JUNE 2016

A DATA BOOK

Health Care Spending and the Medicare Program

MEDPAC Medicare Payment Advisory Commission

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Introduction

The MedPAC Data Book provides information on national health care and Medicare spending as well as Medicare beneficiary demographics, dual-eligible beneficiaries, quality of care in the Medicare program, and Medicare beneficiary and other payer liability. It also examines provider settings—such as hospitals and post-acute care—and presents data on Medicare spending, beneficiaries' access to care in the setting (measured by the number of beneficiaries using the service, number of providers, volume of services, length of stay, or through direct surveys), and the sector's Medicare profit margins, if applicable. In addition, it covers the Medicare Advantage program and prescription drug coverage for Medicare beneficiaries, including Part D.

MedPAC began producing its annual Data Book at the suggestion of congressional staff. Some of the information it contains is derived from MedPAC's March and June reports to the Congress; other information presented is unique to the Data Book. The information is presented through tables and figures with brief discussions.

We produce a limited number of printed copies of this report. It is, however, available through the MedPAC website: www.medpac.gov.

Notes on data

Several charts in this Data Book use data from the Medicare Current Beneficiary Survey (MCBS). We use the MCBS to compare beneficiary groups with different characteristics. The MCBS is a survey, so expenditure amounts that we show may not match actual Medicare expenditure amounts from CMS's program offices or the Office of the Actuary.

A number of charts in the Data Book use information that is typically published in the annual report of the Boards of Trustees of the Medicare Trust Funds. At the time this Data Book was prepared, the trustees' report had not yet been released for 2016. Charts that use data from the trustees' report reflect data from the 2015 report and are flagged accordingly. The reader is advised to consult the 2016 trustees' report directly, when available, for the most current data.

Changes in aggregate spending among the fee-for-service sectors presented in this Data Book reflect changes in Medicare enrollment between the traditional fee-for-service program and Medicare Advantage. Increased enrollment in Medicare Advantage may be a significant factor in instances in which Medicare spending in a given sector has leveled off or even declined. In these instances, fee-for-service spending per capita may present a more complete picture of spending changes. We present both measures (aggregate and per capita) where warranted.

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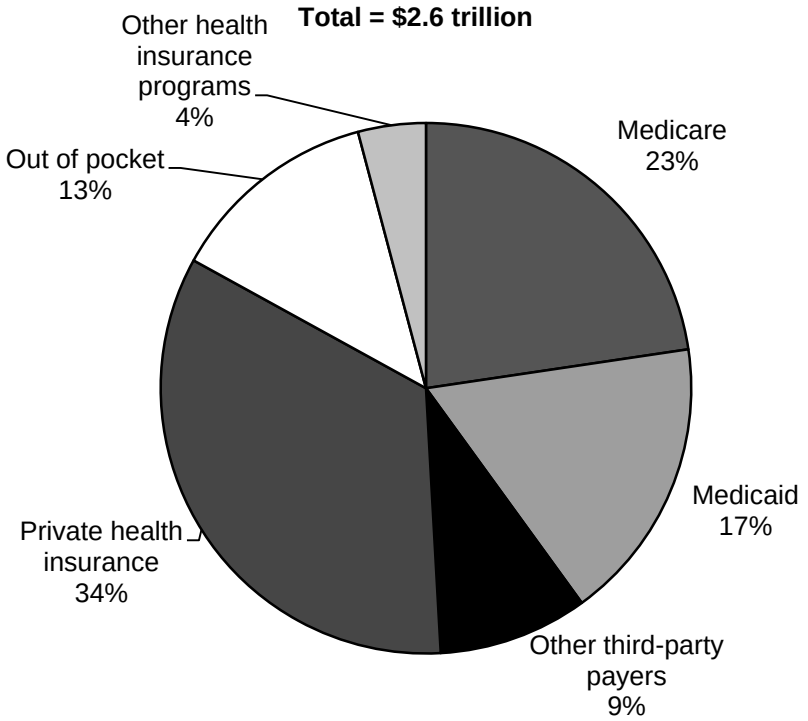
SECTION 1

National health care and Medicare spending

Chart 1-1. Medicare was the largest single purchaser of personal health care, 2014



Note: "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. "Out-of-pocket" spending includes cost sharing for both privately and publicly insured individuals. Premiums are included in the shares of each program (e.g., Medicare, private health insurance) rather than in the share of the out-of-pocket category. "Other health insurance programs" includes the Children's Health Insurance Program, Department of Defense, and Department of Veterans Affairs. "Other third-party payers" includes worksite health care, other private revenues, Indian Health Service, workers' compensation, general assistance, maternal and child health, vocational rehabilitation, other federal programs, Substance Abuse and Mental Health Services Administration, other state and local programs, and school health.

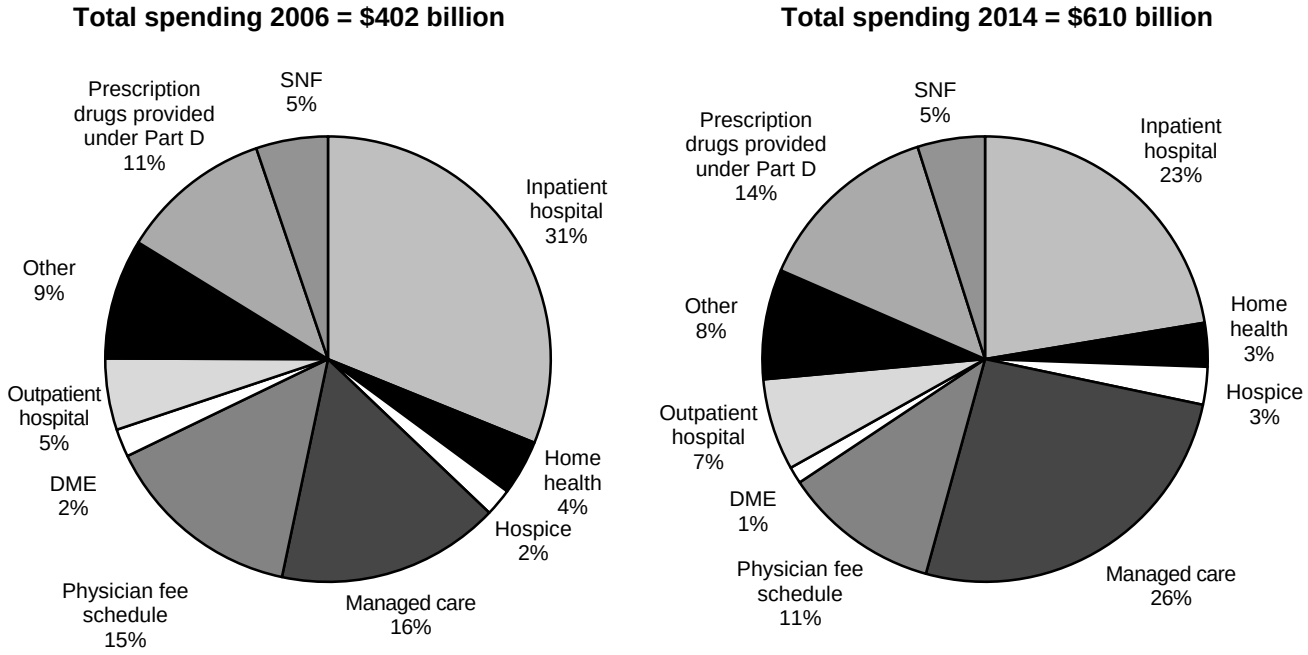
Source: CMS Office of the Actuary, National Health Expenditure Accounts, "Table 6: Personal Health Care Expenditures; Levels, Percent Change and Percent Distribution, by Source of Funds: Selected Calendar Years 1970–2014," released December 2015.

- Medicare is the largest single purchaser of health care in the United States. (The share of spending accounted for by private health insurance (34 percent in 2014) is greater than Medicare's share (23 percent in 2014). However, private health insurance is not a single purchaser of health care; rather, it includes many private plans, including traditional managed care, self-insured health plans, and indemnity plans.) Of the $2.6 trillion spent on personal health care in 2014, Medicare accounted for 23 percent, or $580 billion (as noted above, this amount includes spending on direct patient care and excludes certain administrative and business costs).

- Thirty-four percent of spending was financed through private health insurance payers, and 13 percent was from consumer out-of-pocket spending.

- Medicare and private health insurance spending includes premium contributions from enrollees.

Chart 1-2. Medicare spending is concentrated in certain services and has shifted over time



Note: SNF (skilled nursing facility), DME (durable medical equipment). All data are by calendar year. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. "Other" includes items such as laboratory services, physician-administered drugs, renal dialysis performed in freestanding dialysis facilities, services provided in freestanding ambulatory surgical center facilities, and ambulance. Totals may not sum to 100 percent due to rounding.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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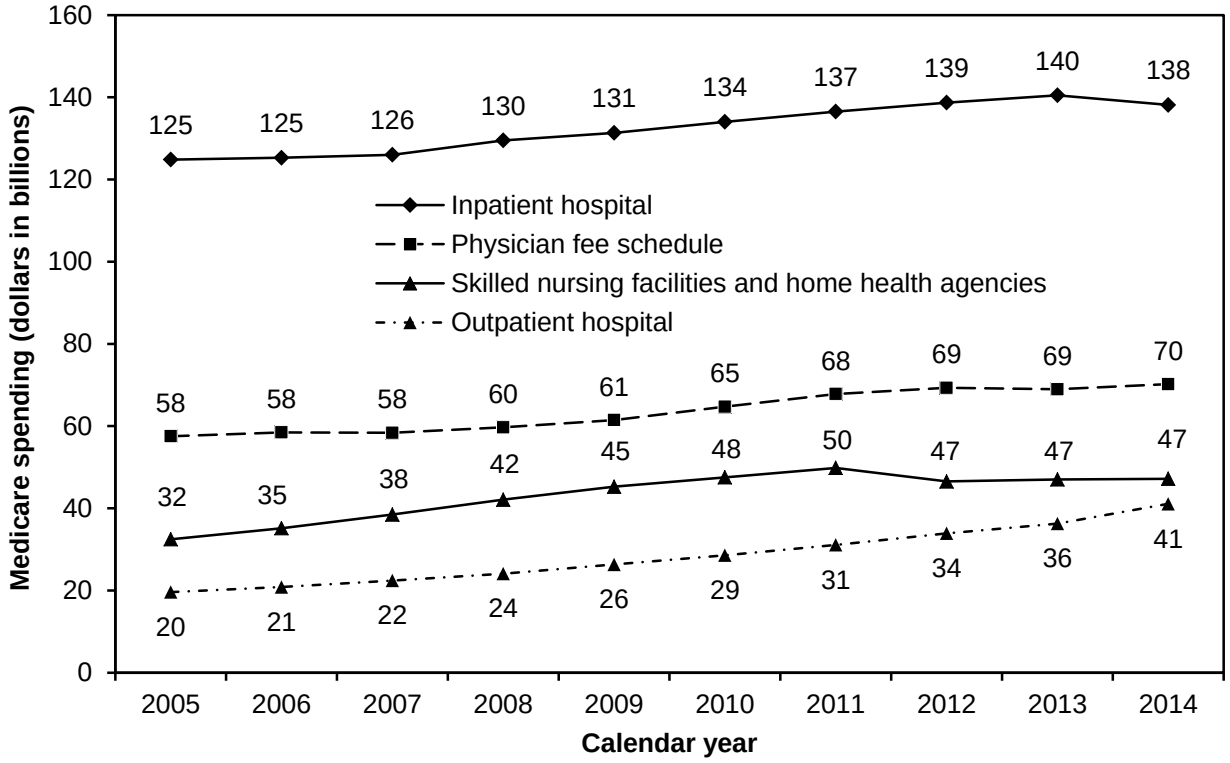
- The distribution of Medicare spending among services has changed over time.
- In 2014, Medicare spending totaled $610 billion for benefit expenses. Managed care was the largest spending category (26 percent), followed by inpatient hospital services (23 percent), prescription drugs provided under Part D (14 percent), services reimbursed under the physician fee schedule (11 percent), and services provided in other settings (8 percent).
- Spending for inpatient hospital services was a smaller share of total Medicare spending in 2014 than it was in 2006, falling from 31 percent to 23 percent. Spending on beneficiaries enrolled in managed care plans grew from 16 percent to 26 percent over the same period. Medicare managed care enrollment increased 129 percent over the same period (data not shown).

Chart 1-3. Aggregate Medicare spending for FFS beneficiaries, by sector, 2005–2014



Note: FFS (fee-for-service). "Physician fee schedule" includes spending on services provided by physicians and other health professionals such as nurse practitioners, physician assistants, and physical therapists. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. Spending for Medicare Advantage enrollees is also not included.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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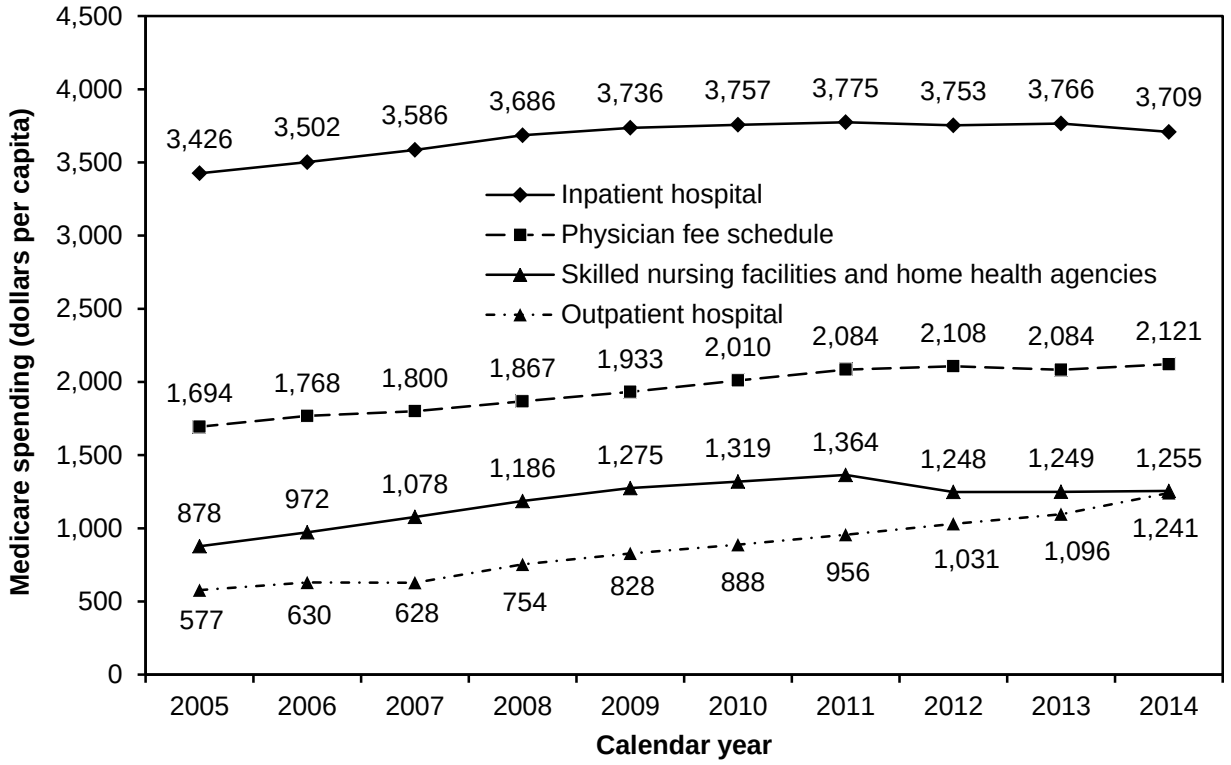
- Medicare spending among FFS beneficiaries has increased significantly since 2005 across all sectors, even though spending growth has slowed recently. The slowdown in spending growth is partly attributable to a decline in the growth of FFS enrollment since the number of Medicare Advantage enrollees has increased.

- Spending growth for inpatient hospital services, the sector with the highest level of spending, averaged 1.5 percent per year from 2005 to 2013. Spending then declined by 1.7 percent between 2013 and 2014 (calculated on unrounded numbers). The decline in the last year is partly attributable to a shift in service volume from the inpatient setting to the outpatient setting and to the decline in the growth of FFS enrollment, but it may also reflect broader economic conditions. Despite the slowdown, spending on inpatient hospital services increased, on aggregate, 11 percent from 2005 to 2014.

