

CHAPTER

# 11

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**Long-term care  
hospital services**

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

- 11** The Secretary should eliminate the fiscal year 2019 Medicare payment update for long-term care hospitals.

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

## 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 certain Medicare patients must have an average length of stay greater than 25 days. In 2016, Medicare spent \$5.1 billion on care provided in LTCHs nationwide. About 111,000 fee-for-service (FFS) beneficiaries had roughly 126,000 LTCH stays in 407 LTCHs. On average, Medicare FFS beneficiaries account for about two-thirds of LTCHs’ discharges.

### 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 of LTCH providers and changes over time in the volume of services they furnish, we expect reductions in both following the implementation of the patient-specific criteria that began in fiscal year 2016.

- **Capacity and supply of providers**—The number of LTCHs filing Medicare cost reports decreased in recent years because of two moratoriums on new facilities and changes to Medicare’s LTCH payment policy. Using cost report data, we estimate that the number of LTCHs and LTCH beds decreased annually by an average of 1.1 percent and 2.3

### In this chapter

- Are Medicare payments adequate in 2018?
- How should Medicare payments change in 2019?

percent, respectively, from 2012 through 2016. However, the average LTCH occupancy rate was 66 percent in 2016, suggesting that LTCHs have adequate capacity in the markets they serve.

- **Volume of services**—From 2015 to 2016, the number of LTCH cases decreased by 4.2 percent, continuing a four-year trend that began in 2013. Controlling for the number of FFS beneficiaries, we found that the number of LTCH cases per beneficiary declined during this period (2015 to 2016) by 5.1 percent, similarly continuing a trend of decreasing per capita LTCH use that began in 2012.

**Quality of care**—Consistent with prior years, we found stable non-risk-adjusted rates of readmission, death in the LTCH, and death within 30 days of discharge across the top 25 LTCH diagnoses.

**Providers' access to capital**—In prior years, the availability of capital to LTCHs reflected uncertainty regarding possible changes to Medicare's regulations and legislation governing LTCHs. Beginning with cost reporting periods starting in fiscal year 2016, the criteria to receive the higher LTCH payment rate specified in the Pathway for SGR Reform Act of 2013 provide more long-term regulatory certainty for the industry compared with recent years. However, we expect LTCHs to alter their cost structure and referral patterns in response to the payment reductions for cases that do not meet the criteria. The new criteria, 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 2007 until 2012, LTCHs held cost growth below the rate of increase in the market basket index, a measure of inflation in the prices of goods and services LTCHs buy to provide care, and aggregate Medicare margins increased to a high of 7.6 percent in 2012. Between 2012 and 2016, Medicare payments continued to increase, but more slowly than provider costs, resulting in an aggregate 2016 Medicare margin of 4.1 percent across all cases. In its March 2017 report to the Congress, the Commission also calculated a margin, using claims data, for cases that would have met the criteria to qualify to receive the higher LTCH payment rate had the policy been in effect at the time of beneficiary discharge. In 2015, using this claims-based methodology, the Commission calculated an aggregate Medicare margin for qualifying cases of 6.8 percent. Using the same methodology for 2016, the aggregate margin decreased to 6.3 percent. Financial performance in 2016 varied across LTCHs, reflecting differences in cost control and responses to payment incentives. Marginal profit, an indicator of whether LTCHs with excess capacity have an incentive to admit more Medicare patients, equaled about 20 percent in 2016, consistent with last year's

analysis. We expect continued changes in admission patterns and cost structure of LTCHs in response to the implementation of the patient-specific criteria that began during fiscal year 2016.

We project that LTCHs' aggregate Medicare margin for discharges that meet the patient-specific criteria and that qualify for the full LTCH payment rate will be 4.7 percent in 2018. On the basis of these indicators, and in the context of recent changes in payment policy, the Commission concludes that LTCHs can continue to provide Medicare beneficiaries with access to safe and effective care and accommodate changes in their costs with no update to LTCH payment rates in fiscal year 2019. This update recommendation applies to the Medicare LTCH prospective payment system (PPS) base payment rate. That is, it applies to payments for discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013.

The recommendation about the level of payments to LTCHs is made in the context of the Commission's recommendation (discussed in the chapter on post-acute care (Chapter 7)) to establish LTCH payments using a blend of the current LTCH PPS relative weights and the unified post-acute care PPS weights beginning in fiscal year 2019. A blend of the relative weights would redistribute payments within the LTCH setting by increasing payments for medically complex patients and lowering payments for patients with less complex conditions. The recommendation would narrow the differences in financial performance across providers based on their mix of patients and would enable the Commission to recommend, and policymakers to implement, a level of payments that would better align payments with the cost of care. ■



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## Background

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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 (HWHs) 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 certain Medicare patients must have an average length of stay greater than 25 days.<sup>1</sup> By comparison, the average Medicare length of stay in ACHs is about five days. In 2016, Medicare spent \$5.1 billion on care provided in LTCHs nationwide. About 111,000 beneficiaries had roughly 126,000 LTCH stays. On average, Medicare fee-for-service (FFS) beneficiaries account 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.<sup>2</sup> 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, reflecting 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.<sup>3</sup> 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. 302). In addition, CMS implemented a policy to prevent LTCHs from functioning as units of ACHs in 2005; however, the Congress and CMS have delayed the full implementation of this policy until fiscal year 2019 (see text box on the “25 percent rule,” p. 303).

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 LTCH PPS payment criteria, pp. 304–305). Under this new dual payment structure, qualifying Medicare cases are paid under the LTCH PPS 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. LTCH cases not meeting the 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. The Commission recommended in March 2014 that LTCH rates be paid only for cases that received eight or more days of care in an ICU or received prolonged mechanical ventilation services during the previous ACH stay.

Starting on October 1, 2015, CMS began phasing in the payment changes associated with the LTCH criteria policy.<sup>4</sup> Cases not meeting the specified criteria receive payment of 50 percent of the LTCH PPS rate and 50 percent of the site-neutral rate for the first four full years of implementation. Fiscal year 2021 will be the first year the policy will be fully in effect for all LTCH facilities.

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## Are Medicare payments adequate in 2018?

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To address whether payments for 2018 are adequate to cover the costs that providers incur in furnishing services to Medicare beneficiaries and how much providers’ costs are expected to change in the coming year (2019), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries’ access to care (by examining the capacity and supply of LTCH providers and changes over time in the volume of services furnished), 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

## 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.<sup>5</sup> 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, referred to as VSSOs.

In fiscal year 2016, the prior SSO structure remained in place. Under this structure, 30.1 percent of LTCH discharges received SSO payment adjustments, but this share varied across types of LTCHs. For example, 29.7 percent of for-profit LTCHs' cases were SSOs compared with 32.5 percent of nonprofit LTCHs' cases. If we consider only the cases in 2016 that met or would have met the new criteria to receive the LTCH PPS standard federal rate, 34.9 percent of cases would be SSOs. ■

settings, including ACHs and skilled nursing facilities (SNFs). In 2017, LTCHs were located in just 8.5 percent of counties, but these LTCHs 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 Hospitals 2017). At the median, beneficiaries traveled about 17 miles to receive LTCH care. About 10 percent of beneficiaries traveled in excess of about 90 miles. The distance that beneficiaries traveled was fairly consistent by facility ownership (e.g., nonprofit or for profit). While we consider the overall capacity and supply of LTCH providers and changes over time in the volume of services they furnish, we expect reductions in

both following the implementation of the patient-specific criteria that began in fiscal year 2016. Given that these reductions are driven by specific statutory and regulatory changes, they do not represent an undue reduction in access to medically necessary LTCH-level care, and instead reflect intended industry change.

