SECTION 8

Post-acute care

Skilled nursing facilities
Home health services
Inpatient rehabilitation facilities
Long-term care hospitals

Chart 8-1. The number of post-acute care providers decreased slightly in 2019

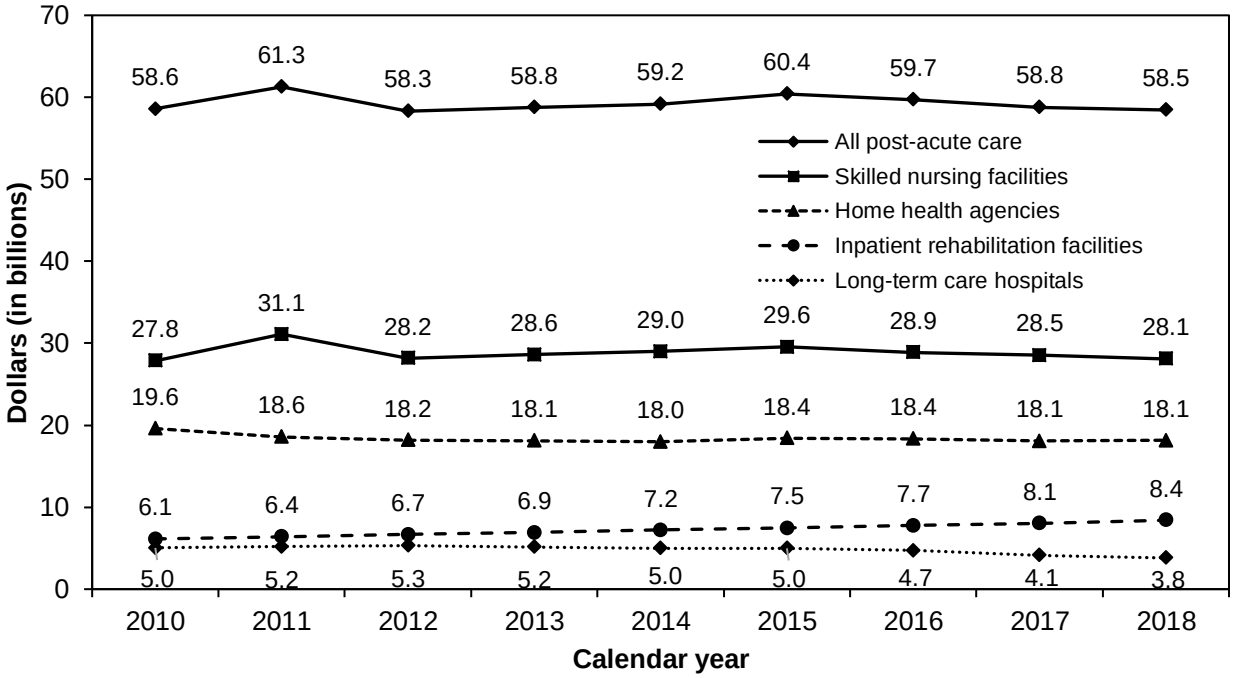
	2015	2016	2017	2018	2019	Average annual percent change 2015–2019	Percent change 2018–2019
Home health agencies	12,346	12,204	11,844	11,783	11,356	–2.1%	–3.6%
Inpatient rehabilitation facilities	1,182	1,188	1,178	1,170	1,152	–0.6	–1.5
Long-term care hospitals	426	423	411	386	371	–3.4	–3.9
Skilled nursing facilities	15,223	15,263	15,277	15,230	15,114	–0.2	–0.8

Note: The skilled nursing facility count does not include swing beds.

Source: MedPAC analysis of data from the Provider of Services files from CMS.

- The number of home health agencies has been declining since 2015 after several years of substantial growth (data not shown). The decline in agencies was concentrated in Texas and Florida, two states that saw considerable growth after the implementation of the home health prospective payment system in October 2000.
- The supply of inpatient rehabilitation facilities (IRFs) has been declining slightly since 2015, though the rate of change picked up between 2018 and 2019. Most IRFs are distinct units in acute care hospitals; about one-quarter are freestanding facilities. However, because freestanding IRFs tend to have more beds, they account for about half of Medicare discharges from IRFs.
- After peaking in 2012 (data not shown), the number of long-term care hospitals (LTCHs) has decreased. The number of LTCHs declined more rapidly after the implementation of a new "dual payment-rate structure" that reduces payments for certain Medicare discharges from LTCHs beginning in fiscal year 2016.
- The total number of skilled nursing facilities rose between 2015 and 2017, then decreased less than 1 percent per year between 2017 and 2019.

Chart 8-2. Medicare fee-for-service spending for post-acute care expenditures was relatively stable from 2010 to 2018



Note: These calendar year–incurred data represent only program spending; they do not include beneficiary cost sharing.

Source: CMS Office of the Actuary 2020.

- Aggregate fee-for-service (FFS) spending on post-acute care (PAC) has remained stable since 2012, in part because of expanded enrollment in managed care under Medicare Advantage (Medicare Advantage spending is not included in this chart). However, spending growth has varied by PAC sector.

- FFS spending on skilled nursing facilities increased sharply in 2011, reflecting CMS's adjustment for the implementation of the new case-mix groups (resource utilization groups, version IV). Once CMS established that the adjustment it made was too large, it lowered the adjustment, and spending dropped in 2012. Overall, spending on SNF care and home health care was relatively stable between 2012 and 2018, decreasing slightly in the latter part of the period.

