SECTION

11

Other services

Dialysis
Hospice
Clinical laboratory

Chart 11-1 Low growth in the capacity of freestanding and for-profit dialysis organizations between 2022 and 2023

	2023	Average annual percent change	
		2019–2022	2022–2023
Total number of:			
Dialysis facilities	7,714	1%	–1.9%
Hemodialysis stations	138,500	1	0.3
Mean number of hemodialysis stations per facility	18	0	2.3
	Share of total facilities		
Hospital based	5%	–3	–2
Freestanding	95	1	–2
Urban	84	1	–2
Rural	16	–0.7	–3
For profit	90	1	–1.4
Nonprofit	10	–1	–7

Note: "Nonprofit" includes facilities designated as either nonprofit or government facilities. "Average annual percent change" is based on comparing 2019, 2022, and 2023 end-of-year files. Provider location reflects the county where the provider is located, urban or rural (the latter includes micropolitan, rural adjacent to urban, or rural nonadjacent to urban) based on an aggregation of the Urban Influence Codes. 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.

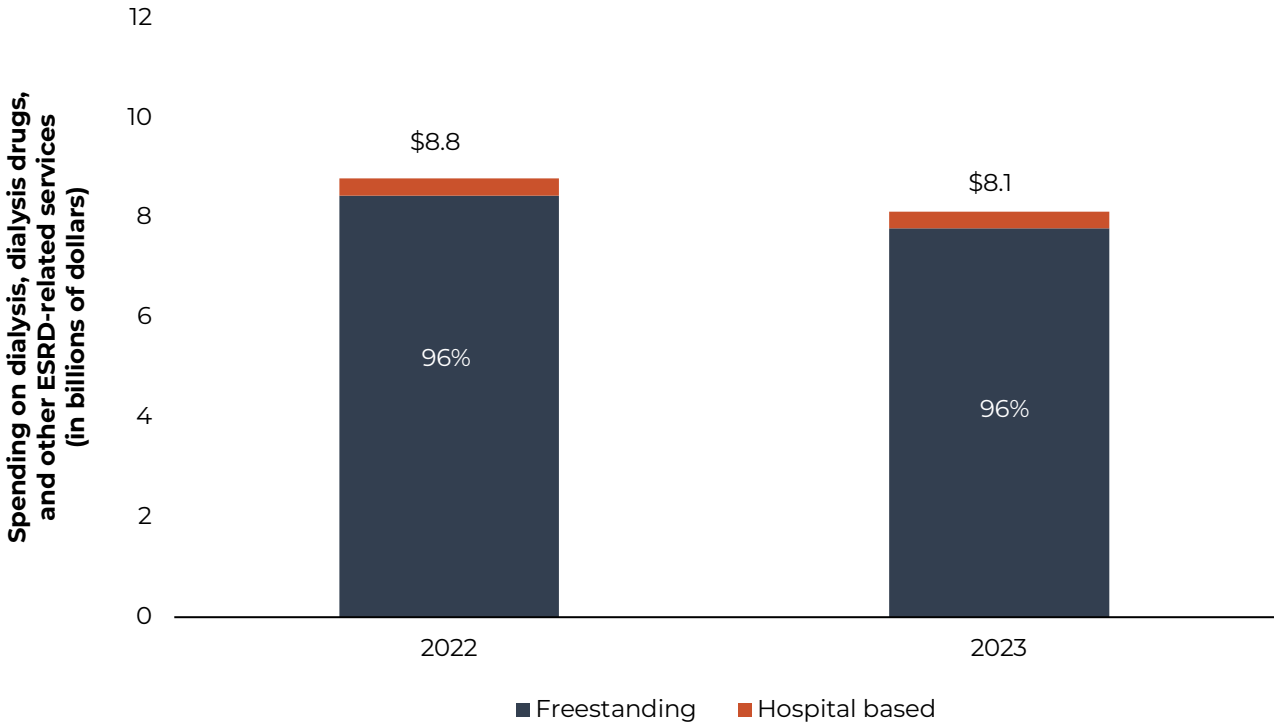
> After increasing 1 percent per year, on average, between 2019 and 2022, the number of dialysis facilities declined between 2022 and 2023 by 1.9 percent, though facilities' capacity to provide care—as measured by hemodialysis treatment stations—remained relatively steady.

> The recent decline in the total number of dialysis facilities may be attributable to factors such as (1) the decline in the rate of new end-stage renal disease (ESRD) cases and excess mortality of persons with ESRD due to the coronavirus pandemic; (2) the growing trend toward home dialysis; and (3) efforts by some dialysis providers to optimize their facilities' capacity utilization.

> The decline in rural capacity between 2022 and 2023 is also linked to facility size. Small dialysis facilities have been more likely to close, and rural facilities are, on average, smaller than urban facilities. In June 2020, the Commission recommended that CMS replace the current separate low-volume and rural payment adjustments with a single low-volume and isolated adjustment to better protect isolated low-volume rural facilities that are necessary for beneficiary access. Instead, in the ESRD prospective payment system final rule for 2025, CMS modified the current low-volume payment adjustment, creating different low-volume adjustments for facilities that furnish fewer than 3,000 treatments and for facilities that furnish between 3,000 and 3,999 treatments. CMS did not change the 0.8 percent rural-facility adjustment.

> Between 2022 and 2023, the number of for-profit and nonprofit facilities decreased by 1.4 percent and 7 percent, respectively. The average size of a facility has remained relatively constant at 18 dialysis treatment stations per facility.

