CHAPTER 12

Hospice services

RECOMMENDATION

12 The Congress should:

- for fiscal year 2021, eliminate the update to the fiscal year 2020 Medicare base payment rates for hospice and
- wage adjust and reduce the hospice aggregate cap by 20 percent.

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

CHAPTER 12

Hospice services

Chapter summary

The Medicare hospice benefit covers palliative and support services for beneficiaries who are terminally ill with a life expectancy of six months or less if the illness runs its normal course. When beneficiaries elect to enroll in the Medicare hospice benefit, they agree to forgo Medicare coverage for conventional treatment of their terminal illness and related conditions. In 2018, more than 1.5 million Medicare beneficiaries (including more than half of decedents) received hospice services from 4,639 providers, and Medicare hospice expenditures totaled $19.2 billion.

Assessment of payment adequacy

The indicators of payment adequacy for hospices—beneficiary access to care, quality of care, provider access to capital, and Medicare payments relative to providers' costs—are positive.

***Beneficiaries' access to care*—**Hospice use among Medicare beneficiaries has grown substantially in recent years, suggesting greater awareness of and access to hospice services. In 2018, hospice use increased across almost all demographic and beneficiary groups examined. However, rates of hospice use remained higher for White beneficiaries than for other beneficiaries.

- ***Capacity and supply of providers*—**In 2018, the number of hospice providers increased by 3.4 percent, due largely to growth in the number

In this chapter

of for-profit hospices, continuing a more than decade-long trend of substantial market entry by for-profit providers.

- ***Volume of services*—**In 2018, the proportion of beneficiaries using hospice services at the end of life continued to grow, and length of stay among decedents increased. Between 2017 and 2018, the share of Medicare decedents who used hospice rose from 50.0 percent to 50.7 percent; the average length of stay among decedents rose from 88.1 days to 89.6 days; and median length of stay was stable at 17 or 18 days.
- ***Marginal profit*—**For hospice providers, Medicare payments exceeded marginal costs by roughly 16 percent in 2017. This rate of marginal profit suggests that providers have an incentive to treat Medicare patients and is a positive indicator of patient access.

***Quality of care*—**Limited quality data are available for hospice providers. In 2018, hospices' performance on seven quality measures related to processes of care at hospice admission was very high, but the measures mostly appear to be topped out (defined as scores so high and unvarying that meaningful distinctions and improvement in performance can no longer be made). Scores on the Hospice Consumer Assessment of Healthcare Providers and Systems® were also stable in 2018. However, Office of Inspector General analysis of data from state survey agencies and accrediting organizations identified 313 hospice providers as poor performers in 2016 due to at least one occurrence of a serious deficiency or severe and substantiated complaint that year.

***Providers' access to capital*—**Hospices are not as capital intensive as some other provider types because they do not require extensive physical infrastructure. Continued growth in the number of for-profit providers (4 percent increase in 2018) and reports of strong investor interest in the sector suggest capital is available to these providers. Less is known about access to capital for nonprofit freestanding providers, for which capital may be more limited. Hospital-based and home health–based hospices have access to capital through their parent providers.

***Medicare payments and providers' costs*—**The aggregate 2017 Medicare margin, which is an indicator of the adequacy of Medicare payments relative to providers' costs, was 12.6 percent, up from 10.9 percent in 2016. The projected Medicare margin for 2020 is 12.6 percent.

In addition to indicators of hospice payment adequacy, this chapter identifies changes to the hospice aggregate cap. The cap limits the total payments a hospice provider can receive in a year in aggregate. If a provider's total payments exceed the

number of patients treated multiplied by the cap amount, the provider must repay the excess to the Medicare program.

The aggregate cap functions as a mechanism that reduces payments to hospices with long stays and high margins. In 2017, an estimated 14 percent of hospices exceeded the cap and their aggregate Medicare margin was 21 percent before and 13 percent after application of the cap. These above-cap hospices had high average lengths of stay and high live discharge rates and were disproportionately for profit, freestanding, urban, small, and new entrants to the Medicare program. Because the hospice aggregate cap is not waged-adjusted but Medicare payments are wage-adjusted, the aggregate cap is stricter in some areas of the country than others. A policy to wage-adjust and reduce the hospice aggregate cap would make the cap more equitable across providers and focus payment reductions on providers with high margins.

The Commission has concluded, based on positive indicators of payment adequacy and strong margins, that aggregate payments are more than sufficient to cover providers' costs. The Commission's recommendation is that the hospice payment rates in 2021 be held at their 2020 levels and that the hospice aggregate cap be wage adjusted and reduced by 20 percent to focus payment reductions on providers with disproportionately long stays and high margins. ■

Background

Medicare began offering the hospice benefit in 1983, pursuant to the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). The benefit covers palliative and support services for beneficiaries who are terminally ill, with a medical prognosis indicating that the individual's life expectancy is six months or less if the illness runs its normal course. A broad set of services is included, such as nursing care; physician services; counseling and social worker services; hospice aide (also referred to as home health aide) and homemaker services; short-term hospice inpatient care (including respite care); drugs and biologics for symptom control; supplies; home medical equipment; physical, occupational, and speech therapy; bereavement services for the patient's family; and other services for palliation of the terminal illness and related conditions. Most commonly, hospice care is provided in patients' homes, but hospice services are also provided in nursing facilities, assisted living facilities, hospice facilities, and hospitals. In 2018, more than 1.5 million Medicare beneficiaries received hospice services, and Medicare expenditures totaled about $19.2 billion.

Beneficiaries receive the Medicare hospice benefit only if they choose to; if they do, they agree to forgo Medicare coverage for conventional treatment of the terminal illness and related conditions outside of the hospice benefit. Medicare continues to cover items and services unrelated to the terminal illness and related conditions. For each person admitted to a hospice program, a written plan of care must be established and maintained by an interdisciplinary group (which must include a hospice physician, registered nurse, social worker, and pastoral or other counselor) in consultation with the patient's attending physician, if there is one. The plan of care must identify the services to be provided (including management of discomfort and symptom relief) and describe the scope and frequency of services needed to meet the patient's and family's needs.

The Medicare hospice benefit is arranged into defined benefit periods. The first hospice benefit period is 90 days. For a beneficiary to elect hospice initially, two physicians—a hospice physician and the beneficiary's attending physician, if any—are generally required to certify that the beneficiary has a life expectancy of six months or less if the illness runs its normal course.[1] If the patient's terminal illness continues to engender the likelihood of death within 6 months, the hospice physician can recertify the patient for another 90 days and for an unlimited number of 60-day periods after that, as long as he or she remains eligible.[2] Beneficiaries can disenroll from hospice at any time (referred to as "revoking hospice") and can later reelect hospice as long as the beneficiary meets the eligibility criteria.

Since 2000, hospice spending has grown substantially, increasing at a rapid rate between 2000 and 2012, remaining flat between 2012 and 2014, and growing again between 2014 and 2018. Between 2000 and 2012, Medicare spending for hospice care increased more than 400 percent, from $2.9 billion to $15.1 billion. That spending increase was driven by greater numbers of beneficiaries electing hospice and by growth in length of stay for patients with the longest stays. Occurring simultaneously since 2000 has been a substantial increase in the number of for-profit providers.[3] Between 2012 and 2014, Medicare spending for hospice services was flat at about $15.1 billion each year. Between 2014 and 2018, Medicare hospice spending increased on average 6.3 percent per year. Spending growth during this period reflects an increase in the number of beneficiaries using hospice care and in the Medicare base payment rate, as well as a modest increase in average length of stay. Medicare is the largest payer of hospice services, covering about 90 percent of hospice patient days in 2017.

Medicare payment for hospice services

The Medicare program pays a daily rate to hospice providers. The hospice provider assumes all financial risk for costs and services associated with care for the patient's terminal illness and related conditions. The hospice provider receives payment for every day a patient is enrolled, regardless of whether the hospice staff visited the patient or otherwise provided a service each day. This payment design is intended to encompass not only the cost of visits but also other costs a hospice incurs for palliation and management of the terminal condition and related conditions, such as on-call services, care planning, drugs, medical equipment, supplies, patient transportation between sites of care that are specified in the plan of care, and short-term hospice inpatient care.

Payments are made according to a fee schedule that has four levels of care: routine home care (RHC), continuous home care (CHC), inpatient respite care (IRC), and general inpatient care (GIP) (Table 12-1, p. 330). The four levels are distinguished by the location and intensity of

TABLE 12–1 **Medicare hospice payment categories and rates**

Category	Description	Base payment rate, FY 2020	Share of hospice days, 2018
Routine home care*	Home care provided on a typical day: Days 1–60	$195 per day	31.2%
	Home care provided on a typical day: Days 61+	$154 per day	67.0
Continuous home care	Home care provided during periods of patient crisis	$58 per hour	0.2
Inpatient respite care	Inpatient care for a short period to provide respite for primary caregiver	$450 per day	0.3
General inpatient care	Inpatient care to treat symptoms that cannot be managed in another setting	$1,021 per day	1.2

Note: FY (fiscal year). Payment rates are rounded in the table to the nearest dollar. The routine home care payment rate has two levels: one for the first 60 days of hospice care and one for days 61 and beyond. If there is a break in hospice care that is more than 60 days, the day count resets to 1 when the patient re-enters hospice. Payment for continuous home care (CHC) is an hourly rate (about $58 per hour, with a maximum payment per day equal to about $1,396) for care delivered during periods of crisis if care is provided in the home for 8 or more hours within a 24-hour period beginning at midnight. In addition, a nurse must deliver more than half of the hours of this care to qualify for CHC-level payment. The above rates apply to providers that met the requirements for the hospice quality reporting program and received a full annual update. Providers that do not meet the quality reporting requirements receive slightly lower rates based on a 2 percentage point reduction to the annual update. The percentages may not sum to 100 percent due to rounding.
*In addition to the daily rate, Medicare pays $58 per hour for registered nurse and social worker visits (up to four hours per day) that occur during the last seven days of life for beneficiaries receiving routine home care.

Source: Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2019. *Update to hospice payment rates, hospice cap, hospice wage index, and the hospice pricer for FY 2020.* Manual System Pub 100–04 Medicare Claims Processing, Transmittal 4363, August 16.

the services provided. RHC is the most common level of hospice care, accounting for about 98 percent of Medicare-covered hospice days in 2018. The other levels of care are available to manage needs in certain situations. GIP is provided in a facility on a short-term basis to manage symptoms that cannot be managed in another setting. CHC is intended to manage a short-term symptom crisis in the home and involves eight or more hours of care per day, mostly nursing. IRC is care in a facility for up to five days to provide a break for an informal caregiver. Unless a hospice provides CHC, IRC, or GIP on any given day, it is paid at the RHC rate. The level of care can vary throughout a patient's hospice stay as the patient's needs change. Daily payment rates for hospice are adjusted to account for geographic differences in wage rates.

In January 2016, CMS implemented reforms to the hospice payment system that represented the first changes to the payment structure since the benefit's inception in 1983. Formerly, RHC was paid at a single, uniform daily rate. Now, Medicare pays two per diem rates for RHC—a higher rate for the first 60 days of a hospice episode and a lower rate for days 61 and beyond ($195 and $154 per day, respectively, in 2020) (Table 12-1). Also beginning January 2016, Medicare pays an additional amount ($58 in 2020) per hour for registered nurse and social worker visits that occur during the last seven days of life (up to four hours per day) for patients receiving RHC.

The new RHC payment structure was intended to better align payments with the costs of providing hospice care throughout an episode. Hospices tend to provide more services at the beginning and end of an episode and fewer in the middle. As a result, under a flat per diem, long stays are more profitable than short stays. The Commission expressed concern that this misalignment of the payment system led to a number of issues (e.g., making the payment system vulnerable to patient selection; spurring some providers to pursue revenue-generation strategies, such as enrolling patients likely to have long stays who may not meet the eligibility criteria; and generating wide variation in profit margins across providers based on the length of stay) (Medicare Payment Advisory Commission 2015b, Medicare Payment Advisory Commission 2009). In March 2009, the Commission recommended that Medicare move away

from the flat per diem to one that is higher at the beginning and end of an episode and lower in the intervening period. The RHC payment structure that CMS implemented in 2016 modestly moves in this direction.

Beginning fiscal year 2020, CMS has rebased the payment rates for the three higher intensity, less frequently provided levels of hospice care (CHC, IRC, GIP). To better align payments with the costs for these three levels of care, CMS increased the CHC payment rates by 40 percent, the IRC rate by 156 percent, and the GIP rate by 35 percent from their 2019 levels. To offset the projected increase in spending, the payment rates for RHC in fiscal year 2020 were reduced slightly (by 2.7 percent, which, when offset by the annual payment update, resulted in a net reduction of less than 1 percent). Although CMS estimated that the RHC payment rates exceeded costs by 18 percent to 19 percent in 2019, the statute requires that any rebalancing of the payment rates be budget neutral. Because RHC accounts for about 98 percent of hospice days, only a small decrease in the RHC rates was needed to offset the increases for the three less frequent levels of care.

Hospice payment rates are updated annually by the inpatient hospital market basket index. Beginning fiscal year 2013, the market basket index has been reduced by a productivity adjustment, as required by the Affordable Care Act of 2010 (ACA). An additional 0.3 percentage point reduction to the market basket update was required in fiscal years 2013 to 2017 and in 2019. The Medicare Access and CHIP Reauthorization Act of 2015 modified the hospice update amount for fiscal year 2018, setting it at 1 percent for that fiscal year. Beginning in fiscal year 2014, hospices that do not report quality data receive a 2 percentage point reduction in their annual payment update.

Beneficiary cost sharing for hospice services is minimal. Prescription drugs and inpatient respite care are the only services potentially subject to cost sharing. Hospices can but are not required to charge coinsurance of 5 percent for each prescription provided outside the inpatient setting (not to exceed $5) and for inpatient respite care (not to exceed the inpatient hospital deductible). (For a more complete description of the hospice payment system, see http://www.medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_19_hospice_final_sec.pdf?sfvrsn=0.)

Medicare hospice payment limits ("caps")

The hospice benefit was included in Medicare to give beneficiaries a choice in their end-of-life care, allowing them to forgo conventional treatment (often in inpatient settings) and die at home, with family, according to their personal preferences. The hospice benefit offers beneficiaries the option of a holistic end-of-life care model focused on symptom management, psychosocial supports, and quality of life.

