges and just over half of patient days in aggregate, representing a slight decline in the share of Medicare FFS discharges and patient days following a period of relative stability since 2010. In 2016, dual-eligible beneficiaries (enrolled in both Medicare and Medicaid) accounted for about 45 percent of FFS Medicare days (data not shown).

Compared with all Medicare beneficiaries, those admitted to LTCHs are disproportionately disabled (under age 65), over age 85, or diagnosed with end-stage renal disease. They are also more likely to be African American.

The higher rate of LTCH use by African American beneficiaries may be due to the concentration of LTCHs in areas of the country with larger African American populations (Dalton et al. 2012, Kahn et al. 2010). Another contributing factor may be a greater incidence of critical illness in this population (Mayr et al. 2010). At the same time, African American Medicare beneficiaries may be more likely to opt for LTCH care since they are less likely than White beneficiaries to elect hospice care (Medicare Payment Advisory Commission 2017b).

LTCH patient discharges are concentrated in a relatively small number of diagnosis groups. In fiscal year 2017, the top 20 LTCH diagnoses made up 63 percent of all LTCH discharges. The most frequently occurring diagnosis was pulmonary edema and respiratory failure (Medicare severity–long-term care diagnosis related group (MS–LTC–DRG) 189). Over 35 percent of LTCH cases were diagnoses that included respiratory conditions, an increase from 2016.¹¹

Not unexpectedly, the patient diagnoses become even more concentrated when we consider cases from the cohort of LTCHs with the highest share of cases (85 percent or more) meeting the criteria for the standard

**TABLE
11-4**

Among LTCHs with a high share of cases meeting the criteria for the standard LTCH PPS rate, the top 20 MS-LTC-DRGs made up 77 percent of discharges in 2017

MS-LTC-DRG	Description	Discharges	Share of cases
189	Pulmonary edema and respiratory failure	5,888	22.1%
207	Respiratory system diagnosis with ventilator support 96+ hours	5,530	20.8
208	Respiratory system diagnosis with ventilator support ≤96 hours	1,157	4.4
871	Septicemia without ventilator support 96+ hours with MCC	1,021	3.8
949	Aftercare with CC/MCC	803	3.0
166	Other respiratory system OR procedures with MCC	681	2.6
682	Renal failure with MCC	629	2.4
4	Tracheostomy with ventilator support 96+ hours or primary diagnosis except face, mouth and neck without major OR procedure	620	2.3
981	Extensive OR procedure unrelated to principal diagnosis with MCC	529	2.0
539	Osteomyelitis with MCC	425	1.6
177	Respiratory infections and inflammations with MCC	405	1.5
592	Skin ulcers with MCC	396	1.5
190	Chronic obstructive pulmonary disease with MCC	360	1.4
862	Postoperative and post-traumatic infections with MCC	348	1.3
314	Other circulatory system diagnoses with MCC	330	1.2
919	Complications of treatment with MCC	313	1.2
559	Aftercare, musculoskeletal system, and connective tissue with MCC	297	1.1
291	Heart failure and shock with MCC	291	1.1
56	Degenerative nervous system disorders with MCC	281	1.1
371	Major gastrointestinal disorders and peritoneal infections with MCC	224	0.8
	Top 20 MS-LTC-DRGs	20,528	77.2

Note: MS-LTC-DRG (Medicare severity-long-term care diagnosis related group), LTCH (long-term care hospital), PPS (prospective payment system), MCC (major complication or comorbidity), CC (complication or comorbidity), OR (operating room). MS-LTC-DRGs are the case-mix system for LTCH facilities. "Cases meeting the criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to be paid the standard LTCH PPS rate.

Source: MedPAC analysis of Medicare Provider Analysis and Review data from CMS.

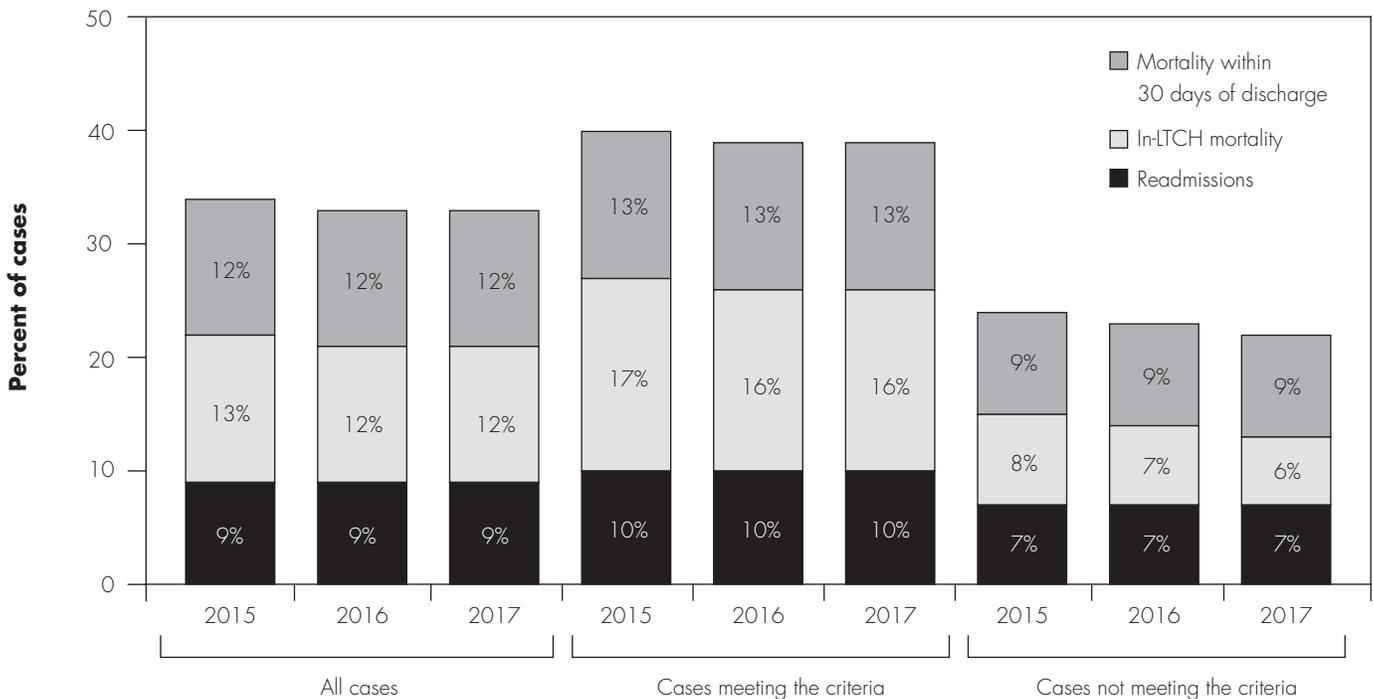
LTCH PPS rate in 2017. For these LTCHs, the top 20 diagnoses made up 77 percent of discharges (Table 11-4).¹² The top two diagnoses, pulmonary edema and respiratory failure and respiratory system diagnosis with ventilator support, accounted for almost 43 percent of all discharges in the subset of LTCHs with a high share of Medicare cases that met the criteria in 2017, compared with less than 30 percent of discharges across all LTCHs. Further, more than 55 percent of these cases involved diagnoses that were respiratory conditions or involved prolonged mechanical ventilation in the cohort of LTCHs with a high share of cases meeting the criteria.