Chart 11-2 FFS Medicare spending for outpatient dialysis services furnished by freestanding and hospital-based dialysis facilities, 2022 and 2023



Note: FFS (fee-for-service), ESRD (end-stage renal disease). Dollar amounts are nominal figures, not adjusted for inflation.

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

> In 2023, total FFS Medicare spending for dialysis, dialysis drugs, and ESRD-related clinical laboratory tests was $8.1 billion. Medicare paid all facilities under a prospective payment system that includes in the payment bundle certain dialysis drugs and ESRD-related clinical laboratory tests that were paid separately before 2011.

> Between 2022 and 2023, total FFS ESRD expenditures decreased by 8 percent on a nominal basis. The spending decline is due in large part to the increasing enrollment of dialysis beneficiaries in Medicare Advantage (MA) plans beginning in 2021. As beneficiaries with ESRD shifted to MA in 2021 through 2023, the number of FFS beneficiaries on dialysis fell 10 percent per year, on average, and the number of FFS treatments fell 11 percent per year (data not shown).

> Freestanding dialysis facilities treated most FFS dialysis beneficiaries and accounted for 96 percent of FFS expenditures on outpatient dialysis in 2022 and 2023.

Chart 11-3 Increase in the number of patients with ESRD over the last decade, but low growth between 2021 and 2022

	2012		2022		2012–2022
	Patients (thousands)	Share of patients	Patients (thousands)	Share of patients	Average annual percent change
Total	637.7	100%	815.6	100%	2%
Dialysis	448.9	70	554.7	68	2
In-center hemodialysis	400.8	63	470.3	58	2
Home hemodialysis[a]	6.6	1	13.1	2	7
Peritoneal dialysis[a,b]	39.9	6	67.3	8	5
Other dialysis[c]	1.6	0.3	4.0	0	10
Functioning graft and kidney transplant	188.8	30	261.0	32	3

Note: ESRD (end-stage renal disease). Totals may not equal the 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 had a functioning graft at the start of the year in question (i.e., 2012 or 2022) or received a transplant during the year in question.
[a] Home dialysis methods.
[b] "Peritoneal dialysis" refers to patients receiving either continuous ambulatory peritoneal dialysis or continuous cyclic peritoneal dialysis.
[c] "Other dialysis" includes other types of peritoneal dialysis methods and uncertain dialysis.

Source: Compiled by MedPAC from the U.S. Renal Data System.

> People with ESRD require either dialysis or a kidney transplant to live. The total number of patients with ESRD increased on average by 2 percent per year between 2012 and 2022. Between 2021 and 2022, the growth rate of the total number of patients with ESRD was 0.9 percent (data not shown). Most patients with ESRD undergo dialysis.

> 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 their abdomen as a filter. Peritoneal dialysis is the most common form of home dialysis.

> In 2022, most people with ESRD (58 percent) underwent hemodialysis administered in a dialysis facility (usually three times a week). Between 2012 and 2022, the total number of in-center hemodialysis patients grew on average by 2 percent annually, while the total number of peritoneal dialysis patients increased on average by 5 percent annually. Although a smaller proportion of all dialysis patients undergo home hemodialysis, the number of these patients grew on average by 7 percent per year during this period.

> Patients with functioning grafts have had a successful kidney transplant. Patients undergoing a kidney transplant may receive either a living or deceased donor's kidney. In 2022, 22 percent of transplanted kidneys were from living donors, and the remainder were from cadaver donors (data not shown).

Chart 11-4 Asian Americans are among the fastest-growing segments of the ESRD population

	Share of total in 2022	Average annual percent change 2017–2022
Total (*N* = 815,896)	100%	1%
Age (years)		
0–17	1	1
18–44	14	1
45–64	41	0
65–79	35	3
80+	9	2
Sex		
Male	59	2
Female	41	1
Race/ethnicity		
White	42	0
Black	29	1
Native American	1	3
Asian American	7	4
Hispanic	20	3
Underlying cause of ESRD		
Diabetes	37	0
Hypertension	27	2
Glomerulonephritis	14	0
Other causes	22	3

Note: ESRD (end-stage renal disease). Totals may not equal the 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 U.S. Renal Data System.

> Among all patients with ESRD (including those who are not covered by Medicare), nearly 44 percent were over age 65 in 2022. About 42 percent were White.

> Diabetes is the most common cause of renal failure.

> The number of patients with ESRD increased by 1 percent annually between 2017 and 2022. In 2022, among the fastest-growing groups were individuals of Native American, Asian, and Hispanic origins and individuals ages 65 and older.

Chart 11-5 Characteristics of Medicare FFS dialysis patients, 2023

	Share of all FFS dialysis patients
Age (years)	
Under 45	10%
45–64	33
64–74	29
75–84	21
85+	7
Sex	
Male	58
Female	42
Race	
White	43
Black	29
Hispanic	15
Asian	6
All other	7
Residence, by type of county	
Urban	84
Rural	16
Prescription drug coverage status	
Enrolled in Part D plan*	81
LIS	52
Dually eligible for Medicare and Medicaid	39

Note: FFS (fee-for-service), LIS (low-income subsidy). "Residence" reflects the beneficiary's county of residence, urban or rural (the latter includes micropolitan, rural adjacent to urban, or rural nonadjacent to urban) based on an aggregation of the Urban Influence Codes. Components may not sum to 100 percent due to rounding.
* Data do not account for FFS beneficiaries with other sources of creditable coverage.

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

> Compared with all Medicare beneficiaries (see Chart 2-5), FFS beneficiaries on dialysis are disproportionately younger and Black.

> In 2023, about 16 percent of FFS beneficiaries on dialysis resided in a rural county.