- Spending growth for outpatient hospital services remained strong throughout the period, averaging 9 percent per year from 2005 to 2014. Aggregate spending on outpatient hospital services increased 110 percent from 2005 to 2014.

Chart 1-4. Per capita Medicare spending for FFS beneficiaries, by sector, 2005–2014



Note: FFS (fee-for-service). "Physician fee schedule" includes spending on services provided by physicians and other health professionals such as nurse practitioners, physician assistants, and physical therapists. Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. Spending for Medicare Advantage enrollees is also not included. Spending per beneficiary for inpatient hospital services equals spending for the sector (see Chart 1-3) divided by FFS enrollment in Part A. Spending per beneficiary for physician fee schedule services and outpatient hospital services equals spending for the sector (see Chart 1-3) divided by FFS enrollment in Part B. Spending per beneficiary for skilled nursing facilities and home health agencies equals spending for those sectors (see Chart 1-3) divided by total FFS enrollment.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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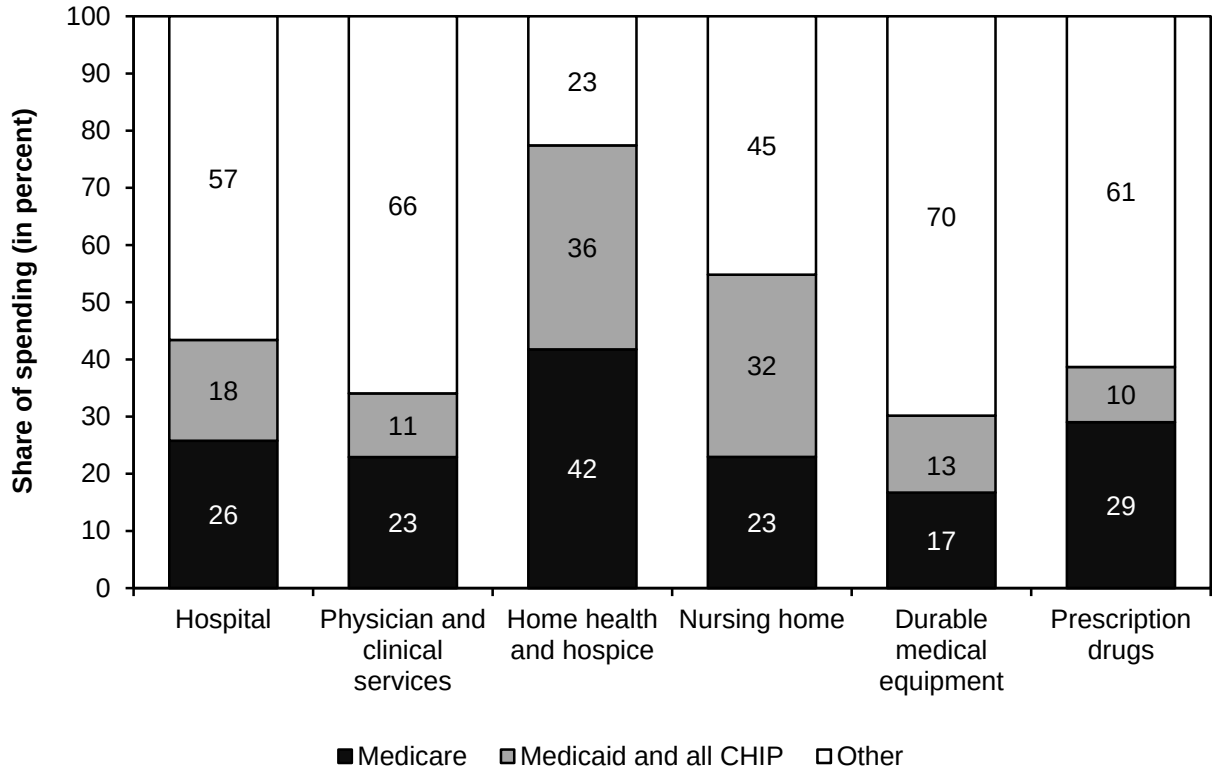
- Medicare spending per beneficiary in FFS Medicare has increased substantially since 2005 across all sectors, despite slowing down or declining recently in some sectors.

- Growth in spending per beneficiary for inpatient hospital services, the sector with the highest level of spending, averaged 3 percent per year from 2005 to 2008 and 1 percent per year from 2008 to 2011. It declined by an average of 1 percent per year from 2011 to 2014. Despite the slowdown in recent years, spending per beneficiary for inpatient hospital services increased, on aggregate, 8 percent from 2005 to 2014.

- Growth in spending per beneficiary for outpatient hospital services remained strong throughout the period, averaging 9 percent per year from 2005 to 2014. Spending per beneficiary for outpatient hospital services increased, on aggregate, 115 percent from 2005 to 2014.

Chart 1-5. Medicare's share of spending on personal health care varied by type of service, 2014



Note: CHIP (Children's Health Insurance Program). "Personal health care" is a subset of national health expenditures. It includes spending for all medical goods and services that are provided for the treatment of an individual and excludes other spending, such as government administration, the net cost of health insurance, public health, and investment. "Other" includes private health insurance, out-of-pocket spending, and other private and public spending. Bars may not total 100 percent because of rounding.

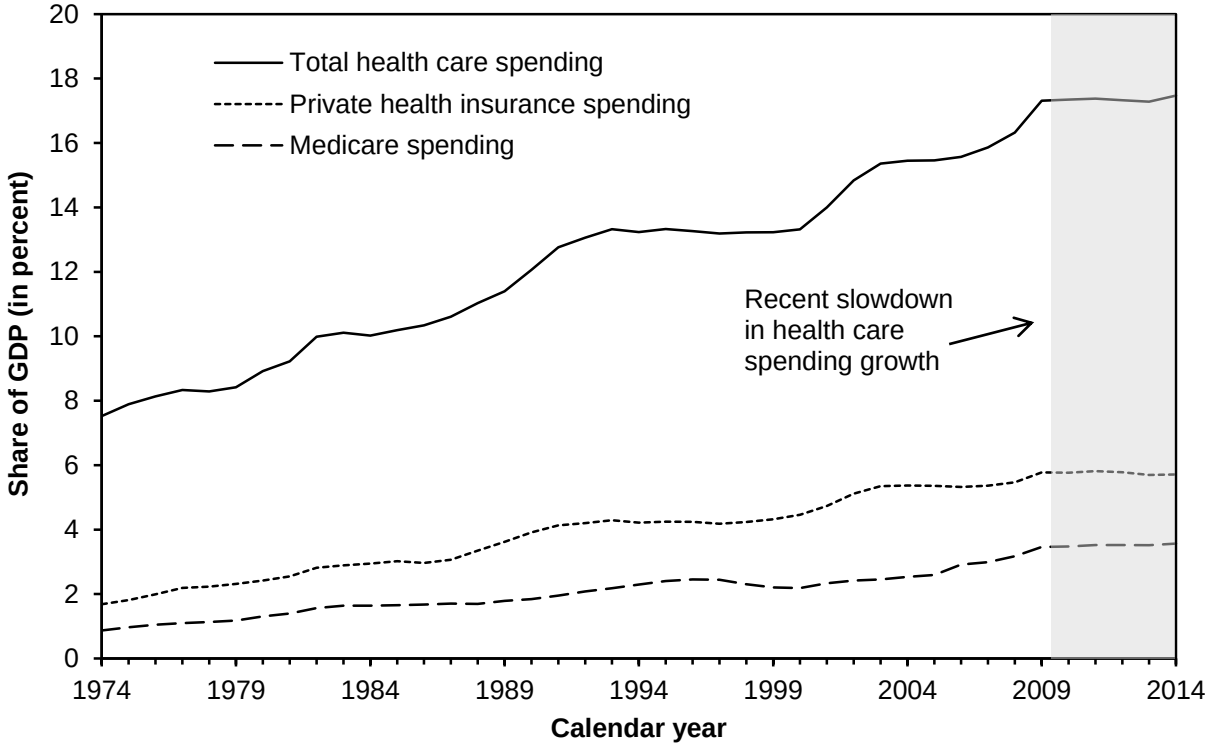
Source: CMS Office of the Actuary, National Health Expenditure Accounts, "Table 19: National Health Expenditures by Type of Expenditure and Program: Calendar Year 2014," released December 2015.

- While Medicare's share of total personal health care spending was 23 percent in 2014 (see Chart 1-1), its share of spending by type of service varied, with a slightly higher share of spending on hospital care (26 percent) and prescription drugs (29 percent) and a much higher share of spending on home health and hospice services (42 percent).

- Medicare's share of spending on nursing homes was smaller than Medicaid's share because Medicare pays for nursing home services only for Medicare beneficiaries who require skilled nursing or rehabilitation services, whereas Medicaid pays for custodial care (assistance with activities of daily living) provided in nursing homes for people with limited income and assets.

- In 2014, Medicare accounted for 26 percent of spending on hospital care, 23 percent of physician and clinical services, 42 percent of home health and hospice services, 23 percent of nursing home care, 17 percent of durable medical equipment, and 29 percent of prescription drugs.

Chart 1-6. Historically, health care spending has risen as a share of GDP; recently, its growth has slowed



Note: GDP (gross domestic product).

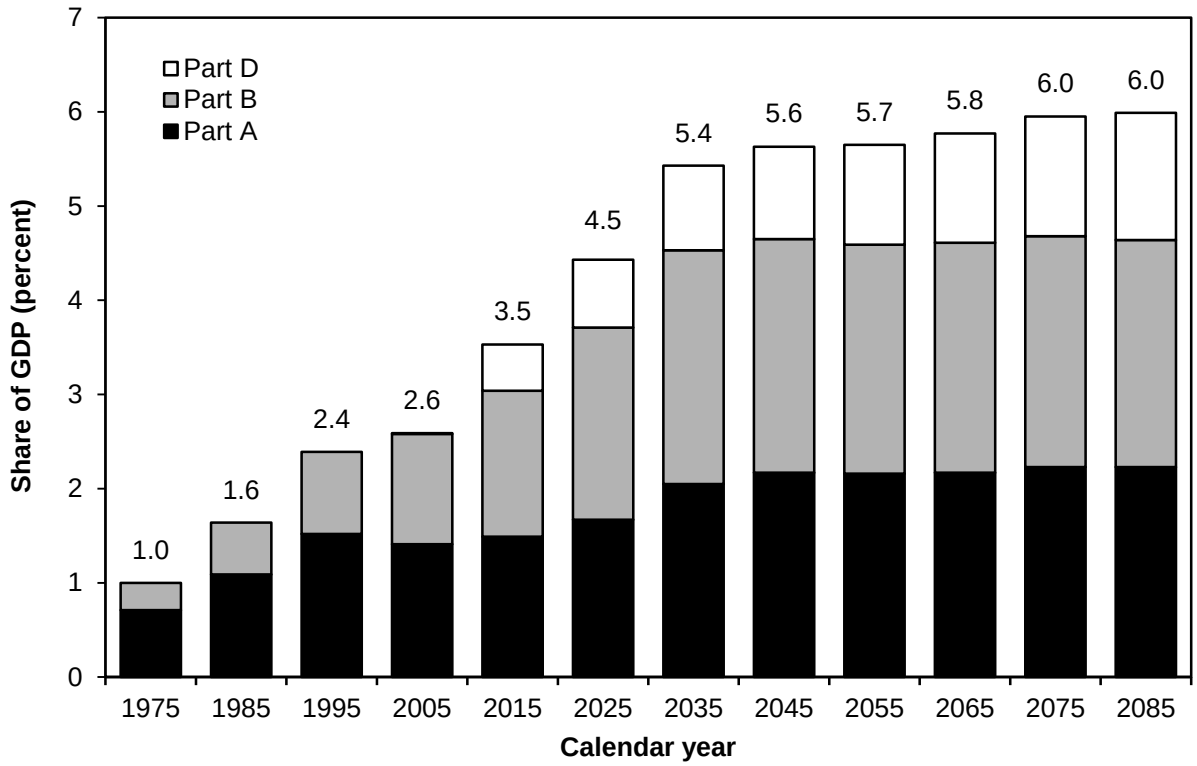
Source: CMS Office of the Actuary, National Health Expenditure Accounts 2014.

- Historically, health care spending has risen as a share of GDP, but recently its growth rate has slowed. That general trend is true for health care spending by private sector payers as well as by Medicare.

- As a share of GDP, total health care spending more than doubled from 1974 to 2014, increasing from 7.5 percent to 17.5 percent. As a share of GDP, private health insurance spending more than tripled over that same time period, increasing from 1.7 percent to 5.7 percent. As a share of GDP, Medicare spending went up by a factor of almost five, increasing from 0.9 percent to 3.6 percent.

- However, as seen in the chart above, health care spending as a share of GDP has remained relatively constant since 2009.

Chart 1-7. Trustees project Medicare spending to continue to increase as a share of GDP



Note: GDP (gross domestic product). Shares for year 2015 and later are projections and based on the Trustees' intermediate set of assumptions.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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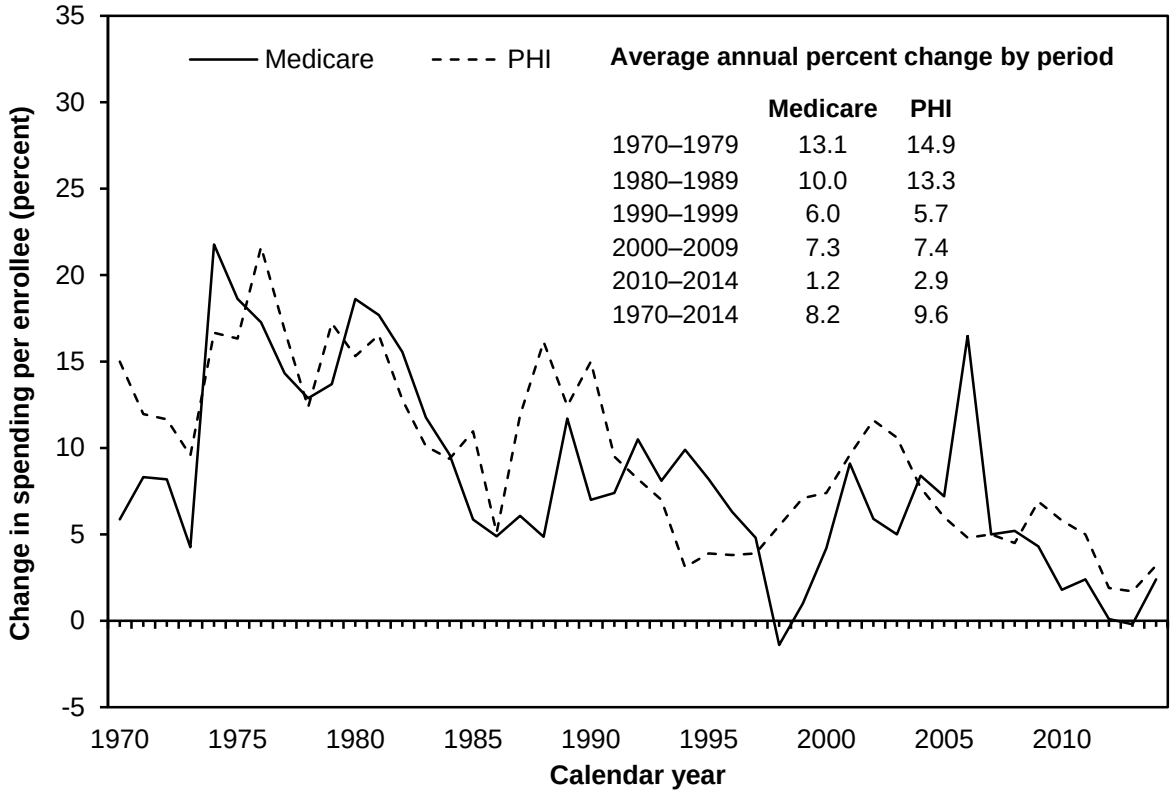
- Over time, Medicare spending has accounted for an increasing share of GDP. From 1 percent in 1975, it is projected to reach 6 percent of GDP in 2075.

