

SECTION

# 11

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## **Other services**

**Dialysis**

**Hospice**

**Clinical laboratory**

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## Chart 11-1. Number of dialysis facilities is growing, and most facilities are for profit and freestanding

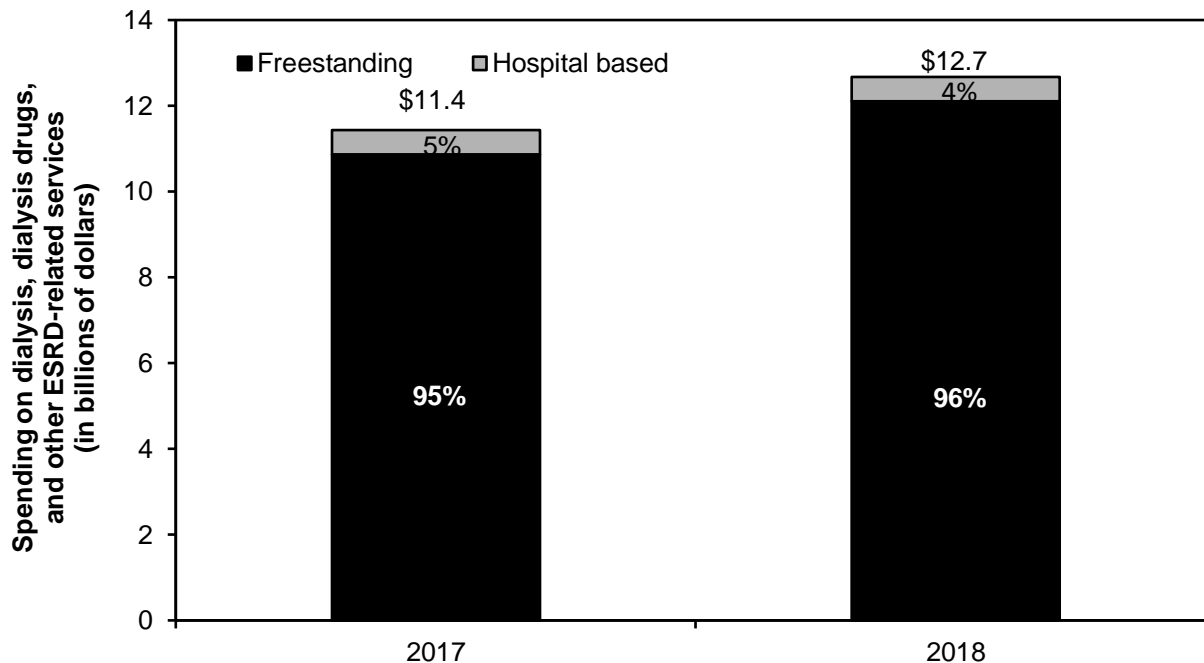
	2018	Average annual percent change	
		2013–2018	2017–2018
Total number of:			
Dialysis facilities	7,441	4%	5%
Hemodialysis stations	130,257	4	6
Mean number of hemodialysis stations per facility			
	18	-0.2	1.2
<u>Share of total facilities</u>			
Hospital based	5%	-4	-6
Freestanding	95	5	6
Urban	83	5	6
Rural, micropolitan	10	2	3
Rural, adjacent to urban	4	2	2
Rural, not adjacent to urban	2	2	-2
Frontier	0.5	1	0
For profit	88	5	5
Nonprofit	12	-0.4	2

Note: "Nonprofit" includes facilities designated as either nonprofit or government. "Average annual percent change" is based on comparing 2013, 2017, and 2018 end-of-year files. Components may not sum to totals due to rounding.

Source: Compiled by MedPAC from the institutional outpatient claims files and the Dialysis Compare files from CMS.

- Between 2013 and 2018, the number of facilities has increased, on average, 4 percent per year. The average size of a facility has remained relatively constant, averaging nearly 18 dialysis treatment stations per facility (17.7 stations in 2013, 17.3 stations in 2017, and 17.5 stations in 2018).
- Since 2013, facilities' capacity to provide care—as measured by hemodialysis treatment stations—grew 4 percent annually on average. Capacity at urban facilities grew by 4 percent per year, while capacity at rural facilities grew at a rate of 2 percent per year (data not shown).
- Since 2013, the number of freestanding and for-profit facilities increased, while hospital-based facilities decreased. Both freestanding and for-profit facilities each increased by 5 percent per year to nearly 7,050 freestanding facilities and about 6,570 for-profit facilities.

**Chart 11-2. Medicare spending for outpatient dialysis services furnished by freestanding and hospital-based dialysis facilities, 2017 and 2018**



Note: ESRD (end-stage renal disease).

Source: Compiled by MedPAC from the institutional outpatient claims files from CMS.