When the hospice benefit was included in TEFRA, it was presumed that the new benefit would be a less costly alternative to conventional end-of-life care (Government Accountability Office 2004, Hoyer 2007). Since that time, studies have been mixed on whether hospice has saved the Medicare program money in the aggregate compared with conventional care. Studies show that beneficiaries who elect hospice incur less Medicare spending in the last one or two months of life than comparable beneficiaries who do not, but also that Medicare spending for beneficiaries is higher for hospice enrollees than for nonenrollees in the earlier months before death. In essence, a hospice's net reduction in Medicare spending decreases the longer the patient is enrolled, and beneficiaries with long hospice stays tend to incur higher Medicare spending than those who do not elect hospice (Medicare Payment Advisory Commission 2008). Research by a Commission contractor examined the literature and conducted a new market-level analysis of hospices' effect on Medicare expenditures. That study found that while hospice produces savings for some beneficiaries, such as those with cancer, overall, hospice has not reduced net Medicare program spending and may have even increased net spending because of very long stays among some hospice enrollees (Direct Research 2015).

When the Congress established the hospice benefit, it included two limitations, or "caps," on payments to hospices in an effort to make cost savings more likely. The first cap limits the share of inpatient care days that a hospice can provide to 20 percent of its total Medicare patient care days. This cap is rarely exceeded; any inpatient days provided in excess of the cap are paid at the RHC payment rate.

The second, more visible cap limits the aggregate Medicare payments that an individual hospice can receive. This aggregate cap was established in statute when the hospice benefit was created and was intended to meet budget-neutrality requirements and generate savings compared with conventional care. The cap was initially intended to approximate 40 percent of the estimated cost of conventional care for cancer patients in the last 6 months of life (Plotzke et al. 2015). In the first year, the

TABLE 12–2 **Increase in total number of hospices driven by growth in for-profit providers**

Category	2000	2007	2016	2017	2018	Average annual percent change 2000–2007	Average annual percent change 2007–2017	Percent change 2017–2018
All hospices	2,255	3,250	4,382	4,488	4,639	5.4%	3.3%	3.4%
For profit	672	1,676	2,940	3,097	3,226	13.9	6.3	4.2
Nonprofit	1,324	1,337	1,275	1,230	1,248	0.1	–0.8	1.5
Government	257	237	167	160	158	–1.2	–3.9	–1.3
Freestanding	1,069	2,103	3,369	3,519	3,674	10.1	5.3	4.4
Hospital based	785	683	501	471	454	–2.0	–3.6	–3.6
Home health based	378	443	487	475	466	2.3	0.7	–1.9
SNF based	22	21	25	22	22	–0.7	0.5	0.0
Urban	1,455	2,237	3,474	3,603	3,736	6.6	4.9	3.7
Rural	757	965	901	879	869	3.5	–0.9	–1.1

Note: SNF (skilled nursing facility). Some categories do not sum to total because of missing data for some providers. The rural and urban definitions used in this chart are based on updated definitions of the core-based statistical areas (which rely on data from the 2010 census).

Source: MedPAC analysis of Medicare cost reports, Medicare Provider of Services file, and the 100 percent hospice claims standard analytical file from CMS.

cap was set at $6,500, and it has been increased annually by a measure of inflation.[4] The hospice cap is the only significant fiscal constraint on the growth of program expenditures for hospice care (Hoyer 2007).

Under the cap, if a hospice's total Medicare payments exceed its total number of Medicare beneficiaries served multiplied by the cap amount ($29,965 in 2020), it must repay the excess to the program.[5] This cap is not applied individually to the payments received for each beneficiary, but rather to the total payments across all Medicare patients served by the hospice in the cap year. It is important to note that the cap is not a limit on Medicare's coverage of hospice services for patients. Rather, it limits how much Medicare will pay a hospice provider in the aggregate for its patient population. After the year ends, Medicare totals all its payments to the provider, and if that amount exceeds the number of beneficiaries multiplied by the aggregate cap amount, Medicare requires the hospice to repay the excess to the Medicare program.[6] In 2017, we estimate that the share of hospices that exceeded the cap was 14 percent.

Are Medicare payments adequate in 2020?

To address whether payments in 2020 are adequate to cover the costs of the efficient delivery of care and how much providers' payments should change in the coming year (2021), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to care by examining the capacity and supply of hospice providers, changes over time in the volume of services provided, quality of care, providers' access to capital, and the relationship between Medicare's payments and providers' costs. Overall, the Medicare payment adequacy indicators for hospice providers are positive.

Beneficiaries' access to care: Indicators continue to be favorable

Our analysis of access indicators—including trends in the supply of providers, utilization of hospice services, and marginal profit—shows that beneficiaries' access to care remains favorable.

Capacity and supply of providers: Supply of hospices continues to grow, driven by growth in for-profit providers

In 2018, 4,639 hospices provided care to Medicare beneficiaries, a 3.4 percent increase from the prior year, continuing more than 10 years of growth in the number of hospices providing care to Medicare beneficiaries (Table 12-2). For-profit hospices accounted for most of the net increase in the number of hospices. Between 2017 and 2018, the number of for-profit hospices increased by 4.2 percent, while the number of nonprofit hospices increased 1.5 percent and government-owned hospices declined by 1.3 percent. As of 2018, about 70 percent of hospices were for-profit, 27 percent were nonprofit, and 3 percent were government owned.

Between 2017 and 2018, freestanding hospices (which are highly correlated with for-profit ownership status) accounted for all of the net increase in the number of providers (Table 12-2). During this period, the number of freestanding providers increased by 4.4 percent, while the number of hospital-based hospices and home health–based hospices declined by 3.6 percent and 1.9 percent, respectively.[7] The number of skilled nursing facility (SNF)–based hospices is very small and was unchanged in 2018. As of 2018, about 80 percent of hospices were freestanding, 10 percent were hospital based, 10 percent were home health based, and less than 1 percent were SNF based.

Overall, the supply of hospices increased substantially between 2000 and 2018 in both urban and rural areas. The number of rural hospices has declined since its peak in 2007, with a decline of about 1 percent in 2018 (Table 12-2). As of 2018, 81 percent of hospices were in urban areas and 19 percent were in rural areas. The number of hospices in rural areas is not necessarily reflective of hospice access for rural beneficiaries for several reasons. A count of the number of rural hospices does not capture the size of those hospice providers, their capacity to serve patients, or the size of their service area. Furthermore, a count of rural hospices does not take into account hospices with offices in urban areas that also provide services in rural areas. While the number of rural hospices has declined in the last several years, the share of rural decedents using hospice grew over this same period.

Most of the growth in the number of hospices in 2018 was concentrated in two states—California and Texas. Between 2017 and 2018, California gained 96 hospices and Texas gained 36 hospices, continuing the trend in recent years of substantial market entry by hospice providers in these two states. Since 2013, on average California has gained roughly 100 hospices each year, and Texas has gained 35 hospices each year. In 2018, some states saw the number of hospice providers decline, although these changes were generally modest. The four states (Georgia, Pennsylvania, South Carolina, and Utah) with the largest decline in the number of providers in 2018 experienced stable or increased hospice use rates among decedents.

The number of hospice providers is not necessarily an indicator of beneficiary access to hospice. The supply of providers—as measured by the number of hospices per 10,000 Medicare decedents—varies substantially across states. In the past, we have concluded that there is no relationship between the supply of hospice providers and the rate of hospice use across states (Medicare Payment Advisory Commission 2010).

Share of decedents using hospice continues to increase

In 2018, hospice use among Medicare beneficiaries increased, continuing the trend of a growing proportion of beneficiaries using hospice services at the end of life.[8] Of the Medicare beneficiaries who died that year, 50.7 percent used hospice, up from 50.0 percent in 2017 and 22.9 percent in 2000 (Table 12-3, p. 334). Hospice use varied in 2018 by beneficiary characteristics—enrollment in traditional fee-for-service (FFS) Medicare or Medicare Advantage (MA); Medicare-only beneficiaries and beneficiaries dually eligible for Medicare and Medicaid; age, race, and sex; and urban or rural residence—but increased in all of these groups (except for beneficiaries ages 65–74, for whom the rate was stable).

Hospice use is higher among decedents in MA than in FFS, but the gap has been closing. In 2018, about 50 percent of Medicare FFS decedents and 53 percent of MA decedents used hospice. MA plans do not provide hospice services. Once a beneficiary in an MA plan elects hospice care, the beneficiary receives hospice services through a provider paid by Medicare FFS. In March 2014, the Commission urged that this policy be changed, recommending that hospice be included in the MA benefits package (Medicare Payment Advisory Commission 2014).[9]

Hospice use varies by other beneficiary characteristics. In 2018, a smaller proportion of Medicare decedents who

TABLE 12–3

Use of hospice continues to increase

	Share of Medicare decedents who used hospice						
	2000	2015	2016	2017	2018	Average annual percentage point change 2000–2017	Percentage point change 2017–2018
All beneficiaries	22.9%	48.2%	49.3%	50.0%	50.7%	1.6	0.7
FFS beneficiaries	21.5	47.1	48.3	49.0	49.7	1.6	0.7
MA beneficiaries	30.9	50.9	51.7	52.3	52.8	1.3	0.5
Dual eligibles	17.5	42.9	43.9	44.8	45.6	1.6	0.8
Non–dual eligible (Medicare only)	24.5	49.8	51.0	51.7	52.4	1.6	0.7
Age							
<65	17.0	29.1	29.3	29.6	30.0	0.7	0.4
65–74	25.4	40.5	40.8	41.0	41.0	0.9	0.0
75–84	24.2	49.1	50.4	50.9	51.5	1.6	0.6
85+	21.4	56.9	59.0	60.1	61.4	2.3	1.3
Race/ethnicity							
White	23.8	50.1	51.4	52.2	53.0	1.7	0.8
African American	17.0	37.9	38.5	39.2	39.4	1.3	0.2
Hispanic	21.1	41.6	42.6	42.6	43.3	1.3	0.7
Asian American	15.2	35.1	35.7	36.7	37.8	1.3	1.1
North American Native	13.0	34.7	35.4	36.0	37.3	1.4	1.3
Sex							
Male	22.4	44.0	44.9	45.5	46.1	1.4	0.6
Female	23.3	52.0	53.4	54.2	55.1	1.8	0.9
Beneficiary county							
Urban	24.2	49.3	50.4	51.0	51.6	1.6	0.6
Micropolitan	18.3	44.5	45.9	46.9	47.9	1.7	1.0
Rural, adjacent to urban	17.5	44.1	45.4	46.6	47.5	1.7	0.9
Rural, nonadjacent to urban	15.0	38.4	39.9	41.2	42.3	1.5	1.1
Frontier	13.1	33.2	33.4	34.1	36.1	1.2	2.0

Note: FFS (fee-for-service), MA (Medicare Advantage). Beneficiary location reflects the beneficiary's county of residence in one of four categories (urban, micropolitan, rural adjacent to urban, or rural nonadjacent to urban) based on an aggregation of the urban influence codes. This table uses the 2013 urban influence code definition. The frontier category is defined as population density equal to or less than six people per square mile and overlaps with the beneficiary county of residence categories. Yearly figures presented in the table are rounded, but figures in the percentage point change columns were calculated using unrounded data. Hospice use rates for 2015 through 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. Hospice use rates for 2015, 2016, and 2017 differ from those published in prior reports because they were based on an earlier version of the Medicare Beneficiary Database obtained from CMS. CMS has revised the hospice election information for some beneficiaries in the Medicare Beneficiary Database.

Source: MedPAC analysis of data from the denominator file and the Medicare Beneficiary Database from CMS.

were dually eligible for Medicare and Medicaid used hospice compared with the rest of Medicare decedents (46 percent and 52 percent, respectively). Hospice use was least prevalent among Medicare decedents under age 65 (who are also likely to be dually eligible) and most prevalent among those age 85 and older (about 30 percent vs. 61 percent, respectively). Female beneficiaries were also more likely than male beneficiaries to use hospice, which partly reflects the longer average life span for women and greater hospice use among older beneficiaries.

TABLE 12–4

Hospice utilization and spending increased in 2018

Category	2000	2016	2017	2018	Average annual change, 2000–2016	Change, 2016–2017	Change, 2017–2018
Total spending (in billions)	$2.9	$16.8	$17.9	$19.2	11.6%	6.4%	7.4%
Number of hospice users (in millions)	0.534	1.427	1.493	1.551	6.3%	4.6%	3.9%
Number of hospice days for all hospice beneficiaries (in millions)	25.8	101.2	106.3	113.5	8.9%	5.1%	6.8%
Average length of stay among decedents (in days)	53.5	87.0	88.1	89.6	3.1%	1.3%	1.7%
Median length of stay among decedents (in days)	17	17	17	18	0 days	0 days	1 day

Note: Average length of stay is calculated for decedents who were using hospice at the time of death or before death and reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime. Total spending, number of hospice users, number of hospice days, and average length of stay displayed in the table are rounded; the percentage change for number of users and total spending is calculated using unrounded data. Length of stay data for 2016, 2017, and 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. Length of stay figures for 2016 and 2017 differ from those published in prior reports because they were based on an earlier version of the Medicare Beneficiary Database obtained from CMS. CMS has revised the hospice election information for some beneficiaries in the Medicare Beneficiary Database

Source: MedPAC analysis of the denominator file, the Medicare Beneficiary Database, and the 100 percent hospice claims standard analytical file from CMS.

Hospice use also varies by racial and ethnic group (Table 12-3). As of 2018, Medicare hospice use was highest among White decedents, followed by Hispanic, African American, Asian American, and North American Native decedents, in that order. Hospice use grew across all these groups between 2017 and 2018. Overall since 2000, hospice use has grown substantially for all racial and ethnic groups, but differences in use rates persist across these groups. The reasons for these differences are not fully understood. Researchers have cited a number of possible factors, such as cultural or religious beliefs, preferences for end-of-life care, socioeconomic factors, disparities in access to care or information about hospice, and mistrust of the medical system (Barnato et al. 2009, Cohen 2008, Crawley et al. 2000).

