

CHAPTER 12

---

**Hospice services**

---

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

- 12** For 2020, the Congress should reduce the fiscal year 2019 Medicare base payment rates for hospice providers by 2 percent.

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

## 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 nonpalliative treatment of their terminal illness and related conditions. In 2017, nearly 1.5 million Medicare beneficiaries (including more than half of decedents) received hospice services from 4,488 providers, and Medicare hospice expenditures totaled about \$17.9 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 continues to increase, suggesting greater awareness of and access to hospice services. In 2017, hospice use increased across almost all demographic and beneficiary groups examined. However, rates of hospice use remained lower for non-White beneficiaries than for White beneficiaries.

- **Capacity and supply of providers**—In 2017, the number of hospice providers increased by about 2.4 percent due to growth in the number of

### In this chapter

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

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

- ***Volume of services***—In 2017, the proportion of beneficiaries using hospice services at the end of life continued to grow, and length of stay among decedents increased. Of the total Medicare beneficiary decedents in 2017, 50.4 percent used hospice, up from 49.7 percent in 2016. Between 2016 and 2017, average length of stay among decedents increased from 87.8 days to 88.6 days and median length of stay was steady at 18 days.
- ***Marginal profit***—For hospice providers, Medicare payments exceeded marginal costs by roughly 14 percent in 2016, suggesting that providers have an incentive to treat Medicare patients. This rate of marginal profit is a positive indicator of patient access.

***Quality of care***—Limited quality data are available for hospice providers. In 2017, hospices' performance on seven quality measures and a composite measure related to processes of care at hospice admission was high, but most of the measures appear to be topped out. Hospice Consumer Assessment of Healthcare Providers and Systems<sup>®</sup> (CAHPS<sup>®</sup>) survey data for individual providers became available for the first time in 2018. Scores on the eight CAHPS measures were generally high; however, there is more variation and potential for improvement with the CAHPS measures than with the process measures.

***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 (5 percent increase in 2017) suggests 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 2016 Medicare margin, which is an indicator of the adequacy of Medicare payments relative to providers' costs, was 10.9 percent, up from 9.9 percent in 2015. The projected Medicare margin is 10.1 percent in 2019.

Given the margin in the industry and our other positive payment adequacy indicators, we recommend that the Congress reduce the Medicare hospice base payment rates by 2 percent for 2020. This recommendation would bring payment rates closer to costs, would lead to savings for beneficiaries and 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. ■

---

## 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 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 2017, nearly 1.5 million Medicare beneficiaries received hospice services, and Medicare expenditures totaled about \$17.9 billion.

Beneficiaries receive the Medicare hospice benefit only if they elect to do so; if they do, they agree to forgo Medicare coverage for conventional nonpalliative treatment of the terminal illness and related conditions.<sup>1</sup> 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.

Beneficiaries elect hospice for 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—are generally required to certify that the beneficiary has a life expectancy of six months or less if the illness runs its normal course.<sup>2</sup> 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.<sup>3</sup> Beneficiaries can disenroll from hospice at any time (referred to as "revoking hospice") and can reelect hospice for a subsequent period as long as the beneficiary meets the eligibility criteria.

Hospice use among Medicare beneficiaries has grown substantially since 2000, perhaps due to greater awareness of hospice use as well as the entry of new types of hospice providers and increased lengths of stay, particularly among beneficiaries with neurological conditions and certain other noncancer diagnoses. 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 2017. 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.<sup>4</sup> Between 2012 and 2014, Medicare spending for hospice services was flat at about \$15.1 billion each year. Between 2014 and 2017, Medicare hospice spending increased roughly 6 percent per year on average. This spending growth between 2014 and 2017 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 since 2015. Medicare is the largest payer of hospice services, covering more than 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 that 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

**TABLE  
12-1**

**Medicare hospice payment categories and rates**

Category	Description	Base payment rate, FY 2019	Share of hospice days, 2017
Routine home care*	Home care provided on a typical day: Days 1–60	\$196 per day	31.6%
	Home care provided on a typical day: Days 61+	\$154 per day	66.4
Continuous home care	Home care provided during periods of patient crisis	\$42 per hour	0.2
Inpatient respite care	Inpatient care for a short period to provide respite for primary caregiver	\$176 per day	0.3
General inpatient care	Inpatient care to treat symptoms that cannot be managed in another setting	\$758 per day	1.4

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 (\$41.56 per hour, with a maximum payment per day equal to about \$997) 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 are 2 percentage points lower for hospices that do not submit the required quality data. The percentages may not sum to 100 percent due to rounding.

\*In addition to the daily rate, Medicare pays \$42 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 (which is referred to as the service intensity adjustment).

Source: Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2018. *Update to hospice payment rates, hospice cap, hospice wage index, and the hospice pricer for FY 2019*. Manual System Pub 100–04 Medicare Claims Processing, Transmittal 4086, July 13.

home care (CHC), inpatient respite care (IRC), and general inpatient care (GIP) (Table 12-1). The four levels are distinguished by the location and intensity of the services provided. RHC is the most common level of hospice care, accounting for about 98 percent of all hospice days in 2017. Other levels of care—GIP, CHC, and IRC—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 to an informal caregiver. Unless a hospice provides GIP, CHC, or IRC 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.

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 (\$196 and \$154 per day, respectively, in 2019) (Table 12-1).<sup>5</sup> Referred to as the service intensity adjustment, Medicare pays an additional \$42 per hour for registered nurse and social worker visits

that occur during the last seven days of life (up to four hours are payable per day) for patients receiving RHC in 2019.

The new RHC payment structure is 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 less 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, including some 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 new payment structure that CMS implemented in 2016 is modest in scope but moves in this direction. Daily payment rates for hospice are adjusted to account for geographic differences in wage rates.<sup>6</sup>

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 Patient Protection and Affordable Care Act of 2010 (PPACA). An additional 0.3 percentage point reduction to the market basket update was required in fiscal years 2013 to 2017 and 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. The annual payment update impacted by the 2 percent reduction is two years after the data reporting year (e.g., a lack of reporting in fiscal year 2014 would affect the provider's update for fiscal year 2016).

Beneficiary cost sharing for hospice services is minimal. Prescription drugs and inpatient respite care are the only services potentially subject to cost sharing. Hospices may 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://medpac.gov/docs/default-source/payment-basics/medpac\\_payment\\_basics\\_18\\_hospice\\_final\\_sec.pdf?sfvrsn=0](http://medpac.gov/docs/default-source/payment-basics/medpac_payment_basics_18_hospice_final_sec.pdf?sfvrsn=0).)

### **Medicare hospice payment limits (“caps”)**

The Medicare hospice benefit was designed 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 inclusion of the Medicare hospice benefit in TEFRA was based in large part on the premise that the new benefit would be a less costly alternative to conventional end-of-life care (Government Accountability Office 2004, Hoyer 2007). 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, 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). Studies have been mixed on whether hospice has

saved the Medicare program money in the aggregate compared with conventional care. Recent 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 may 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 routine home care payment rate.

The second, more visible cap limits the aggregate Medicare payments that an individual hospice can receive. This cap was implemented at the outset of the hospice benefit with the goal of ensuring that Medicare payments did not exceed the cost of conventional care for patients at the end of life. Under the cap, if a hospice's total Medicare payments exceed its total number of Medicare beneficiaries served multiplied by the cap amount (\$29,205 in 2018), it must repay the excess to the program.<sup>7,8,9</sup> 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. The number of hospices that exceed the payment cap has been low, historically, but we have found that increases in the number of hospices and increases in very long stays have resulted in more hospices exceeding the cap, with the number peaking at 12.7 percent in the most recent year of data (2016). The hospice cap is the only significant fiscal constraint on the growth of program expenditures for hospice care (Hoyer 2007).