- The Medicare Trustees project that spending will rise from 3.5 percent of GDP in 2015 to 5.4 percent of GDP by 2035, largely because of rapid growth in the number of beneficiaries, and then to 6.0 percent of GDP in 2075, with growth in spending per beneficiary becoming the greater factor in later years of the forecast. The rapid growth in the number of beneficiaries began in 2011 and will continue through 2030 as members of the baby-boom generation reach age 65 and become eligible to receive benefits.

- Medicare spending is projected to continue rising as a share of GDP, but at a slower pace than in the past. Nominal Medicare spending grew on average 9.7 percent per year over the period from 1975 to 2014, considerably faster than nominal growth in the economy, which averaged 6.2 percent per year over the same time frame. Future Medicare spending is projected to continue growing faster than GDP, averaging 5.3 percent per year between 2014 and 2085 compared with an annual average growth rate of 4.5 percent for the economy as a whole.

Chart 1-8. Changes in spending per enrollee, Medicare and private health insurance



Note: PHI (private health insurance). Medicare expenditures include both fee-for-service and Medicare Advantage plans.

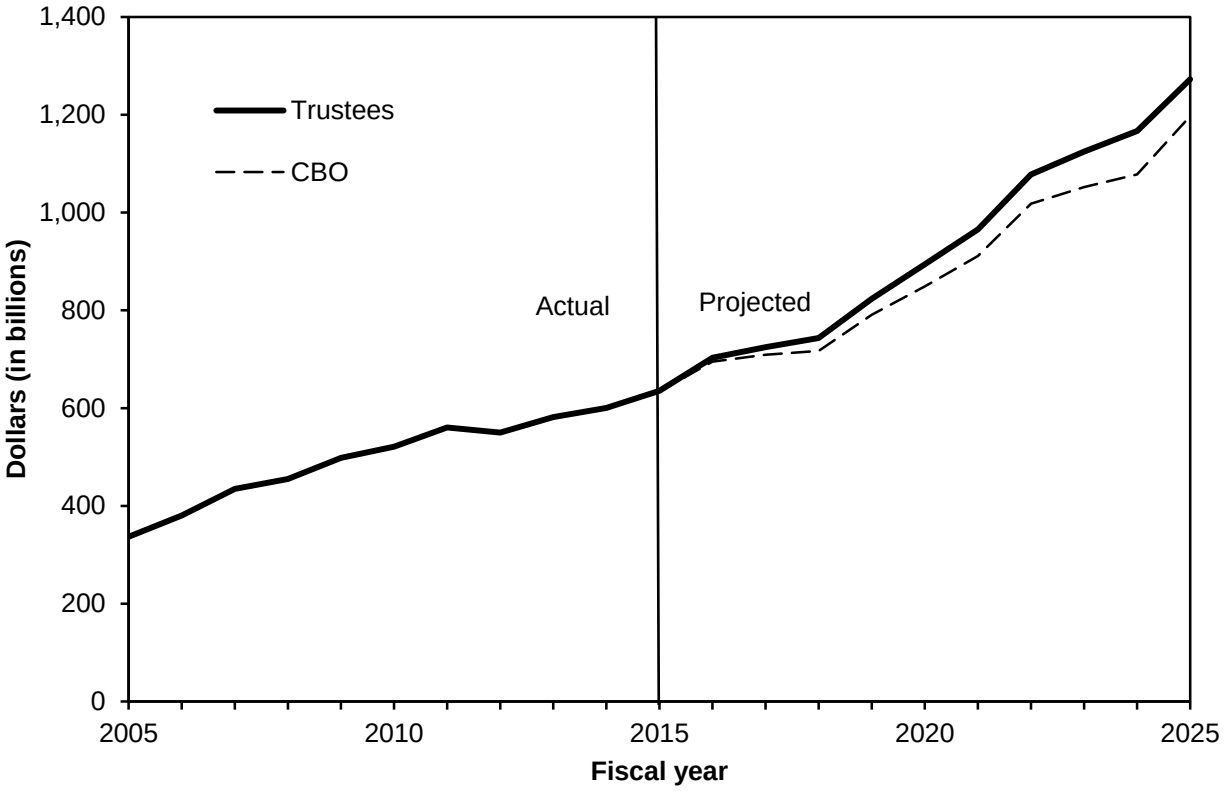
Source: CMS Office of the Actuary, National Health Expenditure Accounts 2013 and 2014.

- Rates of growth in per capita spending for Medicare and private health insurance have followed a similar pattern over the last four decades. For the past several years, rates of growth in per capita spending have slowed for both Medicare and private health insurance; however, rates are beginning to increase.

- Differences between the rates of growth do appear to be more pronounced since the mid-1980s. Some analysts believe that those differences are attributable to the introduction of the prospective payment system for hospital inpatient services that began in 1985. In their view, that payment system has allowed Medicare greater success than private payers in containing spending growth. Others maintain that the differences are due to the expansion of benefits offered by private insurers and to a decline in cost-sharing requirements. More recently, cost-sharing requirements have increased, coinciding with a decline in the growth of per capita spending for private payers.

- Comparisons are problematic because private insurers and Medicare do not buy the same mix of services and Medicare covers an older population, which tends to be more costly. In addition, spending trends are also affected by changes in the generosity of covered benefits and changes in enrollees' out-of-pocket spending.

Chart 1-9. Trustees and CBO project Medicare spending to exceed $1 trillion by the early part of the next decade



Note: CBO (Congressional Budget Office). All data are nominal, mandatory outlays (benefit payments plus mandatory administrative expenses) by fiscal year.

Source: CBO 2015 Baseline; the annual report of the Boards of Trustees of the Medicare trust funds 2015.
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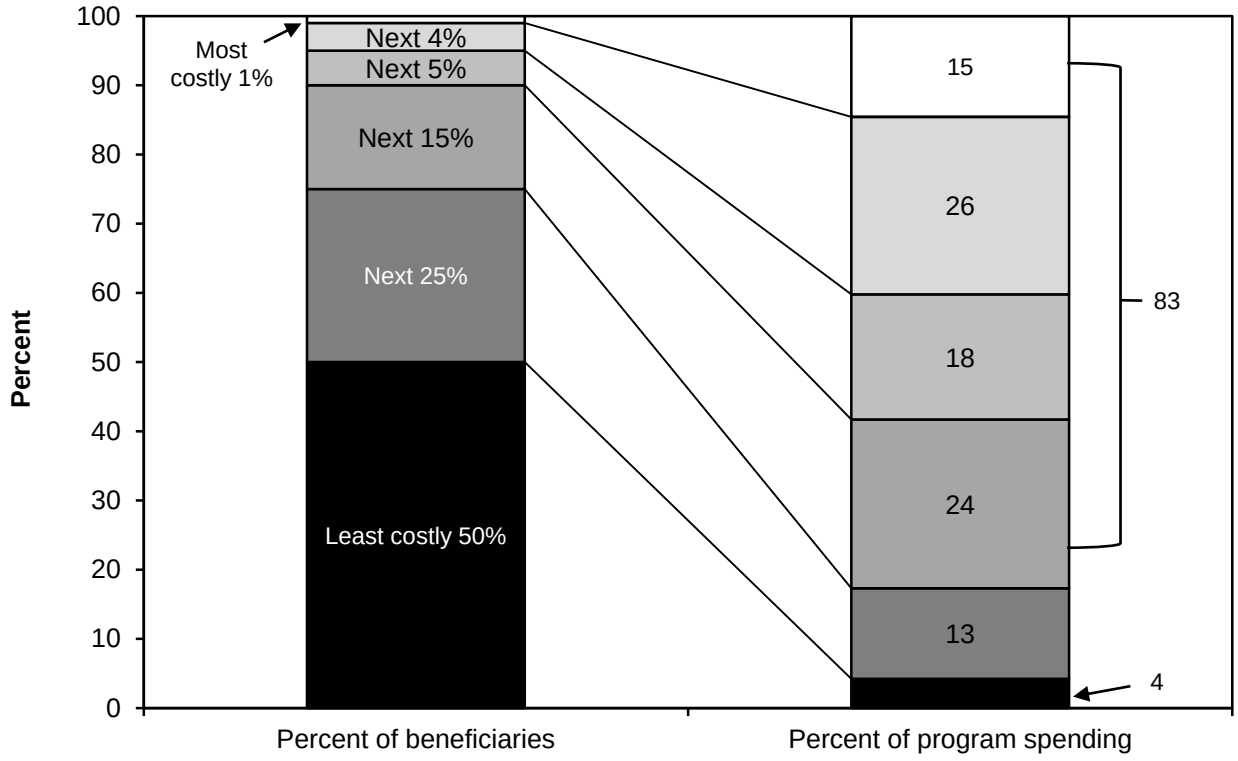
- Medicare spending has nearly doubled since 2005, increasing from $337 billion to $635 billion by 2015 (these data are by fiscal year and include benefit payments and mandatory administrative expenses).
- The Medicare Trustees and CBO project that spending for Medicare between 2015 and 2025 will grow at an average annual rate of 7.2 percent or 6.6 percent, respectively. Medicare spending will reach $1 trillion in 2022 under both the Trustees' and CBO's projections.
- Forecasts of future Medicare spending are inherently uncertain, and differences can stem from different assumptions about the economy (which affect annual updates to provider payments) and about growth in the volume and intensity of services delivered to Medicare beneficiaries, among other factors.

Chart 1-10. FFS program spending was highly concentrated in a small group of beneficiaries, 2012



Note: FFS (fee-for-service). All data are for calendar year 2012. Analysis excludes beneficiaries with any group health enrollment during the year.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use files 2012.

- Medicare FFS spending is concentrated among a small number of beneficiaries. In 2012, the costliest 5 percent of beneficiaries accounted for 41 percent of annual Medicare FFS spending, and the costliest 25 percent accounted for 83 percent. By contrast, the least costly 50 percent of beneficiaries accounted for only 4 percent of FFS spending.

- Costly beneficiaries tend to include those who have multiple chronic conditions, are using inpatient hospital services, are dually eligible for Medicare and Medicaid, and are in the last year of life.

Chart 1-11. Medicare HI trust fund is projected to be insolvent in 2030 under Trustees' intermediate assumptions

Cost assumptions	Years costs exceed income	Years costs remain below income	Year HI trust fund assets exhausted
High	2008–2022	——	2022
Intermediate	2008–2014, 2024–2030	2015–2023	2030
Low	2008–2014	2015–2089*	Never**

Note: HI (Hospital Insurance). All years represent calendar years. The primary source of income for HI is the payroll tax on covered earnings. Other HI income sources include (a) a portion of the federal income taxes that Social Security recipients with incomes above certain thresholds pay on their benefits and (b) interest paid on the U.S. Treasury securities held in the HI trust fund.
*75-year projection period
**Under the low-cost assumption, trust fund assets would start to increase in 2015 and continue to increase throughout the projection period.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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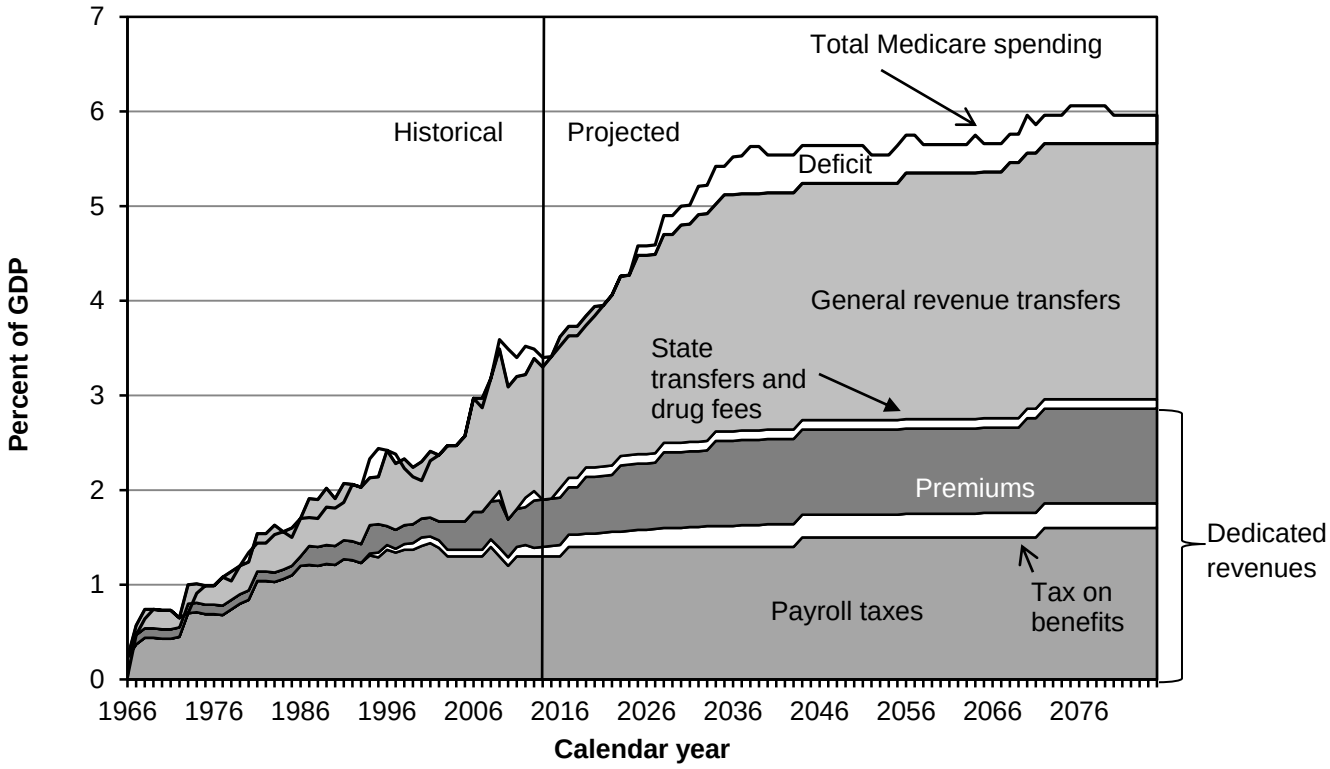
- The HI trust fund funds Part A, which helps pay for inpatient hospital stays and post-acute care such as skilled nursing facilities and hospice. Part A is funded through a dedicated payroll tax (i.e., a tax on wage earnings).

- Since 2008, the HI trust fund has run an annual deficit (i.e., paid more in benefits than it collects in payroll taxes). The trust fund still has interest income generated from loaning funds to other parts of the government during times of surplus, but those assets are projected to be exhausted by 2030 under the Trustees' intermediate assumptions. Under high-cost assumptions, the HI trust fund could be exhausted as early as 2022. Under low-cost assumptions, it would remain able to pay full benefits indefinitely.

- The Trustees estimate that the payroll tax would immediately need to be increased from its current rate of 2.9 percent to 3.6 percent to balance the HI trust fund over the next 75 years. Alternatively, Part A spending would immediately need to be reduced by 15 percent.