### Capacity and supply of providers: The 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

## The “25-percent rule”

In fiscal year 2005, CMS established the 25-percent rule to set a limit on the share of cases that can be admitted to a long-term care hospital (LTCH) from certain referring acute care hospitals (ACHs) and reduce payments for some LTCHs that exceed the threshold. After the threshold is reached, the LTCH is paid the lesser of the LTCH prospective payment system (PPS) rate or an amount equivalent to the acute care hospital PPS rate for patients discharged from the host ACH. CMS established the 25-percent rule in an attempt to prevent LTCHs from functioning as ACH units; decisions about admission, treatment, and discharge in both ACHs and LTCHs were to be made for clinical rather than financial reasons. The 25-percent rule uses payment adjustments to create disincentives for LTCHs to admit a large share of their patients from a single ACH.

The 25-percent rule initially applied only to LTCH hospitals within hospitals (HWHs) and LTCH satellites. In July 2007, CMS extended the rule to also apply to freestanding LTCHs. The Congress delayed full implementation of the 25-percent rule so that most HWHs and satellites were paid standard LTCH rates for eligible patients admitted from their host hospitals as long as the share of Medicare admissions from the host hospital did not exceed 50 percent (instead of the more restrictive 25 percent threshold) until cost reporting periods that began on or after July 1, 2016. In the 21st Century Cures Act, enacted on December 13, 2016, the Congress further delayed the implementation of the 25-percent rule for LTCHs until fiscal year 2018. In its final 2018 payment rule, CMS delayed implementation of the 25-percent rule until fiscal year 2019. ■

able to enter the Medicare program only if they met specific exceptions to the moratorium.<sup>6</sup> The Pathway for SGR Reform Act of 2013 and subsequent legislation implemented a new moratorium from April 1, 2014, through September 30, 2017.<sup>7</sup> That moratorium originally provided exceptions that allowed the establishment of new LTCHs and new LTCH satellites (that is, the law permitted certain new LTCHs in their entirety); however, the 21st Century Cures Act expanded the exceptions to also permit increases in the number of certified beds in existing facilities.

We examine 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, p. 305). Between 2012 and 2015, a larger than usual number of facilities made changes to their cost reporting period, thereby affecting the facilities used for this payment adequacy analysis.<sup>8</sup> Between 2012 and 2016, the number of LTCHs paid under the LTCH PPS decreased from 426 to 407, or about a 1.1 percent average annual decrease, roughly consistent with the 0.8 percent

average annual decrease in the Provider of Services file.<sup>9</sup> Cost report data indicate that the number of LTCH beds nationwide decreased about 2.3 percent annually from 2012 through 2016 (data not shown).

Consistent with historical trends, the Commission estimates that, in 2016, 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 for 2015 and 2016 are not comparable with prior years because CMS adopted new core-based statistical area (CBSA) codes based on the 2010 census for LTCHs beginning fiscal year 2015, in addition to the aforementioned anomalous cost reporting trends. This change reclassified as urban several facilities previously classified as rural.<sup>10</sup>

Aggregate occupancy rates for LTCHs from 2012 through 2016 remained largely unchanged at 66 percent. Historically, occupancy rates for for-profit LTCHs have been 1 to 2 percentage points higher than that of nonprofit LTCHs. In 2016, for-profit LTCHs had an occupancy rate of 66 percent compared with 64 percent for nonprofit LTCHs (data not shown).

## Criteria to receive payment under the long-term care hospital prospective payment system

The Pathway for SGR Reform Act of 2013 mandated changes to the long-term care hospital (LTCH) prospective payment system, including limiting standard LTCH payments 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.

### Commission recommendation for long-term care hospitals

The Commission has maintained that LTCHs should serve only the most medically complex patients—the CCI cases—and has determined 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' resource needs. Further, subject to risk differentials, payment for the same services should 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. 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 the "ideal" LTCH patients described by LTCH representatives and 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 should 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 specified cases in LTCHs, beginning in fiscal year 2016. Under the law, the LTCH payment rate applies only to qualifying LTCH discharges 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—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 either on 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 specified 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

*(continued next page)*

## Criteria to receive payment under the long-term care hospital prospective payment system (cont.)

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, an LTCH must have no more than 50 percent of its cases paid at the site-neutral rate to continue to receive the LTCH payment rate for eligible cases. ■

### Volume of services: Number of LTCH users decreased

Beneficiaries' use of LTCH services suggests that access is adequate. Growth in the number of FFS LTCH cases was high in the first years of the LTCH PPS (data not shown),

but the number of cases declined from 2005 to 2007 (Table 11-2, p. 306). Much of this decrease is consistent with the decline in beneficiaries' enrollment in FFS Medicare and their increased enrollment in Medicare Advantage plans. CMS regulations that reduced LTCH payments to bring

**TABLE  
11-1**

### The number of LTCHs has decreased since 2012

Type of LTCH	Congressionally imposed moratorium					Congressionally imposed moratorium				Average annual change		
	2009	2010	2011	2012	2013*	2014*	2015*	2016	2009-2012	2012-2016	2015-2016	
Hospitals with valid cost reports	411	417	421	426	411	399	392	407	1.2%	-1.1	*	
Urban	389	392	397	401	385	373	373	388	1.0	**	**	
Rural	22	25	24	25	26	26	19	19	4.4	**	**	
Nonprofit	79	82	77	78	78	73	66	71	-0.4	-2.3	*	
For profit	313	314	324	328	315	308	309	320	1.6	-0.6	*	
Government	19	21	20	20	18	18	17	16	1.7	-5.4	*	

Note: LTCH (long-term care hospital). 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 29, 2012. The Pathway for SGR Reform Act of 2013 and subsequent legislation implemented a new moratorium from April 1, 2014, through September 30, 2017.

\*Data 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.

\*\*In addition to the anomalous numbers of facilities that underwent an acquisition and changes in the cost reporting period, CMS adopted new core-based statistical area codes for LTCHs 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.

**TABLE  
11-2**

**The number of Medicare LTCH cases and users continued to decrease between 2015 and 2016**

	2005	2007	2012	2013	2014	2015	2016	Average annual change		
								2007-2012	2012-2015	2015-2016
Cases	134,003	129,202	140,463	137,827	133,984	131,129	125,586	1.7%	-2.3%	-4.2%
Cases per 10,000 FFS beneficiaries	36.4	36.2	37.7	36.6	35.4	34.5	32.7	0.8	-2.9	-5.1
Spending (in billions)	\$4.5	\$4.5	\$5.5	\$5.5	\$5.4	\$5.3	\$5.1	4.3	-1.3	-4.4
Spending per FFS beneficiary	\$122.2	\$126.0	\$148.8	\$146.6	\$141.7	\$140.3	\$132.9	3.4	-1.9	-5.3
Payment per case	\$33,658	\$34,769	\$39,493	\$40,070	\$40,015	\$40,719	\$40,656	2.6	1.0	-0.2
Average length of stay (in days)	28.2	26.9	26.2	26.5	26.3	26.6	26.8	-0.5	0.4	1.1
Users	119,282	114,299	123,652	121,532	118,288	116,088	111,171	1.6	-2.1	-4.2

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 report of the Boards of Trustees of the Medicare trust funds.

them more in line with costs also likely slowed growth in LTCH admissions during that period and beyond. From 2007 to 2012, the number of LTCH cases per capita (per 10,000 FFS beneficiaries) increased by an annual average rate of 0.8 percent. Between 2012 and 2015, the number of LTCH cases per capita decreased by 2.9 percent. LTCH cases per 10,000 FFS beneficiaries further decreased by 5.1 percent between 2015 and 2016. These decreases likely occurred because LTCHs changed their admitting practices in response to the implementation of the new patient-specific criteria that resulted in lower payments for certain cases. In 2016, Medicare FFS beneficiaries accounted for about two-thirds 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 in LTCHs following a period of relative stability since 2010. In 2016, dually eligible Medicare beneficiaries accounted for about 40 percent of FFS Medicare days.