---

### **Are Medicare payments adequate in 2019?**

---

To address whether payments in 2019 are adequate to cover the costs of the efficient delivery of care and how much providers' payments should change in the coming year (2020), we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access

**TABLE  
12-2**

**Use of hospice continues to increase**

**Share of Medicare decedents who used hospice**

	<b>2000</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>Average annual percentage point change 2000–2016</b>	<b>Percentage point change 2016–2017</b>
All beneficiaries	22.9%	47.9%	48.6%	49.7%	50.4%	1.7	0.7
FFS beneficiaries	21.5	46.8	47.6	48.7	49.5	1.7	0.8
MA beneficiaries	30.9	50.9	51.1	51.9	52.4	1.3	0.5
Dual eligibles	17.5	42.6	43.1	44.1	44.9	1.7	0.8
Medicare only	24.5	49.6	50.3	51.5	52.1	1.7	0.6
Age							
<65	17.0	29.5	29.9	30.1	30.4	0.8	0.3
65–74	25.4	40.8	41.2	41.5	41.6	1.0	0.1
75–84	24.2	49.0	49.5	50.7	51.2	1.7	0.5
85+	21.4	56.1	57.1	59.2	60.3	2.4	1.1
Race/ethnicity							
White	23.8	49.8	50.5	51.8	52.5	1.8	0.7
African American	17.0	37.6	38.3	38.9	39.5	1.4	0.6
Hispanic	21.1	41.4	41.9	42.9	42.7	1.4	-0.2
Asian American	15.2	33.8	35.4	36.0	36.9	1.3	0.9
North American Native	13.0	34.8	35.0	35.8	36.2	1.4	0.4
Sex							
Male	22.4	43.9	44.5	45.4	46.0	1.4	0.6
Female	23.3	51.5	52.3	53.7	54.5	1.9	0.8
Beneficiary location							
Urban	24.2	49.1	49.7	50.8	51.3	1.7	0.5
Micropolitan	18.3	44.1	44.9	46.3	47.2	1.8	0.9
Rural, adjacent to urban	17.5	43.4	44.5	45.7	46.9	1.8	1.2
Rural, nonadjacent to urban	15.0	38.1	38.9	40.3	41.5	1.6	1.2
Frontier	13.1	32.5	33.6	33.8	34.4	1.3	0.6

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 chart 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.

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

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: Use of hospice continues to increase**

In 2017, hospice use among Medicare beneficiaries increased, continuing the trend of a growing proportion of beneficiaries using hospice services at the end of life. Of the Medicare beneficiaries who died that year, 50.4 percent

used hospice, up from 49.7 percent in 2016 and 22.9 percent in 2000 (Table 12-2). Hospice use varied in 2017 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 Hispanics.

Hospice use is higher among decedents in MA than in FFS, but the gap has been closing (Table 12-2). In 2017, about 50 percent of Medicare FFS decedents and about 52 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).

Hospice use varies by other beneficiary characteristics (Table 12-2). In 2017, a smaller proportion of Medicare decedents who were dually eligible for Medicare and Medicaid used hospice compared with the rest of Medicare decedents (45 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. 60 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.

Hospice use also varies by racial and ethnic group (Table 12-2). As of 2017, 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 2016 and 2017 except for Hispanics, for whom the rate declined slightly (from 42.9 percent to 42.7 percent). Overall since 2000, hospice use has grown substantially for all racial and ethnic groups, but differences persist across these groups in the rates of use. 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 12-2).<sup>10</sup> In 2017, the share of decedents residing in urban counties who used hospice was about 51 percent; in micropolitan counties and rural counties adjacent to urban counties, about 47 percent; in rural nonadjacent counties, almost 42 percent; and in frontier counties, about 34 percent. Utilization rates for beneficiaries residing in all these areas increased in 2017.

One driver of increased hospice use over the past decade 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 2017, 74 percent of Medicare beneficiaries who used hospice had a noncancer diagnosis, compared with 73 percent in 2016 and 48 percent in 2000 (data not shown). As of 2017, the most common noncancer primary diagnoses reported among hospice beneficiaries were heart and circulatory disorders (28 percent) and neurological conditions (23 percent).

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

In 2017, 4,488 hospices provided care to Medicare beneficiaries, a 2.4 percent increase from the prior year, continuing more than 10 years of growth in the number of hospices providing care to Medicare beneficiaries (Table 12-3, p. 318). For-profit hospices accounted entirely for the net increase in the number of hospices. Between 2016 and 2017, the number of for-profit hospices increased by about 5 percent, while the number of nonprofit hospices and government-owned hospices declined by 3.5 percent and 4.8 percent, respectively. As of 2017, about 69 percent of hospices were for profit, 27 percent were nonprofit, and 4 percent were government owned.

Between 2016 and 2017, freestanding hospices (which are highly correlated with for-profit ownership status) accounted for all of the net increase in the number of providers (Table 12-3, p. 318). During this period, the number of freestanding providers increased by 4.5 percent, while the number of hospital-based hospices and home health-based hospices declined by 6.0 percent and 2.5 percent, respectively.<sup>11</sup> The number of skilled nursing

**TABLE  
12-3**

**Increase in total number of hospices driven by growth in for-profit providers**

Category	2000	2007	2015	2016	2017	Average annual percent change		Percent change 2016-2017
						2000-2007	2007-2016	
All hospices	2,255	3,250	4,199	4,382	4,488	5.4%	3.4%	2.4%
For profit	672	1,676	2,729	2,940	3,097	13.9	6.4	5.3
Nonprofit	1,324	1,337	1,294	1,274	1,230	0.1	-0.5	-3.5
Government	257	237	176	168	160	-1.2	-3.8	-4.8
Freestanding	1,069	2,103	3,163	3,369	3,519	10.1	5.4	4.5
Hospital based	785	683	517	501	471	-2.0	-3.4	-6.0
Home health based	378	443	494	487	475	2.3	1.1	-2.5
SNF based	22	21	25	25	22	-0.7	2.0	-12.0
Urban	1,455	2,237	3,235	3,474	3,587	6.6	5.0	3.3
Rural	757	965	920	901	878	3.5	-0.8	-2.6

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.

facility (SNF)-based hospices, which is very small, declined by three providers. As of 2017, about 78 percent of hospices were freestanding, 10 percent were hospital based, 11 percent were home health based, and less than 1 percent were SNF based.

Overall, the supply of hospices increased substantially between 2000 and 2017 in both urban and rural areas. The number of rural hospices has declined since its peak in 2007, with a decline of about 3 percent in 2017 (Table 12-3). As of 2017, 80 percent of hospices were in urban areas and 20 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 2017 was concentrated in two states—California and Texas. Between 2016 and 2017, California gained 114 hospices and Texas gained 30 hospices, continuing the trend in recent years of substantial market entry by hospice providers in these two states. Since 2013, California has gained an additional 100 hospices each year, and Texas has gained an additional 30 hospices each year on average. In 2017, some states saw the number of hospice providers decline, although these changes were generally modest. The five states (Alabama, Indiana, Louisiana, Oklahoma, and South Carolina) with the largest decline in the number of providers in 2017 experienced an increase in hospice use among decedents that year.

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).

**TABLE  
12-4**

**Hospice utilization and spending continued to increase in 2017**

Category	2000	2015	2016	2017	Average annual change, 2000–2015	Change, 2015–2016	Change, 2016–2017
Total spending (in billions)	\$2.9	\$15.9	\$16.8	\$17.9	11.9%	6.0%	6.4%
Number of hospice users (in millions)	0.534	1.381	1.427	1.492	6.5%	3.3%	4.6%
Number of hospice days for all hospice beneficiaries (in millions)	25.8	95.9	101.2	106.3	9.1%	5.5%	5.1%
Average length of stay among decedents (in days)	53.5	86.7	87.8	88.6	3.3%	1.3%	0.9%
Median length of stay among decedents (in days)	17	17	18	18	0 days	1 day	0 days

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.