- FFS spending on inpatient rehabilitation facilities (IRFs) has increased steadily over the past decade. In all, spending on IRFs increased 37 percent between 2010 and 2018.

- FFS spending on long-term care hospitals (LTCHs) has decreased by 24 percent since 2015, largely due to the implementation of the dual payment-rate structure that reduced payments for certain LTCH cases.

Chart 8-3. Freestanding SNFs and for-profit SNFs accounted for the majority of facilities, Medicare stays, and Medicare spending in 2012 and 2018

	Facilities		Medicare-covered stays		Medicare payments (billions)	
Type of SNF	2012	2018	2012	2018	2012	2018
Totals	14,938	15,042	2,396,548	2,191,246	$26.2	$25.4
Freestanding	95%	96%	94%	96%	97%	97%
Hospital based	5	4	6	4	3	3
Urban	70	73	82	84	84	85
Rural	30	27	18	16	16	15
For profit	70	71	71	71	75	74
Nonprofit	25	23	25	25	21	22
Government	5	6	3	4	3	4

Note: SNF (skilled nursing facility). Totals may not sum to 100 percent due to rounding and missing values. The spending amount included here is lower than that reported by the Office of the Actuary, and the count of SNFs is slightly lower than what is reported in CMS's Survey and Certification Providing Data Quickly system.

Source: MedPAC analysis of the Provider of Services and Medicare Provider Analysis and Review files, 2012 and 2018.

- In 2018, freestanding facilities accounted for 96 percent of stays and 97 percent of Medicare's payments.
- Urban facilities accounted for 73 percent of facilities, 84 percent of stays, and 85 percent of Medicare payments in 2018.
- In 2018, for-profit facilities accounted for 71 percent of facilities and stays and 74 percent of Medicare payments.

Chart 8-4. SNF admissions and stays continued to decline in 2018

Volume measure	2014	2016	2017	2018	Percent change 2017–2018
Covered admissions per 1,000 FFS beneficiaries	68.3	65.9	64.6	62.5	–3.3%
Covered days per 1,000 FFS beneficiaries	1,843	1,693	1,623	1,559	–3.9
Covered days per admission	27.0	25.7	25.1	25.0	–0.4

Note: SNF (skilled nursing facility), FFS (fee-for-service). Data include 50 states and the District of Columbia.

Source: Calendar year data from CMS, Office of Information Products and Data Analytics 2020.

- In 2018, 4 percent of beneficiaries enrolled in Medicare fee-for-service used SNF services, down slightly from 2011 (data not shown).
- Between 2017 and 2018, SNF admissions per 1,000 FFS beneficiaries decreased 3.3 percent. The decline is consistent with a decline in FFS per capita inpatient hospital stays that were three days or longer and therefore qualified for Medicare coverage of SNF care (data not shown).
- During the same period, covered days per admission declined 0.4 percent to 25 days, so there were fewer covered days per 1,000 beneficiaries.

Chart 8-5. Freestanding SNF Medicare margins remained high in 2018

	2012	2014	2015	2016	2017	2018
All	14.1%	12.8%	12.6%	11.6%	11.3%	10.3%
Rural	13.3	10.9	10.9	9.9	9.7	8.2
Urban	14.2	13.1	13.0	11.9	11.5	10.7
Nonprofit	5.7	4.2	4.4	2.3	1.7	0.5
For profit	16.3	15.2	15.1	14.2	13.7	13.0

Note: SNF (skilled nursing facility).

Source: MedPAC analysis of freestanding SNF cost reports 2012–2018.

- Though lower than in recent years, the aggregate Medicare margin for freestanding SNFs in 2018 exceeded 10 percent for the 19th consecutive year (not all years are shown). After reaching over 21 percent in 2011 (data not shown), the margins have declined primarily because current law requires annual market basket increases to payments to be offset by a productivity adjustment.

- In 2018, on average, urban facilities had higher Medicare margins than rural facilities. For-profit SNFs had considerably higher Medicare margins than nonprofit SNFs, reflecting their larger size and lower cost growth.

- In 2018, the average total margin (the margin across all payers and all lines of business) for freestanding facilities was –0.3, the first year that it was negative since 1999 (data not shown).

Chart 8-6. Cost and payment differences explain variation in Medicare margins for freestanding SNFs in 2018

Characteristic	Highest margin quartile (*n* = 3,318)	Lowest margin quartile (*n* = 3,318)	Ratio of highest quartile to lowest quartile
Cost measures			
Standardized cost per day	$278	$410	0.68
Standardized cost per discharge	$11,392	$14,506	0.79
Average daily census (patients)	88	65	1.34
Revenue measures			
Medicare payment per day	$530	$458	1.16
Medicare payment per discharge	$22,554	$15,730	1.43
Share of days in intensive therapy	89%	81%	1.10
Share of medically complex days	3	3	1.00
Medicare share of facility revenue	22	12	1.83
Average length of stay (days)	41	34	1.20
Medicaid share of days	66	57	1.16
Patient characteristics			
Case-mix index	1.42	1.32	1.08
Share of dual-eligible beneficiaries	51%	36%	1.42
Share of minority beneficiaries	15	5	3.00
Share of very old beneficiaries	26	33	0.79
Facility mix			
Share for profit	85%	55%	N/A
Share urban	81	70	N/A

Note: SNF (skilled nursing facility), N/A (not applicable). Values shown are medians for the quartile. Highest margin quartile SNFs were in the top 25 percent of the distribution of Medicare margins. Lowest margin quartile SNFs were in the bottom 25 percent of the distribution of Medicare margins. "Standardized cost per day" includes Medicare costs adjusted for differences in area wages and the case mix (using the nursing component's relative weights) of Medicare beneficiaries. "Days in intensive therapy" are days classified into ultra-high and very high rehabilitation case-mix groups. "Very old beneficiaries" are 85 years or older. "Medically complex days" are those assigned to clinically complex or special-care case-mix groups. Quartile figures presented in the table are rounded, but the ratio column was calculated using unrounded data.