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 to elect hospice care compared with White beneficiaries (Medicare Payment Advisory Commission 2017).

LTCH patient discharges are concentrated in a relatively small number of diagnosis groups. In fiscal year 2016, the top 20 LTCH diagnoses made up over 61 percent of all LTCH discharges, representing a consistent share of cases across for-profit and nonprofit facilities (Table 11-3). The most frequently occurring diagnosis was pulmonary

**TABLE  
11-3**

**The top 20 MS-LTC-DRGs made up over 60 percent of LTCH discharges in 2016**

MS-LTC-DRG	Description	Discharges	Share of cases	Share of for-profit cases	Share of nonprofit cases
189	Pulmonary edema and respiratory failure	17,539	14.0%	13.8%	15.0%
207	Respiratory system diagnosis with ventilator support 96+ hours	14,445	11.5	10.9	15.0
871	Septicemia without ventilator support 96+ hours with MCC	7,938	6.3	6.7	4.3
539	Osteomyelitis with MCC	3,418	2.7	2.7	2.7
592	Skin ulcers with MCC	3,351	2.7	2.8	2.0
177	Respiratory infections and inflammations with MCC	3,092	2.5	2.6	1.8
949	Aftercare with CC/MCC	2,960	2.4	2.3	2.8
208	Respiratory system diagnosis with ventilator support <96 hours	2,790	2.2	2.1	2.6
682	Renal failure with MCC	2,516	2.0	2.0	1.8
981	Extensive OR procedure unrelated to principal diagnosis with MCC	2,451	2.0	1.9	2.3
166	Other respiratory system OR procedures with MCC	1,959	1.6	1.6	1.5
559	Aftercare, musculoskeletal system, and connective tissue with MCC	1,939	1.5	1.6	1.2
570	Skin debridement with MCC	1,746	1.4	1.5	0.8
853	Infectious and parasitic diseases with OR procedure with MCC	1,731	1.4	1.5	0.9
314	Other circulatory system diagnoses with MCC	1,679	1.3	1.4	1.2
919	Complications of treatment with MCC	1,640	1.3	1.3	1.2
862	Postoperative and post-traumatic infections with MCC	1,624	1.3	1.3	1.5
463	Wound debridement and skin graft except hand, for musculo-connective tissue disorders with MCC	1,551	1.2	1.3	1.0
291	Heart failure and shock with MCC	1,535	1.2	1.3	1.0
4	Tracheostomy with ventilator support 96+ hrs or primary diagnosis except face, mouth and neck without major OR procedure	1,534	1.2	1.2	1.4
	<b>Top 20 MS-LTC-DRGs</b>	<b>84,369</b>	<b>61.7</b>	<b>61.6</b>	<b>61.8</b>

Note: MS-LTC-DRG (Medicare severity long-term care diagnosis related group), LTCH (long-term care hospital), MCC (major complication or comorbidity), CC (complication or comorbidity), OR (operating room). MS-LTC-DRGs are the case-mix system for LTCH facilities. The sum of column components may not equal the stated total due to rounding.

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

edema and respiratory failure (MS-LTC-DRG 189). Respiratory system diagnosis with ventilator support for 96 or more hours (MS-LTC-DRG 207) was the second most frequently occurring diagnosis. Over 30 percent of all LTCH cases were respiratory conditions—a statistic that has been relatively stable since the 2008 implementation of the MS-LTC-DRGs; however, nonprofit LTCHs care for a higher share of beneficiaries with a respiratory-related illness compared with for-profit LTCHs (37 percent compared with 32 percent) (data not shown).

Not unexpectedly, the MS-LTC-DRGs become even more concentrated when we consider only the cases that

qualified or would have qualified to receive the LTCH PPS standard federal payment rate if the dual payment rate had been in effect at the time of discharge.<sup>11</sup> The top 25 diagnoses for cases that met the patient-specific criteria accounted for more than three-quarters of these cases.<sup>12</sup> More than half of these cases involved diagnoses that were respiratory conditions or involved prolonged mechanical ventilation. Given the phased-in implementation of criteria for receiving the LTCH PPS standard federal payment rate, we would expect to see an increase in the concentration of diagnoses over time.

**TABLE  
11-4**

**Unadjusted rates of readmission and mortality were higher for cases that met patient-specific criteria in 2016**

	All cases	Only cases that met patient-specific criteria
Unadjusted readmissions	9%	10%
Unadjusted mortality in LTCH	12	16
Unadjusted mortality in LTCH or within 30 days of discharge	24	29

Note: LTCH (long-term care hospital). Cases defined as meeting “patient-specific criteria” include cases that would have qualified to receive the LTCH prospective payment system standard federal payment rate if the dual payment structure mandated in the Pathway for SGR Reform Act of 2013 had been in effect at the time of discharge. “Unadjusted” refers to measures that are not adjusted for differences in patient characteristics, including severity of illness.

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

**Quality of care: Meaningful measures not available, but trends for gross indicators improved**

LTCHs began reporting a limited set of quality measures to CMS in fiscal year 2013 (see text box on quality measures). CMS intended to begin reporting quality data publicly on four measures in the fall of 2016; however, public reporting of two of these measures had been delayed because of an error in the data calculations. Public reporting on the two other measures—the rate of pressure ulcers that are new or worsened and the rate of unplanned hospital readmission within 30 days after discharge from an LTCH—began in mid-December of 2016. In light of the issues with the Medicare LTCH quality measures, and because of interest in understanding changes in the quality of care provided to Medicare beneficiaries, the Commission continues this year to assess aggregate trends in the quality of LTCH care by examining in-facility mortality rates, mortality within 30 days of discharge, and readmissions from LTCHs to ACHs.