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

**Volume of services: Hospice use and length of stay increased in 2017**

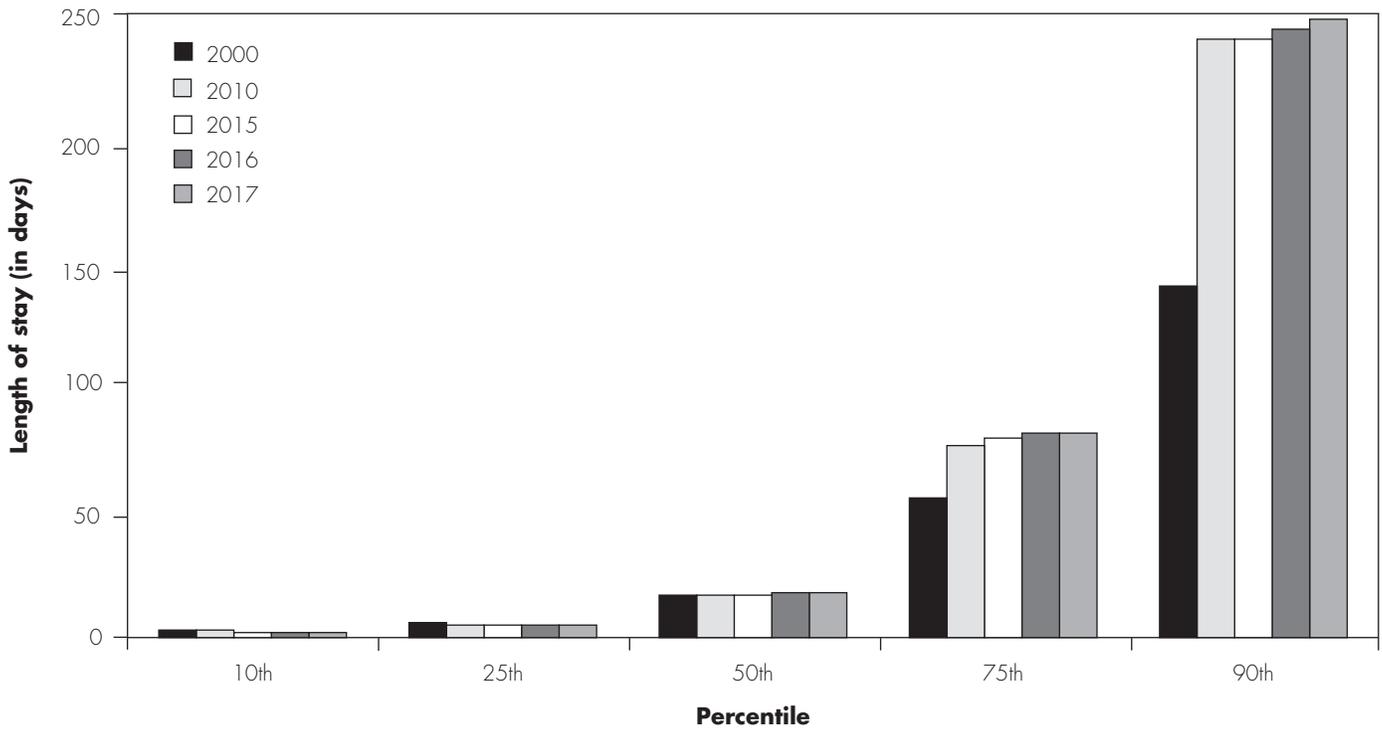
In 2017, the number of Medicare beneficiaries receiving hospice services continued to increase. About 1.49 million beneficiaries used hospice services, up 4.6 percent from 2016 (Table 12-4). Between 2016 and 2017, the number of hospice days furnished to Medicare beneficiaries also increased about 5 percent from about 101 million days to about 106 million days. During that period, the mix of hospice days by level of care shifted: The share of days accounted for by routine home care increased slightly.<sup>12</sup>

Between 2016 and 2017, hospice average length of stay among decedents increased slightly from 87.8 days to 88.6 days, while median length of stay was stable at 18 days (Table 12-4). Growth in average length of stay was driven by an increase in length of stay for patients with the longest stays. During this period, hospice length of stay at the 90th percentile increased from 244 days to 248 days (Figure 12-1, p. 320). In contrast, length of stay remained unchanged at the 10th percentile (2 days), 25th percentile (5 days), 50th percentile (18 days), and 75th percentile (82 days).

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 248 days in 2017. 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 10th percentile, at 2 or 3 days.

Hospice length of stay is generally similar for hospice decedents in FFS Medicare and MA. The most significant difference is that very long stays in hospice are slightly shorter for beneficiaries in MA than for those in FFS (243 days for MA beneficiaries compared with 250 days for FFS beneficiaries at the 90th percentile of stays as of 2017). There were also slight differences at the median (18 days for MA beneficiaries vs. 17 days for FFS beneficiaries) and 75th percentile (80 days for MA beneficiaries vs. 82 days for FFS beneficiaries).

With growing use of hospice, rates of patients dying in the hospital have declined, but evidence is mixed on the

**FIGURE  
12-1****Length of stay among hospice patients with the longest stays increased slightly in 2017**

Note: 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.

extent to which the decline has been accompanied by a reduction in the overall intensity of care in the last months of life. Teno et al. (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 increased at the beginning of the 2000 to 2015 window but decreased in later years, with the net effect being an 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, and 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). These very short stays stem largely from

**TABLE  
12-5**

**Hospice length of stay among decedents by beneficiary and hospice characteristics, 2017**

Characteristic	Average length of stay (in days)	Percentile of length of stay				
		10th	25th	50th	75th	90th
<b>Beneficiary</b>						
Diagnosis						
Cancer	52	3	6	17	51	129
Neurological conditions	149	4	9	36	170	440
Heart/circulatory	94	2	5	16	87	279
COPD	118	2	6	27	126	344
Other	54	2	3	17	35	148
Main location of care						
Home	91	4	9	26	88	242
Nursing facility	105	3	6	20	97	307
Assisted living facility	153	5	13	51	186	436
<b>Hospice</b>						
Hospice ownership						
For profit	109	3	6	23	102	319
Nonprofit	67	2	4	13	56	181
Type of hospice						
Freestanding	91	2	5	18	80	259
Home health based	68	2	5	14	59	186
Hospital based	56	2	4	12	47	149

Note: COPD (chronic obstructive pulmonary disease). Length of stay is calculated for Medicare beneficiaries who died in 2017 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.

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.

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 (Medicare Payment Advisory Commission 2009). In addition, some analysts point to the requirement that beneficiaries forgo conventional nonpalliative 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 model (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 model and receive palliative and supportive care from a hospice provider while continuing to receive "curative" care from other providers.<sup>13</sup> Beginning in 2016, under the physician fee schedule, Medicare pays for advance care

## New models and services related to end-of-life care

The Medicare Care Choices Model (MCCM) being tested by CMS's Center for Medicare & Medicaid Innovation and advance care planning visits that became billable under the Medicare physician fee schedule in 2016 are two recent initiatives that have the potential to affect end-of-life care and hospice use.

**Medicare Care Choices Model.** The MCCM is a model that offers certain beneficiaries who are hospice eligible but not enrolled in hospice the option of receiving supportive services from a hospice while continuing to receive conventional care. The model is intended to test whether beneficiaries would be willing to elect supportive palliative care from hospice providers and what the effect is on quality of care, cost of care, and whether beneficiaries will subsequently choose to enroll in the Medicare hospice benefit.

Under the MCCM, care is directed by the nonhospice provider who referred the beneficiary to the model, and the hospice provider plays a supportive role. Hospice providers are paid \$400 per month (\$200 per half month) to provide supportive services such as care coordination, symptom management, counseling, in-home nurse and aide visits, and other services determined to meet the patient's needs based on a comprehensive assessment.

The model is scheduled to span five years, from January 2016 through December 2020. CMS selected about 140 hospice providers to participate, with participation being phased in (half were scheduled to start in January 2016 and the remainder in January 2018). During model development, CMS indicated that the model could enroll up to 150,000 beneficiaries.