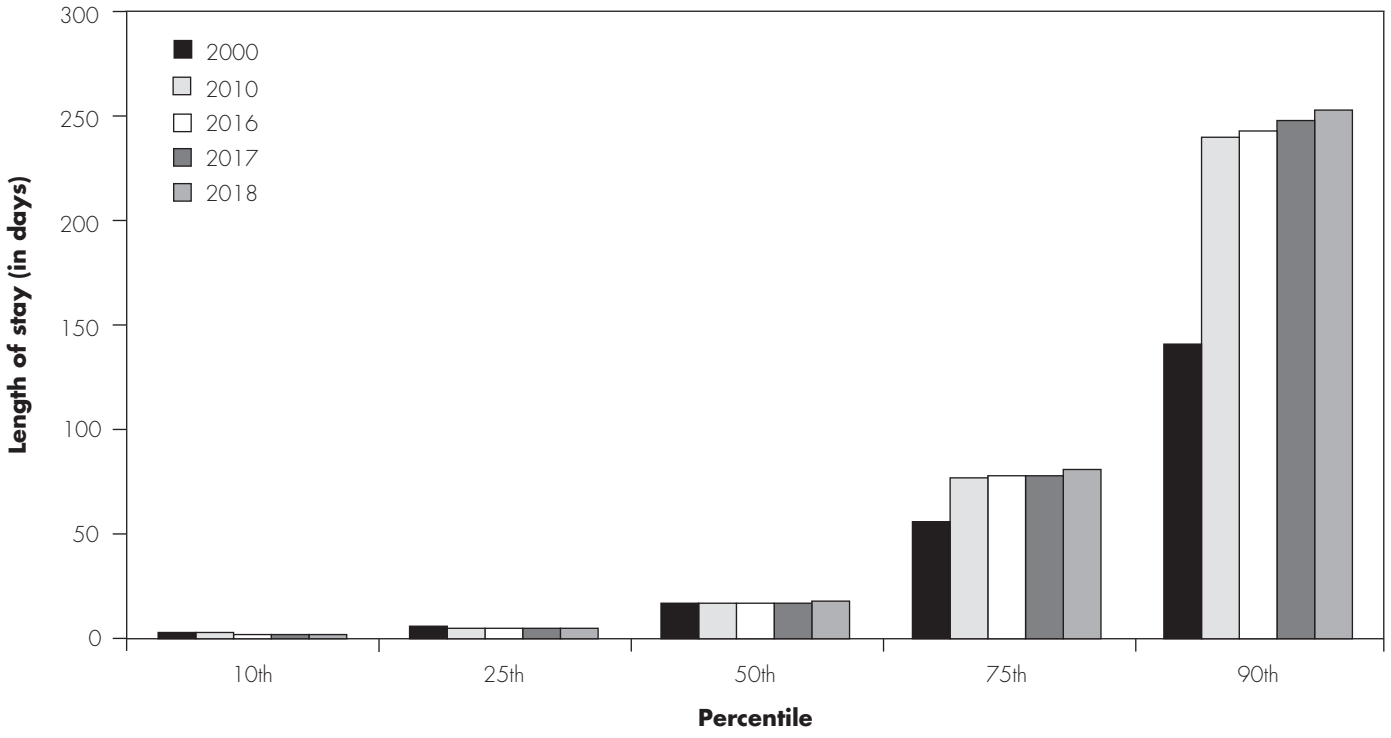
Hospice use is higher for urban than rural beneficiaries, although use has grown across all area categories (Table 12-3).[10] In 2018, the share of decedents residing in urban counties who used hospice was about 52 percent; in micropolitan counties and rural counties adjacent to urban counties, 48 percent; in rural nonadjacent counties, 42 percent; and in frontier counties, 36 percent. Utilization rates for beneficiaries residing in all these areas increased in 2018.

One driver of increased hospice use over the past decades has been growing use by patients with noncancer diagnoses, owing to increased recognition that hospice can care for such patients. At the same time, beneficiaries with these terminal conditions tend to have longer hospice stays, which have historically been more profitable than shorter stays under Medicare's hospice payment system. In 2018, 74 percent of Medicare beneficiaries who used hospice had a noncancer diagnosis, similar to 2017 and up from 48 percent in 2000 (data not shown). As of 2018, the most common noncancer primary diagnoses reported among hospice beneficiaries were heart and circulatory disorders (28 percent) and neurological conditions (23 percent).

Volume of services: Hospice use and length of stay increased in 2018

In 2018, the number of Medicare beneficiaries receiving hospice services continued to increase. About 1.55 million beneficiaries used hospice services, up 3.9 percent from about 1.49 million in 2017 (Table 12-4). Between 2017 and 2018, the number of hospice days furnished to Medicare beneficiaries also increased about 7 percent, from about 106 million days to about 114 million days.

FIGURE 12–1 **Length of stay among hospice patients with the longest stays increased slightly in 2018**



Note: Length-of-stay data for 2016, 2017, and 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. Some length-of-stay figures for 2016 and 2017 differ from those published in prior reports because they were based on an earlier version of the Medicare Beneficiary Database obtained from CMS. Length of stay is calculated for decedents who were using hospice at the time of death or before death and reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime.

Source: MedPAC analysis of the Medicare Beneficiary Database from CMS.

During that period, the mix of hospice days by level of care shifted slightly, with the share of days accounted for by RHC edging upward.[11]

Between 2017 and 2018, hospice average length of stay among decedents increased from 88.1 days to 89.6 days and median length of stay was 18 days, up slightly from 17 days in 2017 (Table 12-4, p. 335). Length of stay for the shortest stays remained stable (2 days at the 10th percentile and 5 days at the 25th percentile) while it increased for longer stays (from 78 days to 81 days at the 75th percentile and from 248 days to 253 days at the 90th percentile) (Figure 12-1).

Since 2000, growth in hospice length of stay has largely been the result of increased length of stay among patients with the longest stays, while short stays have changed little. Hospice length of stay at the 90th percentile grew substantially between 2000 and 2010—from 141 days to 240 days—and has grown modestly since then, reaching 253 days in 2018. In contrast, since 2000, the median length of stay has remained at 17 or 18 days; the 25th percentile, at 5 or 6 days; and the 10th percentile, at 2 or 3 days.

Hospice length of stay is generally similar for hospice decedents in FFS Medicare and MA. Average length of stay for decedents was 90.2 days for FFS beneficiaries and 88.5 days for MA beneficiaries. The most significant difference is that very long stays in hospice are slightly shorter for beneficiaries in MA than for those in FFS

(249 days for MA beneficiaries compared with 255 days for FFS beneficiaries at the 90th percentile of stays as of 2018). Among beneficiaries with short stays, MA beneficiaries have slightly longer stays than FFS beneficiaries (i.e., median length of stay of 18 days and 17 days, respectively).

With growing use of hospice, rates of patients dying in the hospital have declined, but evidence is mixed on the extent to which the decline has been accompanied by a reduction in the overall intensity of care in the last months of life. Teno and colleagues (2018) found that between 2000 and 2015, the share of Medicare FFS decedents ages 65 and older dying in the hospital declined (from 32.6 percent to 19.8 percent). In addition, some indicators of intensity of care rose at the beginning of the 2000 to 2015 window but fell in later years, with a net overall decrease by 2015. For example, between 2000 and 2015, the share of beneficiaries with 3 or more hospitalizations in the last 90 days of life and the share with multiple hospitalizations for infections or dehydration in the last 120 days of life declined. At the same time, the study found that other indicators of intensity of care have increased. For example, the share of beneficiaries receiving treatment in an intensive care unit during the last month of life increased between 2000 and 2009 (from 24.3 percent to 29.2 percent) and has changed little between 2009 and 2015. The share of beneficiaries with a hospitalization in the last 90 days of life increased between 2000 and 2005; it has declined since then but remains higher in 2015 than it was in 2000. This increase in the intensity of some aspects of end-of-life care may in part reflect referrals to hospice occurring in only the last few days of life for some beneficiaries.

The Commission has previously expressed concern about very short hospice stays. More than one-quarter of hospice decedents enroll in hospice only in the last week of life, a length of stay that is commonly thought to be of less benefit to patients than enrolling somewhat earlier. Very short hospice stays occur across a wide range of diagnoses (Table 12-5, p. 338). These very short stays stem largely from factors unrelated to the Medicare hospice payment system: Some physicians are reluctant to have conversations about hospice or tend to delay such discussions until death is imminent; some patients and families have difficulty accepting a terminal prognosis; and financial incentives in the FFS system encourage increased volume of clinical services (compared with palliative care) (Medicare Payment Advisory Commission 2009). In addition, some analysts point to the requirement that beneficiaries forgo intensive conventional care to enroll in hospice as a factor that contributes to deferring hospice care, resulting in short hospice stays.

A number of initiatives seek to address concerns about potentially late hospice enrollments and the quality of end-of-life care more generally. CMS launched a demonstration program (called the Medicare Care Choices Model (MCCM)) that permits certain FFS beneficiaries who are eligible for hospice (but not enrolled in the Medicare hospice benefit) to enroll in the demonstration and receive palliative and supportive care from a hospice provider while continuing to receive "curative" care from other providers.[12] Since 2016, under the physician fee schedule, Medicare has paid for advance care planning conversations between a beneficiary and his or her physician and for advanced practice registered nurse or physician assistant care. (For additional information on early experience with the MCCM and the advance care planning visits, see our March 2019 report.) In March 2014, the Commission recommended that hospice be included in the MA benefits package, which would give plans greater incentives to develop and test new models aimed at improving end-of-life care and care for beneficiaries with advanced illnesses (Medicare Payment Advisory Commission 2014). Accountable care organizations (ACOs)—which are accountable for a defined Medicare population's total spending, including end-of-life care and hospice—have been seen as entities that could have opportunities to improve end-of-life care and potentially reduce costs by facilitating beneficiaries receiving end-of-life care that is consistent with their preferences. Research examining the effect of ACOs on patterns of end-of-life care and hospice use are nascent, but findings to date suggest the effects are modest (Gilstrap et al. 2018).

The Commission has also expressed concern about very long hospice stays. In 2018, Medicare spent about $11 billion, more than half of hospice spending that year, on patients with stays exceeding 180 days (Table 12-6, p. 339). About $3.8 billion of that spending was on additional hospice care for patients who had already received at least one year of hospice services. Although the 2016 changes to the payment structure for RHC reduced payments for long stays and increased payments for short stays to some extent, patients with long stays continue to account for a large share of hospice spending.

TABLE 12–5

Hospice length of stay among decedents by beneficiary and hospice characteristics, 2018

Characteristic	Average length of stay (in days)	Percentile of length of stay				
		10th	25th	50th	75th	90th
Beneficiary						
Diagnosis						
Cancer	53	3	6	17	51	128
Neurological conditions	151	4	9	38	174	445
Heart/circulatory	97	2	5	17	90	288
COPD	119	2	6	28	132	350
Other	56	2	3	8	39	156
Main location of care						
Home	93	4	9	26	89	245
Nursing facility	106	3	6	21	99	310
Assisted living facility	155	5	13	54	192	438
Hospice						
Hospice ownership						
For profit	110	3	6	23	104	321
Nonprofit	68	2	4	13	58	186
Type of hospice						
Freestanding	92	2	5	18	83	263
Home health based	70	2	5	15	61	191
Hospital based	57	2	4	12	50	153

Note: COPD (chronic obstructive pulmonary disease). Length of stay is calculated for Medicare beneficiaries who died in 2018 and used hospice that year and reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime. "Main location" is where the beneficiary spent the largest share of his or her days while enrolled in hospice. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim. In this report, length of stay by hospice ownership status is based on hospices' ownership designation from the Medicare cost report. Prior reports used hospice ownership status from the Provider of Services file.

Source: MedPAC analysis of the 100 percent hospice claims standard analytical file, the Medicare Beneficiary Database, Medicare hospice cost reports, and Medicare Provider of Services file from CMS.

Hospice lengths of stay vary by observable patient characteristics, such as patient diagnosis and location, which permit providers to focus on patients likely to have long (more profitable) stays if they wish to do so (Table 12-5). For example, Medicare decedents in 2018 with neurological conditions and chronic obstructive pulmonary disease had substantially higher average lengths of stay (151 days and 119 days, respectively) compared with decedents with cancer (53 days). In addition, length of stay varies by the setting in which care is provided. In 2018, average length of stay was higher among Medicare decedents whose main care setting was an assisted living facility (ALF) (155 days) or a nursing facility (106 days) compared with home (93 days) (Table 12-5). In particular, hospice patients in ALFs had markedly longer stays compared with other settings, even for the same diagnosis, which warrants further monitoring and investigation in CMS's medical review efforts. These patterns of differences in length of stay by diagnosis and location of care have persisted over many years.

Lengths of stay vary by type of provider ownership as well as by patient characteristics (Table 12-5). In 2018, average length of stay was substantially longer among for-profit hospices than among nonprofit hospices (110 days compared with 68 days). The reason for longer length of stay among for-profit hospices has two components: (1) for-profit hospices have more patients with diagnoses that tend to have longer stays, and (2) for-profit hospice beneficiaries have longer stays for all diagnoses than beneficiaries who receive care from nonprofit hospices. For example, among decedents with a neurological diagnosis, average length of stay was 176 days in for-profit hospices and 121 days in nonprofits (data not shown). Underlying this difference between for-profit and nonprofit hospices' average length of stay for neurological decedents is variation in length of stay for patients with the longest stays. For example, the 90th percentile length of stay for neurological decedents was substantially higher in for-profit hospices (518 days) compared with nonprofits (356 days) (data not shown).

Several factors may contribute to some providers treating more patients with very long stays than other providers. Given the uncertainty associated with predicting life expectancy, some variation across providers in length of stay due to random variation across providers is expected; however, persistent differences in length of stay over time for individual providers suggest additional factors are at work. Since long stays in hospice are more profitable than short stays, financial incentives likely play a role in why some providers treat more patients with very long stays than other providers. Where providers seek referral sources may contribute to length of stay differences. For example, beneficiaries who reside in assisted living facilities tend to have longer stays than beneficiaries who reside in other settings, even for the same diagnosis. It is also possible that some providers may have different interpretations of the hospice eligibility criteria, which could result in some providers admitting patients before other providers would consider them eligible for the hospice benefit.