Source: MedPAC analysis of freestanding SNF claims and cost reports 2018.

- Medicare margins varied widely across freestanding SNFs. One-quarter of SNFs had Medicare margins at or below –0.7 percent, and one-quarter of facilities had Medicare margins at or above 19.7 percent (data not shown).
- High-margin SNFs had lower costs per day (32 percent lower costs than low-margin SNFs), after adjusting for wage and case-mix differences, and higher payment per day (16 percent).
- Facilities with the highest Medicare margins had higher case-mix indexes, higher shares of beneficiaries who were dually eligible for Medicare and Medicaid, and higher shares of minority beneficiaries.

Chart 8-7. Financial performance of relatively efficient SNFs in 2018 reflects a combination of lower cost per day and higher payment per day

	Relatively efficient SNFs	Other SNFs
Performance in 2018		
Community discharge rate	52%	41%
Readmission rate	9%	10%
Standardized cost per day	$304	$331
Medicare revenue per day	$530	$482
Medicare margin	16.9%	9.9%
Total margin	2.0%	0.3%
Facility case-mix index	1.44	1.36
Medicare average length of stay	30 days	37 days
Occupancy rate	88%	84%
Average daily census	98	78
Share of ultra-high therapy days	69%	56%
Share of medically complex days	4%	4%
Medicaid share of facility days	58%	63%
Share urban	85%	68%
Share for profit	79%	67%

Note: SNF (skilled nursing facility). The analysis includes 11,551 freestanding facilities. SNFs were defined as "relatively efficient" by their cost per day measure (2015–2017) and two quality measures (community discharge and readmission rates) for the same period (2015–2017). Relatively efficient SNFs were those in the best third of the distribution of any one measure and not in the bottom third on any measure in each of three years. Eight percent of SNFs qualified as relatively efficient. Costs per day were standardized for differences in case mix (using the nursing component relative weights) and wages. Rates of risk-adjusted community discharge and readmission for patients with potentially avoidable conditions during the SNF stay are quality measures and were calculated for all facilities with at least 25 stays. "Ultra-high therapy days" include days with at least 720 minutes per week of therapy. "Medically complex days" are those assigned to clinically complex or special-care case-mix groups.

Source: MedPAC analysis of quality measures and Medicare cost report data for 2015–2018.

- "Relatively efficient SNFs" are defined as those consistently providing relatively low-cost and high-quality care compared with other SNFs. Compared with other SNFs in 2018, relatively efficient SNFs furnished considerably higher quality (higher discharge to community rates and lower readmission rates) and had costs per day that were 8 percent lower.

- Compared with other SNFs in 2018, relatively efficient SNFs treated the same share of medically complex patients, had a higher share of ultra-high therapy days, shorter stays, higher occupancy rates, and higher average daily censuses.

Chart 8-8. SNFs improved on some measures but not others from 2012 to 2018

Measure	2012	2014	2016	2018
Discharged to the community	35.7%	37.7%	39.6%	41.4%
Potentially avoidable readmissions				
During SNF stay	11.4	10.8	10.8	10.6
During 30 days after discharge from SNF	5.7	5.7	5.8	5.9
Rate of improvement in one or more mobility ADLs	43.6	43.5	43.6	43.9
Rate of no decline in mobility	87.2	87.1	87.1	87.2

Note: SNF (skilled nursing facility), ADL (activity of daily living). High rates of discharge to the community indicate better quality. High readmission rates indicate worse quality. All rates were risk adjusted. The rate of improvement in mobility ADLs is the average of the rates of improvement in bed mobility, transfer, and ambulation, weighted by the number of stays included in each measure. Stays with improvement in one, two, or three mobility ADLs are counted in the improvement measures. "Rate of no decline in mobility" is the share of stays with no decline in any of the three ADLs. Rates are the average of facility rates and calculated for all facilities with 25 or more stays, except the rate of potentially avoidable readmissions during the 30 days after discharge, which is reported for all facilities with 20 or more stays. Measures exclude hospital-based swing-bed units.

Source: MedPAC analysis of Medicare claims and Minimum Data Set data for 2012–2018.

- Quality measures for SNFs draw on two sources: claims for payment submitted by SNFs and patient assessment data collected by SNFs. Given evidence that the patient assessment information reported by inpatient rehabilitation facilities and home health agencies may reflect financial considerations, these measures should be interpreted carefully.

- Rates of claims-based, risk-adjusted community discharge (discharged home with or without home health care) and potentially avoidable readmission during the SNF stay improved between 2012 and 2018. A greater share of beneficiaries was discharged to the community (41.4 percent compared with 35.7 percent). A lesser share of beneficiaries was readmitted to an acute care hospital during the SNF stay (10.6 percent compared with 11.4 percent). The share of beneficiaries readmitted to an acute care hospital in the 30 days after discharge from the SNF has increased slightly since 2012, to 5.9 percent in 2018.