Chart 1-12. General revenue is paying for a growing share of Medicare spending



Note: GDP (gross domestic product). These projections are based on the Trustees' intermediate set of assumptions. "Tax on benefits" refers to the portion of income taxes that higher income individuals pay on Social Security benefits, which is designated for Medicare. "State transfers" (often called the Part D "clawback") refers to payments called for within the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 from the states to Medicare for assuming primary responsibility for prescription drug spending. The "drug fee" is the fee imposed in the Patient Protection and Affordable Care Act of 2010 on manufacturers and importers of brand-name prescription drugs. These fees are deposited in the Part B account of the Supplementary Medical Insurance trust fund.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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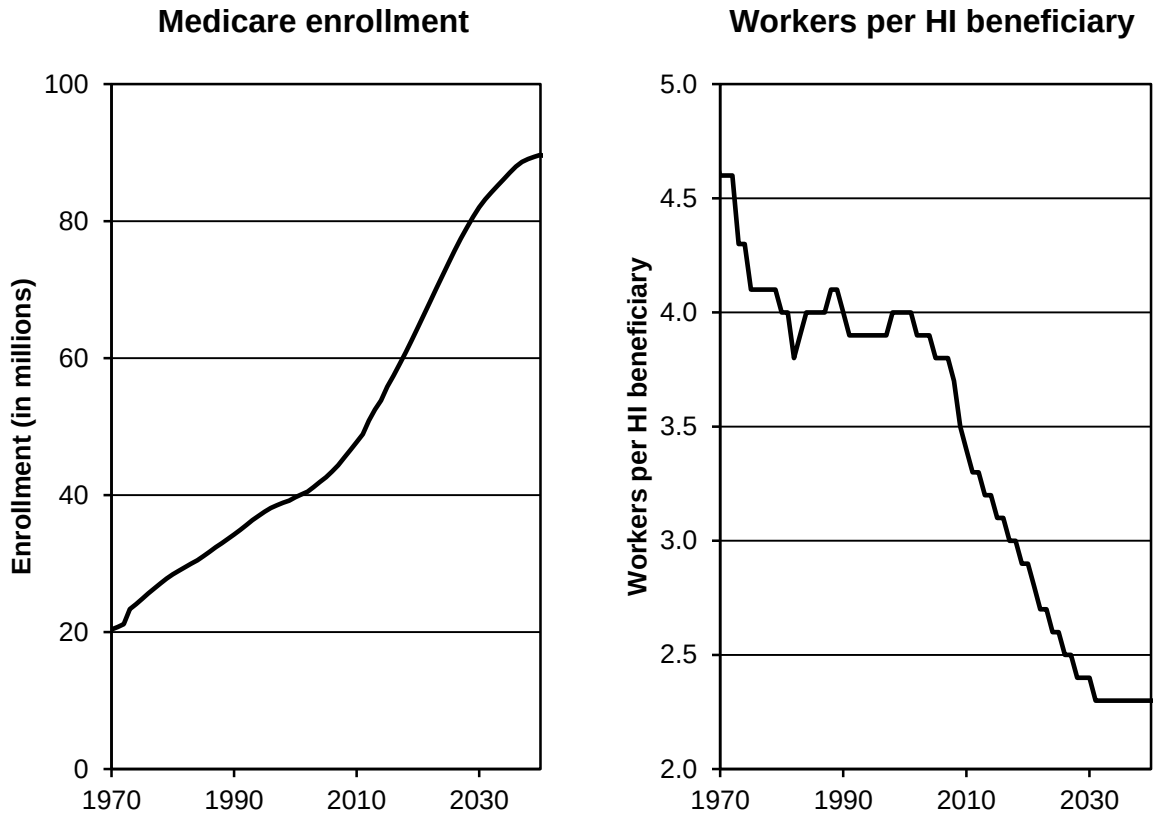
- The Medicare Trustees project that Medicare's share of GDP will rise to 5.5 percent by 2040 and to 6.0 percent by 2085.
- Beginning in 2009, general revenue transfers became the largest single source of Medicare income. They are expected to remain level as a share of Medicare financing, about 44 percent, through 2023 and then grow to about 48 percent by 2037.
- As Medicare becomes more dependent on general revenues, fewer resources will be available to invest in growing the economic output of the future or in other national priorities.

Chart 1-13. Medicare enrollment is rising while the number of workers per HI beneficiary is declining



Note: HI (Hospital Insurance). Hospital Insurance is also known as Medicare Part A.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
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- As the baby-boom generation ages, enrollment in the Medicare program will surge. In 15 years, Medicare is projected to have over 80 million beneficiaries—up from 57 million beneficiaries today.

- While Medicare enrollment is rising, the number of workers per beneficiary is rapidly declining. Workers pay for Medicare spending through payroll taxes and income taxes. However, the number of workers per Medicare beneficiary declined from 4.6 during the early years of the program to 3.1 today and is projected by the Medicare Trustees to fall to 2.4 by 2030.

- These demographics threaten the financial stability of the Medicare program.

Chart 1-14. Medicare HI and SMI benefits and cost sharing per FFS beneficiary

	Average benefit in 2014 (in dollars)	Average cost sharing in 2012* (in dollars)
HI	$4,927	$422
SMI	5,334	1,278

Note: HI (Hospital Insurance), SMI (Supplementary Medical Insurance), FFS (fee-for-service). Dollar amounts are nominal for FFS Medicare only and do not include Part D. "Average benefit" represents amounts paid for covered services per FFS beneficiary and excludes administrative expenses. "Average cost sharing" represents the sum of deductibles, coinsurance, and balance billing paid for covered services per FFS beneficiary.
*Data for average cost sharing in 2013 is not yet available from CMS.

Source: CMS Office of the Actuary, 2015 annual report of the Boards of Trustees of the Medicare trust funds, Medicare and Medicaid Statistical Supplement 2013, CMS Office of Information Services.
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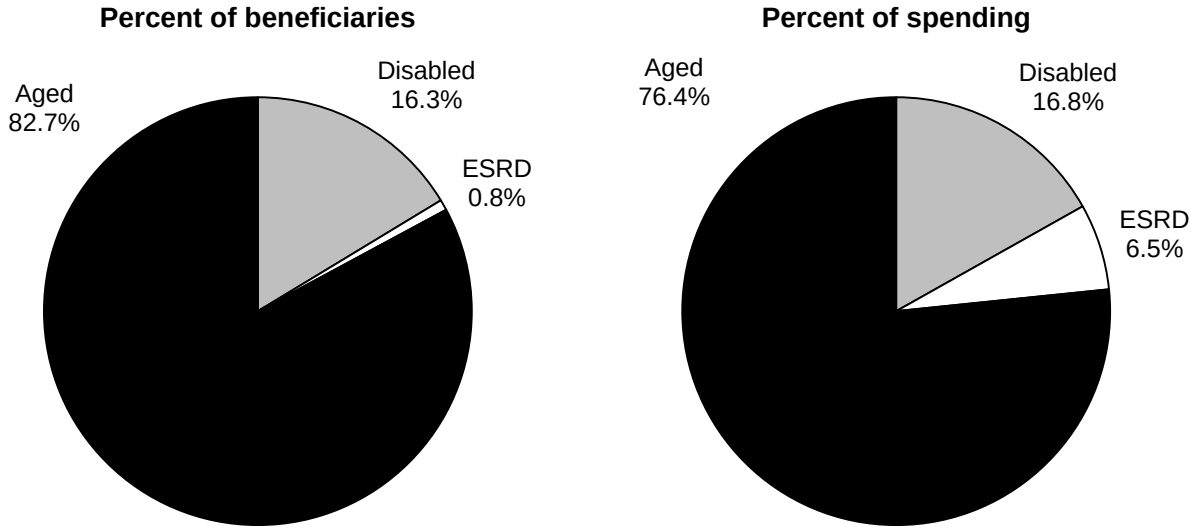
- In calendar year 2014, the Medicare program made $4,927 in HI (Part A) benefit payments and $5,334 in SMI (Part B) benefit payments on average per fee-for-service beneficiary.
- Beneficiaries owed an average of $422 in cost sharing for HI and $1,278 in cost sharing for SMI in calendar year 2012 (the latest year for which such data are available).
- To cover some of those cost-sharing requirements, about 90 percent of beneficiaries have coverage that supplements or replaces the Medicare benefit package, such as Medicare Advantage, Medicaid, supplemental coverage through former employers, and medigap coverage.

SECTION 2

Medicare beneficiary demographics

Chart 2-1. Aged beneficiaries accounted for the greatest share of the Medicare population and program spending, 2012



Note: ESRD (end-stage renal disease). The "aged" category includes beneficiaries ages 65 and older without ESRD. The "disabled" category includes beneficiaries under age 65 without ESRD. The "ESRD" category includes beneficiaries with ESRD, regardless of age. Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category.

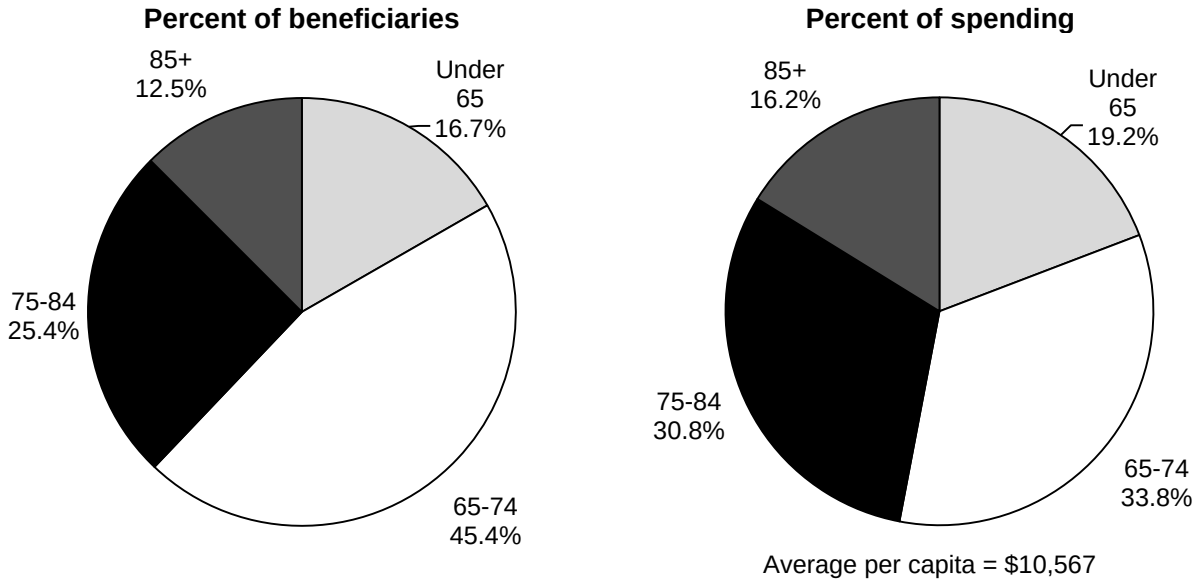
Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- In 2012, beneficiaries ages 65 and older without ESRD composed 82.7 percent of the beneficiary population and accounted for 76.4 percent of Medicare spending. Beneficiaries under 65 with a disability and beneficiaries with ESRD accounted for the majority of the remaining population and spending.

- In 2012, average Medicare spending per beneficiary was $10,567 (data not shown).

- A disproportionate share of Medicare expenditures is devoted to Medicare beneficiaries with ESRD. On average, these beneficiaries incur spending that is more than six times greater than spending for aged beneficiaries (ages 65 years and older without ESRD) or for beneficiaries under age 65 with disability (non-ESRD). In 2012, $76,185 was spent per ESRD beneficiary versus $9,756 per aged beneficiary and $10,841 per beneficiary under age 65 enrolled because of disability (data not shown).

Chart 2-2. Medicare enrollment and spending by age group, 2012

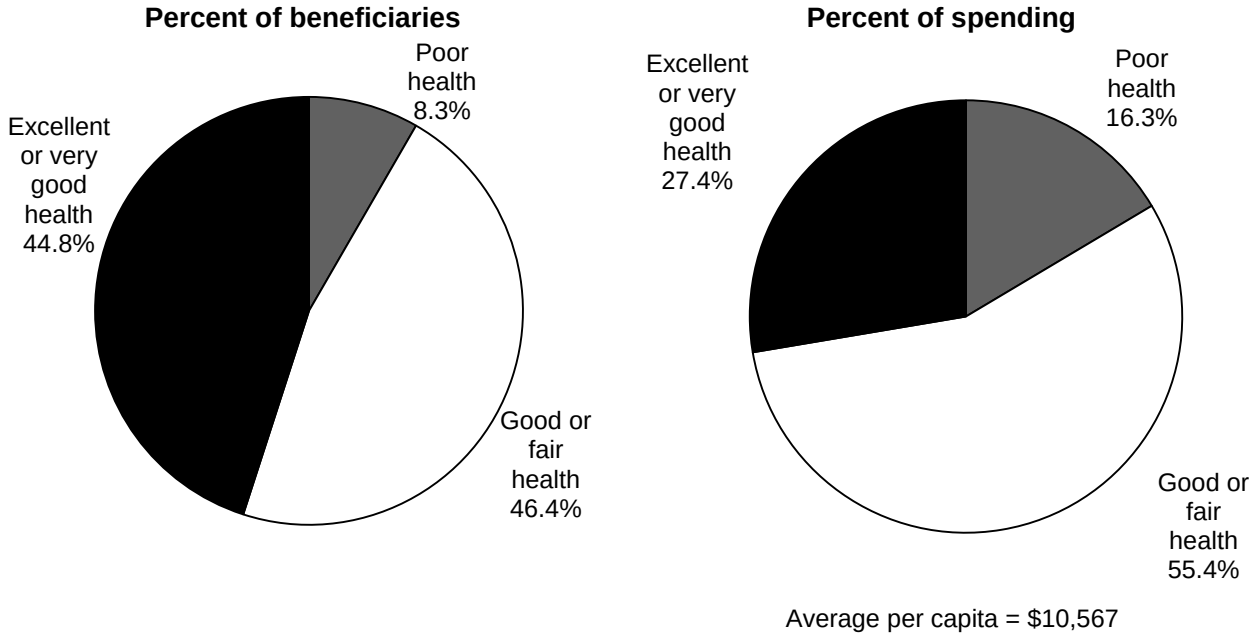


Note: Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- For the aged population (65 and older), per capita expenditures increase with age. In 2012, per capita expenditures were $7,868 for beneficiaries 65 to 74 years old, $12,819 for those 75 to 84 years old, and $13,738 for those 85 or older (data not shown).
- In 2012, per capita expenditures for Medicare beneficiaries under age 65 who were enrolled because of end-stage renal disease or disability were $12,105 (data not shown).

Chart 2-3. Beneficiaries who reported being in poor health accounted for a disproportionate share of Medicare spending, 2012

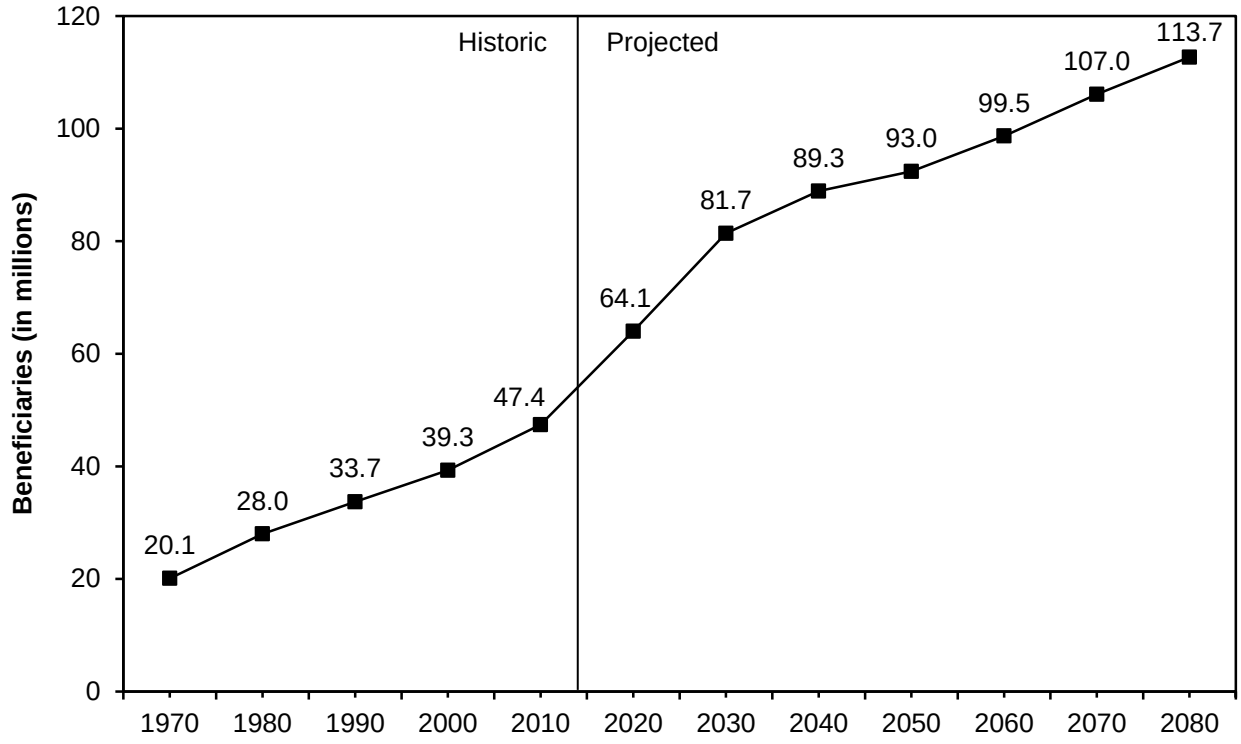


Note: Results include fee-for-service, Medicare Advantage, community-dwelling, and institutionalized beneficiaries. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- In 2012, most beneficiaries reported fair to excellent health. Fewer than 10 percent reported poor health.
- Medicare spending is strongly associated with self-reported health status. In 2012, per capita expenditures were $6,478 for those who reported excellent or very good health, $12,634 for those who reported good or fair health, and $20,756 for those who reported poor health (data not shown).