> In 2023, 81 percent of FFS beneficiaries on dialysis were enrolled in Part D plans. In addition, 6 percent of FFS beneficiaries on dialysis had either obtained drug coverage through employer-sponsored plans that received Medicare's retiree drug subsidy or they had creditable drug coverage from other sources; 13 percent of FFS beneficiaries on dialysis had no coverage or coverage less generous than Part D (data not shown).

> About two in five beneficiaries on dialysis were dually eligible for Medicare and Medicaid services.

Chart 11-6 A greater share of MA beneficiaries than FFS beneficiaries on dialysis are over age 65, Black, dually eligible for Medicare and Medicaid, and urban residents, 2023

	FFS beneficiaries on dialysis	MA beneficiaries on dialysis
Total	216,400	211,900
Age		
Under 45 years	10%	6%
45–64 years	34	31
65–74 years	28	33
75–84 years	21	24
85+ years	7	7
Sex		
Male	59	56
Female	41	44
Race/ethnicity		
White	43	33
Black	30	40
Hispanic	15	19
Asian	6	5
All others	6	3
Residence, by type of county		
Urban	83	87
Rural	16	13
Dual eligibility		
Fully dually eligible	38	39
Partially dually eligible	7	13
Not dually eligible	56	48
Part D enrollment		
Yes	73	98
No	27	2
New to dialysis	18	18
LDO	73	74
Non-LDO	27	26
Existing dialysis	83	82

Note: MA (Medicare Advantage), FFS (fee-for-service), LDO (large dialysis organization (DaVita and Fresenius)). Beneficiaries on dialysis were identified using the risk score file, and FFS versus MA enrollment was identified using CMS enrollment data. "Residence" reflects the beneficiary's county of residence in one of two categories, urban or rural (the latter category includes micropolitan, rural adjacent to urban, and rural nonadjacent to urban) based on an aggregation of the Urban Influence Codes. Data as of January 2023. Components may not sum to 100 percent due to rounding.

Source: Compiled by MedPAC from CMS enrollment data, risk-score file, U.S. Census delineation file, CMS-2728.

> Beginning in January 2021, the 21st Century Cures Act permitted beneficiaries on dialysis to enroll in MA plans without any restrictions. As a result of this statutory change, the share of beneficiaries on dialysis enrolled in MA plans increased rapidly from 25 percent in January 2020 to 52 percent by December 2023 (data not shown).

> Since the removal of enrollment barriers in 2021, a greater share of MA beneficiaries with ESRD in 2023 are under age 65 (a 12 percentage point increase since 2020), Black (a 7 percentage point increase), and dually eligible for Medicare and Medicaid (a 9 percentage point and 4 percentage point increase for full- and partial-benefit dually eligible beneficiaries, respectively; data not shown).

> In 2023, 63 percent of MA beneficiaries on dialysis were 65 years or older (of which 31 percent were 75 years or older), 40 percent were Black, 13 percent had partial dual eligibility, and 87 percent resided in urban areas. By comparison, among FFS beneficiaries on dialysis, 56 percent were 65 years or older (of which 28 percent were 75 years or older), 30 percent were Black, 7 percent had partial dual eligibility, and 83 percent resided in urban areas.

Chart 11-7 Aggregate FFS margins varied by type of freestanding dialysis facility, 2023

Type of freestanding facility	Share of dialysis treatments in freestanding facilities	Aggregate margin
All facilities	100%	–0.2%
Urban	88	0.6
Rural	12	–4.5
Treatment volume (quintile)		
Lowest	8	–19.0
Second	13	–11.2
Third	18	–3.3
Fourth	24	1.6
Highest	38	7.5

Note: FFS (fee-for-service). Pandemic-related federal relief funds are not accounted for in this table's data. Margins include payments and costs for dialysis services commonly provided under treatment, including injectable drugs and laboratory tests that were paid separately before 2011. The Commission's longstanding approach to calculating the Medicare end-stage renal disease (ESRD) prospective payment system (PPS) margin uses only Medicare-allowable costs for ESRD services. Such an approach is consistent with the methods we use to calculate the Medicare margin for other FFS sectors. Treatment-volume components do not sum to 100 percent due to rounding.

Source: Compiled by MedPAC from cost reports and claims submitted by freestanding dialysis facilities to CMS and from the Dialysis Compare database.

> For 2023, the aggregate FFS Medicare margin for dialysis-related services, including ESRD-related drugs and laboratory tests that were paid separately before 2011, was –0.2 percent.

> Between 2022 and 2023, the aggregate FFS Medicare margin increased (from –1.1 percent to –0.2 percent (2022 data not shown)). The increased margin in 2023 was attributable to growth in payments per treatment that outpaced growth in costs, while per treatment capital and ESRD drug, lab, and supply costs declined and growth in per treatment labor costs slowed. Partially offsetting these factors were increases in overhead cost per treatment between 2022 and 2023 and declining total treatment volume between 2022 and 2023.

> 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 in the margins of urban facilities versus rural facilities. Urban facilities are larger on average than rural facilities with respect to the number of in-center hemodialysis treatment stations and Medicare treatments provided (data not shown). Some rural facilities have benefited from the ESRD PPS's low-volume adjustment.