Financial incentives to serve Medicare beneficiaries across LTCHs

Another measure of access is whether providers have a financial incentive to expand the number of Medicare beneficiaries they serve. In considering whether to treat a patient, a provider with excess capacity compares the marginal revenue it will receive (i.e., the Medicare payment) with its marginal costs—that is, the costs that vary with volume. If Medicare payments are larger than the marginal costs of treating an additional beneficiary, a provider with sufficient capacity has a financial

FIGURE 11-1

Rates of unadjusted quality measures remain stable



Note: LTCH (long-term care hospital). “Cases meeting the criteria” refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to qualify for the standard LTCH prospective payment system rate. “Cases not meeting the criteria” refers to Medicare discharges that do not meet the criteria specified in the Pathway for SGR Reform Act of 2013. Results are preliminary and subject to change.

Source: MedPAC analysis of Medicare Provider Analysis and Review and enrollment data from CMS.

incentive to increase its volume of Medicare patients. In contrast, if payments do not cover the marginal costs, the provider may have a disincentive to care for Medicare beneficiaries.¹³

In 2017, the average LTCH marginal profit was about 14 percent, down from almost 20 percent in 2016. This decrease is not unexpected given the industry-wide changes that are occurring as a result of the congressionally mandated implementation of the dual payment-rate structure. However, the change in marginal profit was much smaller for LTCHs with a high share of Medicare cases meeting the criteria. For these LTCHs, marginal profit in 2017 was about 16 percent, 1 percentage point lower than in 2016. Both statistics suggest that LTCHs with available beds continue to have a financial incentive to increase their occupancy rates with Medicare beneficiaries who meet the criteria, representing a positive indicator of access.

Quality of care: Meaningful measures becoming available; trends for unadjusted indicators remain stable

The Commission historically has assessed aggregate quality of care trends by examining three claims-calculated measures: unadjusted in-facility mortality rates, mortality within 30 days postdischarge, and direct ACH readmissions from LTCHs. LTCHs began reporting a limited set of quality measures to CMS in fiscal year 2013 and recently started publicly reporting some risk-adjusted quality measures for LTCHs that are included in our discussion.

Aggregate unadjusted quality measures

For this report, we continued to analyze unadjusted readmission and mortality rates for LTCH cases from 2015 through 2017. We generally found stable rates of readmissions to ACHs and stable mortality rates both in the facility and 30 days postdischarge (Figure 11-1). However, we caution that these measures are not risk

**TABLE
11-5**

Among cases meeting the criteria, rates of unadjusted measures varied across diagnoses related to respiratory illness or prolonged use of mechanical ventilation, 2017

MS-LTC-DRG	Description	Readmission rate	In-LTCH mortality rate	30-day post discharge mortality rate	Total mortality (in-LTCH plus 30-day post discharge)
4	Tracheostomy with ventilator support 96+ hrs or primary diagnosis except face, mouth and neck without major OR procedure	5%	29%	14%	43%
166	Other respiratory system OR procedures with MCC	11	21	16	37
177	Respiratory infections and inflammations with MCC	7	13	14	27
189	Pulmonary edema and respiratory failure	7	15	14	29
190	Chronic obstructive pulmonary disease with MCC	6	10	15	25
207	Respiratory system diagnosis with ventilator support 96+ hours	12	22	14	36
208	Respiratory system diagnosis with ventilator support ≤96 hours	22	30	15	45
870	Septicemia with ventilator support 96+ hours with MCC	9	38	12	50
	Total diagnoses related to respiratory illness or using prolonged mechanical ventilation	10	20	14	34

Note: LTCH (long-term care hospital), OR (operating room), MCC (major complication or comorbidity). "Cases meeting the criteria" refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to be paid the standard LTCH prospective payment system rate.

Source: MedPAC analysis of Medicare Provider Analysis and Review and enrollment data from CMS.

adjusted, so patient characteristics were not taken into account when calculating rates, and trends may therefore be muted or exaggerated by changes in patient mix over time. In aggregate, in 2017, 9 percent of LTCH cases were readmitted to an ACH directly from the LTCH, 12 percent died in the LTCH, and another 12 percent died within 30 days of discharge from the LTCH (Figure 11-1, p. 293). The rates have been stable since 2015.

Not unexpectedly, given differences in patient severity, the unadjusted rates for the three quality measures varied depending on whether the case met the criteria, but the rates were stable over time. In 2017, for cases meeting the criteria, 10 percent were readmitted to the ACH directly from the LTCH, 16 percent died in the LTCH, and 13 percent died within 30 days of discharge from the LTCH. Thus, combined, almost 40 percent of LTCH cases meeting the criteria in 2017 were readmitted or died in the LTCH or within 30 days of discharge.

By comparison, cases not meeting the criteria had lower rates of readmission and mortality than cases

meeting the criteria. The rates of readmission and 30-day postdischarge mortality were consistent from 2015 to 2017, but the share of cases that died in the LTCH appears to have dropped. Six percent of cases not meeting the criteria died during the LTCH stay in 2017, down from 8 percent in 2015. Given that these measures are not adjusted for patient risk factors, this decrease could be attributable to improvements in quality or changes in case mix or admission patterns. We will monitor these cases as the dual payment-rate structure is fully phased in.

For cases meeting the criteria, the unadjusted readmission and mortality rates varied markedly by respiratory diagnosis group (Table 11-5). For example, among patients with a principal diagnosis of septicemia with prolonged ventilator support with major complication or comorbidity (MCC) (MS-LTC-DRG 870), 38 percent died in the LTCH and another 12 percent died within 30 days of discharge. By comparison, among patients with a primary diagnosis of chronic obstructive pulmonary disease with MCC (MS-LTC-DRG 190), 10 percent died in the LTCH and another 15 percent died within 30 days of discharge.

**TABLE
11-6**

Measures collected for the LTCH Quality Reporting Program for 2019

Measure name	Collection start date	Collection instrument	Publicly available
Catheter-associated urinary tract infection outcome measure	10/01/12	NHSN	12/2016
Central line-associated bloodstream infection outcome measure	10/01/12	NHSN	12/2016
Percent of residents or patients who were assessed and appropriately given the seasonal influenza vaccine	10/01/14	LTCH CARE	12/2017
Influenza vaccination coverage among healthcare personnel	10/01/14	NHSN	12/2017
Facility-wide inpatient hospital-onset Clostridium difficile infection outcome measure	01/01/15	NHSN	12/2017
Application of percent of residents experiencing one or more falls with major injury (long stay)	04/01/16	LTCH CARE	09/2018
Percent of LTCH patients with an admission and discharge functional assessment and a care plan that addresses function	04/01/16	LTCH CARE	09/2018
Discharge to community		Claims	09/2018
Medicare spending per beneficiary		Claims	09/2018
Potentially preventable 30-day post-discharge readmission		Claims	
Change in mobility among LTCH patients requiring ventilator support	04/01/16	LTCH CARE	
Application of percent of LTCH patients with an admission and discharge functional assessment and a care plan that addresses function	04/01/16	LTCH CARE	
Drug regimen review conducted with follow-up for identified issues	07/01/18	LTCH CARE	
Changes in skin integrity PAC: Pressure ulcer/injury	07/01/18	LTCH CARE	
Compliance with spontaneous breathing trial by Day 2 of the LTCH stay	07/01/18	LTCH CARE	
Ventilator liberation rate	07/01/18	LTCH CARE	

Note: LTCH (long-term care hospital), NHSN (National Healthcare Safety Network), LTCH CARE (LTCH Continuity Assessment Record and Evaluation), PAC (post-acute care).