To be eligible to enroll in the MCCM, a beneficiary must:

- have certain terminal diagnoses (i.e., cancer, chronic obstructive pulmonary disease, human immunodeficiency virus/acquired immune deficiency syndrome, or congestive heart failure) and a life expectancy of six months or less if the disease runs its normal course;

- in the last 12 months have been enrolled in Medicare fee-for-service (FFS) Part A and Part B, had at least 1 hospital encounter, and had at least 3 office visits;
- in the last 30 days have continuously lived in a traditional home and not been enrolled in the Medicare hospice benefit; and
- live in an area served by a hospice participating in the model.

In April 2016 and January 2017, CMS relaxed some of the MCCM eligibility criteria in an effort to address low enrollment. The criteria described above reflect those changes.

A CMS contractor released its first report evaluating the MCCM (Miescier 2018), which covers the first 18 months (January 2016 to June 2017). Enrollment in the model (about 1,100 enrollees) has been lower than expected and some hospices selected for the model have withdrawn. The report attributes low enrollment in part to the eligibility criteria limiting potential participants. Hospices that withdrew from the model cited concerns about low enrollment, reporting requirements, and the adequacy of the \$400 per month payment. Enrollment in the model has been concentrated among a few hospices, with 8 out of 71 hospices accounting for 59 percent of enrollment.

Because of the low number of participants, the first evaluation report was unable to estimate the impact of the MCCM on utilization of services and spending, compared with what would have occurred in the absence of the program. However, the report provides initial data on participants' service use, expenditures, and transitions to hospice. Those beneficiaries who participated in the MCCM and died before June 30, 2017, were in the program an average of 64 days and received about 11 visits, calls, or mail or email contacts per month from hospice staff, with about three-quarters of those contacts being in person. Services were most commonly provided by care coordinators, nurses, and counselors. About 83 percent of those

(continued next page)

## New models and services related to end-of-life care (cont.)

MCCM beneficiaries who died before June 30, 2017, transitioned to the hospice benefit before death, with an average length of hospice enrollment of 30 days. It is also notable that among those beneficiaries who were referred to and eligible for the MCCM, about a quarter chose to enroll directly into hospice rather than the MCCM. The report found that MCCM enrollees and caregivers were satisfied with the support and services received from the MCCM.

**Advance care planning visits.** Advance care planning can make it easier for interested beneficiaries to create advance directives or medical orders for life-sustaining treatment and can facilitate care consistent with individual patients' preferences. Beginning in 2016, Medicare covers advance care planning conversations for beneficiaries who wish to receive these services and pays for these conversations (between a beneficiary and his or her physician, an advanced practice registered nurse, or a physician assistant) under the physician fee schedule. In 2016 and 2017, the Medicare program and beneficiaries spent \$50 million and \$86 million, respectively, on advance care planning visits; in these years, the numbers of FFS beneficiaries who received an advance care planning visit were about 560,000 and 960,000, respectively.

Because advance care planning services only began being covered in 2016 and because these services are available to patients at various stages of health, it is not surprising that only a small share of beneficiaries who received advance planning services in 2016 enrolled in

**TABLE  
12-6**

### Use of hospice among decedents who received an advance care planning visit, 2016

	Share of beneficiaries who received advance care planning visit in 2016
Died in 2016	8.4%
Used hospice	5.0
Did not use hospice	3.5
Died in 2017	7.3
Used hospice	4.4
Did not use hospice	2.9

Note: Numbers may not sum to totals due to rounding.

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

hospice or died in 2016 or 2017. Of those receiving an advance care planning visit in 2016, about 16 percent died in 2016 or 2017, and nearly 60 percent of those individuals used hospice the year they died (Table 12-6). The rate of hospice use among decedents receiving an advance care planning visit is higher than the overall rate of hospice use for decedents (see Table 12-2, p. 316). However, it is too soon to know whether advance care planning is contributing to an increase in hospice use rates. ■

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 text box). 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 reduce

**TABLE  
12-7****More than half of Medicare hospice spending in 2017 was for patients with stays exceeding 180 days**

	<b>Medicare hospice spending, 2017 (in billions)</b>
All hospice users in 2017	\$17.9
Beneficiaries with LOS > 180 days	10.1
Days 1–180	3.4
Days 181–365	3.2
Days 366+	3.6
Beneficiaries with LOS ≤ 180 days	7.8

Note: LOS (length of stay). “LOS” indicates the beneficiary’s lifetime LOS as of the end of 2017 (or at the time of discharge in 2017 if the beneficiary was not enrolled in hospice at the end of 2017). All spending presented in the chart occurred only in 2017. 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.

costs since it is commonly thought that “end-of-life care is often overly aggressive and inconsistent with patients’ preferences” (Gilstrap et al. 2018). 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 2017, Medicare spent about \$10 billion, more than half of hospice spending that year, on patients with stays exceeding 180 days (Table 12-7). About \$3.6 billion of that spending was on additional hospice care for patients who had already received at least one year of hospice services. Under the flat per diem payment system, which was in effect before 2017, long stays were more profitable than short stays, which appears to have led some hospices to pursue revenue-generation strategies by focusing on patients with long stays, some share of whom did not meet the eligibility criteria. Although the 2017 payment changes 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.

Hospice lengths of stay vary by observable patient characteristics, such as patient diagnosis and location, which permit providers to identify and enroll patients likely to have long (more profitable) stays if they wish to do so (Table 12-5, p. 321). For example, Medicare decedents in 2017 with neurological conditions and chronic obstructive pulmonary disease had substantially higher average lengths of stay (149 days and 118 days, respectively) compared with decedents with cancer (52 days).<sup>14</sup> While a number of factors affect length of stay for hospice beneficiaries, differences in the degree of uncertainty associated with predicting life expectancy for various conditions contribute to length of stay differences by condition. Length of stay also varies by the setting in which care is provided. In 2017, average length of stay was higher among Medicare decedents whose main care setting was an assisted living facility (ALF) (153 days) or a nursing facility (105 days) compared with home (91 days) (Table 12-5, p. 321). 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.

Lengths of stay vary by type of provider ownership as well as by patient characteristics (Table 12-5, p. 321). In 2017, average length of stay was substantially longer among for-profit hospices than among nonprofit hospices (109 days compared with 67 days, respectively). 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, the average length of stay was 177 days in for-profit hospices and 118 days in nonprofits (data not shown).

Among the hospices with very long stays are those that exceed the hospice aggregate cap. In 2016, about 12.7 percent of hospices exceeded the aggregate payment cap, a small increase from the prior year (12.3 percent in 2015) (Table 12-8).<sup>15</sup> On average, above-cap hospices exceeded the cap by about \$295,000 in 2016. The average amount by which above-cap hospices exceed the aggregate cap has been decreasing over time. As shown in prior reports, above-cap hospices have substantially longer stays and higher rates of discharging patients alive than other hospices.<sup>16</sup> This pattern suggests that above-cap hospices

**TABLE  
12-8**

**Hospices that exceeded Medicare’s annual payment cap, selected cap years**

	<b>2002</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Percent of hospices exceeding the cap	2.6%	10.7%	12.2%	12.3%	12.7%
Average payments over the cap per hospice exceeding it (in thousands)	\$470	\$460	\$370	\$320	\$295
Payments over the cap as percent of overall Medicare hospice spending	0.6%	1.3%	1.2%	1.0%	1.0%
Total Medicare hospice spending (in billions)	\$4.4	\$15.1	\$15.0	\$15.7	\$16.7

Note: The cap year is defined as the period beginning November 1 and ending October 31 of the following year. Total spending for 2002 reflects the fiscal year; total spending for years 2012 to 2016 reflects the cap 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.

are admitting patients who do not meet the hospice eligibility criteria, which merits further investigation by the Office of Inspector General 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 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 about 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 is to 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, referred to as service intensity adjustment (SIA) 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 SIA payments for registered nurse and social worker visits that occur during the last seven days of life for patients receiving routine home care. 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 2017, Medicare paid hospice providers roughly \$130 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 2017 to see if they changed over the first two years of the new payment system. The prevalence and length of visits in the last days

**TABLE  
12-9**

**Nurse and social worker visit time in the last days of life changed little under the new payment system that began in 2016**

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

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.