Chart 11-8 Dialysis quality of care: Some measures show progress, others need improvement, 2017–2022

Outcome measure	2017	2021	2022
Share of in-center hemodialysis patients:			
Receiving adequate dialysis	98%	97%	97%
Dialyzed with an AV fistula	65	61	60
Share of peritoneal dialysis patients receiving adequate dialysis	93	91	91
Share of all dialysis patients managing anemia			
Mean hemoglobin < 10 g/dL	28	31	31
Mean hemoglobin 10 to <12 g/dL	67	63	63
Mean hemoglobin ≥ 12 g/dL	5	6	6
Share of all dialysis patients wait-listed for a kidney	14.3	12.4	12.1
Renal transplant rate per 100 patient years	3.5	4.1	4.2
Annual mortality rate per 100 patient years*	17.2	19.4	18.3
Total hospital admissions per patient year*	1.7	1.6	1.6
Hospital days per patient year*	11.4	11.5	11.8

Note: AV (arteriovenous), g/dL (grams per deciliter [of blood]). The rate per patient year is calculated by dividing the total number of events by the fraction of the year that patients were followed. Analysis of data on dialysis adequacy is based on measures used by CMS in its ESRD [End-Stage Renal Disease] Quality Incentive Program. The U.S. Renal Data System (USRDS) adjusts hospitalization and mortality measures by age, gender, race, and primary diagnosis of ESRD.
* Lower values suggest higher quality.

Source: All measures except the share of patients receiving adequate dialysis and anemia management were compiled by MedPAC using data from the USRDS. Measure of share of patients receiving adequate dialysis and anemia management was compiled by MedPAC using data from CMS's 100 percent institutional outpatient files.

> Changes in the available quality of care measures are challenging to interpret due to the effects of the coronavirus pandemic on many of our quality measures. Sadly, patients with ESRD have been at increased risk for COVID-19–associated morbidity and mortality.

> Between 2017 and 2022, anemia management and dialysis adequacy remained relatively steady.

> 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, declined between 2017 and 2022. Although the reasons for the changes in 2021 and 2022 are uncertain, the coronavirus pandemic was likely a factor.

> Mortality rates decreased during 2021 and 2022 (data not shown). All-cause hospital admissions held steady between 2021 and 2022.

> We report access to kidney transplantation because it is widely believed to be the best treatment option for individuals with ESRD. Between 2017 and 2022, the share of dialysis patients accepted on the kidney transplant waiting list declined from 14.3 to 12.1, while the renal transplant rate per 100 dialysis-patient years increased from 3.5 to 4.2.

Chart 11-9 Hospice use increased in 2023

	2010	2019	2022	2023	Average annual change 2010–2022	Change 2022–2023
Medicare payments (in billions)	$12.9	$20.9	$23.7*	$25.7*	5.2%*	8.3%*
Beneficiaries in hospice (in millions)	1.15	1.61	1.72*	1.74*	3.4*	1.3*
Number of hospice days for all hospice beneficiaries (in millions)	81.6	121.8	130.2*	137.7*	4.0*	5.7*

Note: Total payments, number of hospice users, and number of hospice days displayed in the table are rounded; the percentage change is calculated using unrounded data. Dollar amounts are nominal figures, not adjusted for inflation.
* These estimates are based on Medicare-paid hospice claims, which exclude hospice care paid for by Medicare Advantage (MA) plans participating in the Center for Medicare & Medicaid Innovation hospice MA value-based insurance design hospice model beginning in 2021. According to a CMS evaluation reports, 19,065 MA beneficiaries in 2022 and 23,828 MA beneficiaries in 2023 started hospice that year paid for by MA plans (Eibner, C., D. Khodyakov, E. A. Taylor, et al. 2025. *Evaluation of the Medicare Advantage value-based insurance design model test: 2020–2023*. Report prepared for the Centers for Medicare & Medicaid Services, Center for Medicare & Medicaid Innovation: RAND Health Care. https://www.cms.gov/priorities/innovation/data-and-reports/2025/vbid-2020-2023-eval-report.).

Source: MedPAC analysis of data from the Common Medicare Environment and hospice claims data from CMS.

> Total Medicare payments to hospices were about $25.7 billion in 2023, about 8 percent higher on a nominal basis than the prior year.

> The number of Medicare beneficiaries receiving hospice services and the total number of days of hospice care increased in 2023.

Chart 11-10 The share of decedents using hospice increased in 2023, returning to the prepandemic rate

	2010	2019	2022	2023	Average annual percent change 2010–2019	Average annual percent change 2019–2022	Percent change 2022–2023
Number of Medicare decedents (millions)	1.99	2.32	2.64	2.50	1.7%	4.3%	–5.2%
Number of Medicare decedents who used hospice (millions)	0.87	1.20	1.30	1.29	3.6	2.6	–0.3
Share of decedents who used hospice	43.8%	51.6%	49.1%	51.7%			

Note: The "number of Medicare decedents who used hospice" reflects hospice use in the last calendar year of life. Analysis excludes beneficiaries without Medicare Part A because hospice is a Part A benefit. Yearly figures presented in the table are rounded, but figures in the percent change columns were calculated using unrounded data.

Source: MedPAC analysis of data from the Common Medicare Environment and hospice claims data from CMS.

> In 2023, the share of decedents using hospice increased to 51.7 percent, as the number of beneficiaries who died in 2023 declined 5.2 percent and the number of decedents using hospice declined but to a lesser extent (0.3 percent).

> With the onset of the coronavirus pandemic, the hospice use rate declined in 2020 and 2021 but increased in 2022 and 2023. In 2023, the hospice use rate (51.7 percent) was similar to the prepandemic rate (51.6 percent in 2019).

> The decline in hospice use in 2020 and 2021 reflected the effects of the pandemic. Elderly people who die of COVID-19, similar to those who die of pneumonia and influenza, have been much more likely to die in the hospital and less likely to die at home or in a nursing facility than elderly people who die of other illnesses (data not shown).