Source: CMS LTCH quality reporting measure information and CMS LTCH Compare website.

Overall, 34 percent of patients meeting the criteria with a diagnosis related to respiratory illness or using prolonged mechanical ventilation died within the LTCH or within 30 days of discharge.

Adjusted measures for quality reporting

Medicare’s LTCH Quality Reporting Program (QRP) for fiscal year 2019 includes 16 measures (Table 11-6). CMS currently reports some of these measures on its LTCH Compare website, which is updated quarterly. The data elements needed to calculate the LTCH quality measures are collected from three sources, including a patient assessment instrument called the Continuity Assessment Record and Evaluation (CARE) Data Set, the Centers for Disease Control and Prevention’s internet-based surveillance system (National Healthcare Safety

Network (NHSN)), and Medicare claims data. CMS has published two years of outcomes data for four outcome measures, including rates of pressure ulcers, catheter-associated urinary tract infection (CAUTI), central line-associated blood stream infection (CLABSI), and 30-day all-cause unplanned readmissions. For several measures, CMS compares each facility’s risk-adjusted rate with the national rate.

The rate of pressure ulcers reported by LTCHs for the data collection period of October 1, 2016, through September 30, 2017, was relatively low at 1.3 percent (Table 11-7, p. 296). The risk-adjusted readmission rate was about 25 percent and remained stable between 2015 and 2016. CMS has replaced this measure with a potentially preventable 30-day postdischarge readmission measure; however, the

**TABLE
11-7****Trends in selected risk-adjusted quality measures from the CMS LTCH Quality Reporting Program are mixed**

Measure	October 1, 2015 through September 30, 2016	October 1, 2016 through September 30, 2017
Pressure ulcer	1.8%	1.3%
30-day unplanned readmission*	24.6%	25.0%
Catheter-associated urinary tract infection (standardized infection ratio)	0.94	0.98
Central line-associated bloodstream infection (standardized infection ratio)	0.94	0.87

Note: LTCH (long-term care hospital). The standardized infection ratio is a measure of the share of actually observed cases with the infection compared with the expected number of cases after adjusting for certain risk factors. A ratio of 1.0 indicates the rate is equal to what was expected, below 1.0 indicates the rate is lower than expected, and above 1.0 indicates the rate is higher than expected.

*The 30-day unplanned readmission measure is based on data collected from claims data over a two-year period. The most recently published unique time periods include discharges occurring January 1, 2013, through December 31, 2014, and January 1, 2014, through December 31, 2015.

Source: CMS LTCH Compare website.

data are not yet publicly available.¹⁴ The standardized infection ratios of CAUTI and CLABSI continued to be lower than expected (less than 1.0, using a measure of the share of actual cases observed with the infection compared with the expected number of cases) at 0.98 and 0.87, respectively, for fiscal year 2017. These figures mean that the rate of CAUTI was about 2 percent lower than expected, while the rate of CLABSI was about 13 percent lower than expected after adjusting for certain risk factors. We urge caution in interpreting the precise ratios and changes since 2016, given that changes in facilities' testing and reporting for such infections could have altered the rate without any meaningful change in the number of these infections. We will continue to monitor trends in the rates of these measures and newly adopted measures as they become available for analysis.

The rates for certain quality measures varied by hospital characteristics. For example, using data collected during fiscal year 2017, we found that a larger share of for-profit facilities scored better than the national average on rates of CAUTI and CLABSI than did nonprofit LTCHs. However, data collected from 2014 through 2015 show a larger share of nonprofit LTCHs had better rates of unplanned readmissions than the average rate for for-profit LTCHs. We did not find this difference between nonprofit and for-profit facilities in the facility-adjusted rate of pressure ulcers or across any of the measures when we examined them by facility size.

Providers' access to capital: Implementation of LTCH dual payment-rate structure slows investment

Access to capital allows LTCHs to maintain, modernize, and expand their facilities. If LTCHs were unable to access capital, it might in part reflect problems with the adequacy of Medicare payments since Medicare accounts for about half of LTCH total revenues. However, in prior years, the level of capital investment likely reflected more about uncertainty regarding changes to regulations and legislation governing LTCHs than about Medicare payment rates. Although the Pathway for SGR Reform Act of 2013 provided more long-term regulatory certainty for the industry compared with prior years, concerns about the industry's ability to comply with the new patient criteria have resulted in low levels of capital investment.

LTCHs and LTCH companies have been positioning themselves for the changing payment environment. Strategies have included diversifying service lines and shifting portfolios over the last several years through closures and sales (Kindred Healthcare 2017, Kindred Healthcare 2015, Select Medical 2017, Select Medical 2015). Many of these sales and closures have occurred in markets with substantial competition from other LTCH providers. For example, during 2016, Kindred Healthcare acquired five LTCHs from Select Medical that were located in areas where Kindred already owned LTCHs, while Select acquired three hospitals from Kindred that

were located in areas where Select already owned LTCHs. This exchange reduced or eliminated competition between the two companies' LTCHs in some markets. Most of these eight LTCHs were subsequently closed. Kindred also completed an agreement to sell 12 LTCHs (a total of 783 licensed beds) to Curahealth in 2016 (Kindred Healthcare 2016a, Kindred Healthcare 2016b, Select Medical 2016). In 2018, Kindred Healthcare was acquired by Humana and two private equity firms (Kindred Healthcare 2018).

LTCHs' access to capital also depends on their total (all-payer) profitability. From 2012 through 2015, the LTCH all-payer margin remained stable at about 4 percent. However, in 2016, as the implementation of the dual payment-rate structure began, LTCHs' all-payer margin dropped to 3.1 percent. In 2017, the phase-in of the dual payment-rate structure continued, and while facilities, on average, increased the share and volume of patients meeting the criteria, 36 percent of cases, on average, did not meet the criteria and thus received a reduced payment rate. The share of Medicare revenue also decreased between 2015 and 2017, falling from almost 50 percent to about 45 percent of all LTCH revenue. Because of these combined factors, in 2017, the aggregate all-payer LTCH margin dropped to 0.2 percent.

The Commission expects continued industry consolidation, limited need for capital, and limited growth opportunities until after the LTCH dual payment-rate structure becomes fully implemented and LTCHs adjust their admission patterns and cost structures to align with the new payment incentives. Because Medicare pays less for certain cases, LTCHs with a higher share of cases meeting the criteria will have stronger financial performance. LTCHs with more than 85 percent of their Medicare cases meeting the criteria had an aggregate all-payer margin of 4.2 percent in 2017, down 1.2 percentage points from 2016.