- In 2018, total spending for dialysis, dialysis drugs, and ESRD-related clinical laboratory tests was \$12.7 billion. Medicare paid all facilities under a prospective payment system (PPS) that includes in the payment bundle certain dialysis drugs and ESRD-related clinical laboratory tests that were separately paid before 2011.
- Between 2017 and 2018, total ESRD expenditures increased by 11 percent. Nearly all of the growth in spending is due to payments for two drugs that qualified in 2018 for the ESRD PPS's transitional drug add-on payment adjustment (TDAPA). Without the TDAPA, dialysis spending would have increased 0.5 percent, a rate similar to the growth seen between 2016 and 2017.
- Freestanding dialysis facilities treated most dialysis beneficiaries and accounted for 96 percent of expenditures in 2018.

### Chart 11-3. The ESRD population is growing, and most ESRD patients undergo dialysis

	2007		2013		2017	
	Patients (thousands)	Percent	Patients (thousands)	Percent	Patients (thousands)	Percent
Total	527.2	100%	658.4	100%	746.6	100%
Dialysis	369.3	70	462.0	70	523.7	70
In-center hemodialysis	335.4	64	408.3	62	458.6	61
Home hemodialysis*	3.7	0.7	8.1	1	9.5	1
Peritoneal dialysis*	28.7	5	43.9	7	52.7	7
Unknown	1.5	0.3	1.7	0.3	2.9	0.4
Functioning graft and kidney transplant	157.9	30	196.4	30	222.8	30

Note: ESRD (end-stage renal disease). Totals may not equal sum of components due to rounding. Data include both Medicare (fee-for-service and Medicare Advantage) and non-Medicare patients. The “functioning graft and kidney transplant” category includes patients who have a functioning graft at the start of the year in question (i.e., 2007, 2013, or 2017), or who receive a transplant during the year in question.  
\*Home dialysis methods.

Source: Compiled by MedPAC from the United States Renal Data System.

- Persons with ESRD require either dialysis or a kidney transplant to maintain life. The total number of ESRD patients increased by 4 percent annually between 2007 and 2017.
- In hemodialysis, a patient’s blood flows through a machine with a special filter that removes wastes and extra fluids. In peritoneal dialysis, the patient’s blood is cleansed by using the lining of his or her abdomen as a filter. Peritoneal dialysis is the most common form of home dialysis.
- Most ESRD patients undergo hemodialysis administered in a dialysis facility three times a week. Between 2007 and 2017, the total number of in-center hemodialysis patients grew by 3 percent annually, while the total number of peritoneal dialysis patients increased by about 6 percent annually. Although a smaller proportion of all dialysis patients undergo home hemodialysis, the number of these patients grew 10 percent per year during this period.
- Functioning graft patients are patients who have had a successful kidney transplant. Patients undergoing a kidney transplant may receive either a living kidney or a cadaveric kidney donation. In 2017, 28 percent of transplanted kidneys were from living donors and the remainder were from cadaver donors (data not shown).

## Chart 11-4. Asian Americans and Hispanics are among the fastest growing segments of the ESRD population

	Share of total in 2017	Average annual percent change 2012–2017
Total (N = 746,557)	100%	3%
<b>Age (years)</b>		
0–17	1	0.4
18–44	14	1
45–64	43	3
65–79	33	6
80+	9	4
<b>Sex</b>		
Male	58	4
Female	42	3
<b>Race/ethnicity</b>		
White	62	3
African American	30	3
Native American	1	2
Asian American	6	6
Hispanic	18	4
Non-Hispanic	80	3
Unknown	2	1
<b>Underlying cause of ESRD</b>		
Diabetes	39	4
Hypertension	26	4
Glomerulonephritis	16	2
Other causes	20	3

Note: ESRD (end-stage renal disease). Totals may not equal sum of the components due to rounding. ESRD patients include those who undergo maintenance dialysis and those who have a functioning kidney transplant. Data include both Medicare (fee-for-service and Medicare Advantage) and non-Medicare patients.

Source: Compiled by MedPAC from the United States Renal Data System.

- Among ESRD patients, nearly 42 percent are over age 65. About 62 percent are White.
- Diabetes is the most common cause of renal failure.
- The number of ESRD patients increased by 3 percent annually between 2012 and 2017. Among the fastest growing groups of patients are patients between the ages of 65 and 79, Asian Americans, and Hispanics.

## Chart 11-5. Characteristics of Medicare fee-for-service dialysis patients, 2018

	Share of all FFS dialysis patients
<b>Age (years)</b>	
Under 45	10%
45–64	38
65–74	28
75–84	18
85+	6
<b>Sex</b>	
Male	56
Female	44
<b>Race</b>	
White	47
African American	35
All other	18
<b>Residence</b>	
Urban county	83
Rural county, micropolitan	10
Rural county, adjacent to urban	5
Rural county, not adjacent to urban	2
Frontier county	1
<b>Prescription drug coverage status</b>	
Enrolled in Part D plan or other source of creditable drug coverage	89
LIS	58
<b>Dually eligible for Medicare and Medicaid</b>	48

Note: FFS (fee-for-service), LIS (low-income [drug] subsidy). Urban counties contain a core area with 50,000 or more people, rural micropolitan counties contain at least one cluster of at least 10,000 and fewer than 50,000 people, rural counties adjacent to urban areas do not have a city of 10,000 people in the county, and rural counties not adjacent to urban areas do not have a city of 10,000 people. Frontier counties are counties with six or fewer people per square mile. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of dialysis claims files and denominator files from CMS.