Chart 2-4. Enrollment in the Medicare program is projected to grow rapidly in the next 20 years



Note: Enrollment numbers are based on Part A enrollment only. Beneficiaries enrolled only in Part B are not included.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2016. THIS CHART REFLECTS DATA FROM THE 2015 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2016 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.

- The total number of people enrolled in the Medicare program will increase from about 50 million in 2012 to about 82 million in 2030.
- The rate of increase in Medicare enrollment will accelerate until 2030 as more members of the baby-boom generation become eligible, at which point it will continue to increase, but more slowly, after the entire baby-boom generation has become eligible.

Chart 2-5. Characteristics of the Medicare population, 2012

Characteristic	Percent of the Medicare population	Characteristic	Percent of the Medicare population
Total (52,079,014)	100%	**Living arrangement**	
		Institution	4%
Sex		Alone	28
Male	45	With spouse	48
Female	55	Other	20
Race/ethnicity		**Education**	
White, non-Hispanic	76	No high school diploma	21
African American, non-Hispanic	9	High school diploma only	28
Hispanic	10	Some college or more	51
Other	5		
		Income status	
Age		Below poverty	16
<65	17	100–125% of poverty	9
65–74	45	125–200% of poverty	19
75–84	25	200–400% of poverty	31
85+	12	Over 400% of poverty	24
Health status		**Supplemental insurance status**	
Excellent or very good	45	Medicare only	16
Good or fair	46	Managed care	29
Poor	8	Employer-sponsored insurance	26
		Medigap	14
Residence		Medigap with employer-sponsored insurance	1
Urban	77	Medicaid	13
Rural	23	Other	1

Note: "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside MSAs. In 2012, poverty was defined as income of $11,011 for people living alone and $13,892 for married couples. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category. Poverty thresholds are calculated by the U.S. Census Bureau (https://www.census.gov/hhes/www/poverty/data/threshold/). Some beneficiaries may have more than one type of supplemental insurance.

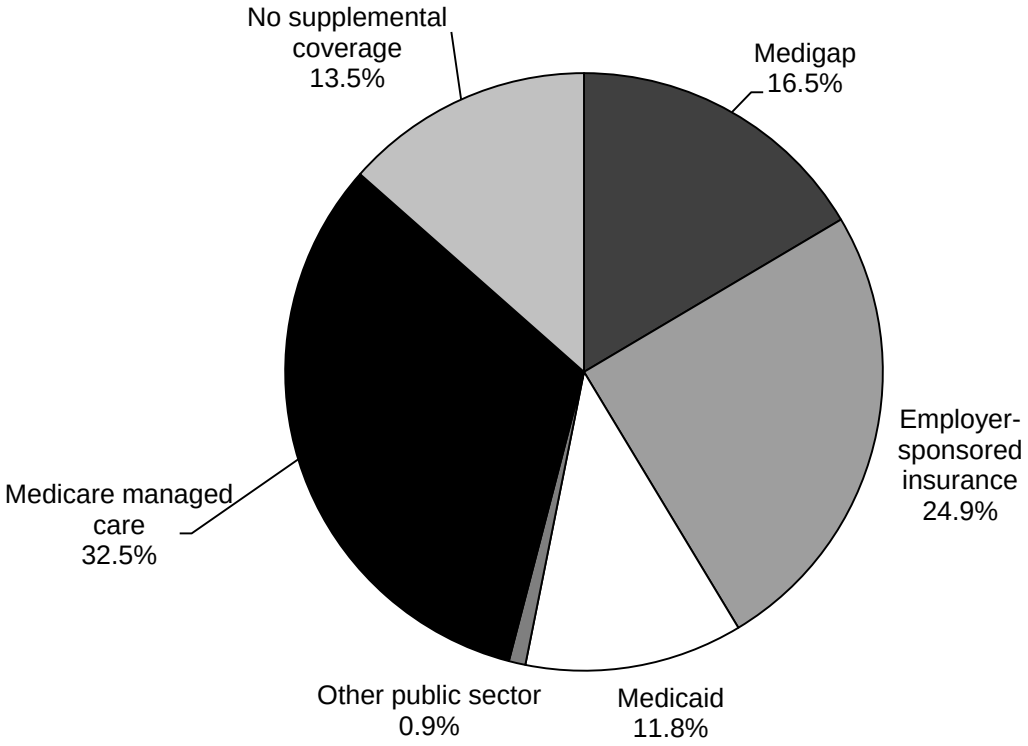
Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Most Medicare beneficiaries are female and White.
- Close to one-quarter of beneficiaries live in rural areas.
- Twenty-eight percent of the Medicare population lives alone.
- About 20 percent of beneficiaries have no high school diploma.
- Most Medicare beneficiaries have some source of supplemental insurance. Managed care plans are the most common source of supplemental coverage.

SECTION 3

Medicare beneficiary and other payer financial liability

Chart 3-1. Sources of supplemental coverage among noninstitutionalized Medicare beneficiaries, 2012



Note: Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2012. They could have had coverage in other categories during 2012. "Other public sector" includes federal and state programs not included in other categories. Analysis includes only beneficiaries not living in institutions such as nursing homes. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2012 or who had Medicare as a secondary payer. Percentages may not sum to 100 because of rounding.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Most beneficiaries living in the community (noninstitutionalized) have coverage that supplements or replaces the Medicare benefit package. In 2012, about 86 percent of beneficiaries had supplemental coverage or participated in Medicare managed care.
- About 41 percent of beneficiaries had private sector supplemental coverage such as medigap (about 17 percent) or employer-sponsored retiree coverage (about 25 percent).
- About 13 percent of beneficiaries had public sector supplemental coverage, primarily Medicaid.
- About 32 percent of beneficiaries participated in Medicare managed care. This care includes Medicare Advantage, health care prepayment, and cost plans. These types of arrangements generally replace Medicare's fee-for-service coverage and often add more coverage.
- The numbers in this chart differ from those in Chart 2-5, Chart 4-1, and Chart 4-4 because of differences in the populations represented in the charts. This chart excludes beneficiaries in long-term care institutions, Chart 2-5 and Chart 4-4 include all Medicare beneficiaries, and Chart 4-1 excludes beneficiaries in Medicare Advantage.

Chart 3-2. Sources of supplemental coverage among noninstitutionalized Medicare beneficiaries, by beneficiaries' characteristics, 2012

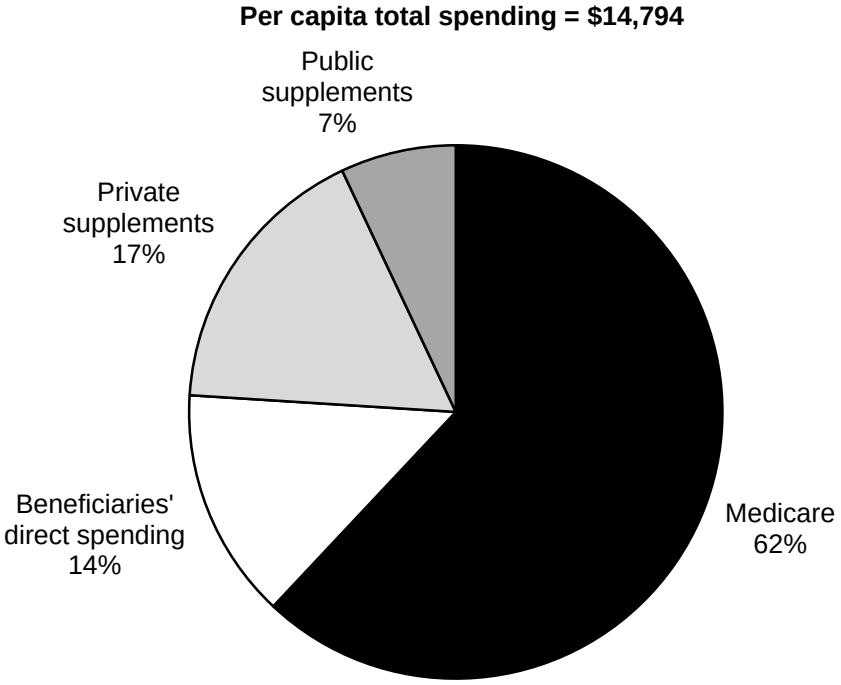
	Number of beneficiaries (thousands)	Employer-sponsored insurance	Medigap insurance	Medicaid	Medicare managed care	Other public sector	Medicare only
All beneficiaries	**44,025**	**25%**	**16%**	**12%**	**32%**	**1%**	**13%**
Age							
<65	7,148	10	3	35	28	1	23
65–69	10,704	25	17	8	32	1	18
70–74	8,894	28	19	6	37	0	10
75–79	6,813	28	20	8	35	1	8
80–84	5,314	31	20	7	32	1	9
85+	5,152	31	22	8	29	1	9
Income category							
<$10,000	5,563	6	8	49	25	1	12
$10,000–$19,999	11,875	12	14	18	37	2	17
$20,000–$29,999	8,535	25	19	3	37	1	15
$30,000–$39,999	5,235	34	16	0	35	1	13
$40,000–$59,999	5,812	35	21	1	31	0	12
$60,000–$79,999	2,898	48	21	0	22	0	9
≥$80,000	4,107	44	23	0	25	0	8
Eligibility status							
Aged	36,650	28	19	7	33	1	12
Disabled	6,987	9	3	36	28	1	23
ESRD	346	22	11	24	28	6	10
Residence							
Urban	33,575	26	14	11	37	1	12
Rural	10,450	23	24	16	19	1	18
Sex							
Male	19,543	26	15	10	32	1	16
Female	24,482	24	18	13	33	1	12
Health status							
Excellent/very good	19,992	28	19	5	34	0	13
Good/fair	20,341	24	15	15	32	1	13
Poor	3,455	12	11	30	25	1	21

Note: ESRD (end-stage renal disease). Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2012. They could have had coverage in other categories during 2012. "Medicare managed care" includes Medicare Advantage, cost, and health care prepayment plans. "Other public sector" includes federal and state programs not included in other categories. Married people have joint income reported on the data file. We divided their income by 1.26 to create an equal measure with unmarried people. "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside MSAs. Analysis includes beneficiaries living in the community. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2012 or who had Medicare as a secondary payer. The number of beneficiaries differs among boldface categories because we excluded beneficiaries with missing values. Numbers in some rows do not sum to 100 percent because of rounding.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Beneficiaries most likely to have employer-sponsored supplemental coverage are those who are age 65 or older, have income over $20,000, are eligible because of age, and report better than poor health.
- Medigap is most common among those who are age 65 or older, have income of $20,000 or more, are eligible because of age, are rural dwelling, and report better than poor health.
- Medicaid coverage is most common among those who are under age 65, have income below $20,000, are eligible because of disability or ESRD, are rural dwelling, and report poor health.
- Lack of supplemental coverage (Medicare coverage only) is most common among beneficiaries who are under age 65, have income below $60,000, are eligible because of disability, are rural dwelling, are male, and report poor health.

Chart 3-3. Total spending on health care services for noninstitutionalized FFS Medicare beneficiaries, by source of payment, 2012



Note: FFS (fee-for-service). "Private supplements" includes employer-sponsored plans and individually purchased coverage. "Public supplements" includes Medicaid, Department of Veterans Affairs, and other public coverage. "Direct spending" is on Medicare cost sharing and noncovered services but not supplemental premiums. Analysis includes only FFS beneficiaries not living in institutions such as nursing homes. Medicare Advantage enrollees are excluded.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

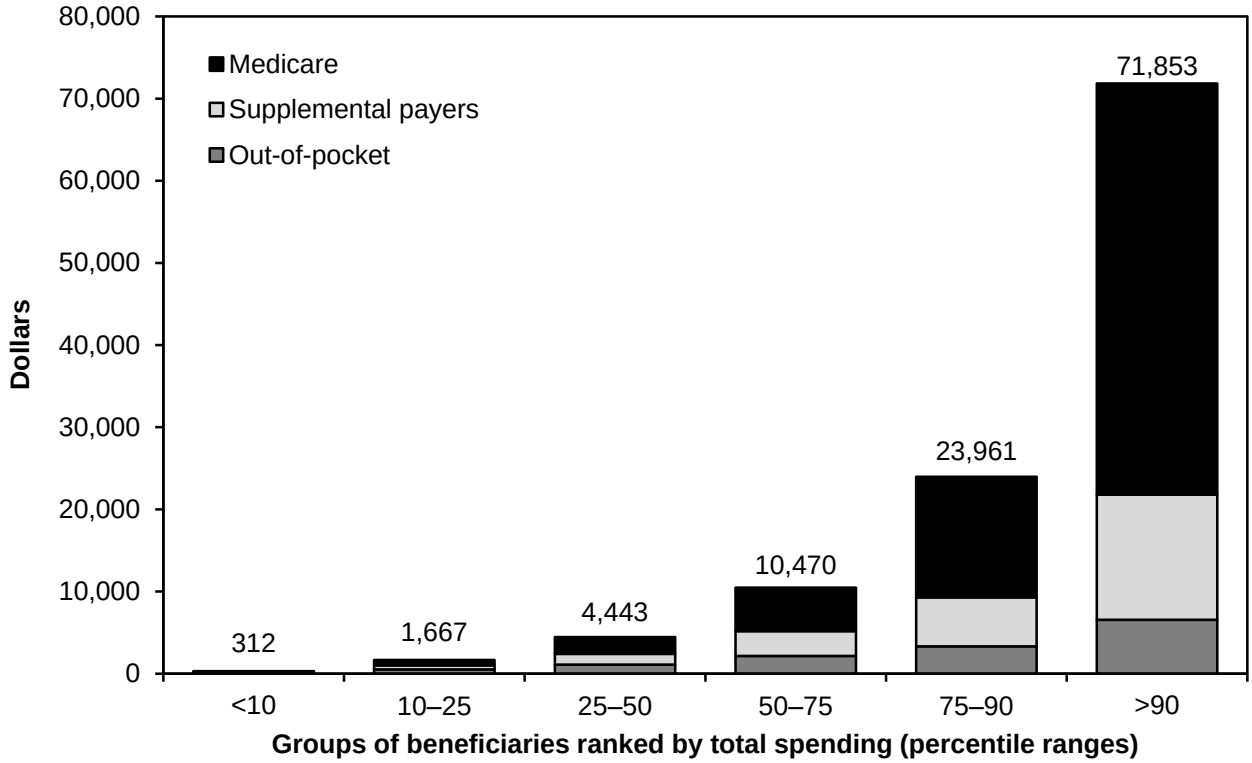
- Among FFS beneficiaries living in the community (noninstitutionalized), the total cost of health care services (defined as beneficiaries' direct spending as well as expenditures by Medicare, other public sector sources, and all private sector sources on all health care goods and services) averaged about $14,800 in 2012. Medicare was the largest source of payment: It paid 62 percent of the health care costs for FFS beneficiaries living in the community, an average of $9,151 per beneficiary. The level of Medicare spending in this chart differs from the level in Chart 2-1 because this chart excludes beneficiaries in Medicare Advantage and those living in institutions, while Chart 2-1 represents all Medicare beneficiaries.

- Private sources of supplemental coverage—primarily employer-sponsored retiree coverage and medigap—paid 17 percent of beneficiaries' costs, an average of $2,554 per beneficiary.

- Beneficiaries paid 14 percent of their health care costs out of pocket, an average of $2,058 per beneficiary.

- Public sources of supplemental coverage—primarily Medicaid—paid 7 percent of beneficiaries' health care costs, an average of $1,030 per beneficiary.