For this report, we analyzed unadjusted readmission and mortality rates for the top LTCH diagnoses from 2012 to 2016. Although rates of readmission and death can vary from year to year, over the 5-year period, we found stable or declining rates of readmissions to ACHs and stable or declining mortality rates for these diagnoses, both in the facility and 30 days postdischarge. However, we caution that these measures are not risk adjusted, meaning that 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 2016, 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. Mortality rates varied markedly by diagnosis group. For example, among patients with a principal diagnosis of septicemia with prolonged ventilator support (MS–LTC–DRG 870), 36 percent died in the LTCH and another 14 percent died within 30 days of discharge. By comparison, among patients assigned to the diagnosis group called “aftercare, musculoskeletal system and connective tissue with complication or comorbidity” (MS–LTC–DRG 560), only 1 percent died in the LTCH and an additional 2 percent died within 30 days of discharge. Among the highest volume MS–LTC–DRGs in 2016, patients with a diagnosis of complications of treatment with major complication or comorbidity (MS–LTC–DRG 919) had the highest readmission rate (16 percent).<sup>13</sup>

If we consider only cases that would have qualified to receive the LTCH PPS standard federal payment rate if the dual payment structure had been in effect at the time of discharge, then the unadjusted rates of readmission directly from the LTCH, death in the LTCH, and death within 30 days of discharge would have been higher for a vast majority of highest volume MS–LTC–DRGs compared with all cases in 2016 (Table 11-4). This difference is expected given the greater severity of illness and case mix for this group of beneficiaries. In 2016, 10 percent of LTCH cases that would have qualified to receive the LTCH PPS standard federal rate under the dual payment structure were readmitted to an ACH directly

## Quality measures for long-term care hospitals

The Patient Protection and Affordable Care Act of 2010 required CMS to establish a quality reporting program for long-term care hospitals (LTCHs) by fiscal year 2014 and further stipulated that LTCHs not participating in the program would have their annual payment update reduced by 2 percentage points starting in 2014. Beginning October 1, 2013, LTCHs receive a full payment update only if they successfully report on three quality measures—catheter-associated urinary tract infections (CAUTIs), central line-associated bloodstream infections (CLABSIs), and new or worsened pressure ulcers. Data on incidences of CAUTIs and CLABSIs are collected through the National Healthcare Safety Network (NHSN), an Internet-based surveillance system maintained by the Centers for Disease Control and Prevention (CDC). The data elements needed to calculate the pressure ulcer measure are provided through a collection instrument called the LTCH Continuity Assessment Record and Evaluation (CARE) Data Set.

In 2014, CMS added two measures to the LTCH quality reporting program: the share of LTCH patients assessed for and appropriately given an influenza vaccine and influenza vaccination coverage among facility health care personnel. Facilities collect data on patient vaccination using the LTCH CARE Data Set, while the CDC's NHSN collects data on vaccination of LTCH health care personnel. Payment updates for fiscal year 2016 and after are affected by LTCHs' reporting on these two measures.

In 2015, LTCHs were required to begin reporting facility-acquired cases of *Clostridium difficile* and methicillin-resistant *Staphylococcus aureus* through the CDC NHSN. Reductions of LTCH payment updates for failing to report on these two measures began in fiscal year 2017. At that time, CMS started using claims data to calculate LTCHs' rates of all-cause unplanned readmissions to acute care hospitals.

CMS added 4 more measures to the program beginning in fiscal year 2018, which will bring the total number of measures to 12. In January 2016, LTCHs began reporting on ventilator-associated events (such as pneumonia, sepsis, and pulmonary embolism) through the CDC NHSN. In April 2016, CMS began collecting data on the following three measures using the LTCH CARE Data Set: share of patients experiencing one or more falls resulting in major injury, change in mobility among LTCH patients who require ventilator support, and share of LTCH patients with an admission and discharge functional assessment and a care plan that addresses patient function.

In its fiscal year 2017 final rule, CMS finalized three additional measures for payment determinations beginning in fiscal year 2018 to meet the requirements specified by the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT). CMS developed measures of total estimated Medicare spending per beneficiary, discharge to community, and potentially preventable 30-day postdischarge readmission measures for post-acute care providers to meet IMPACT's requirements to develop cross-setting measures regarding resource use and other indicators. CMS also finalized a quality measure to address IMPACT's requirement to develop a measure regarding medication reconciliation for use beginning with 2020 payment determination. This measure requires facilities to conduct drug regimen reviews with follow-up for identified issues.

CMS began publicly reporting two LTCH quality measures on the LTCH Compare website in December 2016, including the share of patients with pressure ulcers that were new or worsened and the rate of the all-cause unplanned readmissions. CMS began public reporting on several additional measures during calendar year 2017. ■

from the LTCH, 16 percent died in the LTCH, and another 13 percent died within 30 days of discharge from the LTCH. Mortality rates for these qualifying cases continued to vary markedly by diagnosis group.

### Providers' access to capital: Implementation of LTCH patient criteria 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 reflected more about uncertainty regarding changes to regulations and legislation governing LTCHs than about Medicare payment rates. Although the criteria to receive the higher LTCH payment rate specified in the Pathway for SGR Reform Act of 2013 provided more long-term regulatory certainty for the industry compared with prior years, uncertainties regarding the industry's ability to comply with the new patient criteria have resulted in low levels of capital investment. Further, payment reductions to the annual update required by statute limit future growth and reduce the industry's need for capital in the near term.

LTCHs and LTCH companies have been positioning themselves for the changing payment environment. For example, two for-profit companies, Kindred Healthcare Inc. (Kindred) and Select Medical Corporation (Select), which own close to half of all LTCHs, have continued to diversify their portfolios. Such diversification is intended both to improve their ability to control their mix of patients and costs and to limit the impact of payment policy changes in any one post-acute care sector. In addition, both major LTCH chains have shifted their portfolios over the last several years through closures and sales. For example, since 2014, Kindred reduced the number of LTCHs in its portfolio from 97 to 77, while Select has reduced the number of LTCHs it operates from 112 to 101 (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 acquired five LTCHs from Select, and Select acquired three hospitals from Kindred, most of which were subsequently closed. Kindred completed an agreement to sell 12 LTCHs (a total of 783 licensed beds) to Curahealth, also in 2016 (Kindred Healthcare 2016a, Kindred Healthcare 2016b, Select Medical 2016).

The Commission expects continued industry consolidation, limited need for capital, and limited growth opportunities until after LTCH patient criteria become fully implemented and LTCHs adjust their admission patterns and cost structures to comply with the new payment rules.

## **Medicare's payments and providers' costs: Cost growth exceeded payment growth in 2016**

From 2007 until 2012, LTCHs held cost growth below the rate of increase in the market basket index, a measure of inflation in the prices of goods and services LTCHs buy to provide care. Beginning in 2009 through 2012, payments increased at a faster rate than the rate of provider costs, increasing aggregate Medicare margins from 5.8 percent to 7.6 percent. Starting in 2013 through 2016, however, Medicare payments increased more slowly than the rate of provider costs, resulting in an aggregate 2016 Medicare margin of 4.1 percent across all cases (Figure 11-1; margin data not shown).<sup>14</sup> In its March 2017 report to the Congress, the Commission also calculated a margin, using claims data, for cases that would have met the criteria to qualify to receive the higher LTCH payment rate had the policy been in effect at the time of beneficiary discharge. In 2015, using this claims-based methodology, the Commission calculated an aggregate Medicare margin for qualifying cases of 6.8 percent. Under the same methodology for 2016, the aggregate margin decreased to 6.3 percent. Financial performance in 2016 varied across LTCHs, reflecting differences in cost control and response to payment incentives.