- Compared with all Medicare patients, FFS dialysis patients are disproportionately younger and African American (see Chart 2-5).
- In 2018, about 17 percent of FFS dialysis patients resided in a rural county.
- Nearly half of all dialysis patients were dually eligible for Medicare and Medicaid services.
- Nearly 90 percent of FFS dialysis patients were enrolled in Part D plans or had other sources of creditable drug coverage.

## Chart 11-6. Aggregate margins varied by type of freestanding dialysis facility, 2018

Type of facility	Share of freestanding dialysis treatments	Aggregate margin
All facilities	100%	2.1%
Urban	88	2.8
Rural	12	-2.8
Treatment volume (quintile)		
Lowest	7	-19.3
Second	12	-8.0
Third	17	-0.1
Fourth	24	4.2
Highest	39	8.7

Note: Margins include payments and costs for dialysis services commonly provided under treatment, including injectable drugs and laboratory tests that were separately paid before 2011. Totals may not sum to 100 percent due to rounding.

Source: Compiled by MedPAC from 2018 cost reports and the 2018 institutional outpatient file from CMS.

- For 2018, the aggregate Medicare margin for dialysis-related services, including ESRD-related drugs and laboratory tests that were separately paid before 2011, was 2.1 percent.
- Between 2017 and 2018, the aggregate Medicare margin increased (from -1.1 percent to 2.1 percent) due to the profitability of the drugs paid under the transitional drug add-on payment adjustment (TDAPA) policy. Excluding the payments and costs of the drugs paid under the TDAPA (calcimimetics), we estimate that the 2018 aggregate Medicare margin would have been about -2 percent.
- Generally, freestanding dialysis facilities' margins vary by the size of the facility; facilities with greater treatment volume have higher margins on average. Differences in capacity and treatment volume explain some of the differences observed between the margins of urban facilities versus rural facilities. Urban facilities are larger on average than rural facilities with respect to the number of dialysis treatment stations and Medicare treatments provided. Some rural facilities have benefited from the ESRD prospective payment system's low-volume adjustment.



## Chart 11-7. Dialysis quality of care: Some measures show progress, others need improvement, 2012–2017

Outcome measure	2012	2016	2017
Share of in-center hemodialysis patients:			
Receiving adequate dialysis	97%	98%	98%
Dialyzed with an AV fistula	60	62	63*
Share of peritoneal dialysis patients receiving adequate dialysis	90	93	93
Share of all dialysis patients managing anemia			
Mean hemoglobin <10 g/dL	23	29	28
Mean hemoglobin 10 to <12 g/dL	69	66	67
Mean hemoglobin ≥12 g/dL	7	5	5
Share of all dialysis patients wait-listed for a kidney	17.6	15.3	13.7
Renal transplant rate per 100 patient years	3.5	3.5	3.6
Annual mortality rate per 100 patient years**	17.0	16.4	16.5
Total hospital admissions per patient year**	1.9	1.7	1.7
Hospital days per patient year**	12.0	11.4	11.3

Note: AV (arteriovenous), g/dL (grams per deciliter [of blood]), USRDS (United States Renal Data System). Totals may not sum to 100 percent due to rounding. The rate per patient year is calculated by dividing the total number of events by the fraction of the year that patients were followed. Data on dialysis adequacy, anemia management, and fistula utilization represent the share of patients meeting CMS's clinical performance measures. The United States Renal Data System (USRDS) adjusts hospitalization and mortality measures by age, gender, race, and primary diagnosis of end-stage renal disease.

\*Use of AV fistula as of May 2018 (data on 2017 AV fistula use not available from USRDS).

\*\*Lower values suggest higher quality.

Source: All measures, except for share of patients receiving adequate dialysis and anemia management, compiled by MedPAC using data from the United States Renal Data System. Measure of share of patients receiving adequate dialysis and anemia management compiled by MedPAC using data from CMS's 100 percent institutional outpatient files.

- Quality of dialysis care is mixed. Performance has improved on some measures, but performance on others remains unchanged or has declined.
- Between 2012 and 2017, overall adjusted mortality rates decreased from 17.0 percent to 16.5 percent. During this period, the proportion of hemodialysis patients receiving adequate dialysis remained high, and there has been a modest decline in the overall rates of hospitalization.
- All hemodialysis patients require vascular access—the site on the patient's body where blood is removed and returned during dialysis. Use of arteriovenous fistulas, considered the best type of vascular access, has modestly increased from 60 percent to 63 percent of hemodialysis patients between 2012 and 2017.
- Other measures suggest that improvements in dialysis quality are still needed. We looked at access to kidney transplantation because it is widely believed to be the best treatment option for individuals with end-stage renal disease. Between 2012 and 2017, the share of dialysis patients accepted on the kidney transplant waiting list declined from 17.6 to 13.7, and the renal transplant rate per 100 dialysis-patient years remained relatively constant at 3.6.