Medicare's payments and providers' costs: Cost growth exceeded payment growth in 2017

From the start of Medicare's LTCH PPS until 2012, LTCHs, in aggregate, held cost growth below payment growth. After 2012, however, Medicare payments increased more slowly than provider costs, resulting in an aggregate 2016 Medicare margin of 3.9 percent. Because of reductions in payment associated with the implementation of the dual payment-rate structure, Medicare margins across LTCHs fell to -2.2 percent in 2017. However, LTCH profitability in 2017 relied on the

extent to which LTCHs admitted Medicare cases that met the criteria. LTCHs with more than 85 percent of cases meeting the criteria in 2017 had a Medicare margin of 4.6 percent, down from 6.2 percent in 2016.

Reductions in Medicare payment per case for LTCH services result from the implementation of the dual payment-rate structure in 2016

Per case payments for LTCH services grew rapidly following the implementation of the LTCH PPS, but growth in these payments slowed over time. From 2012 through 2015, payment per case grew at 1.3 percent annually. However, payment growth per case was flat from 2015 to 2016, a function of CMS beginning to phase in the dual payment-rate structure. In 2017, the dual payment-rate structure was 50 percent phased in for all LTCHs, resulting in further reductions in LTCH spending per case. From 2016 through 2017, LTCH payment per case fell by 7.3 percent.

Starting in 2016, trends in the payment per case began to diverge for LTCHs with more than 85 percent of cases meeting the criteria compared with LTCHs with a lower share of cases meeting the criteria. From 2012 through 2015, before the implementation of the dual payment-rate structure, payment per case grew 1.2 percent annually, slightly less than the aggregate. However, in 2016, payments per case increased by 4.9 percent and again by almost 4 percent in 2017, likely due to increases in case mix associated with the higher share of Medicare beneficiaries meeting the criteria in these facilities.

LTCHs reduced cost per case from 2016 to 2017 in response to changes in payment

From 2012 through 2015, LTCH cost per case increased by about 2 percent per year across all LTCHs. During this time, cost per case also increased by about 2 percent for the cohort of LTCHs with a high share of Medicare beneficiaries who met the criteria in 2017. However, after the phase-in of the dual payment-rate structure began, similar to changes in payment growth, the trend in cost growth also diverged. From 2015 to 2016, growth in cost per discharge slowed to 1.3 percent in aggregate, the slowest growth since 2011. In 2017, on average, LTCHs actually reduced costs per discharge by 1.1 percent. This reduction in costs likely resulted from changes in LTCH cost structures, including reductions in length of stay for beneficiaries not meeting the criteria under the dual payment-rate structure.

Cost growth remained robust for LTCHs with a high share of Medicare cases meeting the criteria. For LTCHs

**TABLE
11-8**

The aggregate LTCH Medicare margin for all cases fell to -2.2 percent in 2017

Type of LTCH	Share of discharges	2012	2013	2014	2015	2016	2017
All	100%	7.6%	6.8%	5.2%	4.7%	3.9%	-2.2%
Urban	96	7.7	6.9	5.2	4.7*	4.0	-1.9
Rural	4	3.4	6.0	5.1	3.5*	-0.2	-13.6
Nonprofit	12	-0.2	-1.1	-5.9	-5.9	-5.7	-13.0
For profit	87	9.3	8.6	6.5	6.5	5.5	-0.3
Government	1	N/A	N/A	N/A	N/A	N/A	N/A

Note: LTCH (long-term care hospital), N/A (not applicable). Government-owned facilities operate in a different financial context from other facilities, so their margins are not necessarily comparable. Their margins are not presented separately here, although they are included in the margins for other groups (e.g., "All"), where applicable. Components may not sum to 100 percent due to rounding.

*CMS adopted new core-based statistical area codes for LTCHs beginning fiscal year 2015; this change reclassified several facilities as urban that had previously been classified as rural, and therefore the margins across categories of urban and rural of facilities before 2015 should not be compared.

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

with more than 85 percent of Medicare cases that met the criteria, cost per case increased from 2015 to 2016 by 5.4 percent and from 2016 to 2017 by 5.6 percent, reflecting a 10-year high across this cohort of LTCHs. These increases in costs are expected, given the increase in case mix and patient acuity associated with treating the higher severity cases meeting the criteria (see text box on LTCH operational changes in response to the implementation of the dual payment-rate structure, pp. 302–303). For this group of LTCHs, the share of cases meeting the criteria grew by almost 30 percentage points in aggregate from 65 percent of cases meeting the criteria in 2015 to nearly 95 percent of cases in 2017.

Aggregate LTCH Medicare margins decreased in 2017

LTCH Medicare margins peaked in 2012 at 7.6 percent. In 2013, 2014, and 2015, CMS began implementing a downward payment adjustment intended to bring LTCH payments more in line with what would have been spent under the previous payment method (as mandated by the Medicare, Medicaid, and SCHIP Balanced Budget Refinement Act of 1999), decreasing the standard federal payment rate by about 3.75 percent in total. Because of these adjustments, the 2013 aggregate LTCH margin fell to 6.8 percent, down from 7.6 the previous year (Table 11-8). As anticipated, the margin fell again in 2014, to 5.2

percent. In 2015, the third and final year of the downward adjustment for budget neutrality, the aggregate LTCH margin fell to 4.7 percent.

In 2016, as the phase-in of the dual payment-rate structure began, the aggregate LTCH margin fell to 3.9 percent, primarily because of decreases in Medicare payment for discharges not meeting the criteria. Between 2016 and 2017, although there was a 9 percentage point shift toward cases that met the criteria (from 55 percent to 64 percent), LTCHs in aggregate received lower payments for 36 percent of cases (data not shown). Because the reduction in payments was greater than reductions in costs, the aggregate Medicare margin fell to -2.2 percent. Consistent with prior years, financial performance in 2017 varied across LTCHs. For-profit LTCHs (which accounted for more than three-quarters of all LTCHs and over 85 percent of LTCH discharges) had the highest aggregate margin at -0.3 percent (Table 11-8). The aggregate margin for nonprofit LTCHs (which accounted for less than 20 percent of all LTCHs and 12 percent of LTCH discharges) was -13.0 percent.

Since 2015, the Commission has calculated a margin for Medicare cases meeting the criteria using claims data combined with cost-to-charge ratios for each LTCH, as opposed to aggregate cost report data. Using this methodology, the Medicare margin for cases meeting the

**TABLE
11-9**

From 2016 to 2017, Medicare margins for LTCHs with more than 85 percent of cases meeting the criteria fell

Type of LTCH	Share of discharges	2012	2013	2014	2015	2016	2017
All	23%	10.5%	8.9%	6.5%	6.5%	6.2%	4.6%
Nonprofit	13	0.9	2.9	-1.8	-2.8	-2.8	-6.9
For profit	87	12.0	9.8	7.8	7.9	7.6	6.5

Note: LTCH (long-term care hospital). “Cases meeting the criteria” refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to be paid the standard LTCH prospective payment system rate.