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

of life changed very modestly between 2015 and 2017 (Table 12-9). Overall, between 2015 and 2017, the average number of nurse visits per day increased somewhat (from 0.59 visits per day to 0.63 visits per day) during the last 7 days of life. At the same time, the average length of nurse visits during the last days of life appears to have declined slightly, from about 75 minutes (5.0 fifteen-minute increments) to 70 minutes (4.66 fifteen-minute increments) per visit. The modest increase in nurse visit frequency offset the modest decrease in the length of visits, with the average visit time per day remaining about 44 minutes (2.92 to 2.96 15-minute increments). Social worker visits in the last days of life were less frequent and changed little during this period. Overall, these data suggest that, in the first two years of the new payment system, the additional SIA payments have led to little change in the 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.<sup>17</sup> For hospice providers, we find that Medicare payments in 2017 exceeded marginal costs by roughly 14 percent, suggesting that providers had an incentive to treat Medicare patients. This profit margin is thus a positive indicator of patient access.

**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. Since 2017, Hospice Compare has included data on 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. Scores on one process measure (a pain assessment measure) and a composite measure (based on the seven process measures) were somewhat lower and more varied. In 2018, provider-level data from the hospice Consumer Assessment of Healthcare Providers and Systems® (CAHPS®)—which is a survey of bereaved

family members of hospice patients—became available for the first time. Scores on the hospice CAHPS measures are generally high, but there is more variation and potential for improvement with the CAHPS measures than the process measures. CMS has also established additional quality measures related to the provision of hospice visits at the end of life that will be available on Hospice Compare in the future.

### **Background on the Hospice Quality Reporting Program**

In accord with PPACA, beginning in fiscal year 2014, hospices that do not report quality data receive a 2 percentage point reduction in their annual payment update. 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, the addressing of beliefs and values if desired by the patient, and provision of a bowel regimen for patients treated with an opioid. Hospices were required to report on these measures during the second half of calendar year 2014 to receive a full payment update in fiscal year 2016. Hospices continue to be required to report on these measures.

CMS added two quality measures effective April 2017. The first measure consists of a pair of indicators related to hospices' provision of visits when death is imminent: (1) the share of patients receiving a registered nurse, physician, nurse practitioner, or physician assistant visit in the last three days of life and (2) the share of patients receiving at least two visits from a social worker, chaplain or spiritual counselor, licensed practical nurse, or hospice aide in the last seven days of life. The second measure is a composite measure that gauges the share of patients who received all seven of the original process measures on admission to hospice.

In 2015, the Hospice Quality Reporting Program began requiring hospice providers (except very small providers) to participate in a CAHPS hospice survey. Hospices are required to contract with a CMS-approved vendor to administer the survey. The survey gathers information from the patient's informal caregiver (typically a family member) after the patient's death. The survey addresses aspects of hospice care that are thought to be important

to patients and for which informal 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. Participation in the CAHPS hospice survey and the Hospice Item Set affects payment updates for fiscal year 2017 and thereafter.

### **Hospice performance on process measures related to care at admission**

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 2017, hospices performed the process appropriately between about 96 percent and 99 percent of the time (aggregate score across all hospices) (Table 12-10, p. 328). Aggregate 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 somewhat lower at about 88 percent. CMS's composite measure 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). The 2017 aggregate score on a composite of the seven process measures was 86 percent. Between 2016 and 2017, aggregate scores for each of the seven process measures and the composite measure increased.

Across hospice providers, performance on most process measures varied little. In 2017, for all measures except pain assessment, at least three-quarters of hospices performed the activity appropriately between about 94 percent and 100 percent of the time. On the pain assessment process measure, scores varied somewhat more, ranging from about 78 percent at the 25th percentile to about 98 percent at the 75th percentile. The composite measure scores also varied (from about 75 percent at the 25th percentile to almost 95 percent at the 75th percentile).

Although the high scores on these 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. Six of the seven

**TABLE  
12-10**

**Scores on the seven hospice process measures increased in 2017 and are mostly topped out**

Measure	2016 aggregate average	2017 aggregate average	2017 provider percentiles		
			25th	50th	75th
Treatment preferences	98.5%	99.1%	99.4%	100.0%	100.0%
Beliefs and values	94.2	96.3	95.6	99.2	100.0
Dyspnea screening	98.1	98.7	98.0	99.6	100.0
Dyspnea treatment	96.6	97.3	95.0	98.4	100.0
Pain screening	94.9	96.7	95.0	98.4	100.0
Pain assessment	76.7	87.5	78.3	90.9	98.1
Bowel regimen	95.4	96.5	94.0	98.9	100.0
Composite of all 7 measures	78.7	86.0	75.0	86.7	94.6

Note: 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. The aggregate average is a beneficiary-level estimate and reflects the share of all patients nationally for whom the process measure was appropriately performed at admission. The percentiles reflect provider-level performance scores.

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

individual process measures are topped out. Scores on the pain assessment measure and the composite measure are somewhat lower, but these measures could also be at risk of topping out in the future if performance continues to improve.

CAHPS data for individual providers first became available on Hospice Compare in 2018. CMS reports scores on eight measures. Scores on the hospice CAHPS measures are generally high, but there is more variation and potential for improvement with the CAHPS measures than with the seven process measures (Table 12-11). CAHPS scores were highest on measures related to providing emotional support and treating patients with respect (roughly 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 caregiver training (average scores on these measures were 75 percent to 78 percent). 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 85 percent would definitely recommend the hospice to others.

CMS has indicated that it is considering adopting additional measures, such as a measure related to live discharges and burdensome transitions. 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. The rate at which hospice providers discharge patients alive could signal quality issues. Hospice providers are expected to have some rate of live discharges because (1) some patients change their mind and revoke their hospice benefit, (2) their condition improves and they no longer meet the hospice eligibility criteria, or (3) they may change hospice providers

**TABLE  
12-11**

**Scores on hospice CAHPS® quality measures, January 2016 to December 2017**

	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	85	80	85	90
Treating patients with respect	91	88	91	93
Help for pain and symptoms	75	71	75	79
Hospice team communication	80	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 2016–December 2017.

or move out of the hospice providers’ service area. However, analyses showing providers with substantially higher rates of live discharge than their peers 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.

In 2017, the overall rate of live discharge (that is, live discharges as a share of all discharges) was 16.7 percent (Table 12-12, p. 330) and has changed minimally since 2015. This trend comes after a period of several

years (2013 to 2015) when the live-discharge rate was declining (from 18.4 percent to 16.7 percent). Hospice providers report the reason for live discharge on claims. Between 2016 and 2017, the mix of reasons reported for live discharge was relatively stable. The most common reasons reported were beneficiary was no longer terminally ill and beneficiary revocation (just under 40 percent for both in 2017). Other reasons—such as transferred to a different hospice, moved out of service area, and discharged for cause—are less common. However, over the last few years, the share of live discharges attributed to moving out of the service area has increased slightly.

Live-discharge rates vary by patient diagnosis. In 2017, the rate was higher for hospice beneficiaries with heart and circulatory conditions (19 percent), neurological conditions (20 percent), and chronic obstructive pulmonary disease (24 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. 321).