Among the hospices with very long stays are those that exceed the hospice aggregate cap. In 2017, we estimate that about 14.0 percent of hospices exceeded the aggregate payment cap, a small increase from the prior year (12.7 percent in 2016) (Table 12-7, p. 340). On average, above-cap hospices exceeded the cap by about $273,000 in 2017 (an amount equivalent to about 13 percent of pre-cap payments to these providers on average). The average amount by which above-cap hospices exceed the aggregate cap has been decreasing over time. All historical estimates of hospices over the cap are based on the Commission's analysis and are intended to approximate, but may not be identical to, those of the CMS claims processing contractors due to differences in available data and methodology.[13]

TABLE 12–6 **More than half of Medicare hospice spending in 2018 was for patients with stays exceeding 180 days**

	Medicare hospice spending, 2018 (in billions)
All hospice users in 2018	$19.2
Beneficiaries with LOS > 180 days	11.1
Days 1–180	3.8
Days 181–365	3.5
Days 366+	3.8
Beneficiaries with LOS ≤ 180 days	8.2

Note: LOS (length of stay). "LOS" indicates the beneficiary's lifetime LOS as of the end of 2018 (or at the time of discharge in 2018 if the beneficiary was not enrolled in hospice at the end of 2018). All spending presented in the chart occurred only in 2018. Components may not sum to total because of rounding.

Source: MedPAC analysis of the 100 percent hospice claims standard analytical file and the common Medicare enrollment file from CMS.

As shown in Table 12-8 (p. 341), above-cap hospices have fewer average patients per year than below-cap hospices and are more likely to be for-profit, freestanding, recent entrants to the Medicare program, and located in urban areas. Above-cap hospices have substantially longer stays than below-cap hospices, even for patients with similar diagnoses (Table 12-8). Above-cap hospices also have substantially higher rates of discharging patients alive than other hospices. As the Commission has noted in past reports, these length of stay and live-discharge patterns suggest that above-cap hospices are admitting patients who do not meet the hospice eligibility criteria, which merits further investigation by the Office of Inspector General (OIG) and CMS.

With the variation in practice patterns across hospices and concerns about potential for some hospices to focus on patients likely to have long stays and high profitability, the Commission has advocated over the years for a targeted

TABLE 12–7 **Hospices that exceeded Medicare's annual payment cap, selected cap years**

	2002	2014	2015	2016	2017
Estimated share of hospices exceeding the cap	2.6%	12.1%	12.3%	12.7%	14.0%
Average payments over the cap per hospice exceeding it (in thousands)	$470	$370	$316	$295	$273
Payments over the cap as share of overall Medicare hospice spending	0.6%	1.2%	1.0%	1.0%	1.0%
Total Medicare hospice spending in the cap year* (in billions)	$4.4	$15.0	$15.7	$16.7	$16.2

Note: The aggregate cap statistics reflect the Commission's estimates and may differ from the CMS claims processing contractors. Our estimates for 2014 to 2017 assume all hospices use the proportional methodology and rely on claims data through 14 months after the end of each cap year (with the exception of 2017, which used 15 months). The claims processing contractors may reopen the hospice cap calculation for up to three years; the reopening process and timing may vary across contractors. To illustrate the potential effect of reopening, we reestimated cap overpayments for 2014 and 2015 using 38 months of claims data after the end of each cap year. With 38 months of data, the estimated share of hospices exceeding the cap increased by roughly 1 percentage point, and the average payments over the cap per hospice exceeding the cap increased by roughly $20,000 in both 2014 and 2015.
*Spending in cap year 2017 reflects an 11-month period from November 1, 2016, to Sept 30, 2017. For years before 2017, the cap year was defined as the period beginning November 1 and ending October 31 of the following year. Total spending for 2002 reflects the fiscal year.

Source: MedPAC analysis of 100 percent hospice claims standard analytical file, Medicare hospice cost reports, and Medicare Provider of Services file from CMS. Data on total spending are from the CMS Office of the Actuary or MedPAC estimates.

approach to auditing hospice providers, focusing the most resources on providers for which such scrutiny is warranted. In March 2009, the Commission recommended that CMS conduct medical reviews of all hospice stays exceeding 180 days among those hospice providers for which these long stays exceeded a specified share of the provider's caseload. Similarly, in this report and prior reports, the Commission has expressed concern about very long hospice stays in ALFs among some hospice providers and long stays and high live-discharge rates among above-cap hospices. The Commission has suggested that more program integrity scrutiny is warranted in those areas.

Another targeted auditing approach that could be considered would focus on providers that receive a high share of their payments for hospice patients before the last year of life. As discussed in detail in our March 2017 report, the share of payments hospice providers receive for a beneficiary's care before the last year of life varies across providers. A provider with an unusually high share of payments derived from care furnished to patients earlier in the disease trajectory—for example, before the last year of life—could signal questionable admitting practices and warrant further program integrity scrutiny of those providers (Medicare Payment Advisory Commission 2017).

Visits in the last days of life

One feature of the new hospice payment system implemented in 2016 is that it provides additional payment for certain visits in the last days of life. The purpose of these additional payments is to compensate hospices for the higher patient need and visit intensity in the last days of life. Under the new payment system, the hospice provider is eligible for additional payments for registered nurse and social worker visits that occur during the last seven days of life for patients receiving RHC. These payments are in addition to the base payment that the hospice receives for each day of care. These visits are paid at an hourly rate (up to four hours per day) as a means of targeting the payments toward those hospices that provide more visits in the last days of life.

We estimate that, in 2018, Medicare paid hospice providers roughly $140 million for registered nurse and social worker visits in the last seven days of life. We examined the frequency and length of visits that occurred in the last days of life between 2015 and 2018 to see whether they changed over the first three years of the new payment system. The prevalence and length of visits in the last days of life changed very modestly between 2015 and 2018 (Table 12-9, p. 342). In that period, overall, a modest increase in nurse visit frequency offset a modest decrease in the length of these visits, with the average visit time per day remaining about 44 minutes (2.94 fifteen-minute increments). Social worker visits in the last days of life were less frequent and changed minimally during this period. Overall, these data continue to suggest that the additional payments for certain visits during the last seven

TABLE 12–8 **Characteristics of above-cap and below-cap hospices, 2017**

	Above-cap hospices	Below-cap hospices
Average number of patients per year	114	362
Share of hospices by:		
Date of entry into Medicare program		
Pre-2000	5%	41%
2000–2009	23%	28%
2010 onward	72%	32%
Provider characteristics		
Urban	94%	78%
For profit	99%	64%
Freestanding	97%	75%
Share of patients by diagnosis		
Cancer	15%	27%
Neurological	33%	23%
Heart/circulatory	35%	28%
COPD	6%	5%
Other	10%	17%
Average lifetime length of stay for patients through 2017 (in days; all patients—not limited to decedents)		
Cancer	133	75
Neurological	363	230
Heart/circulatory	284	157
COPD	302	183
Other	207	92
Share of patients discharged alive	38%	16%

Note: COPD (chronic obstructive pulmonary disease). Data on average length of stay reflects lifetime length of stay as of the end of 2017 for all patients who received care during 2017, including patients who were discharged deceased, discharged alive, or remained a patient.

Source: MedPAC analysis of 100 percent hospice claims standard analytical file, Medicare hospice cost reports, Medicare Provider of Services file from CMS, and Medicare Beneficiary Database.

days of life have led to little change in the overall amount of time spent furnishing visits to patients at the end of life.

Marginal profit as a measure of access

Another measure of access is whether providers have a financial incentive to expand the number of Medicare beneficiaries they serve. In considering whether to treat a patient, a provider with excess capacity compares the marginal revenue it will receive (i.e., the Medicare payment) with its marginal costs—that is, the costs that vary with volume. If Medicare payments are larger than the marginal costs of treating an additional beneficiary, a provider 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.[14] For hospice providers, we find that Medicare payments in 2017 exceeded marginal costs by roughly 16 percent, suggesting that providers had an incentive to treat Medicare patients. This profit margin is thus a positive indicator of patient access.

TABLE 12–9

Provision of nurse and social worker visits during the last seven days of life has been stable

	2015	2016	2017	2018
Nurse visits in last 7 days of life				
Average number of visits per day	0.59	0.61	0.63	0.64
Average length of each visit (in 15-minute increments)	5.00	4.84	4.66	4.56
Average visit time per day (in 15-minute increments)	2.96	2.95	2.92	2.94
Social worker visits in last 7 days of life				
Average number of visits per day	0.09	0.09	0.10	0.10
Average length of visits (in 15-minute increments)	4.22	4.30	4.00	4.02
Average visit time per day (in 15-minute increments)	0.37	0.40	0.40	0.41

Note: Nurse visits include both registered nurse (RN) and licensed practical nurse (LPN) visits. Although the new payment system makes additional payments only for RN (not LPN) visits in the last days of life, we have included both types of visits in this chart because data specific to RNs are not available for 2015. "Average visit time per day" is calculated as the average number of visits per day multiplied by the average length of each visit. Due to rounding, this product may not precisely match the value shown in the table.

Source: MedPAC analysis of 100 percent hospice claims standard analytical file data from CMS.

Quality of care: Data on hospice quality are limited

CMS has had a hospice quality reporting program underway for several years, but data on hospice quality are limited. Hospices that do not report quality data receive a 2 percentage point reduction in their annual payment update. Since 2017, Hospice Compare has included seven measures that seek to gauge whether appropriate processes of care occurred at hospice admission. Most hospices scored very high on six of the seven quality measures, which is positive but limits the utility of these measures to differentiate performance across providers. A composite measure of these seven process measures shows some variation in performance across providers, but as performance continues to improve, the measure is likely to become topped out (defined as scores so high and unvarying that meaningful distinctions and improvement in performance can no longer be made). Scores on the Hospice Consumer Assessment of Healthcare Providers and Systems® (CAHPS®)—which is a survey of bereaved family members of hospice patients—were stable in the most recent data. In 2019, Hospice Compare added a new process measure on the share of decedents who received a visit in the last three days of life from a registered nurse, physician, nurse practitioner, or physician assistant. This measure shows some variation across providers and may be helpful in differentiating performance. It is also notable that an OIG analysis of data from state survey agencies and accrediting organizations identified 313 hospice providers as poor performers in 2016 due to at least one occurrence of a serious deficiency or severe and substantiated complaint that year.

Hospice performance on process measures

Since July 2014, hospices have been required to report data on seven process measures that address important aspects of care for patients newly admitted to hospice, using a reporting tool called the Hospice Item Set. These measures focus on pain screening, pain assessment, dyspnea screening, dyspnea treatment, documentation of treatment preferences, addressing beliefs and values if desired by the patient, and provision of a bowel regimen for patients treated with an opioid. CMS now also has a composite measure that reflects the share of admitted patients for whom the hospice performed all seven activities appropriately (or performed appropriately all the activities relevant to the patient).

Hospices' performance on seven quality measures related to processes of care at hospice admission is very high for almost all measures. For six of the seven process measures in 2018, the 25th percentile score was 96 percent or higher, and the 75th percentile score was 100 percent on those same measures. In other words, for those six measures, at least 75 percent of hospices

TABLE 12–10 **Scores on the seven hospice process measures are mostly topped out, 2018**

Measures of processes of care at admission	2018 provider percentile scores on process measures		
	25th	50th	75th
Treatment preferences	99.7%	100.0%	100.0%
Beliefs and values	97.6	99.5	100.0
Dyspnea screening	98.5	99.7	100.0
Dyspnea treatment	96.2	98.6	100.0
Pain screening	96.7	98.9	100.0
Pain assessment	90.0	96.7	99.4
Bowel regimen	96.5	99.1	100.0
Composite of all 7 measures	83.3	92.2	97.3
Visits in the last 3 days of life	80.7	89.5	94.8

Note: For the seven process measures related to care at admission, the numbers in the chart refer to the share of times a hospice appropriately performed a process measure at admission (among patients for whom the process measure was relevant). The composite of all seven process measures represents the share of patients for whom the hospice appropriately performed all seven process measures (or all of the subset of process measures relevant to the patient) at admission.

Source: MedPAC analysis of Hospice Item Set data from CMS.

performed the process appropriately 96 percent or more of the time and at least 25 percent of hospices performed the process appropriately 100 percent of the time (Table 12-10). Performance on the pain assessment measure—which indicates the share of patients who received a comprehensive pain assessment within one day of screening positive for pain—was slightly lower, with a 25th percentile score of 90.0 percent. The composite measure of the seven process measures showed the most variation, ranging from scores of 83.3 percent at the 25th percentile to 97.3 percent at the 75th percentile. Between 2017 and 2018, performance on the seven process measures and the composite measure improved for those hospices with relatively low scores because the 25th percentile for all measures increased slightly.

Although the high scores and continued improvement on these seven quality measures are encouraging, the Commission has several concerns about these measures. Because they are process measures, it is uncertain how much they affect quality from the perspective of patients and families. Almost all of these measures are topped out. According to the Commission's principles, Medicare quality programs should include population-based measures, such as outcomes, patient experience, and value, and quality measurement should not be unduly burdensome for providers. Therefore, in our view, CMS should retire process measures that are topped out and weakly correlated with health outcomes of importance to beneficiaries and the program.

In 2019, for the first time, Hospice Compare included a measure of the share of hospice decedents who received at least one registered nurse, physician, nurse practitioner, or physician assistant visit in the last three days of life. Providers' performance on this measure shows some variation and potential room for improvement among some providers. Providers' scores range from 80.7 percent at the 25th percentile to 89.5 percent at the 50th percentile to 94.8 percent at the 75th percentile (Table 12-10).