- Both readmission rates include only patients readmitted to a hospital with the principal diagnosis of a potentially avoidable condition. The 13 potentially avoidable conditions are congestive heart failure, electrolyte imbalance/dehydration, respiratory infection, sepsis, urinary tract or kidney infection, hypoglycemia or diabetic complications, anticoagulant complications, fractures and musculoskeletal injuries, acute delirium, adverse drug reactions, cellulitis/wound infections, pressure ulcers, and abnormal blood pressure.

- The two patient assessment–based, risk-adjusted measures of change in functional status were essentially unchanged between 2012 and 2018. The mobility measures are composites of the patients' abilities in bed mobility, transfer, and ambulation, and they reflect the likelihood that a patient's abilities will change, given his or her functional ability at admission. A facility admitting patients with worse prognoses will have lower expected rates of achieving these outcomes, and this difference will be reflected in the risk-adjusted rates.

Chart 8-9. Trends in the provision of home health care

	2011	2018	Percent change 2011–2018 Annual average	Percent change 2011–2018 Cumulative
Number of users (in millions)	3.4	3.4	–0.3	–1.9
Share of FFS beneficiaries who used home health care	9.4%	8.8	–1.1	–7.2
Episodes (in millions)	6.8	6.3	–1.2	–8.2
Episodes per home health patient	2.0	1.9	–0.9	–6.4
Visits per home health episode	17.2	16.5	–0.6	–4.0
Visits per home health patient	34.2	30.8	–1.5	–10.2
Average payment per episode	$2,917	$3,089	0.8	5.9

Note: FFS (fee-for-service). Yearly figures presented in the table are rounded, but the percent-change columns were calculated using unrounded data. Average payment per episode excludes low-use episodes, those with fewer than five visits.

Source: MedPAC analysis of the home health standard analytic file from CMS.

- Between 2011 and 2018, episode volume declined by 8.2 percent and the number of users dropped 1.9 percent.
- The number of visits per patient decreased between 2011 and 2018. This decline was a consequence of two other utilization declines in this period: a decline in average number of episodes per home health patient and a decline in the average number of visits per episode.
- The average payment per full episode was $3,089 in 2018, an increase of 5.9 percent relative to 2011. Throughout the 2011 to 2018 period, Medicare implemented a number of policies to reduce or slow the growth in home health payments. However, despite these reductions, the margins of free-standing home health agencies were over 15 percent in 2017 and 2018, indicating that payments remain well in excess of costs despite these policies (see Chart 8-11).

Chart 8-10. Most home health episodes are not preceded by hospitalization or PAC stay

	Number of episodes (in millions)		Percent change 2011–2018	
	2011	2018	Annual average	Cumulative
Episodes preceded by a hospitalization or PAC stay	2.2	2.1	>–0.1%	–0.5%
Episodes not preceded by a hospitalization or PAC stay	4.6	4.2	–1.4	–10.3
Share of episodes not preceded by a hospitalization or PAC stay	67%	66%	–0.4	–2.7
Total	6.8	6.3	–1.1	–7.8

Note: PAC (post-acute care). "Episodes preceded by a hospitalization or PAC stay" refers to episodes that occurred less than 15 days after a stay in a hospital (including a long-term care hospital), skilled nursing facility, or inpatient rehabilitation facility. "Episodes not preceded by a hospitalization or PAC stay" refers to episodes for which there was no hospitalization or PAC stay in the previous 15 days.

Source: 2018 home health standard analytic file, 2018 Medicare Provider and Analysis Review file, and 2018 skilled nursing facility standard analytic file.

- Most home health episodes are not preceded by a hospitalization or institutional PAC stay, and these episodes accounted for about two-thirds of PAC stays in 2011 through 2018. During this period, the number of home health episodes not preceded by a hospitalization or PAC stay declined 10.3 percent, while the number of episodes preceded by a hospitalization or PAC stay decreased 0.5 percent.

- The experience of the 2011 through 2018 period follows one that saw large growth in the number and share of episodes not preceded by a hospital or institutional PAC stay (data not shown). In 2001, episodes not preceded by a hospital or institutional PAC stay accounted for 53 percent of volume; by 2011 those episodes had increased to 67 percent of total episodes. Over the same period, the share of episodes preceded by a hospitalization or institutional PAC stay declined from 47 percent in 2001 to 33 percent in 2011 (data not shown). The shares of episode volume accounted for by these two categories have not changed substantially since 2011.

- Beneficiaries for whom the majority of home health episodes were preceded by a hospitalization or PAC stay had different characteristics from community-admitted beneficiaries (those who had no prior hospitalization or PAC) (data not shown). These beneficiaries were more likely to be dually eligible for Medicare and Medicaid, to have more home health episodes, and to have more episodes with a high share of home health aide services compared with other home health users coming from a hospitalization or other PAC stay (data not shown). Community-admitted users generally had slightly fewer chronic conditions, tended to be older, and were more likely to have dementia or Alzheimer's disease (data not shown).

Chart 8-11. Medicare margins for freestanding home health agencies, 2017 and 2018

	2017	2018	Share of agencies 2018
All	15.2%	15.3%	100%
Geography			
Mostly urban	15.8	15.6	84
Mostly rural	13.4	13.8	16
Type of control			
For profit	16.4	16.8	89
Nonprofit	10.9	9.9	11
Volume quintile (lowest to highest)			
First	7.4	7.8	20
Second	9.8	9.3	20
Third	11.5	11.9	20
Fourth	13.6	13.9	20
Fifth	17.0	17.3	20

Note: Agencies are characterized as urban or rural based on the residence of the majority of their patients.