## **Beginning in 2013, reductions in the number of LTCH cases slowed spending growth**

In the first three years of the LTCH PPS (2003 to 2005), Medicare spending for LTCH services grew rapidly, climbing an average of 29 percent per year. CMS's subsequent changes to LTCH payment policies slowed spending growth from 2005 through 2008 to less than 1 percent per year. MMSEA halted or rolled back the implementation of some CMS regulations designed to address issues of excessive payments to LTCHs. As a result, from 2008 through 2010, spending increased by more than 6 percent per year.<sup>15</sup> Although some of the MMSEA provisions continued through fiscal year 2013, spending growth from 2010 through 2013 slowed to 2.1 percent per year on average, in part because of reductions mandated by the Patient Protection and Affordable Care Act of 2010 (PPACA) in Medicare's LTCH payment rate beginning in 2011.<sup>16</sup> From 2013 through 2016, aggregate spending decreased by an average of 2.1 percent per year, with the largest decrease from 2015 through 2016. On a per beneficiary basis, LTCH spending from 2015 through 2016 fell by 5.3 percent, in part because of the

implementation of the patient-level criteria to qualify for the full LTCH payment amount.

### LTCHs continue to restrain cost growth

LTCHs appear to be responsive to changes in payment, adjusting their costs per case when payments per case change. In the first years of the PPS, cost per case increased rapidly after a surge in payment per case (Figure 11-1). However, starting in 2007, growth in cost per case slowed considerably because regulatory changes to Medicare’s payment policies for LTCHs slowed growth in payment per case.

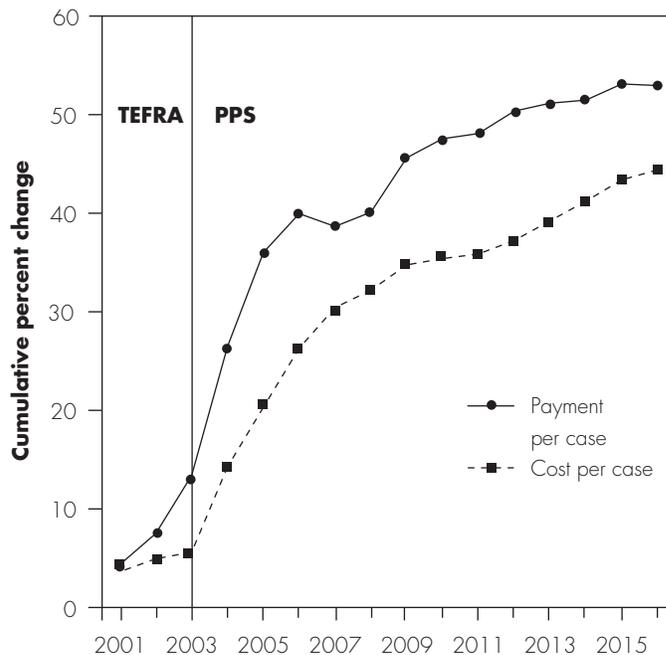
For most of the past decade, LTCHs have held cost growth below the rate of market basket increases, likely because of ongoing concerns about possible changes to Medicare’s payment policies for LTCH services. The slowest growth in average cost per case occurred between 2009 and 2011, when it increased less than 1 percent per year. Between 2012 and 2015, the average cost per case increased by about 2 percent per year, including 2.1 percent between 2014 and 2015. Cost growth in 2016 was 1 percent, the slowest growth since 2011 (Figure 11-1).

### Aggregate LTCH margins for all cases decreased

After the LTCH PPS was implemented in fiscal year 2003, margins rose rapidly for all LTCH provider types, climbing to 11.9 percent in 2005. At that point, margins began to fall as growth in payments per case leveled off. In 2008, LTCH margins averaged 3.7 percent, the lowest since the implementation of the LTCH PPS in 2003. From 2009 through 2012, LTCH margins began to climb again as providers consistently held cost growth below payment growth. CMS began implementing a downward adjustment in response to unexpected changes in coding practices that increased payments to LTCHs relative to CMS’s estimates in the first year of the PPS, fiscal year 2003. These adjustments in 2013, 2014, and 2015 were intended to bring LTCH payments more in line with what would have been spent under the previous payment method, decreasing the standard federal payment rate by about 3.75 percent in total. Because of these adjustments, the 2013 aggregate LTCH margin was 6.8 percent, down from 7.6 the previous year (Table 11-5, p. 312). 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 4.6 percent. The aggregate LTCH margin fell in 2016 to 4.1 percent primarily because of decreases in Medicare

**FIGURE 11-1**

**LTCH cost growth in 2016 was the slowest since 2011**



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

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

payment for discharges that do not meet the criteria to receive the full LTCH payment. However, despite this payment policy change, LTCHs treating higher shares of Medicare beneficiaries had stronger financial performance under than those with lower shares.

### Differences in cost growth across the industry

Consistent with prior years, financial performance in 2016 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 margins at 5.7 percent (Table 11-5, p. 312). The aggregate margins for nonprofit LTCHs (which accounted for less than 20 percent of all LTCHs and 12 percent of LTCH discharges) was -4.7 percent, an increase from -6.0 percent in 2015. From 2015 through 2016, the for-profit LTCH margin decreased by 0.8 percentage point. The decline in margin

**TABLE  
11-5**

**The aggregate LTCH Medicare margin for all cases fell to 4.1 percent in 2016**

Type of LTCH	Share of discharges	2010	2011	2012	2013	2014	2015	2016
All	100%	6.7%	6.9%	7.6%	6.8%	5.2%	4.6%	4.1%
Urban	96	7.0	7.1	7.7	7.0	5.2	4.7*	4.3
Rural	4	0.0	2.7	3.1	2.5	4.1	2.9*	-0.5
Nonprofit	12	-0.3	0.3	-0.3	-1.1	-2.2	-6.0	-4.7
For profit	87	8.3	8.4	9.3	8.7	7.1	6.5	5.7
Government	2	N/A						
Facility share of Medicare days:								
Less than or equal to 75%	73	6.1	7.0	7.0	6.3	4.5	4.0	3.3
Greater than 75%	27	7.9	7.0	9.2	8.7	7.3	6.4	6.6

Note: LTCH (long-term care hospital), N/A (not applicable). Margins for government-owned providers are not shown. They operate in a different context from other providers, so their margins are not necessarily comparable. Percentages 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.

for for-profit LTCHs resulted from growth in cost that exceeded growth in payment per case.

With the exception of 2014, nonprofit LTCHs have generally experienced higher cost growth than for-profit entities. In 2016, nonprofit LTCHs again experienced a higher rate of cost growth compared with for-profit LTCHs. When we examine cumulative cost growth over the last decade, we find that for-profit facilities exhibited cost growth levels about one-third lower than that of nonprofit LTCHs.

The comparatively poor financial performance of nonprofit LTCHs reflects a number of differences in providers' ability to control their costs. First, though occupancy rates in 2016 for the two groups were fairly similar (65.7 percent for nonprofit LTCHs vs. 68.6 percent for for-profit LTCHs), nonprofit LTCHs were smaller and had fewer total cases than for-profit LTCHs (an average of 407 vs. 507, respectively). About 69 percent of nonprofit LTCHs had fewer than 50 beds compared with about half of for-profit LTCHs. Nonprofit LTCHs were therefore less likely than for-profit LTCHs to benefit from economies of scale. In addition, nonprofit LTCHs tend to be less able

to control their input costs than for-profit LTCHs that are members of large chains. For-profit LTCH chains that own or network with other types of post-acute care providers in a single market likely have a distinct advantage over other LTCHs because they are better able to control their mix of patients and lengths of stay (which is especially true if the providers are vertically integrated). Nonprofit LTCHs had a larger share of cases with extraordinarily high costs (22.9 percent of nonprofit LTCHs' cases qualified for high-cost outlier payments vs. 15.1 percent of for-profit LTCHs' cases), although it is not clear whether this difference stems from differences in efficiency, case complexity, or both. Nonprofit LTCHs had a higher share of short-stay outliers than for-profit LTCHs (32.6 percent vs. 29.9 percent, respectively). Nonprofit LTCHs also had a higher share of very short-stay outliers (16.4 percent compared with 15.4 percent in for-profit LTCHs), which typically pay less than short-stay outliers, and thus received reduced payments for a larger share of their Medicare patients.