Hospice performance on the Consumer Assessment of Healthcare Providers and Systems® hospice survey

The Hospice Quality Reporting Program requires hospice providers to participate in a CAHPS hospice survey (except for hospices with fewer than 50 decedents whose caregivers are survey eligible). The survey gathers information from the patient's informal caregiver (typically a family member) after the patient's death.[15] The survey addresses aspects of hospice care that are thought to be important to patients and for which informal

TABLE 12–11 **Scores on hospice CAHPS® quality measures, January 2017 to December 2018**

	National average	25th percentile	50th percentile	75th percentile
Providing emotional support	90	88	90	92
Caregiver rates hospice 9 or 10	81	77	81	85
Caregiver recommends hospice	84	81	85	89
Treating patients with respect	91	88	91	93
Help for pain and symptoms	75	71	75	79
Hospice team communication	81	77	81	84
Providing timely help	78	74	78	83
Caregiver training	75	71	76	80

Note: CAHPS® (Consumer Assessment of Healthcare Providers and Systems®). These scores reflect the share of respondents who reported the "top box"—meaning the most positive survey response. The national average score is across providers. The percentile scores reflect provider-level performance data.

Source: MedPAC analysis of Hospice Compare CAHPS data from CMS for period January 2017–December 2018.

caregivers are positioned to provide information. In particular, the survey collects information on how the hospice performed in the following areas: communicating, providing timely care, treating patients with respect, providing emotional support, providing help for symptom management, providing information on medication side effects, and training family or other informal caregivers in the home setting.

In the aggregate, hospices' performance on the CAHPS survey was stable in the most recent period (2017 to 2018) compared with the prior period (2016 to 2017) (Table 12-11).[16] From 2017 to 2018, CAHPS scores were highest on measures related to providing emotional support and treating patients with respect (on average about 90 percent of caregivers chose the most positive response in those areas). Scores were lowest in the areas of providing help for pain and symptoms, providing timely care, and training caregivers (on average 75 percent to 78 percent of caregivers chose the most positive response in those areas). In terms of an overall assessment of the hospice provider, about 81 percent of caregivers rated the hospice a 9 or 10 on a 10-point scale, and about 84 percent would definitely recommend the hospice to others on average. While average hospice CAHPS scores have been steady, we lack an absolute benchmark for performance on these measures to judge how much potential room for improvement remains. Although 100 percent is theoretically a benchmark for performance, we would not necessarily expect a provider furnishing high-quality care to receive positive scores from 100 percent of caregivers. Nonetheless, the variation in CAHPS scores across providers suggests that opportunities for improvement exist.

A recent Government Accountability Office (GAO) study examined hospices' performance on the Hospice Item Set process measures and the CAHPS survey, focusing on differences by type of ownership (Government Accountability Office 2019). In general, GAO found that average scores were similar for for-profit and nonprofit providers. However, GAO analyzed the 10 percent of providers with the lowest scores on these quality measures and found that for-profit providers accounted for a disproportionate share of the lowest scoring decile.

Another source of information on quality comes from an OIG report examining data from state survey agencies and accrediting organizations on deficiencies and complaints for hospice providers (Office of Inspector General 2019). OIG found serious deficiencies or severe complaints among a small group of providers, and more common deficiencies in compliance with regulatory requirements among a broader set of providers. (OIG used the term *serious deficiency* to refer to a condition-level deficiency, meaning "a hospice violates one or more standards and the hospice's capacity to furnish adequate care is substantially limited or adversely affects the health and safety of patients.") Over the five years from 2012 to

2016, OIG found that 80 percent of hospices had at least one deficiency and 20 percent of hospices had at least one serious deficiency. Most common deficiencies were failure to meet certain care planning requirements, lack of supervision of aide services, and deficiencies related to patient assessments. OIG also found that one-third of hospice providers had at least one complaint filed against them over the five-year period. OIG identified a group of 313 hospice providers as poor performers in 2016, defined as providers that had at least one serious deficiency or one substantiated severe complaint that year. Most of the 313 poor performers had prior deficiencies or complaints, and 40 of these providers had at least one prior serious deficiency or substantiated severe complaint.

With quality measurement in general, it has been the Commission's principle that outcome measures are preferable to process measures. Although outcome measures for hospice are particularly challenging, the Commission believes outcome measures such as patient-reported pain and other symptom-management measures merit further exploration. Rate of live discharge is another measure that in some ways could be considered an outcome measure. Hospice providers are expected to have some rate of live discharges because some patients change their mind about using the hospice benefit and disenroll from hospice or their condition improves and they no longer meet the hospice eligibility criteria. However, providers with substantially higher rates of live discharge than their peers could signal a potential problem with quality of care or program integrity. An unusually high rate of live discharges could indicate that a hospice provider is not meeting the needs of patients and families or is admitting patients who do not meet the eligibility criteria.

Live discharges occur for patients with short and long stays. In our June 2013 report, we conducted an analysis of patients discharged alive in 2010 and followed them through the next year. Among patients discharged alive, 18 percent were discharged after a stay of 14 days or less, 22 percent after a 15-day to 60-day stay, 32 percent after a 61-day to 180-day stay, and 29 percent after a stay greater than 180 days (Medicare Payment Advisory Commission 2013). Patients discharged alive after a long hospice stay were more likely to be alive 180 days after discharge and to have lower average Medicare spending per day after hospice discharge than those discharged after a short hospice stay.[17]

In 2018, the aggregate rate of live discharge (that is, live discharges as a share of all discharges) was 17.0 percent (Table 12-12, p. 346) and has changed little since 2016. Hospice providers report the reason for live discharge on claims. In 2018, beneficiary revocation and beneficiary not terminally ill were the most common reasons for live discharge, accounting for 6.6 percent and 6.3 percent, respectively, of all discharges that year. Between 2017 and 2018, the mix of reasons reported for live discharge changed modestly. The share of discharges due to beneficiary revocation, transferring hospices, and moving out of area increased slightly, while the share of discharges due to the beneficiary not being terminally ill declined slightly.

Live-discharge rates vary by patient diagnosis. In 2018, the rate was higher for hospice beneficiaries with heart and circulatory conditions (20 percent), neurological conditions (21 percent), and chronic obstructive pulmonary disease (25 percent) than for those with cancer (12 percent) or other diagnoses (14 percent) (data not shown). The diagnoses that tend to have higher live-discharge rates are the same diagnoses that tend to have longer stays (lengths of stay by diagnosis are shown in Table 12-5, p. 338).

Some providers have unusually high live-discharge rates. In 2018, among providers with more than 30 discharges, the median live-discharge rate was about 18 percent, but 10 percent of providers had live-discharge rates in excess of 42 percent (Table 12-12, p. 346). Hospices with very high live-discharge rates are disproportionately for-profit and recent entrants to the Medicare program (entered in 2010 or after) and have an above-average prevalence of exceeding the aggregate payment cap. Small hospices as a group also have substantially higher live-discharge rates than larger hospices. In 2018, the aggregate live-discharge rate was 44 percent for hospices with 30 or fewer discharges (data not shown).

Our analysis focuses on the broadest measure of live discharges, including live discharges that are initiated by the hospice (because the beneficiary is no longer terminally ill or because the beneficiary is discharged for cause) and live discharges that are initiated by the beneficiary (because the beneficiary revokes his or her hospice enrollment, transfers hospice providers, or moves out of the area). Some stakeholders argue that live discharges initiated by the beneficiary—such as when the beneficiary revokes his or her hospice enrollment—should not be included in a live-discharge measure because, some stakeholders assert, these discharges reflect beneficiary

TABLE 12–12 **Rates of hospice live discharge and reported reason for discharge, 2016–2018**

Category	2016	2017	2018
Live discharges as a share of all discharges, by reason for live discharge			
All live discharges	16.9%	16.7%	17.0%
No longer terminally ill	6.8	6.5	6.3
Beneficiary revocation	6.4	6.4	6.6
Transferred hospice providers	2.1	2.1	2.2
Moved out of service area	1.2	1.4	1.6
Discharged for cause	0.3	0.3	0.3
Providers' overall rate of live discharge as a share of all discharges, by percentile (for providers with more than 30 discharges)			
10th percentile	8.6%	8.5%	8.5%
25th percentile	11.8	12.2	12.0
50th percentile	17.6	18.1	17.9
75th percentile	26.7	27.1	27.8
90th percentile	40.8	41.4	42.5

Note: Percentages may not sum to total due to rounding. "All discharges" includes patients discharged alive or deceased.

Source: MedPAC analysis of the 100 percent hospice claims standard analytical file, Medicare hospice cost reports, and Medicare Provider of Services file from CMS.

preferences and are not in the hospice's control. Because beneficiaries may choose to revoke hospice for a variety of reasons, which in some cases are related to the hospice provider's business practices or quality of care, we include revocations in our analysis. A CMS contractor, Abt Associates, found that rates of live discharge—both beneficiary revocations and discharges because beneficiaries are no longer terminally ill—increase as hospice providers approach or surpass the aggregate cap (Plotzke et al. 2015). The contractor report suggested this pattern may reflect hospice-encouraged revocations or inappropriate live discharges and merit further investigation.

Providers' access to capital: Hospices have good access to capital

Hospices in general are not as capital intensive as other provider types because they do not require extensive physical infrastructure (although some hospices have built their own inpatient units, which require significant capital). Overall, access to capital for hospices appears adequate, given the continued entry of for-profit providers into the Medicare program.

In 2018, the number of for-profit providers grew by about 4 percent, indicating that capital is accessible to these providers. In addition, publicly traded hospice companies reported positive financial indicators in their fall 2019 filings, with favorable growth in volume (admissions and average daily census) and net revenues. According to financial reports, the hospice sector continues to garner substantial investment interest in 2019. For example, a private equity firm recently announced an agreement to purchase a large, national hospice chain. Several publicly traded hospice firms have expressed interest in acquiring additional hospice providers. It is also notable that CMS's changes to the hospice payment system in 2016 have generally been viewed as modest, and some analysts have indicated that the hospice sector is viewed more

favorably by some investors than the home health sector (Famakinwa 2019).

Among nonprofit freestanding providers, less is known about access to capital, which may be limited. Hospital-based and home health–based nonprofit hospices have access to capital through their parent providers, which currently appear to have adequate access to capital in both sectors.

A provider's total margin—which reflects how its total revenues compare with its total costs for all lines of business and all payers—can influence a provider's ability to obtain access to capital. Irregularities in how some hospices report data on their total revenues and total expenses on the cost report prevent us from calculating a reliable estimate of total margins for hospices. Among hospice payers, however, Medicare accounts for about 90 percent of hospice days, and hospices' Medicare margins are strong.

Medicare payments and providers' costs

As part of our assessment of payment adequacy, we examine the relationship between Medicare payments and providers' costs by considering whether current costs approximate what providers are expected to spend on the efficient delivery of high-quality care. Medicare margins illuminate the relationship between Medicare payments and providers' costs. Specifically, we examined margins through the 2017 cost reporting year, the latest period for which complete cost report and claims data are available.[18] To understand the variation in margins across providers, we also examined the variation in costs per day across providers.

Hospice costs

Hospice costs per day vary substantially by type of provider (Table 12-13), which is one reason for differences in hospice margins across provider types. In 2017, hospice costs per day across all hospice providers were about $148 on average, a slight decrease from $149 in the previous year.[19] Some of this decline is accounted for by a shift in the mix of hospice days, with the share of days accounted for by RHC (the lowest cost level of care) increasing in 2017.[20,21] Freestanding hospices had lower costs per day than provider-based hospices (i.e., home health–based hospices and hospital-based hospices). For-profit, above-cap, and rural hospices also had lower average costs per day than their respective counterparts.[22]

TABLE 12–13 **Total hospice costs per day varied by type of provider, 2017**

	Average total cost per day
All hospices	$148
Freestanding	142
Home health based	158
Hospital based	210
For profit	128
Nonprofit	178
Above cap	130
Below cap	149
Urban	149
Rural	138

Note: Data reflect aggregate costs per day for all types of hospice care combined (routine home care, continuous home care, general inpatient care, and inpatient respite care) for all payers. Data are not adjusted for differences in case mix or wages across hospices.

Source: MedPAC analysis of Medicare hospice cost reports and Medicare Provider of Services file from CMS.

Many factors contribute to variation in hospice costs across providers. One factor is length of stay. Hospices with longer stays have lower costs per day on average. Freestanding and for-profit hospices have substantially longer stays than other hospices and as a result have lower costs per day (Table 12-5, p. 338, and Table 12-13). Another factor that contributes to cost differences across providers relates to overhead costs. Included in the costs of provider-based hospices are overhead costs allocated from the parent provider, which contributes to provider-based hospices' higher costs compared with freestanding providers. The Commission maintains that payment policy should focus on the efficient delivery of services and that if freestanding hospices are able to provide high-quality care at a lower cost than provider-based hospices, payment rates should be set accordingly; the higher costs of provider-based hospices should not be a reason for increasing Medicare payment rates.

Table 12-14 (p. 348) presents estimates of hospice costs by level of care for freestanding and provider-based hospices in 2017. As expected, costs vary by level of care. The

TABLE 12–14

Hospice costs and payment rates by level of care, 2017

Category	2017 cost per day*				FY 2017 payment rate per day*	Share of days 2017
	Average	25th percentile	50th percentile	75th percentile		
Routine home care	$130	$108	$129	$158	$163	98.1%
General inpatient care	924	528	847	1,220	735	1.4
Inpatient respite care	518	218	315	528	171	0.3
Continuous home care* (dollars per hour)	49	20	51	89	40	0.2

Note: FY (fiscal year). Medicare payment rates and costs are rounded to the nearest dollar. The routine home care (RHC) payment rate per day in 2017 reflects an average of the two RHC payment rates weighted by the share of days accounted for by each.
*Cost estimates and payment rates reflect dollars per day except for continuous home care, which is dollars per hour.

Source: MedPAC analysis of Medicare hospice cost reports, 100 percent hospice claims data, and Provider of Services file from CMS.

average cost per day is lowest for RHC, the typical level of hospice care, and is higher for the more specialized levels of care. In 2017, the payment rates by level of care were out of balance relative to estimated costs. RHC, which accounts for the vast majority of days in hospice, had an average cost per day of $130, while the payment rate averaged $163 per day (Table 12-14). Medicare's payment rate for the other three less frequently provided levels of care was lower than the average and median costs per day for providers. For example, in 2017, the estimated cost per day for general inpatient care was $924 on average and $847 at the median, compared with a payment rate of $735. The fiscal year 2020 rebasing has raised the payment rates for CHC, IRC, and GIP substantially to address the gap between estimated costs and payment rates seen in Table 12-14. The fiscal year 2020 payment rate for RHC was reduced slightly (2.72 percent) to maintain budget neutrality, but it remains substantially above estimated cost.