> Prior to the pandemic, hospice use rates among decedents increased substantially, rising from 43.8 percent in 2010 to 51.6 percent in 2019.

Chart 11-11 Share of decedents using hospice increased in 2023 among all beneficiary groups

	Share of decedents using hospice				Average annual percentage point change 2010–2022	Percentage point change 2022–2023
	2010	2019	2022	2023		
All	43.8%	51.6%	49.1%	51.7%	0.4	2.6
FFS beneficiaries	42.8	50.7	49.1	51.7	0.5	2.6
MA beneficiaries	47.2	53.2	49.2	51.7	0.2	2.5
Dually eligible	41.5	49.3	43.9	46.6	0.2	2.7
Non–dually eligible	44.5	52.4	51.1	53.6	0.6	2.5
Age (years)						
<65	25.7	29.5	26.6	28.6	0.1	2.0
65–74	38.0	41.0	37.7	40.2	0.0	2.5
75–84	44.8	52.2	49.4	51.9	0.4	2.5
85+	50.2	62.7	61.8	64.0	1.0	2.2
Race/ethnicity						
White	45.5	53.8	51.7	54.3	0.5	2.6
Black	34.2	40.8	37.4	39.7	0.3	2.3
Hispanic	36.7	42.7	38.2	40.4	0.1	2.2
Asian American	30.0	39.8	38.0	39.2	0.7	1.2
North American Native	31.0	38.5	37.2	39.4	0.5	2.2
Gender						
Male	40.1	46.7	43.9	46.3	0.3	2.4
Female	47.0	56.3	54.4	56.9	0.6	2.5
Beneficiary location						
Urban county	45.6	52.8	50.2	52.6	0.4	2.4
Rural county, micropolitan	39.2	49.7	47.3	50.1	0.7	2.8
Rural county, adjacent to urban	39.0	49.5	47.9	50.9	0.7	3.0
Rural county, nonadjacent to urban	33.8	43.8	42.1	44.9	0.7	2.8
Frontier county	29.2	36.2	35.3	37.1	0.5	1.8

Note: FFS (fee-for-service), MA (Medicare Advantage). For each demographic group, the share of decedents who used hospice is calculated as follows: The number of beneficiaries in the group who both died and received hospice in a given year is divided by the total number of beneficiaries in the group who died in that year. Prior to 2021, the "MA beneficiaries" group received hospice paid for by the FFS program; beginning in 2021, most individuals in the MA beneficiaries group received hospice paid for by FFS Medicare, but a small number received hospice paid for by their MA plan under the MA value-based insurance design model. "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 (UICs). This chart uses the 2013 UIC definitions. The "frontier" category is defined as population density less than or equal to six people per square mile and overlaps the beneficiary county of residence categories. Analysis excludes beneficiaries without Medicare Part A because hospice is a Part A benefit.

Source: MedPAC analysis of data from the Common Medicare Environment and hospice claims data from CMS.

> In 2023, hospice use rates among decedents increased among all beneficiary groups examined.

> In 2023, hospice use continued to vary by demographic and beneficiary characteristics. Medicare decedents who were older, White, female, living in an urban area, or not dually eligible were more likely to use hospice than their respective counterparts.

Chart 11-12 Number of hospice visits for beneficiaries receiving routine home care, 2019–2023

	2019	2021	2022	2023
Average number of visits per week				
All visits	4.3	3.8	3.9	3.9
Nurse visits	1.8	1.7	1.7	1.8
Aide visits	2.2	1.8	1.8	1.9
Social worker visits	0.3	0.3	0.3	0.3
Average length per visit (number of minutes)				
All visits	60	58	56	61
Nurse visits	57	55	54	61
Aide visits	63	61	60	61
Social worker visits	52	50	49	58
Average visit time per week (number of minutes)				
All visits	258	218	218	237
Nurse visits	104	94	93	107
Aide visits	137	111	111	116
Social worker visits	17	13	14	16

Note: Analysis includes only routine home care days and visits. "Visits" refers to in-person visits only and excludes postmortem visits. "Nurse visits" includes both registered nurse and licensed practical nurse visits. "Length per visit" is reported by providers in a number of 15-minute increments, rounded to the nearest 15-minute increment. We calculate visit time in minutes by multiplying the number of 15-minute increments by 15. Components of visits may not sum to total visits due to rounding.

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

> In 2023, hospice enrollees received on average 3.9 visits per week, with nurse, aide, and social worker visits accounting for 1.8 visits, 1.9 visits, and 0.3 visits per week on average, respectively.

> The average length of hospice visits in 2023 was about an hour (61 minutes).

> Overall, the average amount of visit time hospice patients received per week in 2023 was about 237 minutes. On average, hospice patients received 107 minutes of nurse visits, 116 minutes of aide visits, and 16 minutes of social worker visits per week.

> The average number of in-person visits per week and/or length of visits generally declined during the pandemic. Subsequently, nurse and social worker visits rebounded to prepandemic levels, but the average number of aide visits per week in 2023 remained below the 2019 level.

Chart 11-13 Number of Medicare-participating hospices increased due to growth in for-profit hospices, 2019–2023

	2019	2022	2023
All hospices	4,840	5,899	6,535
For profit	3,434	4,581	5,068
Nonprofit	1,256	1,170	1,151
Government	148	138	136
Freestanding	3,937	5,076	5,567
Hospital based	428	382	365
Home health based	456	420	414
SNF based	19	17	17
Urban	3,973	5,051	5,701
Rural	861	834	833

Note: SNF (skilled nursing facility). 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). Type of hospice reflects the type of cost report filed (a hospice files a freestanding hospice cost report or the hospice is included in the cost report of a hospital, home health agency, or skilled nursing facility). Some categories do not sum to totals because of missing data for some providers. Missing data on ownership and hospice type particularly affect the most recent year (2023), for which we lack data on ownership for 180 providers and the type of hospice for 172 providers.