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

criteria declined between 2015 and 2016 from 6.8 percent to 6.3 percent. In 2017, the margin for cases meeting the criteria declined by half a percentage point to 5.8 percent. Because cases that meet the criteria are generally more profitable under the dual payment-rate structure than those that do not, we expect stronger financial performance under Medicare for LTCHs that treat higher shares of these cases. Indeed, LTCHs with more than 85 percent of Medicare cases meeting the criteria have historically had higher margins, in part due to the high case mix and relatively high profitability of Medicare cases admitted. In 2017, the aggregate Medicare margin for these LTCHs was 4.6 percent, a 1.6 percentage point reduction from 2016 (Table 11-9). This reduction in margin resulted from reduced payment for cases that did not meet the criteria (representing up to 15 percent of cases at these facilities), combined with relatively high cost growth.

Consistent with LTCHs’ financial performance in aggregate, differences exist by facility ownership even across LTCHs with a high share of cases meeting the criteria. From 2016 to 2017, cost per case increased four times more rapidly at nonprofit facilities with a high share of cases that met the criteria than at their for-profit counterparts (13 percent compared with 4 percent) (data not shown), resulting in a 4.1 percentage point decrease in the Medicare margin (from -2.8 percent to -6.9 percent). Margins at for-profit LTCHs with a high share of Medicare cases meeting the criteria fell by 1.1 percent to 6.5 percent in 2017.¹⁵

High-margin LTCHs focused on cases meeting the criteria

In 2017, both higher per unit costs and lower per unit payments were the primary drivers of differences in financial performance between LTCHs with the lowest and highest Medicare margins (those in the bottom and top 25th percentiles of Medicare margins).¹⁶ More than half of the LTCHs with the highest Medicare margins in 2017 also had more than 85 percent of their Medicare cases meeting the criteria; therefore, many of the attributes of the highest margin facilities overlapped with those of LTCHs with a high share of cases meeting the criteria. High-margin LTCHs had a higher average case mix (1.24) compared with low-margin LTCHs (1.11) (Table 11-10, p. 300). This case mix, in part, reflects the share of Medicare cases meeting the criteria. In 2017, 71 percent of Medicare cases in high-margin LTCHs met the criteria compared with 55 percent in low-margin LTCHs. Occupancy rates tracked closely with financial performance: High-margin LTCHs had an average occupancy rate of 71 percent, 17 percentage points higher than low-margin LTCHs (54 percent).

After accounting for differences in case mix and local market input price levels, low-margin LTCHs had standardized costs per discharge that were 30 percent higher than high-margin LTCHs (\$35,999 vs. \$27,646, respectively). Payments per discharge were substantially lower for low-margin LTCHs. Outlier payments made up a larger share of total payments to low-margin LTCHs compared with high-margin LTCHs (7 percent compared

**TABLE
11-10****LTCHs in the top quartile of Medicare margins in 2017 had lower costs**

Characteristics	High-margin quartile	Low-margin quartile
Mean margin	13.7%	-29.1%
Mean total discharges per facility (all payers)	473	415
Medicare patient share	65%	58%
Occupancy rate	71%	54%
Mean CMI	1.24	1.11
Mean per discharge:		
Standardized costs	\$27,646	\$35,999
Standard Medicare payment*	38,102	30,295
High-cost outlier payments	2,886	5,258
Share of:		
Cases meeting the criteria	71%	55%
LTCHs that are for profit	96	60

Note: LTCH (long-term care hospital), CMI (case-mix index). Figures presented include only established LTCHs—those that filed valid cost reports in both 2016 and 2017. High-margin-quartile LTCHs were in the top 25 percent of the distribution of Medicare margins. Low-margin-quartile LTCHs were in the bottom 25 percent of the distribution of Medicare margins. Standardized costs have been adjusted for differences in case mix and area wages. Case-mix indexes have been adjusted for differences in short-stay outliers across facilities. “Cases meeting the criteria” refers to Medicare discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 to be paid the standard LTCH prospective payment system rate. Government providers were excluded.
*Excludes outlier payments.

Source: MedPAC analysis of LTCH cost reports and Medicare Provider Analysis and Review data from CMS.

with 15 percent) (data not shown). When these outlier payments were removed from total payments, we found that the standard payment per discharge for low-margin LTCHs was 20 percent lower than that for high-margin LTCHs (\$30,295 vs. \$38,102, respectively).

Given the relatively low occupancy and low share of cases meeting the criteria and the relatively high costs, it will be difficult for many of these low-margin LTCHs to increase their occupancy rates and concurrently transition to a higher share of cases meeting the criteria as the dual payment-rate structure is implemented.

How should Medicare payments change in 2020?

To estimate LTCH payments, costs, and margins for 2019, we consider the cohort of LTCHs with a high share of cases meeting the criteria specified in the Pathway for SGR Reform Act of 2013, those LTCHs with 85 percent or more of Medicare cases meeting the criteria in 2017, consistent with the goals of the dual payment-rate policy. We base this projection on margins in 2017 and policy changes in 2018 and 2019. Those payment changes that affect our estimate of the 2019 margin include:

- a 1 percent payment rate increase for fiscal year 2018, as mandated by the Medicare Access and CHIP Reauthorization Act of 2015;
- a market basket increase of 2.9 percent for fiscal year 2019, offset by reductions required by the Patient Protection and Affordable Care Act of 2010 totaling 1.55 percentage points, for a net update of 1.35 percent;¹⁷ and
- budget-neutrality adjustments for the elimination of the 25-percent threshold rule.¹⁸

The net result is that from 2017 to 2019, payment rates will increase for cases that meet the criteria by about 2.5 percent over two years.

Given the implementation of the dual payment-rate structure, changes in cost will depend on the extent to which LTCHs focus on Medicare cases that meet the criteria. These cases tend to have a higher severity of illness than other cases; thus, as the share of these cases increases in LTCHs, LTCH costs are also expected to increase. From 2016 to 2017, costs per case in LTCHs with a high share of Medicare cases that met the criteria grew by 5.6 percent. This cost growth was in large part due to increases in the share of Medicare cases meeting the criteria. For this group of LTCHs, the share of cases meeting the criteria between 2015 and 2017 grew by nearly 30 percentage points in aggregate, from 65 percent to almost 95 percent. We expect significant changes in LTCHs’ costs as the dual payment-rate structure is fully implemented and LTCHs continue to increase their Medicare admissions of cases that meet the criteria. However, once an LTCH has reached a threshold of such cases, we expect changes in cost will stabilize and reflect levels consistent with those before the implementation of

the dual payment-rate structure. From 2013 through 2015, annual cost growth in LTCHs with a high share of cases meeting the criteria in 2017 was about 2 percent. This annual cost growth was also consistent across LTCHs in aggregate from 2013 through 2015, regardless of the share of Medicare cases that met the criteria in 2017. As such, we assume cost growth per discharge will equal about 2 percent per year based on historical trends.

Our projection of the LTCH Medicare margin for fiscal year 2019 focuses on LTCHs with more than 85 percent of Medicare cases meeting the criteria. About 30 percent of LTCHs meet the 85 percent threshold, which aligns with the goals of the dual payment-rate policy—encouraging LTCHs to admit the most medically complex cases requiring specialized services. We calculated a 2017 margin of 4.6 percent for these LTCHs. Using a three-year historical average of cost growth (2 percent), we project that for facilities with more than 85 percent of Medicare cases that meet the criteria, the aggregate margin will decrease to 1.2 percent in 2019.