Differences in case mix between nonprofit and for-profit LTCHs are difficult to evaluate. By some measures, nonprofit LTCHs appear to care for a somewhat sicker patient population. For example, a higher share of cases in

nonprofit LTCHs qualified for high-cost outlier payments. Similarly, nonprofit LTCHs had a higher share of cases that were high-cost outliers during their immediately preceding ACH stay (19.8 percent compared with 16.6 percent of for-profit LTCHs' cases). Another indicator suggesting a sicker patient population is length of stay: The average Medicare-covered stay in nonprofit LTCHs was 2 days longer than in for-profits (28 days vs. 26 days, respectively). However, longer stays could also result from inefficient care. Other indicators of patient mix suggest fewer differences between the two types of facilities. The median case mix in nonprofit and for-profit LTCHs was similar. Nonprofit and for-profit LTCHs also had similar shares of cases that had ICU stays lasting longer than three days during an immediately preceding ACH stay.

### High-margin LTCHs had lower unit costs

In 2016, higher unit costs were the primary driver 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) (Table 11-6).<sup>17</sup> After accounting for differences in case mix and local market input price levels, low-margin LTCHs had standardized costs per discharge that were 20 percent higher than high-margin LTCHs (\$35,770 vs. \$27,501, respectively). Low-margin LTCHs likely benefited less from economies of scale. Compared with their high-margin counterparts, low-margin LTCHs had fewer cases overall (an average of 427 compared with 520 for high-margin LTCHs) and lower occupancy rates (56 percent vs. 73 percent, respectively). Notably, high-margin LTCHs had a higher average share of Medicare discharges compared with low-margin LTCHs (68 percent vs. 57 percent, respectively), which suggests that Medicare patients are financially desirable.

Outlier payments made up a larger share of total payments to low-margin LTCHs compared with high-margin LTCHs (7 percent compared with 15 percent, data not shown). High-cost outlier payments per discharge for low-margin LTCHs averaged more than double the amount paid to high-margin LTCHs (\$5,947 vs. \$2,607, respectively). When these outlier payments were removed from total payments, we found that the standard payment per discharge for low-margin LTCHs was 9.6 percent lower than that for high-margin LTCHs (\$33,467 vs. \$37,019, respectively). This difference was in part because the low-margin LTCHs had a lower average case mix (1.12 vs. 1.17 for high-margin LTCHs) and in part because they cared for a disproportionate share of short-stay outlier

**TABLE  
11-6**

**LTCHs in the top quartile of Medicare margins in 2016 had lower costs**

Characteristics	High-margin quartile	Low-margin quartile
Mean margin	17.7%	-17.5%
Mean total discharges per facility (all payers)	520	427
Medicare patient share	68%	57%
Average length of stay (in days)	25	26
Occupancy rate	73%	56%
Mean CMI	1.17	1.12
Mean per discharge:		
Standardized costs	\$27,501	\$35,770
Standard Medicare payment*	37,019	33,467
High-cost outlier payments	2,607	5,947
Share of:		
SSO cases	27%	34%
Medicare cases from primary referring ACH	35	41
LTCHs that are for profit	88	63

Note: LTCH (long-term care hospital), CMI (case-mix index), SSO (short-stay outlier), ACH (acute care hospital). Includes only established LTCHs—those that filed valid cost reports in both 2015 and 2016. 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. The “primary referring ACH” is the acute care hospital from which the LTCH receives a plurality of its Medicare patients. Government providers were excluded. \*Excludes outlier payments.

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

cases, which often are paid at reduced rates. Such cases made up about one-third of low-margin LTCHs' cases compared with roughly a quarter of cases in high-margin LTCHs.

### Financial incentives to serve Medicare beneficiaries across LTCHs

Another factor we consider when evaluating the adequacy of payments is whether providers have any financial incentive to expand the number of Medicare beneficiaries they serve. In considering whether to treat a patient, a

**TABLE  
11-7**

**The aggregate LTCH Medicare margin for cases that qualify for payment under the LTCH PPS totaled 6.3 percent in 2016**

Type of LTCH	Margin
All	6.3%
Urban	6.4
Rural	1.4
Nonprofit	-0.3
For profit	7.6
Government	N/A

Note: LTCH (long-term care hospital), PPS (prospective payment system), N/A (not available). Margins for government-owned providers are not shown. They operate in a different context from other providers, so their margins are not necessarily comparable.

Source: MedPAC analysis of cost report data from CMS.

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 has a financial 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. If we approximate marginal cost as total Medicare cost minus fixed building and equipment cost, then marginal profit is:

$$\text{Marginal profit} = (\text{payments for Medicare services} - (\text{total Medicare costs} - \text{fixed building and equipment costs})) / \text{Medicare payments}$$

This comparison is a lower bound on the marginal profit because we ignore any labor costs that are fixed. In 2016, the average LTCH marginal profit was 19.5 percent across all Medicare cases, virtually unchanged from 19.6 percent in 2015. This share suggests that LTCHs with available beds have a financial incentive to increase their occupancy rates with Medicare beneficiaries and represents a positive indicator of access.

**LTCH margins for cases meeting patient-level criteria decreased**

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 during fiscal year 2016 (see text box on implementation of LTCH legislation, pp. 316–317). Under this new dual payment structure, CMS will pay for Medicare cases that meet the criteria under the LTCH PPS. LTCH cases not meeting the 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. In its March 2017 report to the Congress, the Commission calculated a margin for cases that would have met the criteria to qualify to receive the higher LTCH payment rate had the policy been in effect at the time of beneficiary discharge, using claims data combined with cost-to-charge ratios for each LTCH. In 2015, using this methodology, the Commission calculated an aggregate Medicare margin for qualifying cases of 6.8 percent. Using the same methodology for 2016, the aggregate margin decreased to 6.3 percent (Table 11-7). Similar to the aggregate Medicare margin across all LTCH discharges, urban facilities and for-profit facilities were more profitable compared with rural facilities or nonprofit facilities.

**How should Medicare payments change in 2019?**

We project LTCH margins for 2018 based on margins in 2016 and policy changes in 2017 and 2018. Those changes that affect our estimate of the 2018 margin include:

- a market basket increase of 2.8 percent for fiscal year 2017, offset by reduction required by PPACA, totaling 1.05 percentage points for a net update of 1.75 percent;<sup>18</sup>
- a market basket increase of 2.70 percent for fiscal year 2018, offset by PPACA-required reductions totaling 1.35 percentage points for a net update of 1.35 percent;<sup>19</sup>
- an increase in expected short-stay outlier payments based on an increase in costs in 2017; and
- applicable high-cost outlier payment adjustments.