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

> There were 6,535 Medicare-participating hospices in 2023, up nearly 11 percent from 2022 and 35 percent since 2019.

> In 2023, the number of for-profit hospices grew by more than 10 percent. Between 2022 and 2023, the number of hospices with nonprofit ownership or government ownership declined, continuing the downward trend observed from 2019 to 2022.

> The number of freestanding providers increased by almost 10 percent in 2023. The number of home health–based and hospital-based hospices declined in 2023, while the number of SNF-based providers was unchanged. (A hospice's status as freestanding, 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 was stable in 2023, after falling about 1 percent per year between 2019 and 2022. The number of providers located in rural areas is not necessarily an indicator of access to care because it does not capture the size of those hospice providers, their capacity to serve patients, or the size of their service area. Also, some urban hospices furnish services in rural areas. Indeed, despite the overall decline in the number of rural hospices since 2010 (data not shown), the share of rural decedents using hospice has grown overall since 2010 (see Chart 11-11).

Chart 11-14 Hospice cases by primary diagnosis, 2023

Diagnosis	Share of total cases
Alzheimer's, nervous system disorders, organic psychosis	23%
Cancer	23
Circulatory, except heart failure	22
Other	9
Heart failure	8
Respiratory disease	6
Chronic airway obstruction, NOS	4
Genitourinary disease	2
Digestive disease	2
COVID-19	<1
All	100

Note: NOS (not otherwise specified). Cases include all patients who received hospice care in 2023, not just decedents. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim in 2023. Components may not sum to 100 percent due to rounding.

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

> In 2023, the most common primary diagnoses among Medicare hospice patients were neurological conditions (Alzheimer's disease, nervous system disorders, and organic psychosis accounted for 23 percent of cases), cancer (23 percent of cases), and circulatory conditions other than heart failure (22 percent of cases).

> Less than 1 percent of Medicare hospice patients had COVID-19 as their hospice primary diagnosis in 2023. An additional 3 percent of hospice patients had COVID-19 as a secondary diagnosis on their hospice claims in 2023 (data not shown).

Chart 11-15 Hospice average length of stay among decedents increased in 2023

Year	Average length of stay (in days)	Percentiles of length of stay (in days)				
		10th	25th	50th	75th	90th
2010	87.0	3	6	18	78	242
2017	89.3	2	5	18	80	251
2018	90.3	2	5	18	82	255
2019	92.5	2	5	18	85	266
2020	97.0	2	5	18	87	287
2021	92.1	2	5	17	79	264
2022	95.3	2	5	18	84	275
2023	96.2	2	5	18	86	278

Note: Lifetime 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 their lifetime.

Source: MedPAC analysis of data from the Common Medicare Environment and the Medicare Beneficiary Database from CMS.

> The average length of stay among decedents was 96.2 days in 2023, up about 1 day from 2022. In 2023, the length of stay at the 50th percentile (the median) was stable at 18 days.

> Hospice lengths of stay vary broadly. In 2023, hospice length of stay among decedents ranged from 2 days at the 10th percentile to 278 days at the 90th percentile.

> Between 2010 and 2023, growth in the average length of stay among decedents has been the result of increases in length of stay for patients with the longest stays. Length of stay grew from 242 days to 278 days at the 90th percentile.

Chart 11-16 Hospice length of stay among decedents, by beneficiary and hospice characteristics, 2023

	Average length of stay (in days)	Percentiles of length of stay (in days)		
		10th	50th	90th
Beneficiary				
Diagnosis				
Cancer	51	3	15	124
Neurological	164	4	45	482
Heart/circulatory	106	2	19	317
COPD	131	3	30	381
Other	59	2	8	164
Site of service				
Home	97	4	25	265
Nursing facility	113	3	24	334
Assisted living facility	169	6	62	480
Hospice				
For profit	115	3	24	341
Nonprofit	72	2	13	198
Freestanding	98	2	19	287
Home health based	73	2	15	199
Hospital based	60	2	11	162

Note: COPD (chronic obstructive pulmonary disease). Length of stay is calculated for Medicare beneficiaries who died in 2023 and used hospice that year and reflects the total number of days the decedent was enrolled in the Medicare hospice benefit during their lifetime. The location categories reflect where the beneficiary spent the largest share of their days while enrolled in hospice. "Diagnosis" reflects the primary diagnosis on the beneficiary's last hospice claim.

Source: MedPAC analysis of 100 percent hospice claims standard analytic file, Medicare Beneficiary Database, Medicare hospice cost reports, and Provider of Services file 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 11-17 About 60 percent of Medicare hospice spending in 2023 was for patients with stays exceeding 180 days

	Medicare hospice spending, 2023 (in billions)
All hospice users in 2023	$25.7
Beneficiaries with LOS > 180 days	15.6
Days 1–180	5.0
Days 181–365	4.8
Days 366+	5.8
Beneficiaries with LOS ≤ 180 days	10.1

Note: LOS (length of stay). "LOS" reflects the beneficiary's lifetime LOS as of the end of 2023 (or at the time of death or discharge in 2023 if the beneficiary was not enrolled in hospice at the end of 2023). All spending reflected in the chart occurred only in 2023.