## Chart 11-8. Hospice spending and use increased in 2018

	2000	2017	2018	Average annual change, 2000–2017	Change, 2017–2018
Medicare payments (in billions)	\$2.9	\$17.9	\$19.2	11.2%	7.4%
Beneficiaries in hospice (in millions)	0.534	1.493	1.551	6.2%	3.9%
Number of hospice days for all hospice beneficiaries (in millions)	25.8	106.3	113.5	8.7%	6.8%
Average length of stay among decedents (in days)	53.5	88.1	89.6	3.0%	1.7%
Median length of stay among decedents (in days)	17	17	18	0 days	1 day

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

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

- Total Medicare payments to hospices were about \$19.2 billion in 2018, about 7 percent higher than the prior year.
- The number of Medicare beneficiaries receiving hospice services, total number of days of hospice care, and average length of stay continued to grow in 2018.

**Chart 11-9. Hospice use increased across beneficiary groups from 2000 to 2018**

	Share of decedents using hospice			Average annual percentage point change 2000–2017	Percentage point change 2017–2018
	2000	2017	2018		
All	22.9%	50.0%	50.7%	1.6	0.7%
FFS beneficiaries	21.5	49.0	49.7	1.6	0.7
MA beneficiaries	30.9	52.3	52.8	1.3	0.5
Dual eligibles	17.5	44.8	45.6	1.6	0.8
Non–dual eligibles	24.5	51.7	52.4	1.6	0.7
<b>Age (years)</b>					
<65	17.0	29.6	30.0	0.7	0.4
65–84	24.7	46.7	47.1	1.3	0.4
85+	21.4	60.1	61.4	2.3	1.3
<b>Race/ethnicity</b>					
White	23.8	52.2	53.0	1.7	0.8
Minority	17.3	39.3	39.7	1.3	0.4
<b>Gender</b>					
Male	22.4	45.5	46.1	1.4	0.6
Female	23.3	54.2	55.1	1.8	0.9
<b>Residence</b>					
Urban county	24.2	51.0	51.6	1.6	0.6
Rural county, micropolitan	18.3	46.9	47.9	1.7	1.0
Rural county, adjacent to urban	17.5	46.6	47.5	1.7	0.9
Rural county, nonadjacent to urban	15.0	41.2	42.3	1.5	1.1
Frontier county	13.1	34.1	36.1	1.2	2.0

Note: FFS (fee-for-service), MA (Medicare Advantage). “Residence” refers to the beneficiary’s county of residence. Urban, micropolitan, and rural designations are based on 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. Hospice use rates for 2017 and 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. Hospice use rates for 2017 differ from those published in the June 2019 data book because they were based on an earlier version of the Medicare Beneficiary Database obtained from CMS. CMS has revised the hospice election information for some beneficiaries in the Medicare Beneficiary Database.

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

- Hospice use grew across beneficiary groups in 2018, continuing the trend of a growing proportion of beneficiaries using hospice at the end of life.
- Despite this growth, hospice use continued to vary by demographic and beneficiary characteristics. Medicare decedents who were not dual eligible, who were MA enrollees, older, White, female, or living in an urban area were more likely to use hospice than their respective counterparts.

## Chart 11-10. Number of Medicare-participating hospices has increased due to growth in for-profit hospices

	2000	2016	2017	2018
All hospices	2,255	4,382	4,488	4,639
For profit	672	2,940	3,097	3,226
Nonprofit	1,324	1,275	1,230	1,248
Government	257	167	160	158
Freestanding	1,069	3,369	3,519	3,674
Hospital based	785	501	471	454
Home health based	378	487	475	466
SNF based	22	25	22	22
Urban	1,455	3,474	3,603	3,736
Rural	757	901	879	869

Note: SNF (skilled nursing facility). Numbers may not sum to totals because of missing data for a small number of providers. The rural and urban definitions 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, Provider of Services file, and the standard analytic file of hospice claims from CMS.

- There were 4,639 Medicare-participating hospices in 2018. Almost 70 percent of them were for-profit hospices.
- The number of Medicare-participating hospices grew by roughly 150 providers between 2017 and 2018 and has doubled since 2000. For-profit hospices accounted for most of the net growth in providers between 2017 and 2018.
- Growth in the number of providers has occurred predominantly among freestanding providers. The number of hospital-based and home health–based providers declined between 2016 and 2018. The number of SNF-based providers is small and has changed little over the years. (A hospice’s status as freestanding versus hospital based, home health based, or SNF based reflects the type of cost report submitted by the provider and does not necessarily reflect the location of care.)
- The number of hospices located in rural areas has declined in the last several years, decreasing about 5 percent between 2016 and 2018. The number of providers located in rural areas is not necessarily an indicator of access to care. The share of rural decedents using hospice has been increasing since 2000 (see Chart 11-9).