As required by the Pathway for SGR Reform Act of 2013, beginning in 2016, LTCH discharges for beneficiaries who

do not meet the specified patient criteria are paid differently from the LTCH standard federal payment rate. Once fully phased in, the site-neutral payment for these beneficiaries will equal the lesser of an amount based on Medicare's ACH IPPS or 100 percent of cost. The Commission expects that substantial changes in provider behavior will mitigate the impact that the new payment methodology has on LTCH providers (see text box on the implementation of LTCH legislation, pp. 316–317). The LTCH industry has repeatedly demonstrated its responsiveness to payment policy changes, and the Commission has no reason to believe that the response to these most recent changes will be any different. This responsiveness, combined with the multiyear policy phase-in, complicates the projection of future margins. For example, the two largest for-profit LTCH chains have taken different approaches to the new policy, which seem to be, based on limited data, either changing admission patterns significantly or reducing cost. There is less certainty regarding how LTCHs not included in large chains (including nonprofit LTCHs) will respond to the new patient-specific criteria. In addition, there is an industry-wide focus on lower cost sites of post-acute care through several initiatives, including the expansion of accountable care organizations and the ACH Value-Based Purchasing Program; therefore, it is reasonable to expect that changes in practice and referral patterns across the industry from these programs will result in lower LTCH use.

Based on historical trends, we expect cost growth for cases that meet the criteria to receive the full LTCH payment amount to be slightly lower than payment growth and below market basket level. The lower cost growth found in 2016 shows the industry's capability to reduce costs in response to the phase-in of the patient-specific criteria.

In our projection of the LTCH margin for fiscal year 2018, we excluded cases not paid under the standard LTCH payment rate because payment for these cases also relies on the update to the IPPS rate or the individual LTCH's growth in cost. We thus calculated a projected margin using only cases that would have qualified to receive the full LTCH standard payment rate. From 2013 through 2016, these cases were more profitable than cases that do not meet the criteria specified by law. Using the most recently available claims data combined with cost-to-charge ratios for each LTCH, we calculated the 2016 margin for cases that would have qualified to receive the full LTCH standard payment rate to equal 6.3 percent, 2.2 percentage points higher than the total aggregate Medicare margin (4.1 percent). Using a three-year historical average of cost growth, we project

that LTCHs' aggregate Medicare margin for qualifying cases paid under the LTCH PPS will be 4.7 percent in 2018, reflecting current policy and cost structure for these cases.

On the basis of these indicators, the Commission concludes that LTCHs can continue to provide Medicare beneficiaries with access to safe and effective care and accommodate changes in their costs with no update to LTCH payment rates in fiscal year 2019. As we have done historically, we plan to assess both our cost growth assumptions and methodology for calculating the margin on cases that would qualify for the standard LTCH payment rate as the policy is phased in and data reflecting the new policy become available.

This update recommendation applies to the Medicare LTCH PPS base payment rate. That is, it applies to payments for discharges that meet the criteria specified in the Pathway for SGR Reform Act of 2013 and to the portion of the blended payment that reflects the LTCH PPS payment rate for discharges that do not meet the specified criteria (applicable during the policy's phase-in period).

## RECOMMENDATION 11

**The Secretary should eliminate the fiscal year 2019 Medicare payment update for long-term care hospitals.**

## RATIONALE 11

The aggregate Medicare margin for 2016 was positive, indicating that LTCHs are able to operate under current payment rates. We continue to expect LTCHs to quickly respond to the new payment incentives. We estimate that the supply of LTCH facilities and beds decreased slightly in 2016. Although the number of LTCH stays decreased, both in total and per capita, LTCH occupancy rates remain well under capacity, suggesting that LTCHs have continued capacity to provide care to Medicare beneficiaries. While the limited quality trends that we measure appear to be stable across all cases, we will continue to monitor these trends under the new dual payment system. We will also begin to evaluate the utility of the new CMS LTCH quality measures once they have sufficiently matured. LTCHs' access to capital does not reflect LTCH PPS payment rates but, rather, the implementation of the dual payment system beginning in fiscal year 2016. Based on historical trends, we also expect to see increases in cost growth in 2017 and 2018 as the new payment policy continues to be implemented. Given the projected positive margin for qualifying cases, the

## Implementation of long-term care hospital legislation

The Pathway for SGR Reform Act of 2013 established “site-neutral” payments for specified cases in long-term care hospitals (LTCHs), beginning in fiscal year 2016. Since 2016, only qualifying cases are eligible to receive the full LTCH prospective payment system (PPS) standard payment rate. It will be some time before we see LTCHs’ full response to the legislation because this policy is being implemented based on the start of each LTCH’s fiscal year, which varies across LTCHs. Further, for four years (2016 through 2019), it is phased in at 50 percent of the LTCH PPS standard payment rate and 50 percent of the site-neutral payment rate.

In discussing LTCH strategies in 2017 to maintain profitability after implementation, the Commission heard a variety of responses from the industry. For example, LTCHs in one large for-profit chain are admitting only beneficiaries who qualify to receive the full LTCH PPS standard payment rate. As of September 30, 2016, this LTCH chain reported that close to 100 percent of Medicare discharges met the criteria to receive the full LTCH PPS standard 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 have higher case mix and thus result in higher revenue per day than before the implementation of the dual payment policy (Select Medical 2016).

Another large for-profit chain began receiving Medicare payment for discharges under the dual payment 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).<sup>20</sup> Medicare revenue per admission initially decreased by about 5 percent when the dual payment policy began. The revenue per admission has begun to increase again, gaining just over 1 percent since fall of 2016. Occupancy rates remain below pre-policy levels (Kindred Healthcare 2016b).

LTCHs have discussed other strategies, including expanding their market presence, reducing costs associated with supplies and pharmacy, expanding the payer mix to include more managed care, and reducing costs for nonqualifying cases through changes in staff mix. The success of these strategies will likely vary by facility and market area, and it will be another several years before the data reflect facilities’ full responses to this new policy.

Overall, the Commission found that total facility payments per case remained stable from 2015 to 2016, and overall costs per case increased by about 1 percent during the same time (Figure 11-1, p. 311). A preliminary analysis of aggregate Medicare costs and payments for facilities with cost reports reflecting the dual payment structure compared with facilities with cost reports that do not include any of the dual payment structure found wide variation across payment and cost growth and, therefore, total Medicare margin (Table 11-

*(continued next page)*

2019 LTCH base payment rate should be the same as the 2018 rate.

As discussed in Chapter 7, before implementing a unified PAC PPS in 2021, the Commission recommends that the Congress direct the Secretary to establish LTCH payments using a blend of the current LTCH PPS relative weights and the unified PAC PPS weights. The recommendation to blend relative weights would not affect the *level* of

payments to a setting but, rather, the *distribution* of those payments across conditions. A blend of the relative weights would redistribute payments within the LTCH setting by increasing payments for medically complex patients and lowering payments for patients with less complex conditions. Based on an LTCH’s mix of patients, the blend would have the effect of raising payments to nonprofit LTCHs and lowering payments to for-profit LTCHs. The redistribution across providers enables

## Implementation of long-term care hospital legislation (cont.)

8). Cost reports without any implementation of the dual payment structure found growth in payment per case of about 3 percent and growth in cost per case of about 2 percent. For these facilities, cost and payment growth resulted in an aggregate margin of 5.2 percent across all Medicare cases. Facilities with cost reports reflecting the dual payment structure reduced costs per case by about 4 percent, whereas overall payments per case decreased by about 9 percent. The greater reduction in payment compared with cost resulted in an aggregate margin of 1.4 percent across all Medicare cases for these facilities. However, further analysis found that there are substantial differences in cost and payment growth, and therefore aggregate Medicare margin, based on the share of cases paid the “site-neutral” rate.