Source: MedPAC analysis of 2017–2018 Medicare Cost Report files from CMS.

- In 2018, freestanding home health agencies (HHAs) (85 percent of all HHAs) had an aggregate margin of 15.3 percent. HHAs that served mostly urban patients in 2018 had an aggregate margin of 15.6 percent; HHAs that served mostly rural patients had an aggregate margin of 13.8 percent. The 2018 margin is consistent with the historically high margins the home health industry has experienced since the prospective payment system (PPS) was implemented in 2000. The margins from 2001 to 2017 averaged 16.5 percent (data not shown), indicating that most agencies have been paid well in excess of their costs under the PPS.

- For-profit agencies in 2018 had an average margin of 16.8 percent, and nonprofit agencies had an average margin of 9.9 percent.

- Agencies with higher episode volumes had higher margins. The agencies in the lowest volume quintile in 2018 had an aggregate margin of 7.8 percent, while those in the highest quintile had an aggregate margin of 17.3 percent.

Chart 8-12. Home health agencies' assessment-based performance measures increased markedly from 2014 to 2018, while claims-based performance measures were largely unchanged

Measure	2014	2015	2016	2017	2018
Average share of an agency's beneficiaries who:					
Used emergency department care	12.0%	12.2%	12.1%	12.7%	12.8%
Had to be admitted to the hospital	15.4	15.5	16.2	15.4	15.4
Average share of a home health agency's beneficiaries with improvements in:					
Walking	61	63	69	74	77
Transferring	55	59	65	72	77

Note: All data pertain to fee-for-service beneficiaries only and are risk adjusted for differences in patient condition among home health patients.

Source: MedPAC analysis of Medicare claims data and Outcome and Assessment Information Set data provided by the University of Colorado.

- Quality measures for home health care draw on two sources, claims for payment submitted by home health agencies (HHAs) and patient assessment data collected by HHAs. In recent years, quality measures based on claims have indicated little change in quality, while measures based on patient assessment data have indicated improved quality. The claims-based rates of hospitalization and emergency department use have not changed significantly from 2014 to 2018, while the patient assessment–based functional improvement rates have improved substantially. From 2014 and 2018, average rates of beneficiaries with improvement in transferring improved from 55 percent to 77 percent. These divergent trends raise concerns about the objectivity of the patient assessment data and suggest that the functional measures of quality, such as walking and transferring, should be interpreted carefully.

- Medicare implemented a value-based purchasing program for home health agencies in nine states in 2018. In 2020, agencies in these states will receive bonuses or penalties of up to 6 percent, depending on their performance on 20 measures, including the functional and emergency department use measures listed above.

Chart 8-13. Number of FFS IRF cases increased in 2018

	2010	2015	2017	2018	Average annual percent change 2010–2018	Percent change 2017–2018
Number of IRF cases	365,095	393,475	396,294	408,038	1.4%	3.0%
Cases per 10,000 FFS beneficiaries	101.3	103.4	102.7	105.7	0.5	2.9
Payment per case	$16,814	$18,527	$19,481	$20,124	2.3%	3.3
Average length of stay (in days)	13.1	12.7	12.7	12.7	–0.4	–0.6

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility). Numbers of cases reflect Medicare FFS utilization only. The number of cases presented differs from past reports due to a change in methodology. Yearly figures presented in the table are rounded, but the percent-change columns were calculated using unrounded data.

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

- After a period of relative stability from 2015 to 2017, the number of Medicare FFS cases increased 3.0 percent, growing to about 408,000 cases in 2018.
- In 2018, the number of IRF cases per 10,000 FFS beneficiaries grew to 105.7, up 2.9 percent from the previous year. Relatively few Medicare beneficiaries use IRF services because, to qualify for Medicare coverage, IRF patients must be able to tolerate and benefit from rehabilitation therapy that is intensive, which is usually interpreted to mean at least three hours of therapy a day for at least five days a week. Yet, compared with all Medicare beneficiaries, those admitted to IRFs in 2018 were disproportionately over age 85 (data not shown).
- With the increase in the number of IRF cases per FFS beneficiary, FFS Medicare's share of IRF discharges rose slightly, to 59 percent of total discharges (data not shown).
- The average length of stay in an IRF has held steady since 2015.

Chart 8-14. Most common types of FFS inpatient rehabilitation facility cases, 2018

Type of case	Share of cases
Stroke	20.0%
Other neurological conditions	14.7
Brain injury	10.8
Debility	11.6
Fracture of the lower extremity	10.3
Other orthopedic conditions	7.9
Cardiac conditions	5.9
Spinal cord injury	4.9
Major joint replacement of lower extremity	4.1
All other	9.7

Note: FFS (fee-for-service). "Other neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur and hip and knee replacements. "All other" includes conditions such as amputations, arthritis, and pain syndrome. All Medicare FFS inpatient rehabilitation facility (IRF) cases with valid patient assessment information were included in this analysis.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

- In 2018, the most frequently occurring case type among FFS beneficiaries admitted to IRFs was stroke, which accounted for 20.0 percent of Medicare FFS cases.

- Between 2017 and 2018, we observed disproportionate growth in the number of cases with debility (data not shown). Between 2017 and 2018, the share of these cases rose from 10.7 percent to 11.6 percent of FFS IRF cases.