Source: MedPAC analysis of 100 percent hospice claims standard analytical file and an Acumen LLC data file on hospice lifetime length of stay (which is based on an analysis of historical claims data).

> In 2023, Medicare hospice spending on patients with stays exceeding 180 days was $15.6 billion, about 60 percent of all Medicare hospice spending that year.

> About $5.8 billion, or about 23 percent, of Medicare hospice spending in 2023 was on hospice care for patients who had already received at least one year of hospice.

Chart 11-18 Hospice Medicare aggregate margins, 2018–2022

	Share of hospices (2022)	Share of patients (2022)	Medicare margin				
			2018	2019	2020	2021	2022
All	100%	100%	12.4%	13.4%	14.2%	13.3%	9.8%
Freestanding	86	83	15.1	16.2	16.7	15.5	12.4
Home health based	7	9	8.4	9.7	11.2	10.9	3.8
Hospital based	6	8	–16.5	–18.4	–18.2	–15.6	–23.5
For profit	78	55	19.0	19.2	20.5	19.2	16.1
Nonprofit	20	43	3.8	6.1	5.8	5.2	0.3
Government	2	2	N/A	N/A	N/A	N/A	N/A
Urban	86	89	12.6	13.6	14.3	13.4	10.0
Rural	14	11	10.3	11.5	13.5	12.3	8.1
Below cap	77	94	12.6	13.8	14.8	14.0	10.8
Above cap	23	6	10.3	10.0	7.7	2.5	–1.6
Above cap (including cap overpayments)	23	6	21.8	22.5	22.8	21.8	18.5
Share of stays > 180 days							
Lowest quintile	20	27	–3.0	–2.5	–0.4	0.0	–4.1
Second quintile	20	29	8.5	10.3	11.8	11.1	8.2
Third quintile	20	20	16.8	19.9	20.0	20.5	17.8
Fourth quintile	20	17	20.8	22.8	24.1	22.2	18.6
Highest quintile	20	7	17.6	13.4	13.4	9.7	2.7

Note: N/A (not available). Medicare aggregate margins for all provider categories exclude overpayments to above-cap hospices except where specifically indicated (providers whose payments exceed the Medicare hospice aggregate cap are required to repay the excess to Medicare). Medicare aggregate margins are calculated based on Medicare-allowable, reimbursable costs. Margin by hospice ownership status is based on hospices' ownership designation from the Medicare cost report. 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 hospice cost reports, 100 percent hospice claims standard analytic file, and Medicare Provider of Services file from CMS.

> The fee-for-service aggregate Medicare margin was 9.8 percent in 2022, down from 13.3 percent in 2021.

> In 2022, freestanding hospices had higher margins (12.4 percent) than home health–based (3.8 percent) and hospital-based (–23.5 percent) hospices.

> The 2022 margin among for-profit hospices was high at 16.1 percent. Nonprofit hospices as a group had a margin of 0.3 percent in 2022, but the subset of nonprofit hospices that were freestanding had a higher margin, 5.1 percent (latter figure not shown).

> The aggregate 2022 margin was slightly higher for urban hospices (10.0 percent) than rural hospices (8.1 percent).

> Hospices that exceeded the cap (Medicare's aggregate average per beneficiary payment limit) had a 2022 margin of about 18.5 percent before and –1.6 percent after the return of the cap overpayments.

> Hospices with more patients whose stays were longer than 180 days generally had higher margins in 2022. Hospices in the lowest length-of-stay quintile had a margin of –4.1 percent, compared with an 18.6 percent margin for hospices in the second-highest length-of-stay quintile. Margins were lower in the highest quintile (2.7 percent) because some hospices in this quintile exceeded Medicare's aggregate payment cap and were required to repay the overage.

Chart 11-19 Hospices that exceeded Medicare's annual payment cap, 2018–2022

	2018	2019	2020	2021	2022
Share of hospices exceeding the cap	16.3%	19.0%	18.6%	18.9%	22.6%
Average payments over the cap per hospice exceeding the cap (in thousands)	$334	$384	$422	$451	$419
Payments over the cap as a share of overall Medicare hospice spending in cap year	1.3%	1.7%	1.8%	2.0%	2.3%

Note: The aggregate cap statistics reflect the Commission's estimates and may differ from CMS claims-processing contractors' estimates. Our estimates assume all hospices use the proportional methodology and rely on claims data through 15 months after the end of each cap year. The claims-processing contractors may reopen the hospice cap calculation for up to three years; the reopening process and timing vary across contractors. Beginning in 2018, the cap year is aligned with the federal fiscal year (October 1 to September 30 of the following year). Dollar amounts are nominal figures, not adjusted for inflation.

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

> The hospice aggregate cap is a limit on the average annual payment per beneficiary that a hospice provider can receive. If a hospice's total payments exceed its total number of Medicare patients multiplied by the cap amount ($34,465.34 for fiscal year 2025), it must repay the difference.

> An estimated 22.6 percent of hospices exceeded the aggregate cap in 2022, up from 18.9 percent in 2021.

> On average, above-cap hospices exceeded the cap by approximately $419,000 per provider in 2022, down from about $451,000 per provider in 2021.

> Medicare payments over the cap represented 2.3 percent of total Medicare hospice spending in 2022.