The extent to which LTCHs transition their admissions to cases that meet the criteria will influence their financial performance under Medicare. We expect growth in payment to accompany growth in costs associated with the increased severity of illness of cases meeting the criteria. However, the extent to which this occurs relies on the degree of behavioral response from the industry. We project that LTCHs that admit a lower share of cases meeting the criteria will have a negative Medicare margin in 2019, while those that admit a higher share of cases meeting the criteria will have a margin higher than our projection.

The 2020 payment update for cases meeting the criteria is expected to equal the projected LTCH market basket of 3.3 percent, less an adjustment for productivity of 0.5 percent. Currently, the net expected update is 2.8 percent, but that amount may change by the time CMS calculates the final 2020 update. By 2020, the phase in of the dual payment-rate structure will be complete and cases not meeting the criteria will no longer receive a blended payment rate. In addition, LTCHs will be required to meet a 50 percent threshold of Medicare cases that meet the criteria to continue to be paid the standard LTCH PPS rate.

On the basis of these indicators, the Commission concludes that a positive payment update is necessary to support LTCHs focused on a high share of cases meeting the criteria and to ensure that Medicare beneficiaries maintain access to safe and effective LTCH care.

RECOMMENDATION 11

For 2020, the Secretary should increase the fiscal year 2019 Medicare base payment rates for long-term care hospitals by 2 percent.

RATIONALE 11

Most of our payment adequacy measures are positive or reflect expected changes under the new dual payment-rate structure, and the aggregate Medicare margin for LTCHs with a high share of cases that meet the criteria for 2017 was positive, indicating that LTCHs are able to operate under current payment rates. However, we estimate that the Medicare margin will decrease to 1.2 percent for these facilities in 2019. While we continue to expect LTCHs to quickly respond to the new payment incentives, based on historical trends, we also expect to see increases in cost growth in 2018 and 2019 as the new payment structure continues to be implemented. Because of these factors, an update of 2 percent is appropriate given the changes in the industry toward higher acuity patients and the Commission's desire to support LTCHs with a high share of cases that meet the criteria, while maintaining financial pressure on an industry that historically has been highly responsive to changes in payment policy.

IMPLICATIONS 11

Spending

- This recommendation would decrease federal program spending relative to the expected payment update by less than \$50 million in 2020 and by less than \$1 billion over five years.

Beneficiary and provider

- This recommendation is not expected to have adverse effects on Medicare beneficiaries' access to care. This recommendation is not expected to affect providers' willingness or ability to furnish care for cases that meet the criteria. ■

LTCH operational changes in response to the implementation of the dual payment-rate structure

The Pathway for SGR Reform Act of 2013 established “site-neutral” payments for certain cases in long-term care hospitals (LTCHs) beginning in fiscal year 2016. These cases are referred to as “cases not meeting the criteria.” Since 2016, only cases that meet the criteria specified in the Act are paid the standard LTCH prospective payment system (PPS) rate. It will be some time before we see LTCHs’ full response to the legislation because this policy is being phased in over four years (2016 through 2019).

Commission staff conducted a series of site visits and interviews to understand the effects of the implementation of the dual payment-rate structure on LTCHs’ admissions, staffing, and operations and the impact on acute care hospitals’ (ACHs’) patterns of referral to other post-acute care (PAC) providers. Additionally, we sought to understand the various strategies LTCHs are pursuing in response to the dual payment-rate structure (e.g., whether facilities changed their admission practices to accept only cases that met the new criteria for the standard LTCH PPS rate).

We conducted interviews with staff from nine LTCHs, three skilled nursing facilities, and seven ACHs, either in person or by telephone. These included in-person interviews in facilities in California, Connecticut, the District of Columbia, Florida, New York, and Texas. We also spoke by telephone with facility representatives from Iowa and several areas in California and New York. These areas exhibited a wide range of provider and market characteristics. Each market represented varying degrees of Medicare managed care penetration, accountable care organization penetration, physician employment structure, state regulations, ACH occupancy rates and bed availability, and LTCH and other PAC bed

availability. The facilities whose representatives we spoke with varied in size, ownership, Medicare payer share, and degree of integration with other health care providers (e.g., providers fully integrated into a large health care system and those that were part of a chain).

LTCHs have changed several operations-related strategies—including admission patterns, facility capabilities, and staffing. LTCH staff cited changes to their admissions practices, focusing on the extent to which cases that do not meet the criteria continue to be admitted to the facility. Some LTCHs no longer admit cases that do not meet the criteria, while other LTCHs continue to admit such cases.

LTCH staff explained that both financial and practical reasons drove these changes in admission patterns to admit only beneficiaries who meet the criteria. Some staff explained that, even with the blended rate under the partial phase-in of the policy, payments are not adequate to cover their costs. They reported strategies to maintain a profitable average daily census of cases that meet criteria, including expanding referral regions and educating physicians and case managers from referring ACHs about the facility’s capabilities and the types of patients they accept. LTCH administrators reported working to build additional relationships with case managers in the referring ACHs. To expand the mix of patients and payers, some LTCH staff reported increased attempts to contract with private payers, including Medicare Advantage plans.

In contrast, some LTCHs we interviewed continue to admit cases that do not meet criteria while attempting to increase the share of admissions that meet the criteria. For the cases that do not meet the criteria, facilities reported targeting admissions that have lower

(continued next page)

LTCH operational changes in response to the implementation of the dual payment-rate structure (cont.)

expected costs of treatment relative to the reduced payment rate. However, staff expressed concern about the viability of this approach as the policy becomes fully phased in during fiscal year 2020. Facilities reported various reasons for continuing to accept these cases: treating patients who would benefit from their services, maintaining relationships with referring ACHs, and the belief that shorter stay cases that do not meet criteria could be financially profitable and help cover certain facility costs. Several facilities discussed their admission of patients with an expected short length of stay (seven days or less) and the expectation that the cost of treating these beneficiaries would be covered by the blended payment rate.

While facilities differed on admitting cases that do not meet the criteria, LTCH staff interviewed consistently reported operational and staffing changes that occurred because of the increased patient acuity that results from admitting primarily cases that do meet the criteria. Across most staff we spoke with, they discussed implementing operational and administrative changes to handle these higher acuity patients, including adding services or increasing staff capabilities. For example, LTCHs described adding intensive care unit (ICU) beds, bariatric beds, and telemetry services to accommodate the higher acuity patients discharged from an ACH. LTCHs have also attempted to increase staff skill levels through additional training, including critical care training for registered nurses to ensure that ICU-level care can be provided, training to facilitate more vigilant monitoring, and protocols for earlier patient ambulation. In addition to training, facility staff also reported hiring more nurses to increase nurse-to-patient ratios.