- The distribution of case types differs by type of IRF (data not shown). For example, in 2018, only 16 percent of cases in freestanding for-profit IRFs were admitted for rehabilitation following a stroke, compared with 26 percent of cases in hospital-based nonprofit IRFs. Likewise, 20 percent of cases in freestanding for-profit IRFs were admitted with other neurological conditions, twice the share admitted to hospital-based nonprofit IRFs. Cases with other orthopedic conditions also made up a higher share of cases in freestanding for-profit facilities than in all other IRFs. By contrast, the share of cases with brain injury or debility was similar across IRF types (data not shown).

Chart 8-15. Inpatient rehabilitation facilities' Medicare margins by type of facility, 2010–2018

	2010	2012	2014	2015	2016	2017	2018
All IRFs	8.6%	11.2%	12.2%	13.9%	13.3%	13.9%	14.7%
Hospital based	–0.5	0.6	0.7	2.1	0.8	1.5	2.5
Freestanding	21.4	23.9	25.2	26.6	25.8	25.6	25.4
Urban	9.0	11.5	12.6	14.3	13.6	14.2	15.0
Rural	4.7	6.6	6.4	8.6	9.1	8.2	9.8
Nonprofit	2.1	2.0	1.7	3.4	1.5	2.1	2.4
For profit	19.6	23.0	23.9	25.1	24.5	24.1	24.6

Note: IRF (inpatient rehabilitation facility).

Source: MedPAC analysis of cost report data from CMS.

- In 2018, the aggregate IRF Medicare margin increased to 14.7 percent.
- Margins varied by ownership, with for-profit IRFs having substantially higher margins. At the same time, Medicare margins in freestanding IRFs far exceeded those of hospital-based facilities. Nevertheless, one-quarter of hospital-based IRFs had Medicare margins greater than 13 percent (data not shown), indicating that many hospitals can manage their IRF units profitably. Further, despite comparatively low average margins in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. For example, aggregate inpatient Medicare margins for hospitals are consistently higher for hospitals with IRF units versus hospitals without IRF units (1.4 percentage points higher in 2018). Aggregate overall Medicare margins for hospitals with IRF units were 2.4 percentage points higher for 2018 (data not shown).
- Higher unit costs are a major driver of low margins in both hospital-based and nonprofit IRFs. However, in an analysis of data from 2013, the Commission found that the mix of case types in IRFs was also correlated with profitability. IRFs with the highest margins had a higher share of neurological cases and a lower share of stroke cases. Further, we observed differences in the types of stroke and neurological cases admitted to high- and low-margin IRFs. Stroke cases in the highest margin IRFs were much less likely to have paralysis than were stroke cases in the lowest margin IRFs. Neurological cases in the highest margin IRFs were much more likely to be neuromuscular disorders (such as amyotrophic lateral sclerosis or muscular dystrophy) than were neurological cases in the lowest margin IRFs (data not shown).
- In an analysis of data from 2013, the Commission found that high-margin IRFs had patients who were, on average, less severely ill in the preceding stay in an acute care hospital than patients admitted to low-margin IRFs. Once admitted to and assessed by the IRF, however, the average patient profile changed, with patients treated in high-margin IRFs appearing to be more disabled than those in low-margin IRFs. This finding suggests the possibility that assessment and coding practices may contribute to greater revenues in some IRFs (data not shown).

Chart 8-16. Low standardized costs led to high margins for both hospital-based and freestanding IRFs, 2018

Characteristic	Lowest cost quartile	Highest cost quartile
Median cost per discharge		
All	$11,583	$20,257
Hospital based	12,216	20,278
Freestanding	11,194	20,001
Median Medicare margin		
All	28.6%	–19.9%
Hospital based	23.7	–20.4
Freestanding	31.4	–17.3
Median		
Number of beds	44	18
Occupancy rate	74%	54%
Share of facilities in the quartile that are:		
Hospital based	36%	94%
Freestanding	64	6
Nonprofit	25	64
For profit	70	18
Government	5	17
Urban	94	72
Rural	6	28

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for differences in wages across geographic areas, differences in case mix across providers, and differences across providers in the prevalence of high-cost outliers, short-stay outliers, and transfer cases. Totals may not sum to 100 percent due to rounding.

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

- IRFs with the lowest standardized costs (those in the lowest cost quartile) had a median standardized cost per discharge that was 43 percent less than that of the IRFs with the highest standardized costs (those in the highest cost quartile).
- IRFs with the lowest costs tended to be larger: The median number of beds was 44 compared with 18 in the highest cost quartile. In addition, IRFs with the lowest costs had a higher median occupancy rate (74 percent vs. 54 percent, respectively). These results suggest that low-cost IRFs benefit from economies of scale.
- Low-cost IRFs were disproportionately freestanding and for profit. Still, 36 percent of IRFs in the lowest cost quartile were hospital based and 25 percent were nonprofit. By contrast, in the highest cost quartile, 94 percent were hospital based and 64 percent were nonprofit.

Chart 8-17. Risk-adjusted quality indicators for IRFs held steady or improved slightly from 2012 to 2018

Measure	2012	2014	2015	2016	2017	2018
Potentially avoidable rehospitalizations during IRF stay	2.8%	2.7%	2.6%	2.7%	2.7%	2.6%
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	5.0	4.8	4.4	4.8	4.8	4.8
Discharged to the community	74.4	75.3	75.1	76.0	76.0	76.4
Discharged to a SNF	6.7	6.9	6.9	6.7	6.7	6.6

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). High rates of rehospitalization and discharge to a SNF indicate worse quality. High rates of discharge to the community indicate better quality. Rates are the average of the facility rates and are calculated for all facilities with 25 or more stays.