Some providers have unusually high live-discharge rates. In 2017, about 25 percent of providers had a live-discharge

**TABLE  
12-12**

**Rates of hospice live discharge and reported reason for discharge, 2013–2017**

Category	2013	2015	2016	2017
Live discharges as a share of all discharges, by reason for live discharge				
All live discharges	18.4%	16.7%	16.9%	16.7%
No longer terminally ill	7.8	6.9	6.8	6.5
Beneficiary revocation	7.3	6.3	6.4	6.4
Transferred hospice providers	2.0	2.1	2.1	2.1
Moved out of service area	0.9	1.0	1.2	1.4
Discharged for cause	0.4	0.3	0.3	0.3
Providers' overall rate of live discharge as a share of all discharges, by percentile				
10th percentile	9.3%	8.4%	8.3%	8.3%
25th percentile	13.2	12.0	12.2	12.6
50th percentile	19.4	18.4	19.1	19.3
75th percentile	30.2	29.6	31.3	31.8
90th percentile	47.2	50.0	53.3	53.0

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.

rate greater than approximately 32 percent, and 10 percent of providers had live-discharge rates of 53 percent or more (Table 12-12).<sup>18</sup> Hospices with very high live-discharge rates are disproportionately for profit, small, and recent entrants to the Medicare program (entered in 2010 or after), and they have an above-average prevalence of exceeding the aggregate payment cap.

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 they assert that these discharges reflect beneficiary preferences and are not in the hospice's control. Because beneficiaries

may choose to revoke hospice or transfer hospice providers for a variety of reasons, which in some cases may be related to the hospice provider's business practices or quality of care, we include revocations and transfers in our analysis. A CMS contractor, Abt Associates, found that rates of live discharges—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 2017, the number of for-profit providers grew by about 5 percent, indicating that capital is accessible to these providers. In addition, publicly traded hospice companies reported positive financial indicators in their fall 2018 filings, with favorable growth in admissions, net revenues, or both. According to financial analysts, the hospice sector garnered substantial investment interest from other health care companies and private equity investors in 2018. For example, in 2018, a major health insurer and private equity firms worked together to acquire two large hospice chains (Baxter 2018). In addition, a large publicly traded hospice company announced that it will be acquiring a large hospice chain (Kacik 2018). It is also notable that CMS’s changes to the hospice payment system for 2016 have generally been viewed by financial analysts as modest and a sign of stability in the sector.

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 their cost reports prevent us from calculating a reliable estimate of total margins for hospices. Among hospice payers, however, Medicare accounts for more than 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 2016 cost reporting year, the latest period for which complete cost report and claims data are available.<sup>19</sup> To understand the variation in margins across providers, we also examined the variation in costs per day across providers.

**TABLE  
12-13**

**Total hospice costs per day varied by type of provider, 2016**

	Average total cost per day
All hospices	\$149
Freestanding	143
Home health based	159
Hospital based	210
For profit	133
Nonprofit	175
Above cap	136
Below cap	150
Urban	150
Rural	140

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). 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.

### 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 2016, hospice costs per day across all hospice providers were about \$149 on average, a slight decrease from \$150 in the previous year.<sup>20</sup> Some of the decline in cost per day is accounted for by a shift in the mix of hospice days, with the share of days accounted for by routine home care (the lowest cost level of care) increasing in 2016.<sup>21,22</sup> 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.<sup>23</sup>

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 (see Table 12-5, p. 321). Another factor that

**TABLE  
12-14**

**Hospice costs and payment rates by level of care, 2016**

Category	2016 cost per day*				FY 2016 payment rate per day*	Percent of days 2016
	Average	25th percentile	50th percentile	75th percentile		
Routine home care	\$129	\$109	\$129	\$156	\$162	98.0%
General inpatient care	870	560	851	1,207	720	1.5
Inpatient respite care	442	212	312	511	167	0.3
Continuous home care* (dollars per hour)	50	17	50	88	39	0.3

Note: FY (fiscal year). Medicare payment rates and costs are rounded to the nearest dollar.

\*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.

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 contribute to provider-based hospices having higher costs than freestanding providers. The Commission believes payment policy should focus on the efficient delivery of services to Medicare beneficiaries. If freestanding hospices are able to provide high-quality care at a lower cost than provider-based hospices, payment rates should be set accordingly, and the higher costs of provider-based hospices should not be a reason for increasing Medicare payment rates.

The total cost per day estimates reflect the total cost per day averaged across the four levels of hospice care. CMS has recently restructured the hospice cost report to provide information on cost per day by level of care. With the restructured cost report, we are able to estimate how hospice costs per day differ by level of care. The new cost report became effective for freestanding providers beginning cost report year 2015 and for most provider-based hospices for the 2016 cost report year.

Table 12-14 presents estimates of hospice costs by level of care for freestanding and provider-based hospices in 2016. As expected, costs vary by level of care. The average cost per day is lowest for RHC, the typical level of hospice care, and is higher for the more specialized levels of care. RHC, which accounts for the vast majority of days in hospice, had an average and median cost per day of \$129,

while the Medicare RHC payment rate was substantially higher in 2016 at an average of \$162 per day (Table 12-14). Medicare’s payment rate for the other less frequent levels of care appears to be lower than the average and median costs per day for freestanding providers. The cost per day for general inpatient care was \$870 on average and \$851 at the median, compared with a payment rate of \$720. The cost per day for inpatient respite care was \$442 on average and \$312 at the median, compared with a payment rate of about \$167.<sup>24</sup> The cost per hour for continuous home care was \$50 on average and at the median, compared with a payment rate of about \$39 per hour in 2016. These data suggest the payment rates by level of care are out of balance and may warrant changes in the future.<sup>25</sup>

**Hospice margins**

The aggregate Medicare margin for hospice providers was 10.9 percent in 2016, reaching its highest level in more than 10 years.<sup>26</sup> Between 2015 and 2016, the aggregate hospice Medicare margin increased from 9.9 percent to 10.9 percent (Table 12-15). In 2016, Medicare margins varied widely across individual hospice providers: -6.8 percent at the 25th percentile, 10.6 percent at the 50th percentile, and 23.6 percent at the 75th percentile (data not shown). Our estimates of Medicare margins from 2010 to 2016 exclude overpayments to above-cap hospices and are calculated based on Medicare-allowable, reimbursable costs consistent with our approach in other Medicare sectors.<sup>27</sup>

**TABLE  
12-15**

**Hospice Medicare margins by selected characteristics, 2010–2016**

Category	Share of hospices 2016	2010	2011	2012	2013	2014	2015	2016
All	100%	7.4%	8.7%	10.0%	8.5%	8.2%	9.9%	10.9%
Freestanding	77	10.7	11.8	13.3	12.0	11.6	13.8	13.9
Home health based	11	3.4	6.1	5.5	2.5	3.7	3.3	6.2
Hospital based	11	-17.1	-17.0	-17.1	-17.4	-20.8	-23.8	-16.7
For profit (all)	67	12.3	14.7	15.4	14.7	14.6	16.5	16.8
Freestanding	60	13.4	15.9	16.5	15.7	15.4	17.8	17.6
Nonprofit (all)	29	2.9	2.3	3.6	0.9	-0.9	0.1	2.7
Freestanding	15	7.6	6.4	7.7	5.2	3.5	5.0	6.4
Urban	79	7.7	9.0	10.3	8.8	8.7	10.4	11.4
Rural	21	4.6	5.2	7.3	5.9	3.3	4.8	6.2
Patient volume (quintile)								
Lowest	20	-4.8	-3.8	-2.3	-0.4	-4.9	-5.3	-3.1
Second	20	4.1	2.7	5.8	5.9	2.0	4.3	6.2
Third	20	6.8	7.6	9.7	9.3	9.8	10.7	11.2
Fourth	20	7.0	9.3	11.1	10.6	9.9	13.0	13.1
Highest	20	8.2	9.6	10.5	8.2	8.4	9.9	11.1
Below cap	87.3	7.6	8.9	10.3	8.6	8.4	9.9	10.7
Above cap (excluding cap overpayments)	12.7	3.2	4.1	5.2	7.0	6.0	9.8	12.6
Above cap (including cap overpayments)	12.7	17.3	18.4	21.3	20.1	18.8	21.4	20.2

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. 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.