Chart 11-20 Hospice live-discharge rates, 2021–2023

	2021	2022	2023
Live discharges as a share of all discharges, by reason for live discharge			
All live discharges	17.2%	17.3%	18.5%
No longer terminally ill	6.3	6.1	6.2
Beneficiary revocation	6.3	6.1	6.7
Transfer hospice providers	2.4	2.4	2.6
Move out of service area	2.0	2.3	2.7
Discharge for cause	0.3	0.3	0.4
Providers' overall rate of live discharge as a share of all discharges, by percentile (for providers with more than 30 discharges)			
10th percentile	8.5	8.3	8.6
25th percentile	12.5	12.2	13.2
50th percentile	19.1	19.2	20.7
75th percentile	30.2	29.9	33.3
90th percentile	50.0	49.9	56.1

Note: Percentages may not sum to totals 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.

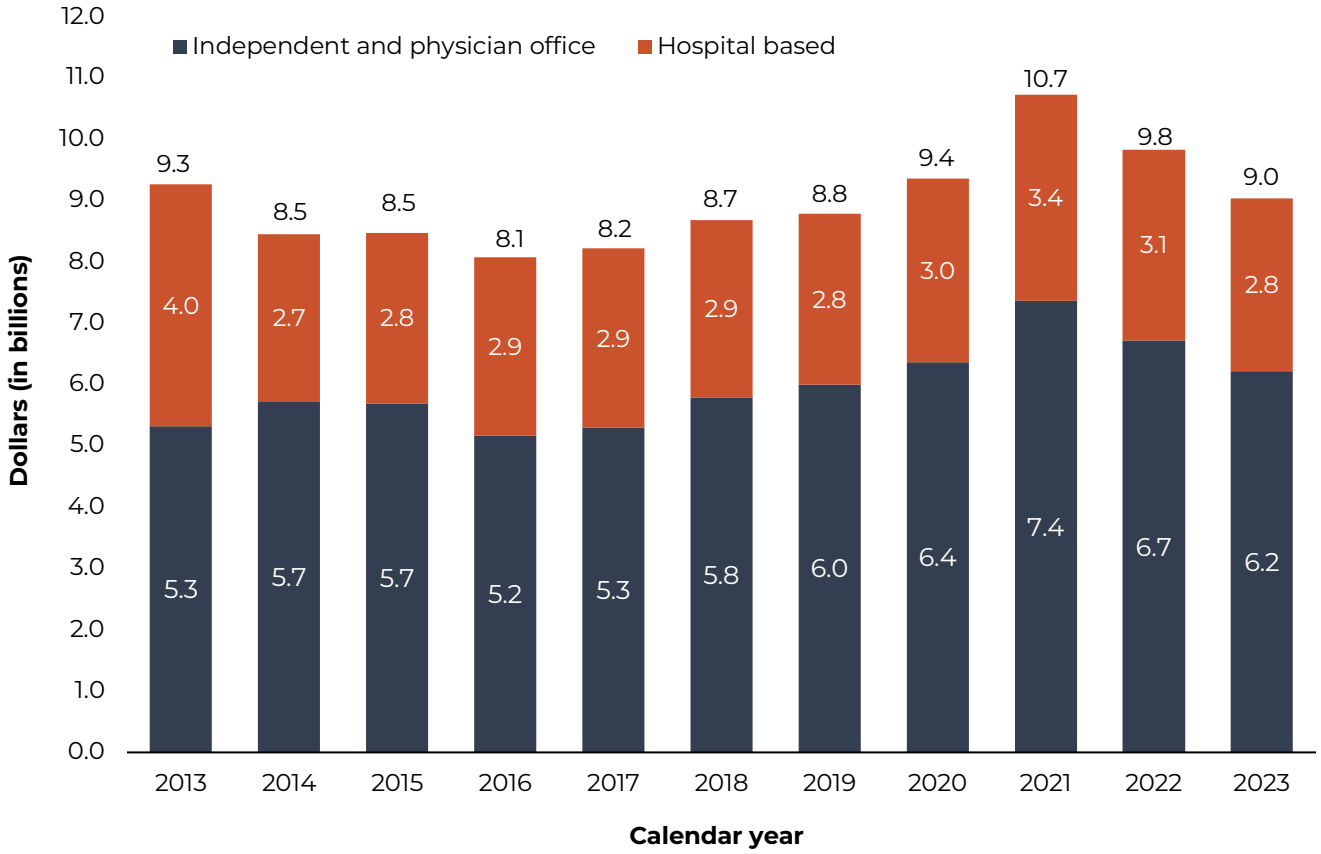
> In 2023, the overall live-discharge rate was 18.5 percent, up from 17.3 percent in 2022.

> The most common reasons for live discharge were the beneficiary revoking the hospice benefit and the beneficiary no longer being terminally ill, accounting for 6.7 percent and 6.2 percent of all discharges in 2023, 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 of about 56.1 percent or more in 2023.

> Small hospices as a group have substantially higher live-discharge rates than larger hospices. In 2023, the aggregate live-discharge rate was 56.4 percent for hospices with 30 or fewer discharges, in contrast to a 18.5 percent aggregate live-discharge rate for all hospices (data for small hospices not shown).

Chart 11-21 Medicare spending for clinical laboratory tests, 2013–2023



Note: Spending is for services paid under the clinical laboratory fee schedule. Hospital-based services are furnished in laboratories 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 laboratory tests. Dollar amounts are nominal figures, not adjusted for inflation.

Source: The annual report of the Boards of Trustees of the Medicare trust funds, 2022 and 2023.

> From 2013 to 2014, Medicare spending for laboratory tests declined by about 9 percent because, since 2014, many laboratory tests provided in hospital outpatient departments are no longer paid separately under the clinical laboratory 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 laboratory tests 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 laboratory tests grew by an average of 5.2 percent per year.

> Largely due to the coronavirus public health emergency, lab spending increased in 2020 and 2021, then declined in later years.