Source: Analysis of Medicare claims data and Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

- Between 2012 and 2018, the national average rate of risk-adjusted potentially avoidable rehospitalizations during IRF stays declined from 2.8 percent to 2.6 percent (lower rates are better). The national average rate of risk-adjusted potentially avoidable rehospitalizations within 30 days after discharge from an IRF declined from 5.0 percent to 4.4 percent in 2015, then rose to 4.8 percent in 2016 and held steady.

- The rehospitalization rates count only stays readmitted to a hospital with the principal diagnosis of a potentially avoidable condition. The potentially avoidable rehospitalizations we measure are respiratory-related illness (pneumonia, influenza, bronchitis, chronic obstructive pulmonary disease, and asthma); sepsis; congestive heart failure; fractures or fall with a major injury; urinary tract or kidney infection; blood pressure management; electrolyte imbalance; anticoagulant therapy complications; diabetes-related complications; cellulitis or wound infection; pressure ulcer; medication error or adverse drug reaction; and delirium.

- Between 2012 and 2018, the national average for the risk-adjusted community discharge rate increased from 74.4 percent to 76.4 percent (higher rates are better). Our measure of community discharge does not give IRFs credit for discharging a Medicare beneficiary to the community if the beneficiary is subsequently admitted to an acute care hospital within 30 days of the IRF discharge.

- Between 2012 and 2018, the national risk-adjusted rate of discharge to a SNF improved slightly (was lower). Between 2012 and 2014, the national risk-adjusted rate of discharge to a SNF increased from 6.7 percent to 6.9 percent, but subsequently declined to 6.7 percent in 2016, then again in 2018 to 6.6 percent (lower rates are better).

Chart 8-18. The top 25 MS–LTC–DRGs accounted for almost 70 percent of LTCH discharges in 2018

MS–LTC–DRG	Description	Discharges	Share of cases
189	Pulmonary edema and respiratory failure	18,761	18.3%
207	Respiratory system diagnosis with ventilator support 96+ hours	12,691	12.4
871	Septicemia without ventilator support 96+ hours with MCC	6,154	6.0
166	Other respiratory system OR procedures with MCC	2,636	2.6
208	Respiratory system diagnosis with ventilator support <96 hours	2,616	2.6
949	Aftercare with CC/MCC	2,128	2.1
592	Skin ulcers with MCC	2,066	2.0
177	Respiratory infections and inflammations with MCC	2,038	2.0
981	Extensive OR procedure unrelated to principal diagnosis with MCC	1,938	1.9
539	Osteomyelitis with MCC	1,798	1.8
682	Renal failure with MCC	1,708	1.7
291	Heart failure and shock with MCC	1,645	1.6
4	Tracheostomy with ventilator support 96+ hours or primary diagnosis except face, mouth, and neck without major OR	1,542	1.5
559	Aftercare, musculoskeletal system and connective tissue with MCC	1,459	1.4
314	Other circulatory system diagnoses with MCC	1,305	1.3
919	Complications of treatment with MCC	1,262	1.2
862	Postoperative and post-traumatic infections with MCC	1,249	1.2
853	Infectious and parasitic diseases with OR procedure with MCC	1,239	1.2
870	Septicemia with ventilator support 96+ hours	1,187	1.2
570	Skin debridement with MCC	1,108	1.1
193	Simple pneumonia and pleurisy w MCC	1,013	1.0
190	Chronic obstructive pulmonary disease with MCC	996	1.0
638	Diabetes with CC	986	1.0
560	Aftercare, musculoskeletal system and connective tissue w CC	968	1.0
689	Kidney and urinary tract infections with MCC	941	0.9
	Top 25 MS–LTC–DRGs	71,434	70.0
	Total	102,288	100.0

Note: MS–LTC–DRG (Medicare severity long-term care diagnosis related group), LTCH (long-term care hospital), MCC (major complication or comorbidity), OR (operating room), CC (complication or comorbidity). MS–LTC–DRGs are the case-mix system for LTCHs.

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

- Cases in LTCHs are concentrated in a relatively small number of MS–LTC–DRGs. In 2018, the top 25 MS–LTC–DRGs accounted for 70 percent of LTCH Medicare cases.
- Consistent with 2016 and 2017, the two most frequent diagnoses in LTCHs in 2018 were pulmonary edema and respiratory failure and a respiratory system diagnosis with ventilator support of more than 96 hours.
- Over 40 percent of all LTCH cases were respiratory conditions. Nonprofit LTCHs care for a higher share of beneficiaries with diagnoses of pulmonary edema and respiratory failure and a respiratory system diagnosis with ventilator support of more than 96 hours than for-profit LTCHs (data not shown).

Chart 8-19. The number of Medicare LTCH cases and users decreased by over 11 percent between 2017 and 2018

						Average annual change		
	2014	2015	2016	2017	2018	2014–2016	2016–2017	2017–2018
Cases	133,984	131,129	125,586	116,424	102,288	–3.2%	–7.3%	–12.1%
Cases per 10,000 FFS beneficiaries	35.4	34.4	32.5	30.1	26.5	–4.2	–7.3	–11.9
Payment per case	$40,015	$40,719	$40,656	$38,253	$40,105	0.8	–5.9	4.8
Length of stay (in days)	26.3	26.6	26.8	26.3	26.6	1.0	–2.2	1.2
Users	118,288	116,088	111,171	103,322	91,754	–3.1	–7.1	–11.2

Note: LTCH (long-term care hospital), FFS (fee-for-service). Yearly figures presented in the table are rounded, but the average annual changes were calculated using unrounded data.