## Chart 11-11. Hospice cases and length of stay, by diagnosis, 2018

Diagnosis	Share of total cases	Share of cases with length of stay greater than 180 days
Cancer	26%	9%
Alzheimer's, nervous system disorders, organic psychosis	23	35
Circulatory, except heart failure	20	25
Heart failure	8	23
Other	8	16
Respiratory disease	6	15
Chronic airway obstruction, NOS	5	29
Genitourinary disease	2	9
Digestive disease	2	9
All	100	21

Note: NOS (not otherwise specified). Cases include all patients who received hospice care in 2018, not just decedents. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim in 2018. The share of cases with length of stay greater than 180 days reflects the share of hospice patients who received hospice care in 2018 whose lifetime length of hospice stay exceeded 180 days at the end of 2018 (or at the time of death or discharge in 2018 if the beneficiary was not enrolled in hospice at the end of 2018).

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

- In 2018, the most common primary diagnoses among Medicare hospice patients were cancer (26 percent), neurological conditions (Alzheimer's disease, nervous system disorders, and organic psychosis) (23 percent of cases), circulatory conditions other than heart failure (20 percent), and heart failure (8 percent).
- Length of stay varies by diagnosis. Long hospice stays were most common among patients with Alzheimer's disease and other nervous system disorders, circulatory conditions (including heart failure), and chronic airway obstruction. Long hospice stays were least common among beneficiaries with cancer, genitourinary disease, and digestive disease.

## Chart 11-12. Hospice average length of stay among decedents increased slightly in 2018

Year	Average length of stay (in days)	Percentiles of length of stay (in days)				
		10th	25th	50th	75th	90th
2000	53.5	3	6	17	56	141
2016	87.0	2	5	17	78	243
2017	88.1	2	5	17	78	248
2018	89.6	2	5	18	81	253

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. Length-of-stay data for 2016, 2017, and 2018 are based on the Medicare Beneficiary Database obtained from CMS in October 2019. Some length-of-stay figures for 2016 and 2017 differ from those published in the June 2019 data book because they were based on an earlier version of the Medicare Beneficiary Database obtained from CMS.

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

- Average length of stay among decedents was 89.6 days in 2018, an increase from 2017 of more than one day.
- There is wide variation in hospice length of stay. In 2018, hospice length of stay among decedents ranged from 2 days at the 10th percentile to 253 days at the 90th percentile.
- Since 2000, growth in average length of stay among decedents has largely been the result of increases in length of stay for patients with the longest stays. Length of stay at the 90th percentile was more than 100 days greater in 2018 than in 2000.
- Short stays in hospice have changed little since 2000. For example, among decedents, median length of stay was 18 days in 2018 and 17 days in 2000. Hospice length of stay at the 25th percentile was 5 days in 2018 and 6 days in 2000.

**Chart 11-13. Hospice length of stay among decedents, by beneficiary and hospice characteristics, 2018**

	Average length of stay (in days)	Length-of-stay percentiles (in days)		
		10th	50th	90th
<b>Beneficiary</b>				
Diagnosis				
Cancer	53	3	17	128
Neurological	151	4	38	445
Heart/circulatory	97	2	17	288
COPD	119	2	28	350
Other	56	2	8	156
Site of service				
Home	93	4	26	245
Nursing facility	106	3	21	310
Assisted living facility	155	5	54	438
<b>Hospice</b>				
For profit	110	3	23	321
Nonprofit	68	2	13	186
Freestanding	92	2	18	263
Home health based	70	2	15	191
Hospital based	57	2	12	153

Note: COPD (chronic obstructive pulmonary disease). Average length of stay is calculated for Medicare beneficiaries who died in 2018 and used hospice that year, and it reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during his or her lifetime. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim.

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

- Hospice average length of stay among decedents varies by both beneficiary and provider characteristics. Most of this variation reflects differences in length of stay among patients with the longest stays (i.e., at the 90th percentile). Length of stay varies much less for patients with shorter stays (i.e., at the 10th or 50th percentile).
- Beneficiaries with neurological conditions and COPD have the longest stays, while beneficiaries with cancer have the shortest stays, on average.
- Beneficiaries who receive hospice services in assisted living facilities have longer stays on average than beneficiaries who receive care at home or in a nursing facility.
- For-profit and freestanding hospices have longer average lengths of stay than nonprofit and provider-based (home health-based and hospital-based) hospices.

## Chart 11-14. More than half of Medicare hospice spending in 2018 was for patients with stays exceeding 180 days

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

Note: LOS (length of stay). LOS reflects the beneficiary's lifetime LOS as of the end of 2018 (or at the time of death or discharge in 2018 if the beneficiary was not enrolled in hospice at the end of 2018). All spending reflected in the chart occurred only in 2018. Break-out groups do not sum to total because of rounding.