Chart 3-4. Per capita total spending on health care services among noninstitutionalized FFS beneficiaries, by source of payment, 2012



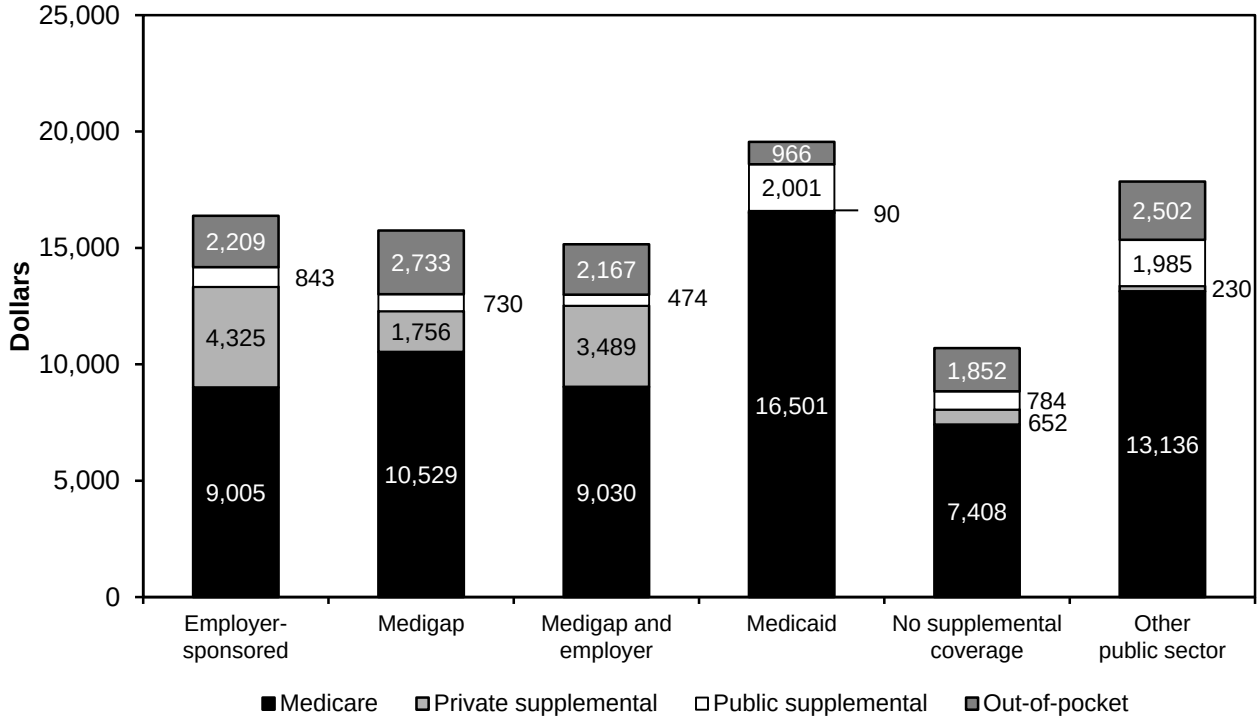
Note: FFS (fee-for-service). Analysis excludes those who are not in FFS Medicare and those living in institutions such as nursing homes. “Out-of-pocket" spending includes Medicare cost sharing and noncovered services.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Total spending on health care services varied dramatically among FFS beneficiaries living in the community in 2012. Per capita spending for the 10 percent of beneficiaries with the highest total spending averaged $71,853. Per capita spending for the 10 percent of beneficiaries with the lowest total spending averaged $312.

- Among FFS beneficiaries living in the community, Medicare paid a larger percentage as total spending increased, and beneficiaries’ out-of-pocket spending was a smaller percentage as total spending increased. For example, Medicare paid 62 percent of total spending for all beneficiaries, but paid 70 percent of total spending for the 10 percent of beneficiaries with the highest total spending. Beneficiaries’ out-of-pocket spending covered 14 percent of total spending for all beneficiaries, but only 9 percent of total spending for the 10 percent of beneficiaries with the highest total spending.

Chart 3-5. Variation in and composition of total spending among noninstitutionalized FFS beneficiaries, by type of supplemental coverage, 2012



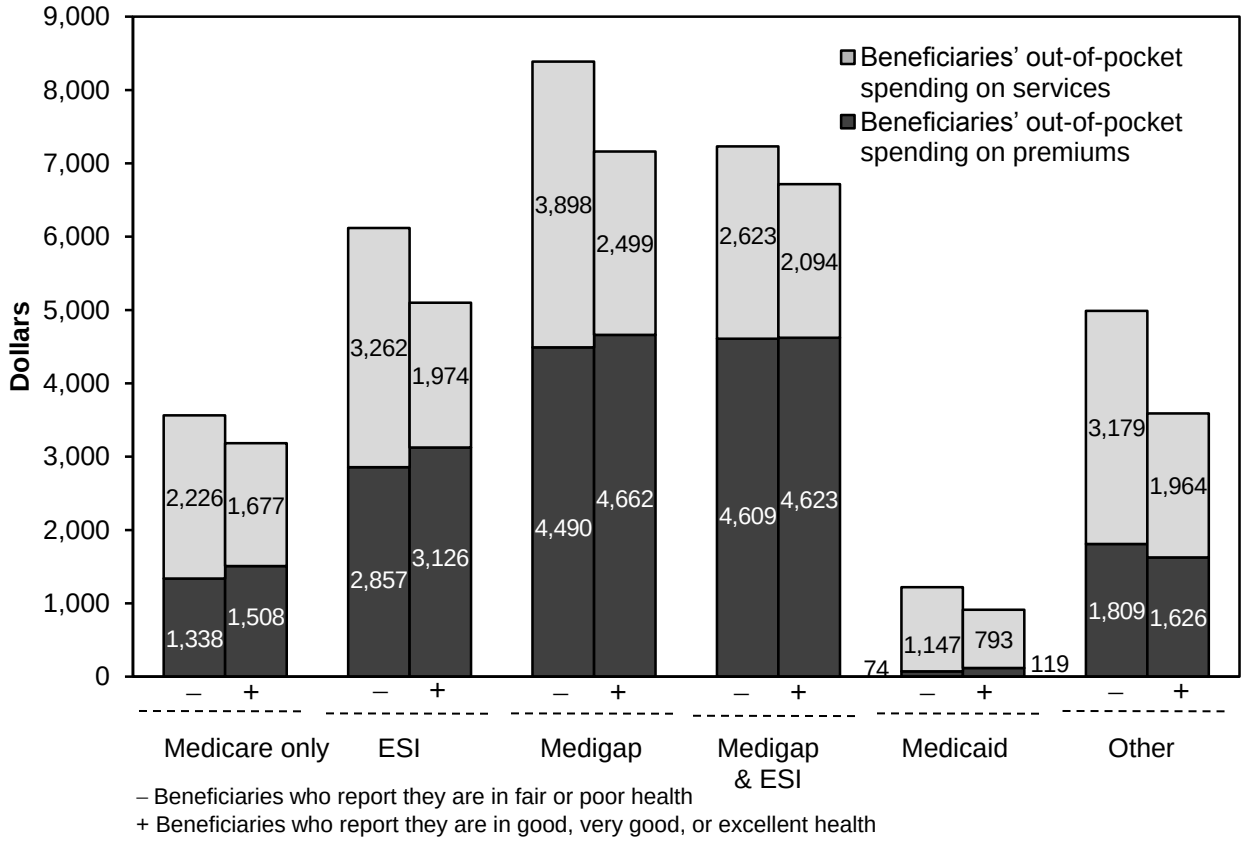
Note: FFS (fee-for-service). Beneficiaries are assigned to the supplemental coverage category they were in for the most time in 2012. They could have had coverage in other categories during 2012. "Other public sector" includes federal and state programs not included in the other categories. "Private supplemental" includes employer-sponsored plans and individually purchased coverage. "Public supplemental" includes Medicaid, Department of Veterans Affairs, and other public coverage. Analysis excludes beneficiaries who are not in FFS Medicare or live in institutions such as nursing homes. It excludes beneficiaries who were not in both Part A and Part B throughout their enrollment in 2012 or had Medicare as a second payer. "Out-of-pocket" spending includes Medicare cost sharing and noncovered services, but not supplemental premiums.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- The level of total spending (defined as beneficiaries' out-of-pocket spending as well as expenditures by Medicare, other public sector sources, and all private sector sources on all health care goods and services) among FFS beneficiaries living in the community varied by the type of supplemental coverage they had. Total spending was lower for those beneficiaries with no supplemental coverage than for those beneficiaries who had supplemental coverage. Beneficiaries with Medicaid coverage had the highest level of total spending—83 percent higher than those with no supplemental coverage in 2012.

- Medicare was the largest source of payment for beneficiaries in each supplemental insurance category, but the second largest source of payment differed. Among those with employer-sponsored, medigap with employer-sponsored, or Medicaid supplemental coverage, combined public and private supplemental coverage was the second largest source of payment. Among those who were covered by medigap or only by Medicare, beneficiaries' out-of-pocket spending was the second largest source of payment.

Chart 3-6. Out-of-pocket spending for premiums and health services per beneficiary, by insurance and health status, 2012



Note: ESI (employer-sponsored supplemental insurance).

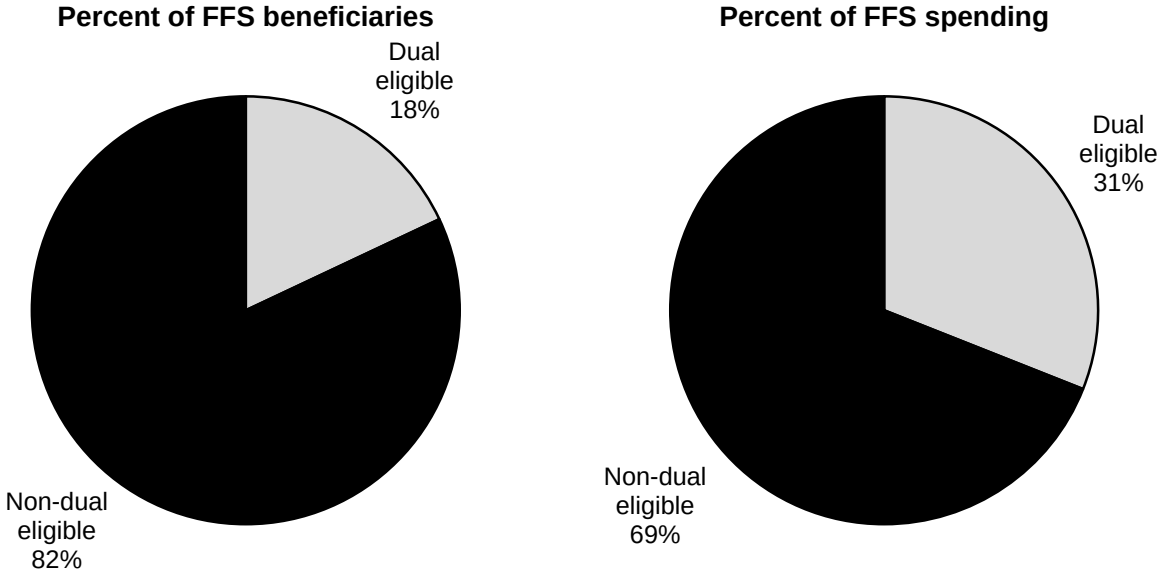
Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- This diagram illustrates out-of-pocket spending on services and premiums by beneficiaries' supplemental insurance and health status in 2012. For example, beneficiaries who had only traditional Medicare coverage ("Medicare only") and reported fair or poor health averaged $1,338 in out-of-pocket spending on premiums and $2,226 on services in 2012. Those who had Medicare-only coverage and reported good, very good, or excellent health averaged $1,508 in out-of-pocket spending on premiums and $1,677 on services.
- Insurance that supplements Medicare does not shield beneficiaries from all out-of-pocket costs. Beneficiaries who reported being in fair or poor health spent more out of pocket for health services than those reporting good, very good, or excellent health, regardless of the type of coverage they had to supplement Medicare.
- Despite having supplemental coverage, beneficiaries who had ESI or medigap had out-of-pocket spending that was more than those who had only coverage under traditional Medicare ("Medicare only"). This result likely reflects the fact that beneficiaries who had ESI or medigap had higher incomes and were likely to have stronger preferences for health care.
- What beneficiaries actually pay out of pocket varies by type of supplemental coverage. For those with medigap, out-of-pocket spending generally reflects the premiums and costs of services not covered by Medicare. Beneficiaries with ESI usually pay less out of pocket for Medicare noncovered services than those with medigap but may pay more in Medicare deductibles and cost sharing.

SECTION 4

Dual-eligible beneficiaries

Chart 4-1. Dual-eligible beneficiaries accounted for a disproportionate share of Medicare spending, 2012

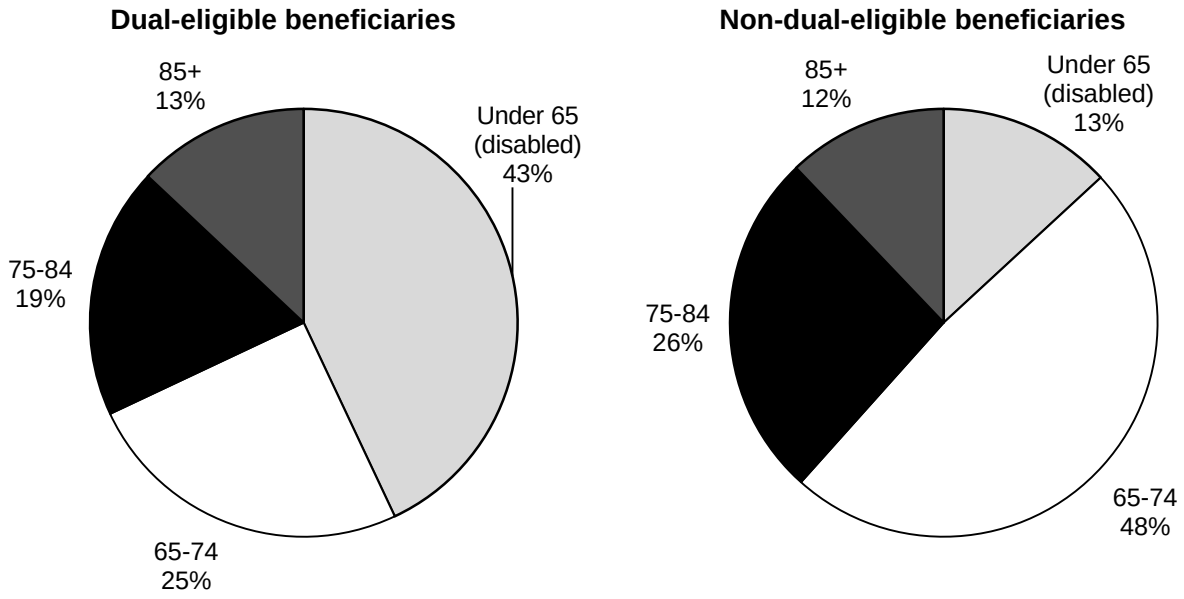


Note: FFS (fee for service). Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Dual-eligible beneficiaries are those who qualify for both Medicare and Medicaid. Medicaid is a joint federal and state program designed to help people with low incomes obtain needed health care.
- Dual-eligible beneficiaries account for a disproportionate share of Medicare FFS expenditures. Although they were 18 percent of the Medicare FFS population in 2012, they represented 31 percent of aggregate Medicare FFS spending.
- On average, Medicare FFS per capita spending is more than twice as high for dual-eligible beneficiaries compared with non-dual-eligible beneficiaries: In 2012, $17,847 was spent per dual-eligible beneficiary, and $8,568 was spent per non-dual-eligible beneficiary (data not shown).
- In 2012, average total spending—which includes Medicare, Medicaid, supplemental insurance, and out-of-pocket spending across all payers—for dual-eligible beneficiaries was $30,619 per beneficiary, about twice the amount for other Medicare beneficiaries (data not shown).