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)); however, the statute prohibits Medicare payment for these services (Section 1814(i)(1)(A) of the Social Security Act). 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 2016 aggregate Medicare margin by at most 1.4 percentage points. The 1.4 percentage point 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 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

**TABLE  
12-16****Hospice Medicare margins  
by length of stay, 2016**

Hospice characteristic	Medicare margin
Average length of stay	
Lowest quintile	-5.4%
Second quintile	5.8
Third quintile	15.1
Fourth quintile	19.2
Highest quintile	16.0
Share of stays >180 days	
Lowest quintile	-5.4
Second quintile	5.8
Third quintile	14.8
Fourth quintile	20.0
Highest quintile	15.0

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.

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, p. 333). In 2016, freestanding hospices had higher margins (13.9 percent) than home health-based or hospital-based hospices (6.2 percent and -16.7 percent, respectively) (Table 12-15). Provider-based hospices 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. The aggregate Medicare margin was considerably higher

for for-profit hospices (16.8 percent) than for nonprofit hospices (2.7 percent). The margin for freestanding nonprofit hospices (6.4 percent) was higher than the margin for nonprofit hospices overall. 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 (11.4 percent) than those in rural areas (6.2 percent). The difference between rural and urban margins may partly reflect differences in volume.

In 2016, above-cap hospices had favorable margins even after the return of overpayments. Above-cap hospices would have had a margin of about 20.2 percent before the return of overpayments, but had a margin of 12.6 percent after the return of overpayments. Notably in 2016, above-cap hospices' margin after the return of overpayments was higher than below-cap hospices' margin (10.7 percent). In contrast, above-cap hospices' margin was generally lower than below-cap hospices' margin from 2010 to 2015. As shown in Table 12-8 (p. 325), the amount by which above-cap hospices have been exceeding the cap has been decreasing in recent years, which likely contributes to their increasing margin. This decline suggests that above-cap hospices are becoming better at bringing their utilization closer to the cap.

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 -5.4 percent for hospices in the lowest quintile to 20.0 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 15.0 percent average margin after the return of cap overpayments, but without the hospice aggregate cap, these providers' margins would have averaged 20 percent (latter figure not shown in table).

Hospices with a large share of patients in nursing facilities and ALFs also have higher margins than other hospices (Table 12-17). For example, in 2016, the 50 percent of hospices with the highest share of patients residing in nursing facilities had a margin of roughly 14 percent compared with an 8 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 14 percent compared with a margin of approximately 6 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 and in facilities serving as referral sources for new patients. Nursing facilities may 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 2016 margin estimates reflect hospices' financial performance in the first year of the new payment system, which began in January 2016.<sup>28</sup> CMS's payment reforms—which move away from a single base rate for routine home care 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, 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 2015. In 2016, the difference in margins narrowed slightly to about 25 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). The Commission intends to examine the effects of the new payment system and consider the need for additional changes to better match the costs of care for both short and long hospice stays.

### Projecting margins for 2019

To project the aggregate Medicare margin for 2019, we model the policy changes that went into effect between 2016 (the year of our most recent margin estimates) and

**TABLE  
12-17**

**Hospice Medicare margins by providers' share of patients residing in facilities, 2016**

Hospice characteristic	Medicare margin
Share of patients in nursing facilities	
Lowest half	8.1%
Highest half	13.5
Share of patients in assisted living facilities	
Lowest half	5.8
Highest half	13.7

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.

2019. The policies include updates of 2.1 percent in 2017, 1.0 percent in 2018, and 1.8 percent in 2019. The updates for 2017 and 2019 reflect the market basket update, productivity adjustment, and an additional legislated adjustment of –0.3 percentage point each year. The update for 2018 was statutorily specified at 1 percent in the Medicare Access and CHIP Reauthorization Act of 2015. 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, we project an aggregate Medicare margin for hospices of 10.1 percent in 2019. This margin projection excludes nonreimbursable costs associated with bereavement services and volunteers (which, if included, would reduce margins by at most 1.4 percentage points and 0.3 percentage point, respectively).

### How should Medicare payments change in 2020?

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 should be reduced in 2020 by 2 percent.

## RECOMMENDATION 12

**For 2020, the Congress should reduce the fiscal year 2019 Medicare base payment rates for hospice providers by 2 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 2017. The rate of marginal profit was 14 percent in 2016. As the number of for-profit providers increased by 5 percent, access to capital appears strong. The aggregate Medicare margin in 2016 reached 10.9 percent—the highest level in more than 10 years. The projected 2019 margin is 10.1 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 by 2 percent in 2020 and would still be sufficient to cover providers' costs. This recommendation would bring payment rates closer to costs, would lead to savings for beneficiaries and 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.

Beyond the issue of the annual payment update, there are concerns that several aspects of the hospice payment system are out of balance. The payment rate for routine home care (which accounts for 98 percent of days) exceeds providers' costs substantially, while the payment rates for the other three less frequent levels of care appear to be below providers' costs. The continuation of certain longer term trends also suggests imbalances in the payment system. For more than a decade, we have observed the number of providers increasing, due almost entirely to the entry of for-profit providers. Concern has existed that long stays in hospice have been very profitable, and those profit opportunities have drawn some new actors into the industry with revenue-generating strategies. Patients with long stays in hospice account for more than half of Medicare's payments for hospice—over \$10 billion in 2017. The changes CMS made to the payment structure in 2016 have had only a modest effect, and providers with the most long-stay patients

continue to have high profit margins. It is also notable that hospices with a large share of patients in nursing facilities and ALFs have higher margins than other hospices. In addition, for the first time in 2016, above-cap hospices had a higher margin than below-cap hospices, even after the return of cap overpayments. In light of these issues, the Commission will consider approaches to rebalance the payment system in the future.