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

- In 2018, Medicare hospice spending on patients with stays exceeding 180 days was about \$11.1 billion, more than half (58 percent) of all Medicare hospice spending that year.
- About \$3.8 billion, or about 20 percent, of Medicare hospice spending in 2018 was on hospice care for patients who had already received at least one year of hospice.



## Chart 11-15. Hospice aggregate Medicare margins, 2013–2017

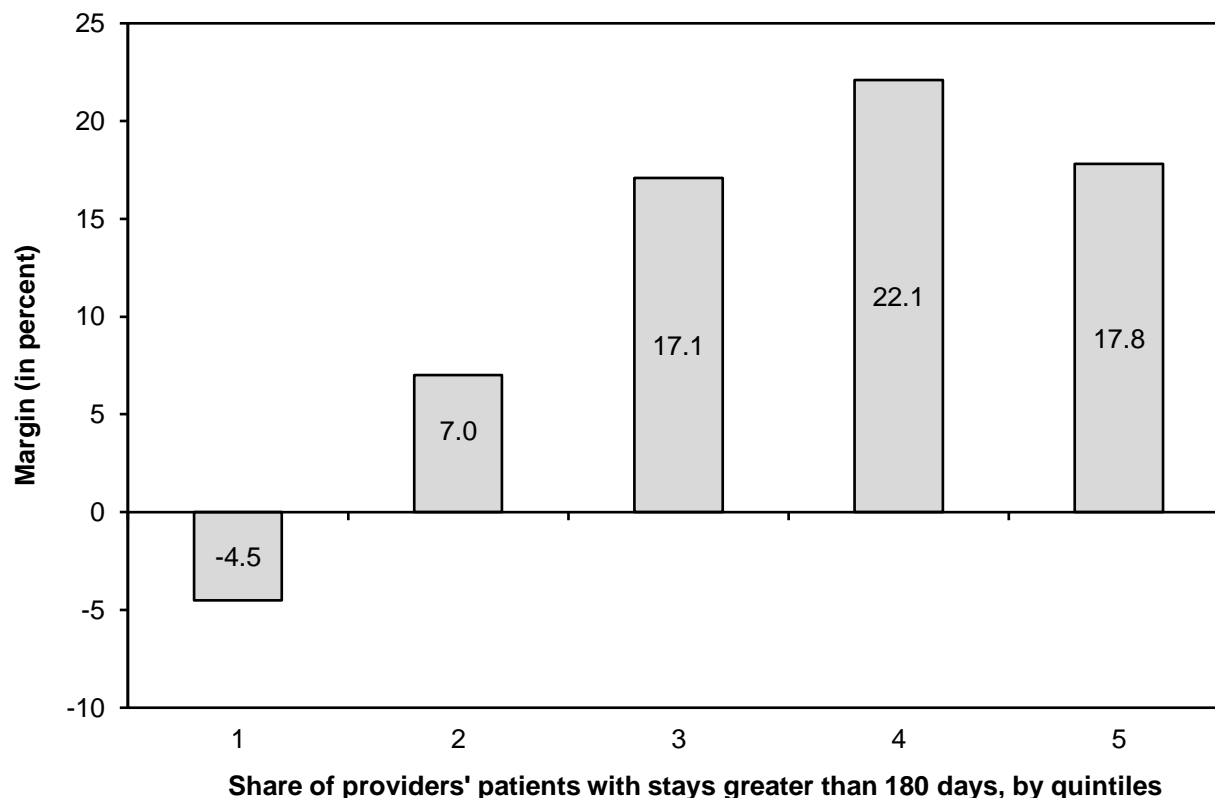
	Share of hospices (2017)	Medicare margin				
		2013	2014	2015	2016	2017
All	100%	8.5%	8.2%	9.9%	10.9%	12.6%
Freestanding	78	12.0	11.6	13.8	14.0	15.3
Home health based	11	2.5	3.5	3.3	6.2	8.0
Hospital based	10	-17.4	-20.8	-23.8	-16.7	-13.8
For profit	69	15.0	15.3	17.8	17.9	20.2
Nonprofit	27	0.8	-0.4	0.0	2.2	2.5
Government	4	N/A	N/A	N/A	N/A	N/A
Urban	80	8.8	8.7	10.4	11.4	12.9
Rural	20	5.9	3.3	4.8	6.3	8.8
Below cap	86.0	8.6	8.4	9.9	10.7	12.5
Above cap	14.0	7.0	6.0	9.8	12.6	13.0
Above cap (including cap overpayments)	14.0	20.1	18.8	21.4	20.2	21.2

Note: N/A (not available). 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 percentages of freestanding and provider-based (home health–based and hospital-based) hospices do not sum to 100 percent because skilled nursing facility–based hospices are not broken out separately.