Hospice margins

In 2017, the aggregate Medicare margin for hospice providers was 12.6 percent, reaching its highest level in more than 10 years, 1.7 percentage points greater than in 2016 (10.9 percent) (Table 12-15).[23] In 2017, Medicare margins varied widely across individual hospice providers: –4.6 percent at the 25th percentile, 12.6 percent at the 50th percentile, and 25.6 percent at the 75th percentile (data not shown). Our estimates of Medicare margins from 2011 to 2017 exclude overpayments to above-cap hospices and are calculated based on Medicare-allowable, reimbursable costs consistent with our approach in other Medicare sectors.[24]

We excluded nonreimbursable bereavement costs from our margin calculations. The statute requires that hospices offer bereavement services to family members of their deceased Medicare patients (Section 1861(dd)(2)(A)(i) of the Social Security Act); however, the statute prohibits Medicare payment for these services (Section 1814(i)(1)(A)). Hospices report the costs associated with bereavement services on the Medicare cost report in a nonreimbursable cost center. If we included bereavement costs from the cost report in our margin estimate, it would reduce the 2017 aggregate Medicare margin by at most 1.3 percentage points. This figure likely overestimates the bereavement costs associated with Medicare hospice patients because, in addition to bereavement costs associated with hospice patients, the estimate could include the costs of community bereavement services offered to the family and friends of decedents who were not enrolled in hospice. Also, some hospices fund bereavement services through donations. Hospice revenues from donations are not included in our margin calculations.

We also exclude nonreimbursable volunteer costs from our margin calculations. As discussed in our March

TABLE 12–15 **Hospice Medicare margins by selected characteristics, 2011–2017**

Category	Share of hospices 2017	2011	2012	2013	2014	2015	2016	2017
All	100%	8.7%	10.0%	8.5%	8.2%	9.9%	10.9%	12.6%
Freestanding	78	11.8	13.3	12.0	11.6	13.8	14.0	15.3
Home health based	11	6.1	5.5	2.5	3.5	3.3	6.2	8.0
Hospital based	10	–17.0	–17.1	–17.4	–20.8	–23.8	–16.7	–13.8
For profit	69	14.5	15.9	15.0	15.3	17.8	17.9	20.2
Nonprofit	27	2.6	3.7	0.8	–0.4	0.0	2.2	2.5
Urban	80	9.0	10.3	8.8	8.7	10.4	11.4	12.9
Rural	20	5.2	7.3	5.9	3.3	4.8	6.3	8.8
Patient volume (quintile)								
Lowest	20	–3.8	–2.3	–0.4	–4.9	–5.3	–2.2	–1.0
Second	20	2.7	5.8	5.9	2.0	4.3	6.6	8.1
Third	20	7.6	9.7	9.3	9.8	10.7	11.5	15.1
Fourth	20	9.3	11.1	10.6	9.9	13.0	13.1	14.5
Highest	20	9.6	10.5	8.2	8.4	9.9	11.0	12.4
Below cap	86.0	8.9	10.3	8.6	8.4	9.9	10.7	12.5
Above cap (excluding cap overpayments)	14.0	4.1	5.2	7.0	6.0	9.8	12.6	13.0
Above cap (including cap overpayments)	14.0	18.4	21.3	20.1	18.8	21.4	20.2	21.2

Note: Margins for all provider categories exclude overpayments to above-cap hospices, except where specifically indicated. Margins are calculated based on Medicare-allowable, reimbursable costs. In this report, margin by hospice ownership status is based on hospices' ownership designation from the Medicare cost report. Prior reports used hospice ownership status from the Provider of Services file. As a result, margins by ownership status in this report may differ from those published in prior reports. The rural and urban definitions used in this chart are based on updated definitions of the core-based statistical areas (which rely on data from the 2010 census). Percentages may not sum to 100 due to omitted categories.

Source: MedPAC analysis of Medicare hospice cost reports, 100 percent hospice claims standard analytical file, and Medicare Provider of Services file from CMS.

2012 report, the statute requires Medicare hospice providers to use some volunteers in the provision of hospice care. Costs associated with recruiting and training volunteers are generally included in our margin calculations because they are reported in reimbursable cost centers. The only volunteer costs that would be excluded from our margins are those associated with nonreimbursable cost centers. It is unknown what costs are included in the volunteer nonreimbursable cost center. If nonreimbursable volunteer costs were included in our margin calculation, it would reduce the aggregate Medicare margin by 0.3 percentage point.

Hospice margins vary by provider characteristics, such as type of hospice (freestanding or provider based), type of ownership (for profit or nonprofit), patient volume, and urban or rural location (Table 12-15). In 2017, freestanding hospices had higher margins (15.3 percent) than home health–based or hospital-based hospices (8.0 percent and –13.8 percent, respectively) (Table 12-15). Provider-based hospices typically have lower margins than freestanding hospices for several reasons, including their shorter stays and the allocation of overhead costs from the parent provider to the provider-based hospice. In 2017, the aggregate Medicare margin was considerably higher for for-profit hospices (20.2 percent) than for nonprofit

TABLE 12–16

Hospice Medicare margins by length of stay, 2017

Hospice characteristic	Medicare margin
Average length of stay	
Lowest quintile	–3.7%
Second quintile	7.4
Third quintile	16.5
Fourth quintile	21.0
Highest quintile	19.2
Share of stays >180 days	
Lowest quintile	–4.5
Second quintile	7.0
Third quintile	17.1
Fourth quintile	22.1
Highest quintile	17.8

Note: Margins for all provider categories exclude overpayments to above-cap hospices. Margins are calculated based on Medicare-allowable, reimbursable costs.

Source: MedPAC analysis of Medicare hospice cost reports, Medicare Beneficiary Database, 100 percent hospice claims standard analytical file, and Medicare Provider of Services file from CMS.

hospices (2.5 percent). The margin for freestanding nonprofit hospices was higher (5.7 percent) than the margin for nonprofit hospices overall (data not shown). Generally, hospices' margins vary by the provider's volume; hospices with more patients have higher margins on average. Hospices in urban areas have a higher overall aggregate Medicare margin (12.9 percent) than those in rural areas (8.8 percent). The difference between rural and urban margins could partly reflect differences in volume.

In 2017, above-cap hospices had favorable margins even after the return of overpayments. Above-cap hospices had a margin of about 21.2 percent before the return of overpayments but had a margin of 13.0 percent after the return of overpayments, which was slightly higher than below-cap hospices' margin, 12.5 percent.

Hospice profitability is closely related to length of stay. Hospices with longer stays have higher margins. For example, in an analysis of hospice providers based on the share of their patients' stays exceeding 180 days, the average margin ranged from –4.5 percent for hospices in the lowest quintile to 22.1 percent for hospices in the second highest quintile (Table 12-16). Hospices in the quintile with the greatest share of their patients exceeding 180 days had a 17.8 percent average margin after the return of cap overpayments, but without the hospice aggregate cap, these providers' margins would have averaged 21 percent (latter figure not shown in table).

Hospices with a large share of patients in nursing facilities and assisted living facilities (ALFs) also have higher margins than other hospices (Table 12-17). For example, in 2017, the 50 percent of hospices with the highest share of patients residing in nursing facilities had a margin of roughly 16 percent compared with a 9 percent margin for providers with fewer nursing facility patients. For the half of providers with the largest share of patients residing in ALFs, the margin was about 16 percent compared with a margin of about 7 percent for other hospices. Some of the difference in margins among hospices with different concentrations of nursing facility and ALF patients was driven by differences in their patients' diagnostic profile and length of stay. However, hospices may find caring for patients in facilities more profitable than caring for patients at home for reasons in addition to length of stay. As discussed in our June 2013 report, there may be efficiencies in treating hospice patients in a centralized location in terms of mileage costs and staff travel time, as well as facilities serving as referral sources for new patients. Nursing facilities can also be a more efficient setting for hospices to provide care because of the overlap in responsibilities between the hospice and the nursing facility. Analyses in our June 2013 report suggest that a reduction to the RHC payment rate for patients in nursing facilities may be warranted because of this overlap (Medicare Payment Advisory Commission 2013).

Our 2017 margin estimates reflect hospices' financial performance in the second year of the new payment system, which began in January 2016. CMS's payment reforms—which move away from a single base rate for RHC to a two-tiered base rate and provide additional payments for certain visits in the last seven days of life—were expected to modestly reduce the variation in profitability across hospices. In fact, between 2015 and 2016, the variation in profitability across providers by length of stay narrowed. When providers were grouped based on the share of their patients' stays exceeding 180 days, in 2015 there was a 29 percentage point spread in

margin between the lowest length of stay quintile (–8.9 percent) and the second highest length of stay quintile (20.4 percent). In 2017, the difference in margins narrowed slightly to about 22 percentage points (as shown in Table 12-16). As the Commission noted in its comment letter on the 2016 hospice proposed rule, the initial changes to the hospice payment system are projected to be modest and leave room for additional changes in future years based on further data and experience (Medicare Payment Advisory Commission 2015a).

Projecting margins for 2020

To project the aggregate Medicare margin for 2020, we model the policy changes that went into effect between 2017 (the year of our most recent margin estimates) and 2020. The policies include updates of 1.0 percent in 2018, 1.8 percent in 2019, and 2.6 percent in 2020. The update for 2018 was statutorily specified at 1 percent in the Medicare Access and CHIP Reauthorization Act of 2015. The updates for 2019 and 2020 reflect the market basket update and a productivity adjustment and, for 2019, an additional legislated adjustment of –0.3 percentage point. We also assume a rate of cost growth that is consistent with historical rates of cost growth among hospice providers. Taking these factors into account, for 2020, we project an aggregate Medicare margin for hospices of 12.6 percent. This margin projection excludes nonreimbursable costs associated with bereavement services and volunteers (which, if included, would reduce the aggregate margin by at most 1.3 percentage points and 0.3 percentage point, respectively).

Policy to modify the hospice aggregate cap

A policy to wage adjust and reduce the aggregate cap would make the aggregate cap more equitable across providers and focus payment reductions on providers with disproportionately long stays and high margins.

Medicare payments to hospice providers are wage adjusted, but the hospice aggregate cap is not. As a result, the hospice cap is stricter in some areas of the country than in others. To illustrate, a hospice provider in 2017 serving patients in an area with a low wage index of 0.86 could have an average length of stay for RHC of 204 days before exceeding the cap. In contrast, a hospice provider serving patients in an area with a high wage index of 1.16 could have an average length of stay for RHC of just 147 days before exceeding the cap.[25] In 2017, about 25 percent of hospices with an average wage index greater than 1.0 exceeded the cap compared with 9 percent of hospice providers with an average wage index less than 1.0. Wage adjustment of the cap would make the cap more equitable across providers by making the cap equivalent to the same amount of hospice days across all areas of the country (see text box (p. 357) for more details on the aggregate cap and wage adjustment).

TABLE 12–17 **Hospice Medicare margins by providers' share of patients residing in facilities, 2017**

Hospice characteristic	Medicare margin
Share of patients in nursing facilities	
Lowest half	9.3%
Highest half	15.7
Share of patients in assisted living facilities	
Lowest half	7.4
Highest half	15.6

Note: Margins for all provider categories exclude overpayments to above-cap hospices. Margins are calculated based on Medicare-allowable, reimbursable costs.

Source: MedPAC analysis of Medicare hospice cost reports, Medicare Beneficiary Database, 100 percent hospice claims standard analytical file, and Medicare Provider of Services file from CMS.

Although the original intent of the aggregate cap was to ensure that the legislation establishing the hospice benefit generated savings, today the aggregate cap essentially functions as a mechanism to return excess payments to the Medicare program from providers with disproportionately long stays that would otherwise have very high margins. Lowering the hospice cap would further reduce these excess payments and generate savings for taxpayers and the Part A Trust Fund.

Over the years, the Commission has been concerned that the high profitability associated with long stays in hospice may be spurring some providers to enter the hospice field with revenue-generation strategies. Because some diagnoses are associated with longer stays than others, providers that wish to do so can select patients with conditions likely to have long, profitable stays. The aggregate cap currently provides a limit on the extent to

which a hospice provider can earn substantial profits by focusing on very long stay patients. A policy to reduce the cap would potentially further limit that type of business model.

Pairing a policy to reduce the cap amount with a policy to wage adjust the cap would have some additional benefits. Wage adjusting the cap would result in the cap rising for providers serving high wage index areas. A reduction to the cap amount could help stem the potential incentives for some providers in high wage index areas to respond to wage adjustment by changing their admitting practices in ways that lead to more very long hospices stays.

The appropriate level for the hospice cap is a policy judgment. The aggregate cap in 2020 is equivalent to the amount that Medicare pays for a routine home care stay of about 179 days (assuming a wage index of 1.0). Some stakeholders may argue that the aggregate cap should be pegged to a dollar amount equivalent to 180 days of care since the hospice benefit eligibility criteria is a life expectancy of 6 months or less if a terminal disease runs its normal course. However, because the cap is applied in the aggregate across the provider's entire patient population (including both short and long stays) and not at the individual level, 180 days is not necessarily the appropriate benchmark. Many hospice patients have short stays. Hospice length of stay among decedents was 2 days at the 10th percentile, 5 days at the 25th percentile and 18 days at the 50th percentile in 2017. Because a provider's short stays offset its longer stays in the cap calculation, it is possible for providers to furnish very long stays to a portion of their caseload without exceeding the cap. For example, consider a hypothetical hospice with a wage index of 1.0 whose patients received only RHC. In cap year 2020, if half of that hospice's patients each had a length of stay of 30 days, the other half could have an average length of stay of up to 335 days before that provider would have exceeded the 2020 cap.[26] The length of stay patterns in this hypothetical example are much longer than typical for the hospice population (both for patients with short and long stays), so this example demonstrates the extent to which hospices that exceed the cap have outlier utilization patterns. In the prior hypothetical example, if the hospice cap was reduced by 20 percent, a hospice provider with a wage index of 1.0 could have half of its patients with 30-day stays and the other half with an average stay of 257 days before the provider would exceed the reduced aggregate cap amount.