As of September 30, 2016, one LTCH chain reported that nearly 100 percent of Medicare discharges in its

facilities met the criteria to receive the standard LTCH PPS rate. Initially, the average daily census across these LTCHs had dropped by about 2.5 patients per hospital per day; however, as of September 30, 2017, patient days increased by 2.7 percent and occupancy increased by 4 percentage points compared with the same quarter of the prior year (2016) (Select Medical 2017). In addition, the admitted Medicare cases had higher case mix and thus resulted in higher revenue per day than before the implementation of the dual payment-rate structure (Select Medical 2016). Net revenue per patient day increased 0.5 percent from 2017 to 2018, while the number of patient days and admissions increased 1.5 percent and 2.7 percent, respectively (Select Medical 2018a). Compared with the third quarter of 2017, occupancy remained stable at 65 percent in 2018 (Select Medical 2018b).

Another large for-profit chain began receiving Medicare payment for discharges under the dual payment-rate structure on September 1, 2016. In its third quarter 2017 earnings release, this chain reported an 11 percent decrease in Medicare admissions compared with the third quarter of 2016, holding the number of facilities constant (Kindred Healthcare 2017).¹⁹ Medicare revenue per admission initially decreased by about 5 percent when the dual payment-rate structure began. The revenue per admission began to increase, gaining just over 1 percent since fall of 2016. In 2017, occupancy rates remained below pre-policy levels (Kindred Healthcare 2016b). In July 2018, Kindred Healthcare was acquired by Humana and two private equity firms. In this acquisition, Kindred's long-term care hospital, inpatient rehabilitation hospital, and contract rehabilitation services were separated from the rest of Kindred business lines that include hospice and home health (Kindred Healthcare 2018). ■

Endnotes

- 1 The Medicare, Medicaid, and SCHIP Extension Act of 2007 also requires LTCHs to have a patient review process that screens patients to ensure appropriateness of admission and continued stay, physician on-site availability on a daily basis, and interdisciplinary treatment teams of health care professionals. The Pathway for SGR Reform Act of 2013 specifies that, beginning in fiscal year 2020, LTCHs will also be required to maintain a certain share of beneficiaries who qualify to receive the standard LTCH prospective payment system rate.
- 2 More information on the prospective payment system for LTCHs is available at http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_18_ltch_final_v2_sec.pdf?sfvrsn=0.
- 3 High-cost outlier cases are identified by comparing their costs with a threshold that is the MS–LTC–DRG payment for the case plus a fixed loss amount (\$21,943 in 2017). Medicare pays 80 percent of the LTCH’s costs above the threshold. In fiscal year 2017, high-cost outlier payments were made for about 19 percent of LTCH cases. The prevalence of high-cost outlier cases varied by LTCH ownership. About 17 percent of cases in for-profit LTCHs were high-cost outliers compared with 23 percent of cases in nonprofit LTCHs. Historically, some case types have been far more likely to be high-cost outliers than others. For example, almost a quarter of cases assigned to MS–LTC–DRG 4 (tracheostomy with prolonged mechanical ventilation) qualify to receive high-cost outlier payments each year.
- 4 Not all LTCHs’ cost reporting start dates are the same; implementation of the dual payment-rate structure began for LTCHs over the course of fiscal year 2016.
- 5 The 85 percent threshold originated from conversations with industry representatives and stakeholders as a reasonable goal for financial stability under Medicare.
- 6 Previously, the amount Medicare paid to LTCHs for an SSO case equaled the lowest of the following payment formulas: 100 percent of the cost of the case, 120 percent of the per diem amount for the MS–LTC–DRG multiplied by the patient’s length of stay, the full MS–LTC–DRG payment, or a blend of the IPPS amount for the same type of case and 120 percent of the MS–LTC–DRG per diem amount. The LTCH per diem payment amount makes up more of the total amount as the patient’s length of stay increases.
- 7 MMSEA and subsequent legislation allowed exceptions to the moratorium for (1) LTCHs that began their qualifying period (demonstrating an average Medicare length of stay greater than 25 days) on or before December 29, 2007; (2) entities that had a binding or written agreement with an unrelated party for the construction, renovation, lease, or demolition of an LTCH, with at least 10 percent of the estimated cost of the project already expended on or before December 29, 2007; (3) entities that had obtained a state certificate of need on or before December 29, 2007; (4) existing LTCHs that had obtained a certificate of need for an increase in beds issued on or after April 1, 2005, and before December 29, 2007; and (5) LTCHs located in a state with only one other LTCH and that sought to increase beds after the closure or decrease in the number of beds of the state’s other LTCH.
- 8 The Pathway for SGR Reform Act of 2013, as amended by the Protecting Access to Medicare Act of 2014, allowed exceptions to the moratorium for (1) LTCHs that began their qualifying period (demonstrating an average Medicare length of stay greater than 25 days) on or before April 1, 2014; (2) entities that had a binding or written agreement with an unrelated party for the construction, renovation, lease, or demolition of an LTCH, with at least 10 percent of the estimated cost of the project already expended on or before April 1, 2014; and (3) entities that had obtained a state certificate of need on or before April 1, 2014.
- 9 The anomalous cost reporting trends during this period make it difficult to accurately compare changes in the number of LTCH facilities and LTCH beds using cost report data in 2013, 2014, and 2015. The Commission requires cost reports to span from 10 to 13 months for inclusion in the margin analysis. Thirty-five LTCHs included in the 2014 analysis were excluded from the 2015 analysis because of changes in cost reporting periods, closures, or status as an all-inclusive-rate provider. Twenty-seven LTCHs that were not included in the 2014 analysis because of changes in cost reporting periods were included in the 2015 analysis. Combined, these facility changes resulted in eight fewer facilities in the 2015 analysis compared with 2014.
- 10 The Medicare Provider of Services (POS) file is an alternate data source for determining LTCH supply. The POS file includes a larger number of facilities than is found in the cost report file. The cost report file provides a more conservative estimate of total capacity because some LTCHs may not yet have filed a cost report for the applicable year when we completed our analysis, while others may have been exempt from filing cost reports because of low Medicare volume or because they are paid under an all-inclusive rate. However, POS data may overstate the total number of LTCHs because facilities that close may not be immediately removed from the file.