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

- The aggregate Medicare margin was 12.6 percent in 2017, up from 10.9 percent in 2016.
- In 2017, freestanding hospices had higher margins (15.3 percent) than home health–based (8.0 percent) and hospital-based hospices (-13.8 percent).
- The 2017 margin among for-profit hospices was high at 20.2 percent. Nonprofit hospices as a group had a margin of 2.5 percent in 2017, but the subset of nonprofit hospices that were freestanding had a higher margin, 5.7 percent (latter figure not shown in chart).
- The aggregate 2017 margin was higher for urban hospices (12.9 percent) than rural hospices (8.8 percent).
- Hospices that exceeded the cap (Medicare’s aggregate average per beneficiary payment limit) had a 2017 margin of about 21 percent before the return of the cap overpayments.

**Chart 11-16. Medicare margins were higher among hospices with more long stays, 2017**



Note: Margins exclude overpayments to hospices that exceeded the cap on the average annual Medicare payment per beneficiary. Margins are calculated based on Medicare-allowable, reimbursable costs. For hospice providers in the lowest (first) quintile, the share of stays greater than 180 days was less than 12.4 percent; it was between 12.4 percent and 20.0 percent in the second quintile; it was between 20.0 percent and 26.7 percent in the third quintile; it was between 26.7 percent and 34.9 percent in the fourth quintile; and it was greater than 34.9 percent in the highest (fifth) quintile.

Source: MedPAC analysis of Medicare hospice cost reports and 100 percent hospice claims standard analytic file from CMS.

- Medicare's per diem payment system for hospice has provided an incentive for longer lengths of stay.
- Hospices with more patients who had stays greater than 180 days generally had higher margins in 2017. Hospices in the lowest length-of-stay quintile had a margin of -4.5 percent compared with a 22.1 percent margin for hospices in the second highest length-of-stay quintile.

*(Chart continued next page)*

## **Chart 11-16. Medicare margins were higher among hospices with more long stays, 2017 (continued)**

- Margins were somewhat lower in the highest length-of-stay quintile (17.8 percent) compared with the second highest quintile (22.1 percent) because some hospices in the highest quintile exceeded Medicare's aggregate payment cap and were required to repay the overage. Hospices exceeding the cap had a margin of about 20 percent before the return of overpayments (see Chart 11-15).
- The 2017 margin estimates reflect hospices' financial performance in the second year of the new payment system, which began January 2016. The payment reforms modestly reduced the variation in profitability by length of stay. In 2015, there was a 29 percentage point spread in the margins between the lowest length of stay quintile (-8.9 percent) and the second highest length of stay quintile (20.4 percent) (data not shown). In 2017, the difference in margins between those length of stay quintiles narrowed to about 22 percentage points, as shown in the chart.

## Chart 11-17. Hospices that exceeded Medicare’s annual payment cap, selected years

	2002	2014	2015	2016	2017
Share of hospices exceeding the cap	2.6%	12.1%	12.3%	12.7%	14.0%
Average payments over the cap per hospice exceeding the cap (in thousands)	\$470	\$370	\$316	\$295	\$273
Payments over the cap as a share of overall Medicare hospice spending	0.6%	1.2%	1.0%	1.0%	1.0%

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

Source: MedPAC analysis of 100 percent hospice claims standard analytic file data, Medicare hospice cost reports, Provider of Services file data from CMS, and CMS Providing Data Quickly system. Data on total spending for each fiscal year are from the CMS Office of the Actuary or MedPAC estimates.

- The share of hospices exceeding the aggregate cap was 14.0 percent in 2017, up from 12.7 percent in 2016.
- Medicare payments over the cap represented 1.0 percent of total Medicare hospice spending in 2017.
- On average, above-cap hospices exceeded the cap by about \$273,000 per provider in 2017, down from about \$295,000 per provider in 2016.