Chart 4-2. Dual-eligible beneficiaries were more likely than non-dual-eligible beneficiaries to be under age 65 and disabled, 2012

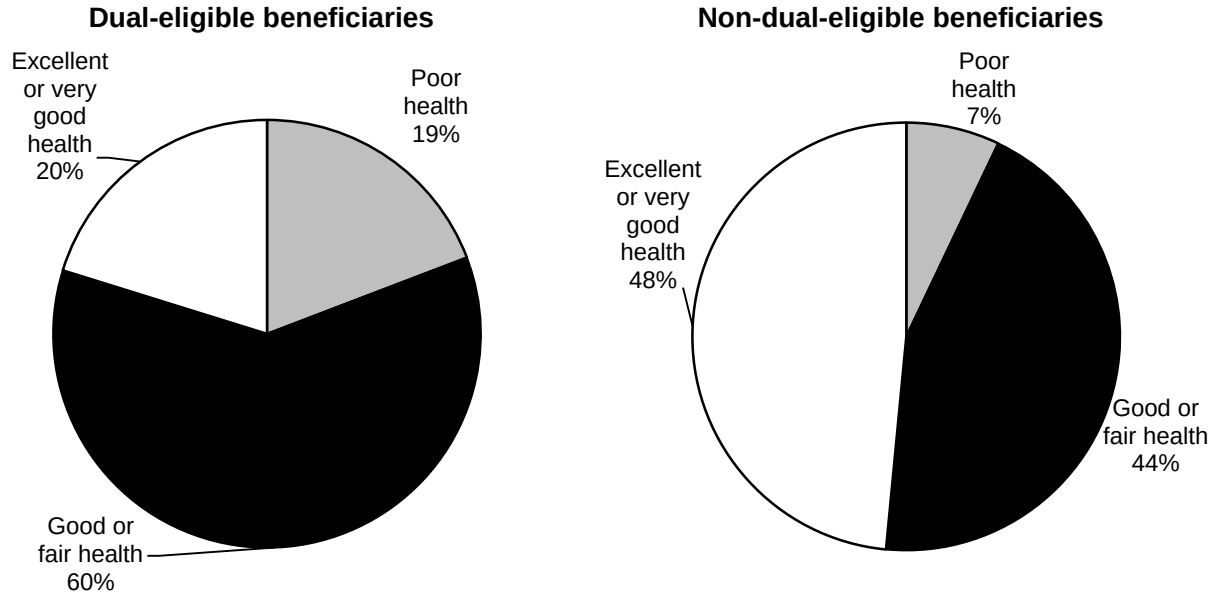


Note: Beneficiaries who are under age 65 qualify for Medicare because they are disabled. Once disabled beneficiaries reach age 65, they are counted as aged beneficiaries. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Disability is a pathway for individuals to become eligible for both Medicare and Medicaid benefits.
- Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to be under age 65 and disabled. In 2012, 43 percent of dual-eligible beneficiaries were under age 65 and disabled compared with 13 percent of the non-dual-eligible population.

Chart 4-3. Dual-eligible beneficiaries were more likely than non-dual-eligible beneficiaries to report poorer health status, 2012



Note: Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding or nonresponse to survey question.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to report poorer health status. In 2012, 19 percent of dual-eligible beneficiaries reported being in poor health compared with 7 percent of non-dual-eligible beneficiaries.

- Almost half of non-dual-eligible beneficiaries (48 percent) reported being in excellent or very good health in 2012. In comparison, only one-fifth (20 percent) of dual-eligible beneficiaries reported being in excellent or very good health.

Chart 4-4. Demographic differences between dual-eligible beneficiaries and non-dual-eligible beneficiaries, 2012

Characteristic	Percent of dual-eligible beneficiaries	Percent of non-dual-eligible beneficiaries
Sex		
Male	39%	46%
Female	61	54
Race/ethnicity		
White, non-Hispanic	58	78
African American, non-Hispanic	18	8
Hispanic	16	9
Other	8	5
Limitations in ADLs		
No limitations in ADLs	38	65
Limitations in 1–2 ADLs	27	23
Limitations in 3–6 ADLs	35	12
Residence		
Urban	70	78
Rural	30	22
Living arrangement		
Institution	17	2
Alone	31	28
With spouse	14	53
Children, nonrelatives, others	39	17
Education		
No high school diploma	45	17
High school diploma only	28	28
Some college or more	25	54
Income status		
Below poverty	61	9
100–125% of poverty	18	7
125–200% of poverty	15	20
200–400% of poverty	5	35
Over 400% of poverty	1	28
Supplemental insurance status		
Medicare or Medicare/Medicaid only	92	19
Medicare managed care	4	33
Employer-sponsored insurance	<1	30
Medigap	<1	16
Medigap/employer	0	1
Other*	4	1

Note: ADL (activity of daily living). Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in other supplemental insurance. "Urban" indicates beneficiaries living in metropolitan statistical areas (MSAs). "Rural" indicates beneficiaries living outside of MSAs. In 2012, poverty was defined as income of $11,011 for people living alone and $13,892 for married couples. Totals may not sum to 100 percent due to rounding and exclusion of an "other" category. Poverty thresholds are calculated by the U.S. Census Bureau (https://www.census.gov/hhes/www/poverty/data/threshld/).
*Includes public programs such as the Department of Veterans Affairs and state-sponsored drug plans.

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Dual-eligible beneficiaries qualify for Medicaid due in part to low incomes. In 2012, 61 percent of dual-eligible beneficiaries lived below the federal poverty level, and 94 percent lived below 200 percent of the poverty level. Compared with non-dual-eligible beneficiaries, dual-eligible beneficiaries are more likely to be female, be African American or Hispanic, lack a high school diploma, have greater limitations in activities of daily living, reside in a rural area, and live in an institution. They are less likely to have sources of supplemental coverage other than Medicaid.

Chart 4-5. Differences in Medicare spending and service use between dual-eligible beneficiaries and non-dual-eligible beneficiaries, 2012

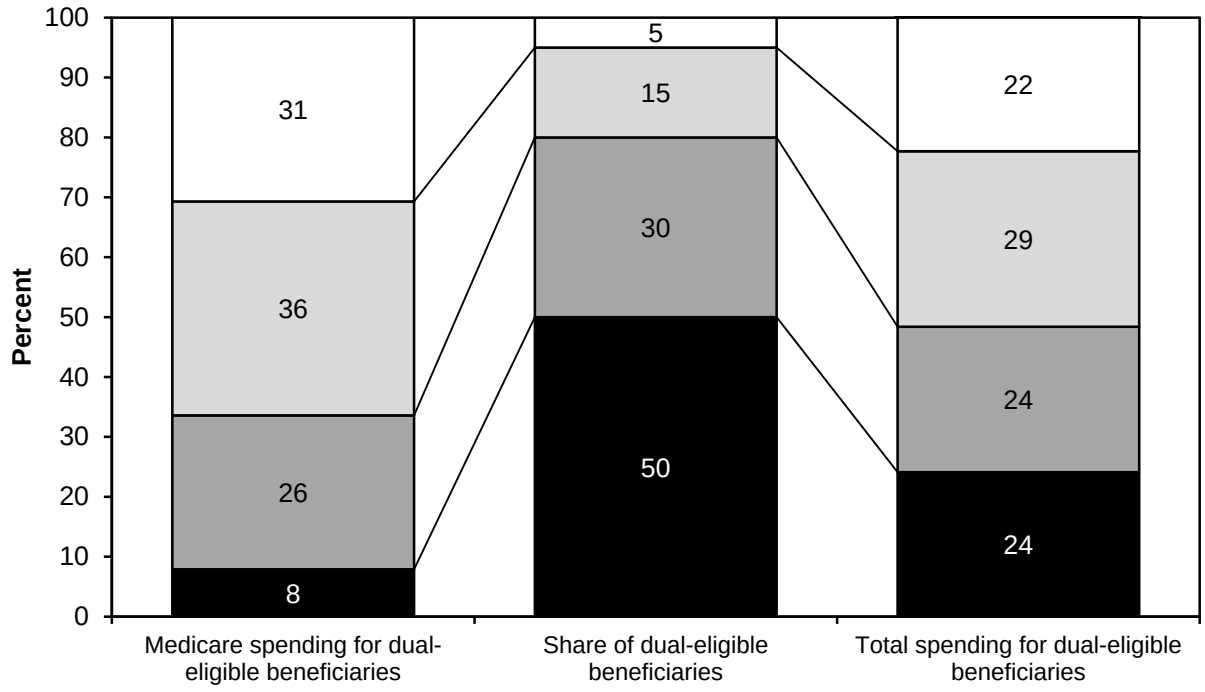
Service	Dual-eligible beneficiaries	Non-dual-eligible beneficiaries
Average FFS Medicare payment for all beneficiaries		
Total Medicare FFS payments	$17,847	$8,568
Inpatient hospital	5,041	2,690
Physician[a]	3,377	2,414
Outpatient hospital	2,412	1,167
Home health	681	386
Skilled nursing facility[b]	1,335	521
Hospice	546	254
Prescribed medication[c]	4,439	1,130
Share of FFS beneficiaries using service		
Share using any type of service	97.4%	85.5%
Inpatient hospital	25.8	14.8
Physician[a]	92.8	80.1
Outpatient hospital	80.0	59.4
Home health	11.5	7.8
Skilled nursing facility[b]	8.5	3.9
Hospice	4.4	1.8
Prescribed medication[c]	77.2	49.2

Note: FFS (fee-for-service). Data in this analysis are restricted to beneficiaries in FFS Medicare. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Spending totals derived from the Medicare Current Beneficiary Survey (MCBS) do not necessarily match official estimates from CMS Office of the Actuary. Total payments may not equal the sum of line items due to omitted "other" category.
[a] Includes a variety of medical services, equipment, and supplies.
[b] Individual short-term facility (usually skilled nursing facility) stays for the MCBS population.
[c] Data from Medicare Advantage–Prescription Drug plans and stand-alone prescription drug plans.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use file 2012.

- Average per capita Medicare FFS spending for dual-eligible beneficiaries was more than twice that for non-dual-eligible beneficiaries—$17,847 compared with $8,568.
- For each type of service, average Medicare FFS per capita spending is higher for dual-eligible beneficiaries than for non-dual-eligible beneficiaries.
- Higher average per capita FFS spending for dual-eligible beneficiaries is a function of a higher use of these services by dual-eligible beneficiaries compared with their non-dual-eligible counterparts. Dual-eligible beneficiaries are more likely than non-dual-eligible beneficiaries to use each type of Medicare-covered service.

Chart 4-6. Both Medicare and total spending were concentrated among dual-eligible beneficiaries, 2012



Note: "Total spending" includes Medicare, Medicaid, supplemental insurance, and out-of-pocket spending. Dual-eligible beneficiaries are designated as such if the months they were enrolled in Medicaid exceeded the months they were enrolled in supplemental insurance. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey, Cost and Use files 2012.

- Annual Medicare FFS spending on dual-eligible beneficiaries is concentrated among a small number. The costliest 20 percent of dual-eligible beneficiaries accounted for 67 percent of Medicare spending and 51 percent of total spending on dual-eligible beneficiaries in 2012. In contrast, the least costly 50 percent of dual-eligible beneficiaries accounted for only 8 percent of Medicare spending and 24 percent of total spending on dual-eligible beneficiaries.

- On average, total spending (including Medicaid, medigap, etc.) for dual-eligible beneficiaries in 2012 was about twice that for non-dual-eligible beneficiaries—$30,619 compared with $15,583 (data not shown).

SECTION 5

Quality of care in the Medicare program

Chart 5-1. SNFs slightly improved on some measures but not others from 2011 to 2014

Measure	2011	2012	2013	2014
Discharged to the community	33.1%	35.6%	37.5%	37.6%
Potentially avoidable readmissions during SNF stay	12.4	11.5	11.2	10.9
Potentially avoidable readmissions during 30 days after discharge from SNF	5.9	5.7	5.5	5.6
Rate of improvement in one or more mobility ADLs	43.6	43.5	43.7	43.5
Rate of no decline in mobility	87.3	87.2	87.2	87.1

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

Source: MedPAC analysis of Medicare claims and Minimum Data Set data for 2011–2014.

- Rates of risk-adjusted community discharge and potentially avoidable readmission during the SNF stay improved slightly between 2013 and 2014. A higher percentage of beneficiaries were discharged to the community, and a lower percentage of beneficiaries were readmitted to an acute care hospital during the SNF stay for 1 of 13 potentially avoidable conditions.

- The rate of potentially avoidable readmissions during the 30 days after discharge from the SNF worsened slightly from 2013 to 2014.

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

- The two risk-adjusted measures of change in functional status were essentially unchanged between 2013 and 2014. The mobility measures are composites of the patients' abilities regarding bed mobility, transfer, and ambulation, and they consider the likelihood that a patient will change, given her functional ability at admission. A facility admitting patients with worse prognoses will have a lower expected rate of achieving these outcomes, and this difference will be reflected in the risk-adjusted rates. The rate of improvement in mobility shows the share of stays with improvement in one, two, or three ADLs: bed mobility, transfer, and ambulation. The rate of no decline in mobility is the share of stays with no decline in any of the three ADLs.

Chart 5-2. Risk-adjusted home health quality measures held steady or improved slightly from 2008 to 2014

Functional measure	2004	2008	2013	2014
Hospitalization rate	27.7%	28.8%	26.5%	27.8%
Share of a home health agency's beneficiaries with improvements in:				
Walking	37.2%	45.0%	61.2%	63.6%
Transferring	51.0%	53.1%	57.1%	58.9%

Note: The measure for walking changed in 2011, and therefore the 2004 and 2008 results shown are not comparable with data from later years.

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

- Since 2004, the rates of functional improvement have slightly improved each year. The hospitalization rate has not changed significantly.
- Medicare publishes risk-adjusted home health quality measures that track changes in the functional abilities of patients who receive home health care. These measures do not include home health episodes that end with a hospitalization.

Chart 5-3. IRFs improved on risk-adjusted rates of discharge to the community and potentially avoidable rehospitalizations

	2011	2012	2013	2014
Potentially avoidable rehospitalizations during IRF stay	2.9%	2.6%	2.5%	2.5%
Potentially avoidable rehospitalizations during 30 days after discharge from IRF	5.0	4.6	4.5	4.5
Discharged to the community	73.9	75.1	75.7	76.1
Discharged to a SNF	6.9	6.7	6.8	6.9

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

Source: Analysis of Inpatient Rehabilitation Facility-Patient Assessment Instruments from CMS.

- Between 2011 and 2013, the national average rate of risk-adjusted potentially avoidable readmissions during the IRF stay declined from 2.9 percent to 2.5 percent, where it remained in 2014. (Lower rates are better.) A similar pattern was observed in the rate of risk-adjusted potentially avoidable readmissions within 30 days after discharge from an IRF: The national average declined between 2011 and 2013 (from 5.0 percent to 4.5 percent) and remained unchanged in 2014.

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

- Between 2013 and 2014, the national average risk-adjusted community discharge rate increased slightly from 75.7 percent to 76.1 percent. (Higher rates are better.) Our measure of community discharge does not give IRFs credit for discharging a Medicare beneficiary to the community if the beneficiary is subsequently readmitted to an acute care hospital within 30 days of the IRF discharge.

Chart 5-4. Dialysis quality of care: Some measures show progress, others need improvement, 2009–2013

Outcome measure	2009	2011	2013
Percent of in-center hemodialysis patients:			
Receiving adequate dialysis	N/A	96%	97%
Managing anemia			
Mean hemoglobin 10 to <12 g/dL	56%	70	71
Mean hemoglobin ≥12 g/dL*	35	17	5
Mean hemoglobin <10 g/dL	9	14	24
Dialyzed with an AV fistula	53	59	62
Percent of peritoneal dialysis patients:			
Receiving adequate dialysis	N/A	88	91
Managing anemia			
Mean hemoglobin 10 to <12 g/dL	56	65	62
Mean hemoglobin ≥12 g/dL*	31	15	6
Mean hemoglobin <10 g/dL	13	19	32
Percent of all dialysis patients wait-listed for a kidney	17	17	17
Renal transplant rate per 100 dialysis-patient years	4.3	4.0	3.7
Annual mortality rate per 100 patient years*	19.1	18.0	16.9
Total hospital admissions per patient year*	2.0	1.9	1.7
Hospital days per patient year	13.2	12.4	11.2

Note: N/A (not available), g/dL (grams per deciliter [of blood]), AV (arteriovenous). 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 adjusts data by age, gender, race, and primary diagnosis of end-stage renal disease.
*Lower values suggest higher quality.