Simulating the effects of a policy to wage adjust and reduce the hospice cap

Using 2017 claims data, we simulated the effect of a policy to wage adjust the aggregate cap and reduce it by 20 percent. To simulate the effect of this policy to modify the cap, we started with our actual 2017 estimates of Medicare payments and number of providers exceeding the cap. Because CMS's fiscal year 2020 rebasing of the payment rates by level of care is not reflected in the 2017 data, we first simulated the effect that rebasing would have had on Medicare payments in 2017 if such a policy had been in effect that year. After simulating the effect of rebasing, we simulated the effect of wage adjusting and reducing the cap by 20 percent. It is important to note that these simulations are illustrative and use historical data (without any projections or behavioral assumptions).

Under a policy to wage adjust and reduce the cap, the share of hospices exceeding the cap is estimated to increase. We estimate that the overall share of hospices exceeding the cap in 2017 would change from 14 percent (the estimated actual rate) to 13 percent under CMS's fiscal year 2020 rebasing policy to 26 percent under the policy to wage adjust and reduce the cap (Table 12-18).[27] These estimates are based on constant 2017 utilization data. Although we are not able to incorporate potential behavioral changes in our simulation, it is possible that some providers might respond to cap changes by adjusting their admissions practices to remain under the cap.

In the simulation, the increase in the share of hospices exceeding the cap occurs among hospice providers with the longest stays. Under the modified cap policy, roughly one-third of for-profit and freestanding providers, which tend to have a higher prevalence of patients with long stays, are estimated to exceed the cap; by contrast, estimates of exceeding the cap for nonprofit hospices, home health–based hospices, and hospital-based hospices are significantly lower, at 3 percent, 9 percent, and 1 percent, respectively (Table 12-18). In addition, the estimated shares of hospices exceeding the cap would increase for both urban and rural providers—the former from the current level of 16 percent to 29 percent and the latter from 4 percent to 14 percent.

Despite these estimated increases in shares of hospices exceeding the cap, a sizable share of providers across various types of hospices would remain substantially below the cap. Figure 12-2 (p. 354) displays provider

TABLE 12–18

Simulated share of providers exceeding the aggregate cap in 2017 under rebasing and a policy to modify the aggregate cap

	Share of providers exceeding the cap, 2017		
	Actual	Simulated with CMS's FY 2020 rebasing	Simulated with rebasing and policy to wage adjust and reduce cap
All	14%	13%	26%
Freestanding	17	16	32
Home health based	5	4	9
Hospital based	0	0	1
For profit	20	18	37
Nonprofit	1	1	3
Urban	16	15	29
Rural	4	3	14

Note: FY (fiscal year). This analysis, using 2017 data, simulates the effect of rebasing and policy to wage adjust and reduce the cap by 20 percent. The simulation assumes no changes in utilization in response to the policy. "Actual" refers to the Commission's estimate of the share of hospices that exceeded the cap in 2017.

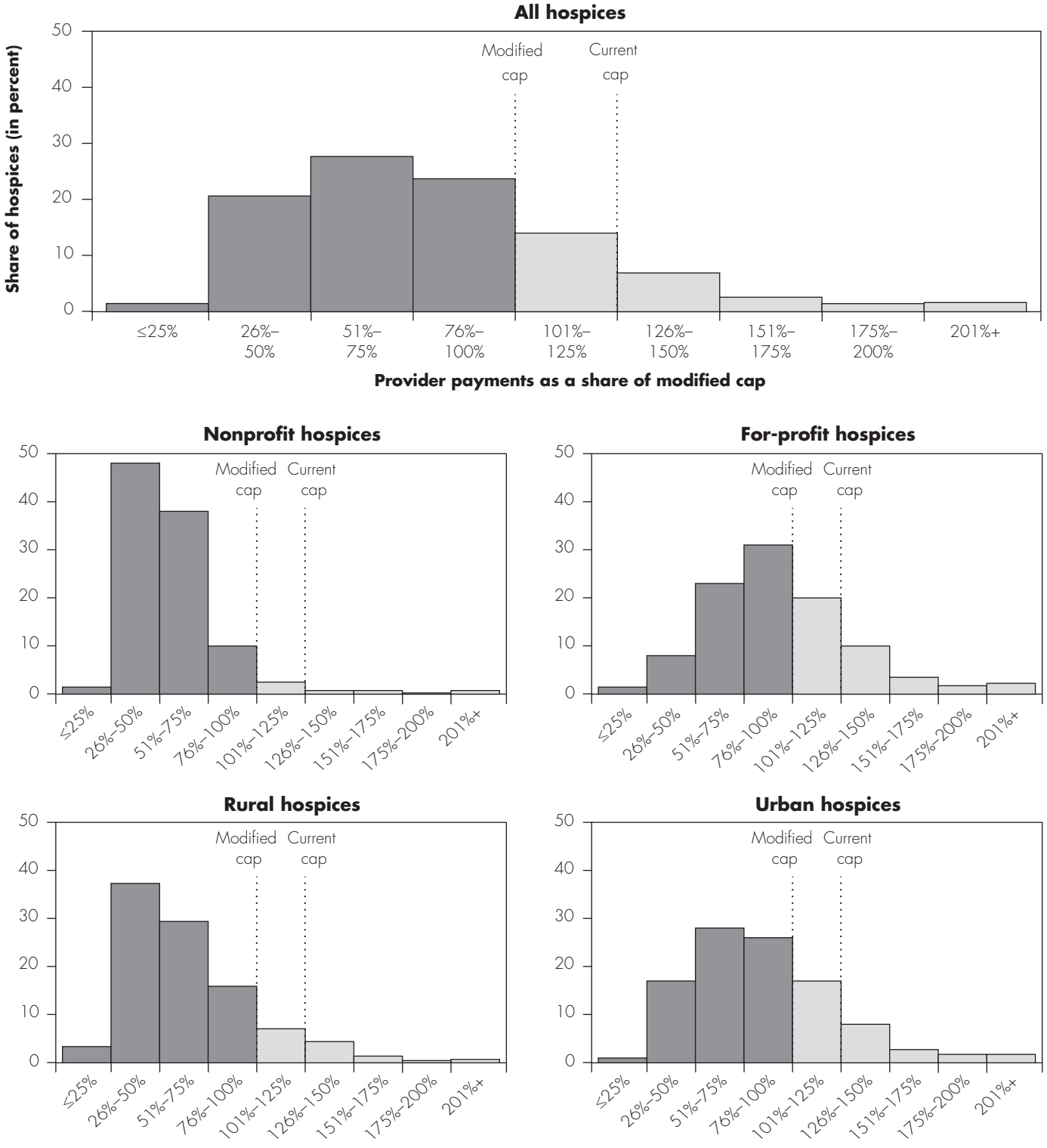
Source: MedPAC analysis of Medicare claims data for hospice providers.

payments as a share of the modified aggregate cap. Under the modified cap policy, if a provider's payments as a share of the modified cap is less than 100 percent, the provider remains below the cap. Across all providers, our simulation finds that about half of hospices would be at least 25 percent below the cap under the modified cap policy (i.e., payments as a share of the modified cap being less than or equal to 75 percent). A large share of nonprofit and rural hospices would be at least 25 percent or more below the cap (roughly 87 percent and 70 percent of these providers, respectively). Although for-profit hospices have the highest prevalence of exceeding the aggregate cap, nearly one-third of for-profit hospices are estimated to be at least 25 percent below the cap under the simulated cap policy change.

Table 12-19 (p. 355) presents our simulation of how rebasing and the policy to wage adjust and reduce the cap would have affected Medicare payments to providers in 2017. Overall, CMS's fiscal year 2020 rebasing is designed to have no aggregate effect on payments to providers; however, it does redistribute revenues across providers. Rebasing is expected to modestly shift payments away from providers with higher margins and toward providers with lower margins. Provider groups estimated to experience a reduction in payments are those that on average provide disproportionately more days of RHC and fewer days of the other three levels of care. For example, rebasing is estimated to increase payment for nonprofit (1.3 percent) and hospital-based hospices (1.0 percent) and reduce payments for hospices that are for profit (–1.1 percent), home health based (–0.3 percent), or rural (–0.9 percent).

We estimate in our simulation that the policy to modify the aggregate cap would have reduced aggregate Medicare program payments in 2017 by about 2.8 percent (assuming no changes in utilization). The reductions in payments would occur among a subset of providers with disproportionately long stays and high margins. For example, our simulation finds that the cap policy change would reduce payments for hospices in the top two length-of-stay quintiles (about –4 percent in the 4th quintile and –14 percent in the 5th (highest) quintile), while payments for other hospices would remain largely unchanged (Table 12-19, p. 355). The effects of the cap policy by

FIGURE 12–2 **Many hospices would remain substantially below the cap under the modified cap policy**



Note: The figure simulates the amount that providers would have been above or below the cap in 2017 under rebasing and the policy to wage adjust and reduce the aggregate cap by 20 percent. This simulation assumes no changes in utilization in response to the policy changes. New providers that enter Medicare after the start of the cap year do not have cap overpayments calculated until the following cap year and are not included in this chart.

Source: MedPAC analysis of Medicare claims data for hospice providers.

TABLE 12–19

Simulated effect of rebasing and policy to modify the hospice aggregate cap on hospice payments

	Percentage change in 2017 Medicare payments	
	Simulation of CMS's FY 2020 rebasing	**Simulation of policy to wage adjust and reduce cap**
All	0.0%	–2.8%
Freestanding	–0.1	–3.2
Home health based	–0.3	–0.9
Hospital based	1.0	0.0
For profit	–1.1	–4.8
Nonprofit	1.3	–0.1
Urban	0.0	–2.7
Rural	–0.9	–3.1
Share of stays >180 days		
Lowest quintile	2.4	0.0
Second quintile	1.1	0.0
Third quintile	–0.8	–0.1
Fourth quintile	–1.3	–4.0
Highest quintile	–1.6	–13.6

Note: FY (fiscal year). This analysis, using 2017 data, simulates the effect of rebasing and policy to wage adjust and reduce the cap by 20 percent. The simulation assumes no changes in utilization in response to the policy. The figures reported here by ownership are based on the hospice ownership designation in the Medicare cost report.

Source: MedPAC analysis of Medicare claims and cost report data for hospice providers.

category of hospice provider depends on the prevalence of providers in each category with disproportionately long stays. Per category, for-profit and freestanding hospices are estimated to experience reduced payments under the policy to modify the cap, while payments to nonprofit and hospital-based providers (the two groups with the lowest margins) would be unchanged.

Both urban and rural providers as groups are estimated to experience reduced payments under the cap policy modification; however, these payment reductions would occur among the subset of urban and rural providers with disproportionately long stays and high margins. For example, both urban and rural providers in the two highest length of stay quintiles had substantial profit margins in 2017, with payments exceeding costs by roughly 20 percent to 30 percent, and would experience payment declines under the cap policy modification, as seen in Table 12-20 (p. 356). Table 12-20 also shows that rural providers with fewer long-stay patients and lower margins (e.g., providers in the two lowest length of stay quintiles) would see no change in their payments under the policy to modify the cap.

Under the modified cap policy, we expect that beneficiaries would continue to have good access to hospice care since many providers would remain substantially below the cap, and some others would likely respond by adjusting their average length of stay to remain under the cap. There are different ways hospice

TABLE 12–20

Simulated effect of rebasing and policy to modify the aggregate cap on 2017 payment-to-cost ratios for urban and rural hospices

	2017 payment-to-cost ratios					
	Urban providers			Rural providers		
Providers grouped by share of stays greater than 180 days	Actual	Simulated with CMS's FY 2020 rebasing	Simulated with rebasing and policy to wage adjust and reduce cap	Actual	Simulated with CMS's FY 2020 rebasing	Simulated with rebasing and policy to wage adjust and reduce cap
Lowest quintile	0.97	0.99	0.99	0.90	0.91	0.91
Second quintile	1.08	1.09	1.09	1.03	1.03	1.03
Third quintile	1.21	1.20	1.20	1.19	1.17	1.17
Fourth quintile	1.29	1.28	1.22	1.23	1.21	1.18
Highest quintile	1.21	1.19	1.03	1.26	1.24	1.02

Note: FY (fiscal year). This analysis, using 2017 data, simulates the effect of rebasing and policy to wage adjust and reduce the cap by 20 percent. The simulation assumes no changes in utilization in response to the policy. "Actual" refers to the Commission's estimates of the payment-to-cost ratios that occurred in 2017.

Source: MedPAC analysis of Medicare claims and cost report data for hospice providers.

providers with disproportionately long stays could respond to a policy to reduce the cap. They could adjust their mix of patients to reflect the broader hospice population and adjust the timing for their admissions to ensure that patients they admit meet the hospice eligibility criteria. There is evidence suggesting that some hospices are inappropriately using live discharges as a way to limit their cap liabilities. CMS and the Office of Inspector General should monitor this type of behavior under current policy and any changes under a policy to reduce the cap. In addition, there could be merit in considering a payment penalty for hospices with unusually high rates of live discharges, something the Commission intends to work on in the next year.

How should Medicare payments change in 2021?

The indicators of payment adequacy for hospices—beneficiary access to care, quality of care, provider access to capital, and Medicare payments relative to providers' costs—are positive. The Commission has concluded that aggregate payments are more than sufficient to cover providers' costs and that the payment rates in 2021 should be held at their 2020 levels. In addition, the Commission has concluded that aggregate payments should be reduced by wage adjusting and reducing the hospice aggregate cap, an approach that focuses payment reductions on providers with the longest stay and high margins.

RECOMMENDATION 12

The Congress should:

• for fiscal year 2021, eliminate the update to the fiscal year 2020 Medicare base payment rates for hospice and

• wage adjust and reduce the hospice aggregate cap by 20 percent.