As expected, on an aggregate basis, facilities with a high portion of discharges paid under the LTCH PPS had higher margins compared with facilities with a lower share of discharges paid under the LTCH PPS. For example, the aggregate Medicare margin for facilities with less than 15 percent of discharges paid the site-neutral rate (or more than 85 percent of Medicare cases paid under the LTCH PPS) was 5.0 percent in 2016. In contrast, the total Medicare margin across all cases for facilities with 15 percent or more discharges paid the site-neutral rate totaled 0.2 percent in 2016. This analysis suggests that facilities with a high portion of cases paid under the LTCH PPS will remain profitable under the dual payment structure. ■

**TABLE  
11-8**

**Aggregate Medicare margin for all cases varied by share of cases that qualified to receive the LTCH PPS rate**

	Payment growth per case 2015–2016	Cost growth per case 2015–2016	Aggregate Medicare margin 2016
All facilities	0%	1%	4.1%
Facilities without implementation of dual payment structure	3	2	5.2
Facilities with implementation of the dual payment structure	-9	-4	1.4
<15 percent of Medicare cases paid as site neutral	4	7	5.0
≥15 percent of Medicare cases paid as site neutral	-13	-7	0.2

Note: LTCH (long-term care hospital), PPS (prospective payment system). “Facilities without implementation of the dual payment structure” were identified as LTCHs with cost reports that do not reflect the new payment policy specified under the Pathway for SGR Reform Act of 2013. “Facilities with implementation of the dual payment structure” were identified as LTCHs with cost reports reflecting the new payment policy. “Site-neutral” refers to the cases that do not meet the criteria to receive the full LTCH PPS standard payment rate as established by the Pathway for SGR Reform Act of 2013.

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

the Commission to recommend, and policymakers to implement, a level of payments that would better align payments with the cost of care.

### IMPLICATIONS 11

#### Spending

- This recommendation would decrease federal program spending relative to the statutory payment update by

between \$50 million and \$250 million in 2019 and by less than \$1 billion over five years.

#### Beneficiary and provider

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

## Endnotes

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- 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 full LTCH standard payment 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\\_17\\_ltch\\_finalaaa311adfa9c665e80adff00009edf9c.pdf?sfvrsn=0](http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_17_ltch_finalaaa311adfa9c665e80adff00009edf9c.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 (\$16,423 in 2016). Medicare pays 80 percent of the LTCH’s costs above the threshold. In fiscal year 2016, high-cost outlier payments were made for about 16 percent of LTCH cases. The prevalence of high-cost outlier cases varied by LTCH ownership. About 15 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) typically receive high-cost outlier payments each year.
- 4 Not all LTCHs’ cost reporting start dates are the same, so implementing the dual payment structure began for LTCHs throughout fiscal year 2016.
- 5 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.
- 6 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 that are 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.
- 7 The Pathway for SGR Reform Act of 2013, as amended by the Protecting Access to Medicare Act of 2014, allows 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.
- 8 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 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.
- 9 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.
- 10 In contrast to the new CBSA codes used for the analysis as presented in Table 11-1 (p. 305), we found that applying the former CBSA codes to the 2015 data resulted in 368 facilities classified as urban and 23 facilities as rural.

- 11 Since the implementation of the patient-specific criteria began at individual LTCHs based on their unique cost reporting period start date, in 2016, the dual payment rate affected about 35 percent of discharges. For this analysis, we assumed that the policy was fully implemented for the entire year.
- 12 Across the top 25 diagnoses for both qualifying cases and all cases, 22 MS–LTC–DRGs overlap. The diagnoses that do not overlap in the top 25 represent relatively low-volume MS–LTC–DRGs. The list of top 25 MS–LTC–DRGs based on all cases captures about three-quarters of qualifying cases.
- 13 We observed a higher readmission rate (21.7 percent) for cases with respiratory diagnoses with mechanical ventilation lasting less than 96 hours (MS–LTC–DRG 208). However, a higher rate of readmission is expected for this group because it is defined in part by the length of time a service (mechanical ventilation) is received. Any patient with a principal respiratory diagnosis with use of mechanical ventilation who is readmitted to a short-term ACH within 4 days is assigned to MS–LTC–DRG 208, while a similar patient who stays in the LTCH for a longer period is likely assigned to “respiratory diagnosis with mechanical ventilation lasting more than 96 hours” (MS–LTC–DRG 207). When we combined cases assigned to MS–LTC–DRGs 207 and 208 and recalculated the rate of readmission, we found that 12.6 percent of these cases were readmitted in 2016.
- 14 The 2016 aggregate all-payer margin was 3.1 percent across all cases in LTCHs.
- 15 Another factor was growth in the reported patient case-mix index (CMI), which measures the expected costliness of a facility’s patients (Centers for Medicare & Medicaid Services 2010, Centers for Medicare & Medicaid Services 2009, Centers for Medicare & Medicaid Services 2008, Centers for Medicare & Medicaid Services 2007, Centers for Medicare & Medicaid Services 2006). Refinements to the LTCH case-mix classification system, implemented in October 2007, likely led to more complete documentation and coding of the diagnoses, procedures, services, comorbidities, and complications that are associated with payment, thus raising the average CMI, even though patients may have been no more resource intensive than they were previously (Centers for Medicare & Medicaid Services 2009, Medicare Payment Advisory Commission 2009, RAND Corporation 1990). Although some of the increase in LTCHs’ CMI between 2008 and 2009 was due to growth in the intensity and complexity of the patients admitted, CMS estimated that the case-mix increase attributable to documentation and coding improvements was 2.5 percent (Centers for Medicare & Medicaid Services 2010, Centers for Medicare & Medicaid Services 2009). Those improvements contributed to growth in payments to providers without corresponding increases in providers’ costs. CMS reduced the update to the LTCH base payment rate in fiscal years 2010 and 2011 to partly offset payment increases due to documentation and coding improvements between 2007 and 2009.
- 16 PPACA specified that the annual update to the LTCH standard payment rate in 2011 be reduced by half a percentage point. That requirement, combined with a CMS offset to the 2011 update to account for past improvements in documentation and coding, resulted in a negative update to the LTCH payment rate in 2011. PPACA also mandated reductions in the LTCH standard payment rate of 1.1 percent in 2012, 0.8 percent in 2013, 0.8 percent in 2014, 0.7 percent in 2015, and 0.7 percent in 2016.
- 17 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 2015 and 2016. We excluded government-owned LTCHs.
- 18 The 2017 LTCH PPS market basket increase equaled 2.8 percent; then, as required by law, CMS applied a 1.05 percentage point reduction to account for multifactor productivity (0.3 percentage point) and an additional factor (0.75 percentage point).
- 19 The 2018 payment update equaled the LTCH PPS market basket increase of 2.7 percent, less the required multifactor productivity adjustment of 0.6 percentage point and less the required 0.75 percentage point reduction.
- 20 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 based on all LTCHs owned by this chain in 2016 (Kindred Healthcare 2017).

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