## IMPLICATIONS 12

### Spending

- Under current law, hospices are projected to receive an update in fiscal year 2020 equal to 2.8 percent (based on a projected market basket of 3.3 percent and a projected productivity adjustment of -0.5 percent). Our recommendation to reduce the payment rates by 2 percent 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 Under Section 1812(d)(2)(A) of the Social Security Act, beneficiaries who elect hospice agree to waive their right to have Medicare payment for services that are related to the treatment of the terminal condition or that are equivalent to hospice services when provided by an entity other than the beneficiary's hospice provider or attending physician. To the extent that certain aspects of conventional care for the terminal condition and related conditions are palliative, a beneficiary electing hospice would continue to have access to such palliative services under the hospice benefit in accord with the beneficiary's plan of care.
- 2 If a beneficiary does not have an attending physician, the beneficiary can initially elect hospice based on the certification of the hospice physician alone.
- 3 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.
- 4 In 2000, 30 percent of hospice providers were for profit, 59 percent were nonprofit, and 11 percent were government owned. As of 2017, about 69 percent of hospices were for profit, 27 percent were nonprofit, and 4 percent were government owned.
- 5 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.
- 6 From 1983 to 1997, Medicare adjusted hospice payments with a 1983 wage index. In 1998, CMS began using the most current hospital wage index to adjust hospice payments and applied a budget-neutrality adjustment each year to make aggregate payments equivalent to what they would have been under the 1983 wage index. This adjustment increased Medicare payments to hospices by about 4 percent and was phased out over seven years between 2010 and 2016. Beginning 2017, there are no further reductions to the payment rates associated with this phase-out.
- 7 The 2019 cap year spans from October 1, 2018, to September 30, 2019. Payments for the cap year reflect the sum of payments to a provider for services furnished to all Medicare patients in that year. The calculation of the beneficiary count for the cap year is more complex, involving two alternative methodologies. For a detailed description of the two methodologies and when they are applicable, see our March 2012 report (Medicare Payment Advisory Commission 2012).
- 8 This 2019 cap is equivalent to an average length of stay of 173 days of routine home care for a hospice with a wage index of 1.
- 9 The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT) changed the annual update factor applied to the hospice aggregate cap for cap years 2017 through 2025. Previously, the aggregate cap was updated annually based on the percentage increase in the medical care expenditure category of the consumer price index for all urban consumers. As a result of IMPACT, the aggregate cap will be updated annually by the same factor as the hospice payment rates (market basket net of productivity and other adjustments).
- 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 The 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.
- 12 The share of days accounted for by RHC increased slightly from 98.0 percent to 98.1 percent because the number of RHC days increased 5 percent, while the number of GIP and CHC days declined (2 percent and 10 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 2017.
- 13 The terms *curative care* and *conventional care* are often used interchangeably to describe treatments intended to be disease modifying.
- 14 Hospice length of stay has grown between 2000 and 2017, particularly for patients with certain diagnoses. For example, between 2000 and 2017, average length of stay grew from 63 days to 149 days for beneficiaries with neurological conditions, from 46 days to 94 days for beneficiaries with heart and circulatory conditions, and from 69 days to 118 days for beneficiaries with chronic obstructive pulmonary disease. In contrast, average length of stay has been stable for patients with cancer (50 days in 2000 and 52 days in 2017).
- 15 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. 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). Using 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.
- 16 Above-cap hospices are more likely to be for profit, be freestanding, and have smaller patient counts than below-cap hospices.
  - 17 If we approximate marginal cost as total Medicare costs minus fixed building and equipment costs, then marginal profit can be calculated as follows:  $\text{Marginal profit} = (\text{payments for Medicare services} - (\text{total Medicare costs} - \text{fixed building and equipment costs})) / \text{Medicare payments}$ . This comparison is a lower bound on the marginal profit because we do not consider any potential labor costs that are fixed.
  - 18 The live-discharge rates were calculated for providers regardless of size. If the live-discharge rate is used as a quality or program integrity measure, issues with random variation would dictate limiting the measure to providers with a specified minimum number of discharges. Nonetheless, it is important to include small providers in live-discharge measures because the aggregate live-discharge rate (based on combined data for similarly sized hospices) is higher for small hospice providers than large providers. In 2017, the aggregate live-discharge rate for providers with 30 or fewer discharges annually was about 42 percent compared with just under 16 percent for larger providers.
  - 19 We present margins for 2016 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 2016 cap overpayment calculation requires 2017 claims data).
  - 20 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.
  - 21 The share of days accounted for by routine home care (the lowest cost level of care) increased from 97.8 percent to 98.0 percent between 2015 and 2016.
  - 22 Several other factors may have also contributed to the decline in total cost per day, such as the increase in average length of stay, the increase in the share of revenues accounted for by freestanding providers (which have lower costs than provider-based hospices), and the shift to the use of the new cost report for provider-based hospices.
  - 23 The mix of days by level of care varies slightly by type of provider and ownership. Routine home care (RHC), the lowest cost level of care, accounted for about 98 percent of hospice days overall in 2016. 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 hospices. By ownership, the share of days accounted for by RHC was about 99 percent for for-profit hospices and 97 percent for nonprofit hospices.
  - 24 Wide variation in cost per day exists in the freestanding hospice cost reports for inpatient respite care, including the presence of some high-end outliers that cause a significant divergence between the average and the median. To address the presence of outliers, we explored excluding observations below the 10th percentile and above the 90th percentile. With this approach, the average cost per day was \$370 for inpatient respite care in 2016.
  - 25 CMS has implemented some level 1 edits to the hospice cost reports that have become effective for cost report year ending on or after December 31, 2017 (with an exemption for cost reports created before June 1, 2018). These level 1 edits reject electronically filed cost reports that lack information in certain cost report fields. Some provider associations point out that the 2016 estimates of cost by level of care included in this report were not subject to the new level 1 edits. We note that in the fiscal year 2019 hospice proposed rule, CMS simulated the effect of three different types of edits to the cost report data, including a set of level 1 edits. CMS's analysis found that estimated cost by level of care was relatively consistent across three editing approaches. For example, the variance in cost estimates was approximately 2 percent for RHC, 4 percent for CHC, 6 percent for GIP, and 13 percent for IRC. All three models suggested that providers' costs are below the payment rate for RHC and above the payment rates for the other three levels of care.

- 26 The aggregate Medicare margin is calculated as follows:  
((sum of total payments to all providers) – (sum of total costs of all providers)) / (sum of total 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.
- 27 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.
- 28 Because some hospices’ cost report years begin before January, the 2016 cost report year includes some payments under the old payment system for a portion of the year for some providers. We estimate that across all providers in our margin estimates, about 90 percent of payments were made under the new payment system.

## References

---

- Barnato, A. E., D. L. Anthony, J. Skinner, et al. 2009. Racial and ethnic differences in preferences for end-of-life treatment. *Journal of General Internal Medicine* 24, no. 6 (June): 695–701.
- Baxter, A. 2018. Humana completes acquisitions of Kindred, Curo. *Health Exec*, July 12. <https://www.healthexec.com/topics/healthcare-economics/humana-acquires-kindred-and-curo>.
- Centers for Medicare & Medicaid Services, Department of Health and Human Services. 2011. Medicare program; hospice wage index for fiscal year 2012. Notice of CMS ruling. *Federal Register* 76, no. 89 (May 9): 26731–26735.
- Cohen, L. L. 2008. Racial/ethnic disparities in hospice care: A systematic review. *Journal of Palliative Medicine* 11, no. 5 (June): 763–768.
- Crawley, L., R. Payne, J. Bolden, et al. 2000. Palliative and end-of-life care in the African American community. *Journal of the American Medical Association* 284, no. 19 (November 15): 2518–2521.
- Direct Research. 2015. *Spending in the last year of life and the impact of hospice on Medicare outlays (updated August 2015)*. Report prepared by Direct Research for the Medicare Payment Advisory Commission. Washington, DC: Medicare Payment Advisory Commission.
- Gilstrap, L. G., H. A. Huskamp, D. G. Stevenson, et al. 2018. Changes in end-of-life care in the Medicare Shared Savings Program. *Health Affairs* 37, no. 10 (October): 1693–1700.
- Government Accountability Office. 2004. *Medicare hospice care: Modifications to payment methodology may be warranted*. GAO-05-42. Washington, DC: GAO.
- Hoyer, T. 2007. The future of hospice. *Caring*, November 6–8.
- Kacik, A. 2018. Amedisys aims to acquire Compassionate Care Hospice for \$340 million. *Modern Healthcare*, October 10.
- Medicare Payment Advisory Commission. 2017. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2015a. Comment letter to CMS on the hospice wage index and payment rate update and hospice quality report requirements proposed rule, June 2.
- Medicare Payment Advisory Commission. 2015b. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2014. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2013. *Report to the Congress: Medicare and the health care delivery system*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2012. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2010. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2009. *Report to the Congress: Medicare payment policy*. Washington, DC: MedPAC.
- Medicare Payment Advisory Commission. 2008. *Report to the Congress: Reforming the delivery system*. Washington, DC: MedPAC.
- Miescier, L. 2018. *Evaluation of the Medicare Care Choices Model: Annual report #1*. Report prepared by staff from Abt Associates for the Centers for Medicare & Medicaid Services. Rockville, MD: Abt Associates. <https://innovation.cms.gov/Files/reports/mccm-firstannrpt.pdf>.
- Plotzke, M., T. J. Christian, E. Axelrod, et al. 2015. *Medicare hospice payment reform: Analysis of how the Medicare hospice benefit is used*. Report prepared for the Centers for Medicare & Medicaid Services. Cambridge, MA: Abt Associates.
- Teno, J. M., P. Gozalo, A. N. Trivedi, et al. 2018. Site of death, place of care, and health care transitions among US Medicare beneficiaries, 2000–2015. *Journal of the American Medical Association* 320, no. 3 (July 17): 264–271.