RATIONALE 12

Our indicators of access to care are positive, and there are signs that the aggregate level of payment for hospice care exceeds the level needed to furnish high-quality care to beneficiaries. The number of providers, number of beneficiaries enrolled in hospice, days of hospice care, and average length of stay increased in 2018. The rate of marginal profit was 16 percent in 2017. As the number of for-profit providers increased by 4 percent in 2019, access to capital appears strong. The aggregate Medicare

Wage adjustment of the aggregate cap

Because hospice payments are wage adjusted but the aggregate cap is not, the cap is effectively stricter in some areas of the country than in others. In cap year 2017, the hospice aggregate cap was $28,405 for all hospice providers. To illustrate, in an area of the country with a wage index of 1.0, the 2017 aggregate cap was equivalent to an average length of stay for routine health care (RHC) of 173 days.[28] The cap would equate to a higher average length of stay for RHC in areas with a lower wage index and a lower average length of stay for RHC in areas with a higher wage index. To measure the effect of wage adjustment on a provider's payments, we calculated the ratio of a provider's actual total payments to what that provider's total payments would have been without wage adjustment. We refer to this ratio as the wage index ratio. As shown in Table 12-21, for the 10 percent of hospices with the lowest wage index ratios, wage adjustment reduced their payments by at least 14 percent and the hospice cap equated to an average length of stay for RHC of 204 days or more. In contrast, for the 10 percent of providers with the highest wage index ratios, wage adjustment raised their payments by at least 16 percent and resulted in the hospice cap equating to an average length of stay for RHC of 147 days or less, meaning that providers with similar utilization patterns could exceed the cap in one area of the country but not in another due to wage index differences.

In general, we observe higher rates of exceeding the cap among providers serving patients in areas with higher wage indexes. In 2017, we estimate that about 25 percent of hospices with a wage index ratio greater than 1.0 exceeded the cap compared with 9 percent of hospice providers with a wage index ratio less than 1.0. While a higher wage index ratio may make it more likely that some providers exceed the cap, most providers with relatively high wage index ratios do not. For example, in 2017, among the 10 percent of hospices with the highest wage index ratios, we estimate that about 29 percent exceeded the cap and 71 percent did not.

Wage adjusting the cap would make the cap more equitable across providers. A policy to wage adjust the aggregate could work as follows: For each provider, Medicare could calculate the provider's wage index ratio and adjust the aggregate cap accordingly.

Wage index ratio = Provider's actual payments in cap year / amount that provider's payments would have been without wage adjustment

Wage-adjusted cap for a particular provider = National cap × wage index ratio for the provider

The cap calculation would otherwise work the same as it does today. If the provider's payments in the cap year exceeded the wage-adjusted cap multiplied by the number of beneficiaries served, the provider would repay the excess to the government. ■

TABLE 12–21 **The hospice cap is stricter in areas with a higher wage index**

Provider percentile of wage index ratio	Wage index ratio	Average number of RHC days the hospice cap is equivalent to in an area with the specified wage index ratio
10th percentile (lowest)	0.86	204
25th percentile	0.89	197
50th percentile	0.95	183
75th percentile	1.03	168
90th percentile (highest)	1.16	147

Note: RHC (routine home care). Medicare payments to hospice providers are wage adjusted based on the location of the patient reported by the hospice on each claim. The "wage index ratio" refers to the ratio of wage-adjusted payments to payments without wage adjustment and is calculated across all of a provider's patients and reflects the average effect of wage adjustment on that provider's payments. The "average number of RHC days the hospice cap is equivalent to" is calculated assuming the hospice provides only RHC and all care falls within a single cap year; the calculation does not incorporate the sequester or service intensity adjustment payments in the last seven days of life.

Source: MedPAC analysis of Medicare claims data for hospice providers.

margin in 2017 reached 12.6 percent—a 1.7 percentage point increase from the prior year. The projected 2020 margin is 12.6 percent. Given the margin in the industry and our other positive payment adequacy indicators, we anticipate that the aggregate level of payments could be reduced and would still be sufficient to cover providers' costs. In light of the differential financial performance across providers, the Commission has developed a two-part recommendation that would keep the payment rates unchanged in 2021 at the 2020 levels for all providers, while modifying the aggregate cap to focus payment reductions on providers with disproportionately long stays and high margins. The recommendation would also wage adjust the aggregate cap to make it more equitable across providers. This recommendation would bring aggregate payments closer to costs, would lead to savings for taxpayers, and would be consistent with the Commission's principle that it is incumbent on Medicare to maintain financial pressure on providers to constrain costs.

IMPLICATIONS 12

Spending

- Under current law, hospices are projected to receive an update in fiscal year 2021 equal to 2.8 percent (based on a projected market basket of 3.2 percent and a projected productivity adjustment of –0.4 percent). Our recommendation would decrease federal program spending relative to the statutory update by between $750 million and $2 billion over one year and between $5 billion and $10 billion over five years.

Beneficiary and provider

- We do not expect this recommendation to have an adverse effect on beneficiaries' access to care. This recommendation is not expected to affect providers' willingness or ability to care for Medicare beneficiaries. ■

Endnotes

1 If a beneficiary does not have an attending physician, the beneficiary can initially elect hospice based on the certification of the hospice physician alone.

2 When first established under TEFRA, the Medicare hospice benefit limited coverage to 210 days of hospice care. The Medicare Catastrophic Coverage Repeal Act of 1989 and the Balanced Budget Act of 1997 eased this limit.

3 In 2000, 30 percent of hospice providers were for profit, 59 percent were nonprofit, and 11 percent were government owned. As of 2018, about 70 percent of hospices were for profit, 27 percent were nonprofit, and 3 percent were government owned.

4 The aggregate cap increased annually by the rate of growth in the consumer price index for all urban consumers for medical care through 2016. In accord with the Improving Medicare Post-Acute Care Transformation Act of 2014, the aggregate cap is updated annually by the same factor as the hospice payment rates (market basket net of productivity and other adjustments) from 2017 through 2025.

5 The 2020 cap year is aligned with the federal fiscal year (October 1, 2019, to September 30, 2020). Payments for the cap year reflect the sum of payments to a provider for services furnished in that year. The beneficiary count starts with the number of beneficiaries treated by the hospice in the cap year. If a beneficiary receives care from more than one hospice and/or in more than one cap year, that beneficiary is generally represented as a fraction in the beneficiary count of the cap calculation. In general, the fraction is calculated based on a proportional methodology and reflects the number of days of hospice care in a cap year the beneficiary received from that hospice as a percent of all days of hospice care received by that beneficiary from all hospices in all years. Because the fraction a beneficiary represents in a prior year's cap calculation may change going forward as that beneficiary continues to receive hospice care in subsequent cap years, the CMS contractors may revisit the cap calculation for a past cap year to update the beneficiary count and collect additional overpayments. Some hospices have elected an alternate methodology for handling the beneficiary count when a patient receives care in more than one cap year—called the streamlined methodology. For a detailed description of the two methodologies for the beneficiary count and when they are applicable, see our March 2012 report (Medicare Payment Advisory Commission 2012).

6 When the CMS claims processing contractor calculates cap overpayments for the most recent cap year, the contractor may also reopen the cap calculation for a hospice provider for a prior year to adjust the prior year's beneficiary count to more accurately take into account beneficiaries who continued to receive hospice beyond the end of that cap year (as described in more detail in endnote 5).

7 Type of hospice reflects the type of cost report filed (a hospice files a freestanding hospice cost report or is included in the cost report of a hospital, home health agency, or skilled nursing facility). The type of cost report does not necessarily reflect where patients receive care. For example, all hospice types may serve some nursing facility patients.

8 Statistics on hospice use rates and length of stay for 2015 through 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. These statistics for 2015, 2016, and 2017 may differ from those published in prior reports because the prior statistics were based on an earlier version of the Medicare Beneficiary Database obtained from CMS. CMS has revised the hospice election information for some beneficiaries in the Medicare Beneficiary Database. The revised data do not change the conclusion in past reports that hospice use among decedents and average length of stay continue to increase.

9 As part of its Value-Based Insurance Design models in MA, the CMS Innovation Center has released a request for applications for MA plans to test the inclusion of the hospice benefit in MA beginning calendar year 2021.

10 Our hospice analyses in this report that break out data for rural and urban beneficiaries or rural and urban providers are based on core-based statistical area definitions (which rely on the 2010 census) or are based on the 2013 urban influence codes.

11 Between 2017 and 2018, the share of days accounted for by RHC increased slightly from 98.1 percent to 98.2 percent because the number of RHC days increased 7 percent, while the number of GIP and CHC days declined (4 percent and 1 percent, respectively). The number of IRC days also increased, about 8 percent, but IRC is an infrequently used level of care, so it remained about 0.3 percent of days in 2018.

12 The term *curative care* is often used interchangeably with *conventional care* to describe treatments intended to be disease modifying.

13 The estimates of hospices over the cap are based on the Commission's analysis. While the estimates are intended to approximate those of the CMS claims processing contractors, differences in available data and methodology have the

potential to lead to different estimates. For example, we calculate the share of hospices exceeding the cap and the amount of overpayments for each above-cap hospice using claims data through December of the following year. In other words, we rely on claims data through 14 months after the close of each cap year for years 2014 through 2016 and 15 months after the close of the cap year for 2017 (because, beginning cap year 2017, the close of the cap year shifts from October 31 to September 30). Our method differs from that of the claims processing contractors in that they make an initial calculation with earlier data but then may reopen the cap calculation for up to three years. An additional difference between our estimates and those of the CMS contractors relates to the alternative cap methodology that CMS established in the hospice final rule for 2012 (Centers for Medicare & Medicaid Services 2011). Based on that regulation, for cap years before 2012, hospices that challenged the cap methodology in court or made an administrative appeal had their cap payments calculated from the challenged year going forward using a new, alternative methodology. For cap years from 2012 onward, all hospices have their cap liability calculated using the alternative methodology unless they elect to remain with the original method. For estimation purposes, we assume that the CMS contractors used the alternative methodology for cap year 2012 onward. Estimates for cap years 2011 and earlier assumed that the original cap methodology was used.

14 If we approximate marginal cost as total Medicare costs minus fixed building and equipment costs, then marginal profit can be calculated as follows: Marginal profit = (payments for Medicare services – (total Medicare costs – fixed building and equipment costs)) / Medicare payments. This comparison is a lower bound on the marginal profit because we do not consider any potential labor costs that are fixed.

15 The response rate for hospice CAHPS in the most recent period from January 2017 through December 2018 was 32 percent (https://www.hospicecahpssurvey.org/en/scoring-and-analysis).

16 Hospice CAHPS data are available for rolling two-year periods.

17 In total, 43 percent of all beneficiaries discharged alive in 2010 were still alive one year after discharge. (Of these beneficiaries, almost one-third returned to hospice care during the year.) These beneficiaries spent an average of 213 days in hospice before their first discharge, with Medicare hospice payments for these first episodes totaling $1.2 billion. (Medicare Payment Advisory Commission 2013).

18 We present margins for 2017 because our margin estimates exclude cap overpayments to providers. To calculate this exclusion accurately, we need the next year's claims data (i.e., the 2017 cap overpayment calculation requires 2018 claims data).

19 The cost per day calculation reflects aggregate costs for all types of hospice care (routine home, continuous home, general inpatient, and inpatient respite care). "Days" reflects the total number of days for which the hospice is responsible for care of its patients, regardless of whether the patient received a visit on a particular day. The cost per day estimates are not adjusted for differences in case mix or wages across hospices and are based on data for all patients, regardless of payer.

20 Between 2016 and 2017, the share of days accounted for by routine home care (RHC) rose slightly from 98.0 percent to 98.1 percent, while the share of days accounted for by general inpatient care (GIP) and continuous home care (CHC) dropped from 1.7 percent to 1.6 percent. Because there are substantial cost differences between the lower cost RHC and the higher cost GIP and CHC levels of care, these small shifts in the mix of days contribute to the decline in cost per day between 2016 and 2017.

21 Several other factors could have also contributed to the decline in total cost per day, such as the increase in average length of stay and the increase in the share of revenues accounted for by freestanding providers (which have lower costs than provider-based hospices).

22 The mix of days by level of care varies slightly by type of provider and ownership. RHC, the lowest cost level of care, accounted for 98.1 percent of hospice days overall in 2017. By type of provider, the share of days accounted for by RHC was about 98 percent for freestanding and home health–based hospices and about 97 percent of days for hospital-based hospice. By ownership, the share of days accounted for by RHC was about 99 percent for for-profit hospices and 97 percent for nonprofit hospices.

23 The aggregate Medicare margin is calculated as follows: ((sum of total Medicare payments to all providers) – (sum of total Medicare costs of all providers)) / (sum of total Medicare payments to all providers). Estimates of total Medicare costs come from providers' cost reports. Estimates of Medicare payments and cap overpayments are based on Medicare claims data.

24 Hospices that exceed the Medicare aggregate cap are required to repay the excess to Medicare. We do not consider the overpayments to be part of hospice revenues in our margin calculation.

25 For illustrative purposes, these examples assume that the hospice provides only RHC and that all care falls within a single cap year; they also do not incorporate the sequester or service intensity adjustment payments in the last seven days of life.

26 This hypothetical example involves a hospice that provided only RHC to its patients. The aggregate cap equates to a smaller number of days for the other, more intense, highly paid levels of care. However, the three other levels of care are typically furnished only for a short period, so the general principle that providers have room within the cap to furnish very long stays to some patients without exceeding the cap applies to providers that furnish the three higher intensity levels of care as well. In addition, this example involves beneficiaries who receive hospice care entirely within a cap year. When beneficiaries receive hospice care across multiple cap years, methodologies exist to apportion the hospice cap amount for the beneficiary across cap years. In that situation, the average length of stay that results in a hospice exceeding the cap varies and depends on several factors, such as how many beneficiaries receive care entirely within the cap year versus multiple cap years and what share of a beneficiary's hospice days occur in only the cap year versus within other cap years.

27 The share of hospices exceeding the cap declines slightly under rebasing. The driver of this decrease is the modest reduction to the RHC rates that occurs with rebasing, which results in some providers that were slightly over the cap in 2017 moving under the cap in a rebasing scenario.

Under the policy to wage adjust and reduce the cap by 20 percent, we estimate that 97 percent of hospices would experience a decline in the hospice aggregate cap. An estimated 3 percent of hospices (those in the highest wage index areas) would see an increase in their hospice aggregate cap because the increase in the cap resulting from wage adjustment would more than offset the 20 percent reduction to the cap.

28 Beginning in fiscal year 2020, due to the modest reduction in the payment rates for RHC associated with rebasing the payment rates by level of care, the hospice cap would be equivalent to 179 days of RHC for a provider with a wage index of 1.0.

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