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

- The Pathway for SGR Reform Act of 2013 created a "dual payment-rate structure" for LTCHs where, beginning in fiscal year 2016, only certain LTCH cases continue to qualify for the standard LTCH prospective payment system (PPS) rate, while cases that do not meet a set of criteria are paid a lower "site-neutral" rate (*site neutral* is defined as the lower of Medicare's inpatient hospital PPS rate or 100 percent of the cost of the case).

- Controlling for the number of FFS beneficiaries, the number of LTCH cases declined by about 4 percent annually between 2014 and 2016. The number of cases declined more rapidly following the implementation of the dual payment-rate structure. From 2016 to 2017, the number of LTCH cases declined by over 7 percent, and from 2017 to 2018, the number of LTCH cases declined by another 12 percent.

- Reflecting the decline in the number of Medicare cases, the number of beneficiaries who had LTCH stays ("users") also decreased by 11.2 percent from 2017 to 2018.

- Reductions in payment per case from 2015 through 2017 reflect a lower payment rate for cases that did not meet the criteria after the implementation of the dual payment-rate structure. From 2017 to 2018, on a payment per case basis, the increase in the share of cases that qualified for the standard LTCH PPS rate offset the payment reduction for cases paid the "site-neutral" rate.

Chart 8-20. The aggregate LTCH Medicare margin increased in 2018

Type of LTCH	Share of discharges in 2018	Medicare margin				
		2014	2015	2016	2017	2018
All	100%	5.2%	4.7%	3.9%	–2.2%	–0.5%
Urban	95	5.2	4.7*	4.0	–1.9	–0.2
Rural	5	5.1	3.5*	–0.2	–13.6	–9.5
Nonprofit	14	–2.2	–5.9	–5.7	–13.0	–11.7
For profit	84	7.0	6.5	5.5	–0.3	1.3

Note: LTCH (long-term care hospital).
*CMS adopted new core-based statistical area codes for LTCHs beginning in fiscal year 2015; this change reclassified several facilities as urban that had previously been classified as rural, and therefore the margin across categories of urban and rural facilities between 2014 and 2015 should not be compared.

Source: MedPAC analysis of cost report data from CMS.

- After peaking in 2012, the aggregate LTCH margin began to fall in 2013, primarily due to policy changes that reduced payments, including the start of a three-year phase-in of a downward adjustment for budget neutrality and the effect of sequestration that began on April 1, 2013. Margins steadily declined between 2012 and 2018 (early years not shown).

- In fiscal year 2016, CMS began implementing a "dual payment-rate structure" where certain LTCH cases not meeting a set of criteria specified in law are paid a lower "site-neutral" rate (*site neutral* is defined as the lower of Medicare's inpatient hospital PPS rate or 100 percent of the cost of the case). As a result, the aggregate Medicare margin fell to –2.2 percent in 2017. Increases in the aggregate share of cases meeting the criteria resulted in the aggregate Medicare margin increasing to –0.5 percent in 2018.

- Financial performance in 2018 varied across LTCHs. The aggregate Medicare margin for for-profit LTCHs (which accounted for 84 percent of all Medicare discharges from LTCHs) decreased from 6.5 percent in 2015 to 1.3 percent in 2018. The aggregate margin for nonprofit LTCHs decreased from –5.9 percent in 2015 to –11.7 percent in 2018.

Chart 8-21. The share of LTCH cases meeting the criteria for the standard LTCH PPS rate increased from 2017 to 2018

Cases meeting the criteria	2015	2016	2017	2018	Percent change 2015–2017	Percent change 2017–2018
Cases	72,429	72,318	74,666	71,916	1.5%	–3.7%
Share of all LTCH cases	55%	58%	64%	70%		
Cases per 10,000 FFS beneficiaries	19.0	18.7	19.3	18.6	0.7	–3.4
Payment per case	$46,217	$46,223	$46,127	$46,789	–0.1	1.4
Spending (in billions)	$3.3	$3.3	$3.4	$3.4	1.4	–2.3
Length of stay (in days)	28.5	27.9	27.9	28.0	–1.0	0.4
Aggregate Medicare margin	6.8%	6.3%	5.8%	5.8%	N/A	N/A

Note: LTCH (long-term care hospital), PPS (prospective payment system), FFS (fee-for-service), N/A (not applicable). Yearly figures presented in the table are rounded, but the percent changes were calculated using unrounded data.

Source: MedPAC analysis of cost report data from CMS.

- The Pathway for SGR Reform Act of 2013 created a "dual payment-rate structure" for LTCHs where, beginning in fiscal year 2016, only certain LTCH cases continue to qualify for the standard LTCH PPS rate, while cases that do not meet a set of criteria are paid a lower "site-neutral" rate (*site neutral* is defined as the lower of Medicare's inpatient hospital PPS rate or 100 percent of the cost of the case).

- Controlling for the number of FFS beneficiaries, the number of cases meeting the criteria to qualify for the standard LTCH PPS rate decreased by 3.4 percent in 2018, in contrast to the 11.9 percent reduction in all LTCH cases per 10,000 FFS beneficiaries (see Chart 8-19).

- After decreasing from 28.5 days in 2015 to 27.9 days in 2016, the average length of stay for cases meeting the criteria to qualify for the standard LTCH PPS rate has remained relatively stable since 2017.

- The aggregate Medicare margin for cases meeting the criteria to qualify for the standard LTCH PPS rate was 5.8 percent in 2018. 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.