## Chart 11-18. Hospice live-discharge rates, 2016–2018

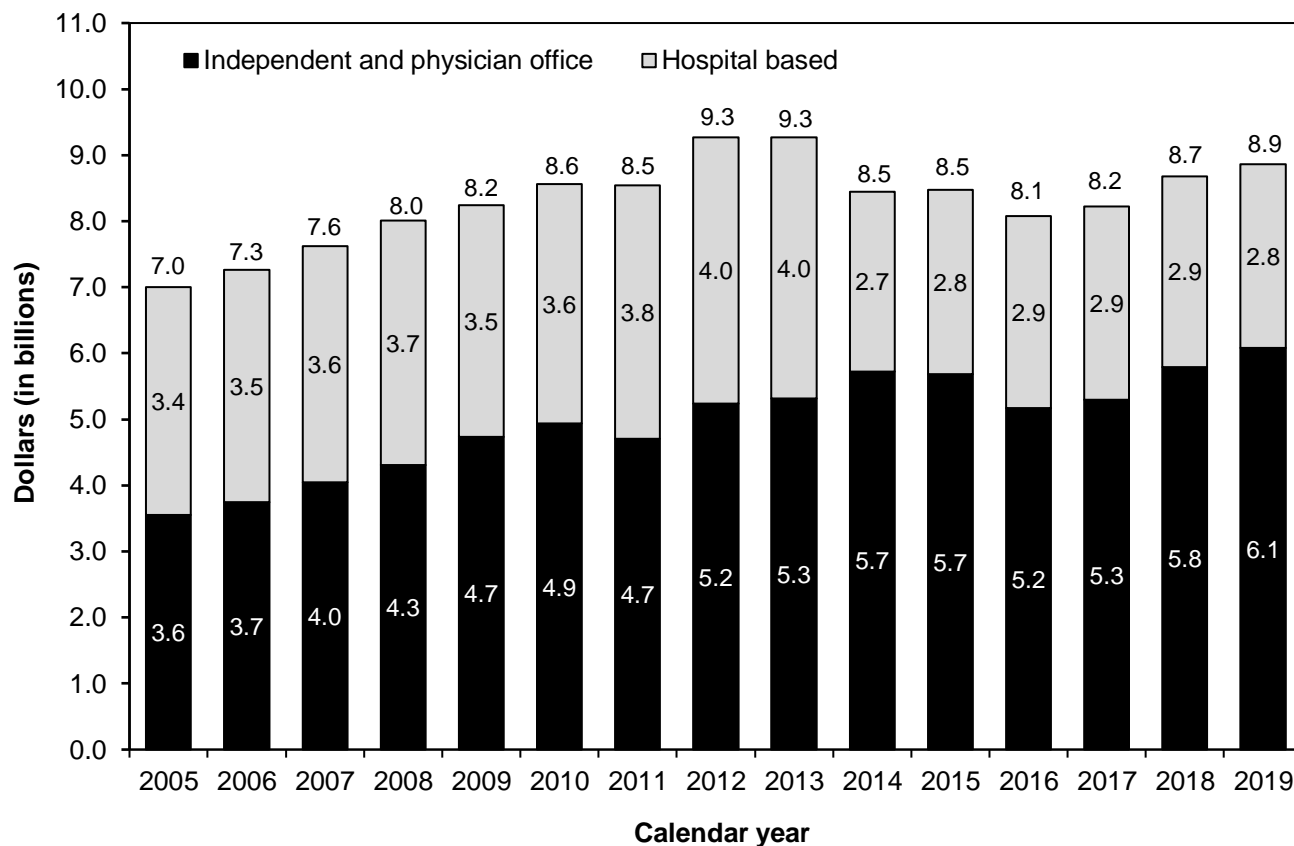
	2016	2017	2018
Live discharge as a share of all discharges, by reason for live discharge			
All live discharges	16.9%	16.7%	17.0%
No longer terminally ill	6.8	6.5	6.3
Beneficiary revocation	6.4	6.4	6.6
Transfer hospice providers	2.1	2.1	2.2
Move out of service area	1.2	1.4	1.6
Discharge for cause	0.3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

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

Source: MedPAC analysis of 100 percent hospice claims standard analytic file.

- In 2018, the overall live-discharge rate was 17.0 percent and has changed little since 2016.
- The most common reasons for live discharge were the beneficiary revoking the hospice benefit and the beneficiary no longer being terminally ill, accounting for 39 percent and 37 percent of live discharges, respectively. Less frequent reasons for live discharges included a beneficiary transferring hospice providers, a beneficiary moving out of the service area, and a beneficiary being discharged for cause.
- Among providers with more than 30 discharges, 10 percent of providers had live-discharge rates in excess of 42 percent.
- Small hospices as a group have substantially higher live-discharge rates than larger hospices. In 2018, the aggregate live-discharge rate was 44 percent for hospices with 30 or fewer discharges (data not shown).

**Chart 11-19. Medicare spending for clinical laboratory services, 2005–2019**



Note: Spending is for services paid under the clinical laboratory fee schedule. Hospital-based services are furnished in labs owned or operated by hospitals. The components of each bar may not sum to the total at the top of each bar due to rounding. The spending data include only program payments; there is no beneficiary cost sharing for clinical lab services.

Source: The annual report of the Boards of Trustees of the Medicare trust funds, 2015 and 2020.

- Medicare spending for clinical laboratory services in all settings grew by an average of 3.6 percent per year between 2005 and 2013.
- From 2013 to 2014, Medicare spending for lab services declined by about 9 percent because, beginning in 2014, many lab tests provided in hospital outpatient departments are no longer paid separately under the clinical lab fee schedule. Instead, many of these tests are packaged with their associated visits or procedures under the hospital outpatient prospective payment system.
- Medicare spending for lab services decreased by an average of 0.9 percent per year from 2014 to 2017.
- Beginning in 2018, clinical laboratory fee schedule payment rates are based on private sector rates. From 2017 to 2019, Medicare spending for lab services grew by an average of 3.8 percent per year.