- 11 The following MS–LTC–DRGs are considered related to respiratory illness or using prolonged mechanical ventilation: MS–LTC–DRG 4, tracheostomy with ventilator support 96+ hours or primary diagnosis except face, mouth and neck without major operating room (OR) procedure; MS–LTC–DRG 166, other respiratory system OR procedures with major complication or comorbidity (MCC); MS–LTC–DRG 177, respiratory infections and inflammations with MCC; MS–LTC–DRG 189, pulmonary edema and respiratory failure; MS–LTC–DRG 190, chronic obstructive pulmonary disease with MCC; MS–LTC–DRG 207, respiratory system diagnosis with ventilator support 96+ hours; MS–LTC–DRG 208, respiratory system diagnosis with ventilator support ≤96 hours; MS–LTC–DRG 870, septicemia with prolonged ventilator support with MCC.
- 12 Among the top 20 diagnoses in all LTCHs and LTCHs with a high share of cases that met the criteria in 2017, 18 MS–LTC–DRGs overlap. The MS–LTC–DRGs in the top 20 across all LTCHs included MS–LTC–DRG 570 (skin debridement with MCC) and MS–LTC–DRG 853 (infectious and parasitic diseases with operating room procedure with MCC), instead of MS–LTC–DRG 56 (degenerative nervous system disorders with MCC) and MS–LTC–DRG 371 (major gastrointestinal disorders and peritoneal infections with MCC, included with LTCHs with a high share of cases).
- 13 If we approximate marginal cost as total Medicare costs minus fixed building and equipment costs, then marginal profit can be calculated as follows: (payments for Medicare services – (total Medicare costs – fixed building and equipment costs)) / Medicare payments. This comparison is a lower bound on the marginal profit because we do not consider any potential labor costs that are fixed.
- 14 This rate of about 25 percent is higher than the Commission’s unadjusted measure of direct LTCH to ACH readmissions for a combination of reasons. First, the Commission’s measure includes only direct LTCH to ACH admissions and does not include a 30-day window. Second, the CMS measure requires a one-day period after LTCH discharge before ACH admission to be counted for the measure, eliminating any direct LTCH to ACH admissions.
- 15 Only one rural facility had more than 85 percent of its Medicare cases meeting the criteria in 2017; therefore, we did not consider a breakdown of margins by urban–rural location to be meaningful.
- 16 Many new LTCHs operate at a loss for a period after opening. For this analysis of high-margin and low-margin LTCHs, we examined only LTCHs that submitted valid cost reports in both 2016 and 2017. We excluded government-owned LTCHs because they operate in a different financial context than other LTCHs, making their financial performance not comparable.
- 17 The 2019 payment update equaled the LTCH PPS market basket increase, projected to be 2.9 percent, less the required multifactor productivity adjustment of 0.8 percentage point and less the required 0.75 percentage point reduction.
- 18 CMS established the “25-percent threshold rule” to set a limit on the share of cases that can be admitted to an LTCH from certain referring ACHs and reduce payment for some LTCHs with cases that exceed the threshold. Although the policy was intended to create disincentives for LTCHs to admit a large share of their patients from a single ACH, it was never fully implemented. In its final 2019 payment rule, CMS eliminated the 25-percent threshold rule.
- 19 This chain consolidated its presence in several geographic markets, reducing the number of LTCHs between 2016 and 2017. Medicare admissions decreased by over 22 percent across all LTCHs owned by this chain in 2016 (Kindred Healthcare 2017).

References

- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2013. Medicare program; hospital inpatient prospective payment systems for acute care hospitals and the long term care hospital prospective payment system and proposed fiscal year 2014 rates; quality reporting requirements for specific providers; hospital conditions of participation; Medicare program; FY 2014 hospice wage index and payment rate update; hospice quality reporting requirements; and updates on payment reform; proposed rules Proposed rules. *Federal Register* 78, no. 91 (May 10): 27486–27823.
- Dalton, K., D. Kennell, S. Bernard, et al. 2012. *Determining medical necessity and appropriateness of care for Medicare long-term care hospitals (LTCHs): Report on site visits to IPPS critical care services and LTCHs*. Prepared under contract by Kennell and Associates Inc. and Research Triangle International for the Centers for Medicare & Medicaid Services. Baltimore, MD: CMS.
- Gage, B., L. Smith, M. Morley, et al. 2011. *Post-Acute Care Payment Reform Demonstration: Report*. Prepared under contract to the Centers for Medicare & Medicaid Services. Baltimore, MD: CMS. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Reports/Research-Reports-Items/PAC_Payment_Reform_Demo_Final.html.
- Kahn, J. M., N. M. Benson, D. Appleby, et al. 2010. Long-term acute care hospital utilization after critical illness. *Journal of the American Medical Association* 303, no. 22 (June 9): 2253–2259.
- Kindred Healthcare. 2018. Humana, together with TPG Capital and Welsh, Carson, Anderson & Stowe, announce completion of the acquisition of Kindred Healthcare, Inc. News release. July 2. <https://www.kindredhealthcare.com/news/2018/07/02/humana-together-tpg-capital-and-welsh-carson-anderson-stowe>.
- Kindred Healthcare. 2017. Kindred Healthcare reports third quarter 2017 results. News release. November 6. <http://investors.kindredhealthcare.com/news-releases/news-release-details/kindred-healthcare-reports-third-quarter-2017-results>.
- Kindred Healthcare. 2016a. Kindred completes sale of 12 LTAC hospitals to Curahealth, advancing LTAC portfolio optimization strategy. News release. October 3. http://investors.kindredhealthcare.com/phoenix.zhtml?c=129959&p=irol-newsArticle_Print&ID=2208657.
- Kindred Healthcare. 2016b. Kindred Healthcare updates strategy and reports third quarter 2016 results. News release. November 7. http://investors.kindredhealthcare.com/phoenix.zhtml?c=129959&p=irol-newsArticle_Print&ID=2220343.
- Kindred Healthcare. 2015. Kindred Healthcare reports third quarter 2015 results. News release. November 4. <http://investors.kindredhealthcare.com/news-releases/news-release-details/kindred-healthcare-reports-third-quarter-2015-results>.
- Koenig, L., B. Demiralp, J. Saavoss, et al. 2015. The role of long-term acute care hospitals in treating the critically ill and medically complex: An analysis of nonventilator patients. *Medical Care* 53, no. 7 (July): 582–590.
- Makam, A. N., O. K. Nguyen, L. Xuan, et al. 2018. Factors associated with variation in long-term acute care hospital vs skilled nursing facility use among hospitalized older adults. *JAMA Internal Medicine* 178, no. 3 (March 1): 399–405.
- Mayr, F. B., S. Yende, W. T. Linde-Zwirble, et al. 2010. Infection rate and acute organ dysfunction risk as explanations for racial differences in severe sepsis. *Journal of the American Medical Association* 303, no. 24 (June 23): 2495–2503.
- Medicare Payment Advisory Commission. 2017a. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2017b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2014. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- National Association of Long Term Care Hospitals. 2017. *State of the long term care hospital sector: Access to care for Medicare beneficiaries*. Prepared by KNG Health Consulting for the National Association of Long Term Care Hospitals. West Hartford, CT: NALTH.
- Nierman, D. M., and J. E. Nelson. 2002. Chronic critical illness. *Critical Care Clinics* 18, no. 4: xi–xii.
- Select Medical. 2018a. Select Medical Holdings Corporation announces results for its third quarter ended September 30, 2018. <https://www.selectmedical.com/-/media/project/selectmedical/dotcom/usa/page-assets/ir/earnings-news-releases/11-select-medical-holdings-corporation-announces-its-2018-third-quarter-results-november-1-2018.pdf?t=20181112203944>.
- Select Medical. 2018b. Select Medical Holdings Corporation earning release call, November 6. <https://seekingalpha.com/article/4217728-select-medical-holdings-corporation-sem-q3-2018-results-earnings-call-transcript?page=2>.

Select Medical. 2017. Select Medical Holdings Corporation announces results for its third quarter ended September 30, 2017. https://www.selectmedical.com/uploadedFiles/Content/Investor_Relations/Earnings_Releases/2017-Q3-Earnings-Release.pdf.

Select Medical. 2016. Select Medical Holdings Corporation announces results for third quarter ended September 30. http://www.selectmedical.com/uploadedFiles/Content/Investor_Relations/Earnings_Releases/2016-Q3-Earnings-Release.pdf.

Select Medical. 2015. Q3 2015 Select Medical Holdings Corporation earnings conference call, October 30.