Source: Compiled by MedPAC from Fistula First, the United States Renal Data System, and 2011 and 2013 institutional outpatient files from CMS.

- Quality of dialysis care is mixed. Performance has improved on some measures, but performance on others remains unchanged.

- All hemodialysis patients require vascular access—the site on the patient's body where blood is removed and returned during dialysis. Between 2009 and 2013, use of arteriovenous fistulas, considered the best type of vascular access, increased from 53 percent to 62 percent of hemodialysis patients. Between 2009 and 2013, overall adjusted mortality rates decreased by nearly 12 percent.

- Between 2011 and 2013, the proportion of hemodialysis patients receiving adequate dialysis remained high. Between 2009 and 2013, overall rates of hospitalization declined.

- 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 2009 and 2013, the proportion of dialysis patients accepted on the kidney transplant waiting list remained low, and the renal transplant rate per 100 dialysis-patient years declined.

Chart 5-5. Medicare Advantage quality measures were generally stable between 2013 and 2015

Measures	HMO averages (cost plans included) 2013	2014	2015	Local PPO averages 2013	2014	2015
HEDIS® administrative measures						
Osteoporosis management[a]	24.8	29.2[b]	37.9[a]	19.4	22.7[bc]	39.3[a]
Rheumatoid arthritis management	75.4	76.1	76.7[c]	79.3	80.6[c]	81.1[c]
HEDIS® hybrid measures						
BMI documented	81.7	90.1[bc]	93.3[bc]	77.1	86.5[bc]	90.0[bc]
Colorectal cancer screening	63.1	65.1[bc]	66.9[bc]	59.1	61.8[bc]	63.4[c]
Controlling blood pressure[d]	63.9	65.8[b]	71.1[d]	60.0[d]	63.9[b]	69.0[d]
Eye exam to check for damage from diabetes[a]	67.6	68.8	69.2[a]	65.5	67.3	69.3[a]
Kidney function testing for members with diabetes[a]	90.5	91.4[bc]	92.2[a]	88.5	89.6[bc]	90.3[a]
Diabetics not controlling blood sugar (lower rate better)[a]	25.4	24.3[c]	24.2[a]	28.6	25.1[bc]	24.6[a]
Measures from HOS[e]						
Advising physical activity	50.0	50.3[c]	51.4[bc]	49.1	48.4[c]	49.4[c]
Reducing the risk of falling	61.8	62.3[c]	62.2[c]	56.6	56.5[c]	57.1[c]
Other measures based on HOS						
Improving or maintaining physical health	66.5	68.8[b]	68.3	67.1	68.3[b]	68.3
Improving or maintaining mental health	77.5	79.1[bc]	78.7[c]	78.0	80.3[bc]	80.1[c]
Measures from CAHPS®						
Annual flu vaccine	70.7	72.3[b]	71.7[c]	72.0	73.8	74.1[c]
Ease of getting needed care and seeing specialists	84.9	83.6[bc]	83.0[c]	86.1	85.3[bc]	84.9[c]
Getting appointments and care quickly	75.7	76.0[c]	75.7[c]	76.2	77.2[bc]	76.8[c]
Overall rating of health care quality	85.9	86.0	85.4[bc]	86.3	86.4	86.4[c]
Overall rating of plan	86.2	85.8	85.0[b]	85.0	85.1	84.3[b]
Care coordination	84.8	85.1	84.9[c]	85.9	85.8	85.7[c]

Note: HMO (health maintenance organization), PPO (preferred provider organization), HEDIS® (Healthcare Effectiveness Data and Information Set, a registered trademark of the National Committee for Quality Assurance (NCQA)), BMI (body mass index), HOS (Health Outcomes Survey), CAHPS® (Consumer Assessment of Healthcare Providers and Systems, a registered trademark of the Agency for Healthcare Research and Quality). Data exclude regional PPOs, private fee-for-service plans, and employer-direct plans. Cost-reimbursed HMO plans are included. HEDIS administrative measures are calculated using administrative data; hybrid measures can involve sampling medical records to determine a rate. Averages are for all reporting plans in each year; results may therefore differ from those shown in other MedPAC reporting of scores for plans that report measures for both years in a two-year time period. The 2014 HMO rate for reducing the risk of falling is a correction of the previously reported rate.

[a] NCQA advises caution in the evaluation of the rates for certain measures for 2015 due to some data anomalies.

[b] Statistically significant difference in performance from previous year ($p < 0.05$).

[c] Statistically significant difference in performance between HMO and PPO results ($p < 0.05$).

[d] The specifications for this measure changed for the 2015 reporting period such that the result cannot be compared with prior-year results.

[e] Results shown for HEDIS measures taken from the HOS (the three measures listed) include scores for plans not reporting other HEDIS data. Results may therefore differ from those shown in other MedPAC reporting of these scores.

Source: MedPAC analysis of CMS HEDIS public use files for HEDIS measures and star ratings data for measures based on HOS and for CAHPS measures.

(Chart continued next page)

Chart 5-5. Medicare Advantage quality measures were generally stable between 2013 and 2015 (continued)

- The chart displays the simple averages across all plans in each category (HMOs and local PPOs) for each year.

- The measures listed are included in the measures that CMS uses to develop plan star ratings, which are the basis of quality bonus payments for plans (see Chart 9-12). For star rating purposes, measures have different weights. Process measures, such as each of the HEDIS administrative measures in the table, have a weight of 1.0. Patient experience measures, including the last four items in the table, have a weight of 1.5. Outcome measures have a weight of 3.0.

- The table includes two HEDIS outcome measures used in the star ratings: controlling blood pressure (for all patients with hypertension) and diabetics not controlling blood glucose. In the last year, specifications for the former measure changed because of new standards for appropriate blood pressure levels varying by age. For the HOS-based outcome measures, there continue to be differences between HMO results and PPO results in the mental health measure, with PPOs showing better performance by a small margin (up to a 1.4 percentage point difference).

- Among HMOs, for measures where there are no data comparability issues, 3 of 13 measures show statistically significant improvement between 2014 and 2015, with the greatest improvement being a 3.2 percentage point improvement in the documentation of enrollees' body mass index (BMI), a measure that also improved among PPOs by 3.5 percentage points. The BMI measure was the only measure showing statistically significant improvement among PPOs. For HMOs, colorectal cancer screening rates rose by 1.8 percentage points, and the HOS measure of advising patients to engage in physical activity rose by 1.1 percentage points (or about 2 percent). All six of the CAHPS patient experience measures showed a decline for HMOs between 2014 and 2015. Four of the CAHPS showed a decline for PPOs. However, the change in each of the CAHPS measures was less than one percentage point.

- In 2015, HMOs performed better than local PPOs on four measures where comparison can be made. HMOs showed better performance on two hybrid measures (BMI documentation and colorectal cancer screening, the reporting of which can be based on a review of a sample of medical records). HMOs also performed better on the two measures collected through the Health Outcomes Survey (advising physical activity and reducing the risk of falling). On the measure of improving or maintaining mental health, the PPO rate was 1.4 percentage points higher than for HMOs. PPOs also performed better on influenza vaccination rates and on four of the five CAHPS patient experience measures, though for three of the five CAHPS measures the difference was 1.1 percentage points or less (getting appointments and care quickly, overall rating of health care quality, and care coordination).

Chart 5-6. Use and spending for selected services detected by measures of low-value care in fee-for-service Medicare, 2013

Measure	Broader version of measures			Narrower version of measures		
	Count per 100 beneficiaries	Share of beneficiaries affected	Spending (millions)	Count per 100 beneficiaries	Share of beneficiaries affected	Spending (millions)
Imaging for nonspecific low back pain	11.9	8.9%	$236	3.4	3.2%	$68
PSA screening at age ≥75 years	9.2	6.3	82	5.2	4.3	47
Colon cancer screening for older adults	8.4	8.0	443	0.4	0.4	4
Spinal injection for low-back pain	6.4	3.2	1,261	3.3	1.9	654
Carotid artery disease screening in asymptomatic patients	5.2	4.8	284	4.3	4.0	234
Preoperative chest radiography	4.8	4.3	72	1.2	1.2	18
Stress testing for stable coronary disease	4.5	4.3	1,297	0.5	0.5	148
PTH testing in early CKD	4.4	2.5	84	3.8	2.2	73
T3-level testing for patients with hypothyroidism	3.7	2.2	23	3.7	2.2	23
Head imaging for headache	3.7	3.4	255	2.5	2.3	168
Cervical cancer screening at age >65 years	2.5	2.5	52	2.2	2.2	46
Homocysteine testing in cardiovascular disease	1.6	1.3	13	0.4	0.4	4
Head imaging for syncope	1.2	1.2	83	0.8	0.8	54
Preoperative echocardiography	0.8	0.8	63	0.2	0.2	20
Carotid artery disease screening for syncope	0.7	0.7	36	0.5	0.5	26
Preoperative stress testing	0.6	0.6	187	0.2	0.2	65
CT for rhinosinusitis	0.6	0.5	40	0.2	0.2	18
Dihydroxyvitamin D testing in absence of hypercalcemia or decreased kidney function	0.5	0.5	9	0.5	0.4	8
Imaging for plantar fasciitis	0.5	0.4	9	0.4	0.3	6
BMD testing at frequent intervals	0.5	0.4	10	0.3	0.3	6
Cancer screening for patients with CKD on dialysis	0.4	0.3	9	0.1	0.1	1
PCI/stenting for stable coronary disease	0.3	0.3	1,303	0.1	0.1	217
Arthroscopic surgery for knee osteoarthritis	0.3	0.3	222	0.1	0.1	117
Vertebroplasty	0.2	0.2	369	0.2	0.2	359
Renal artery stenting	0.2	0.2	463	0.03	0.03	76
IVC filter placement	0.2	0.2	38	0.2	0.2	38
Hypercoagulability testing after DVT	0.1	0.1	5	0.1	0.05	2
Preoperative PFT	0.1	0.1	1	0.1	0.1	1
Carotid endarterectomy for asymptomatic patients	0.1	0.1	173	0.03	0.03	74
EEG for headache	0.1	0.1	4	0.04	0.04	2
Pulmonary artery catheterization in ICU	0.01	0.01	0.3	0.01	0.01	0.2
Total	**73.7**	**38.1**	**7,128**	**35.0**	**23.1**	**2,576**

(Chart continued next page)

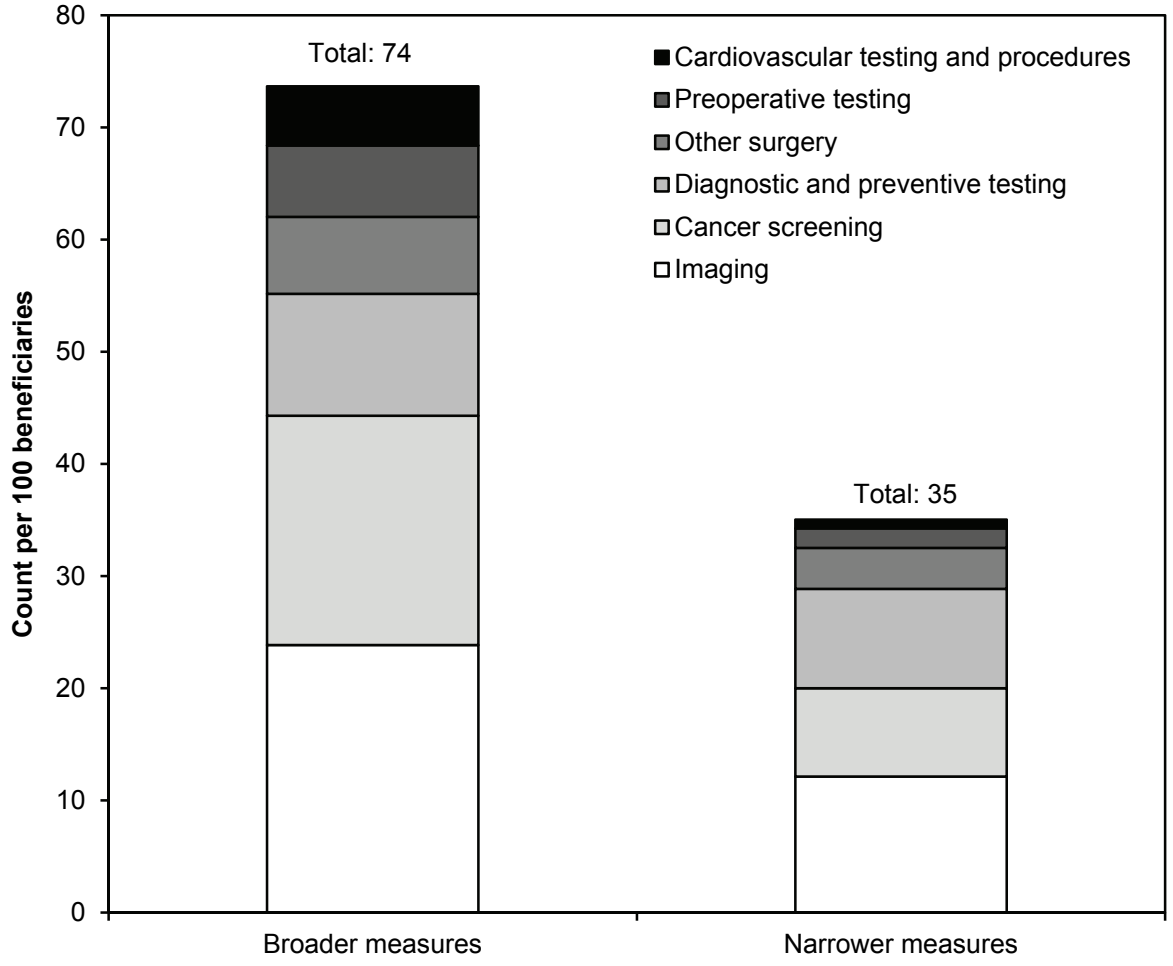
Chart 5-6. Use and spending for selected services detected by measures of low-value care in fee-for-service Medicare, 2013 (continued)

Note: PSA (prostate-specific antigen), PTH (parathyroid hormone), CKD (chronic kidney disease), CT (computed tomography), BMD (bone mineral density), PCI (percutaneous coronary intervention), IVC (inferior vena cava), DVT (deep vein thrombosis), PFT (pulmonary function test), EEG (electroencephalography), ICU (intensive care unit). "Count" refers to the number of unique services. Numbers may not sum to totals due to rounding. The total share of beneficiaries affected does not equal the column sum because some beneficiaries received services covered by multiple measures. To estimate spending, we used standardized prices to adjust for regional differences in payment rates. The standardized price is the median payment amount per service in 2009, adjusted for the increase in payment rates between 2009 and 2012.

Source: MedPAC analysis of 100 percent of Medicare claims using measures developed by Aaron Schwartz and colleagues. (Schwartz, A. L., B. E. Landon, A. G. Elshaug, et al. 2014. Measuring low-value care in Medicare. *JAMA Internal Medicine* 174: 1067–1076; Schwartz, A. L., M. E. Chernew, B.E. Landon, et al. 2015. Changes in low-value services in year 1 of the Medicare Pioneer Accountable Care Organization Program. *JAMA Internal Medicine* 175: 1815–1825.)

- Low-value care is the provision of a service that has little or no clinical benefit, or a service for which the risk of harm outweighs its potential benefit.
- The measures of low-value care in this chart were developed by a team of researchers at Harvard University. The measures are drawn from evidence-based lists—such as Choosing Wisely—and the medical literature. We applied these measures to 100 percent of Medicare claims data from 2013.
- The researchers developed two versions of each measure: a broader one with higher sensitivity (and lower specificity) and a narrower one with lower sensitivity (and higher specificity). Increasing the sensitivity of a measure captures more potentially inappropriate use, but is also more likely to misclassify some appropriate use as inappropriate. Increasing a measure's specificity leads to less misclassification of appropriate use as inappropriate at the expense of potentially missing some inappropriate use.
- Based on the broader versions of each measure, there were about 74 instances of low-value care per 100 beneficiaries across all the measures, and about 38 percent of beneficiaries received at least one low-value service. Based on the narrower versions of each measure, there were about 35 instances of low-value care per 100 beneficiaries, and about 23 percent of beneficiaries received at least one low-value service.

Chart 5-7. Use of services detected by selected measures of low-value care, by category, 2013

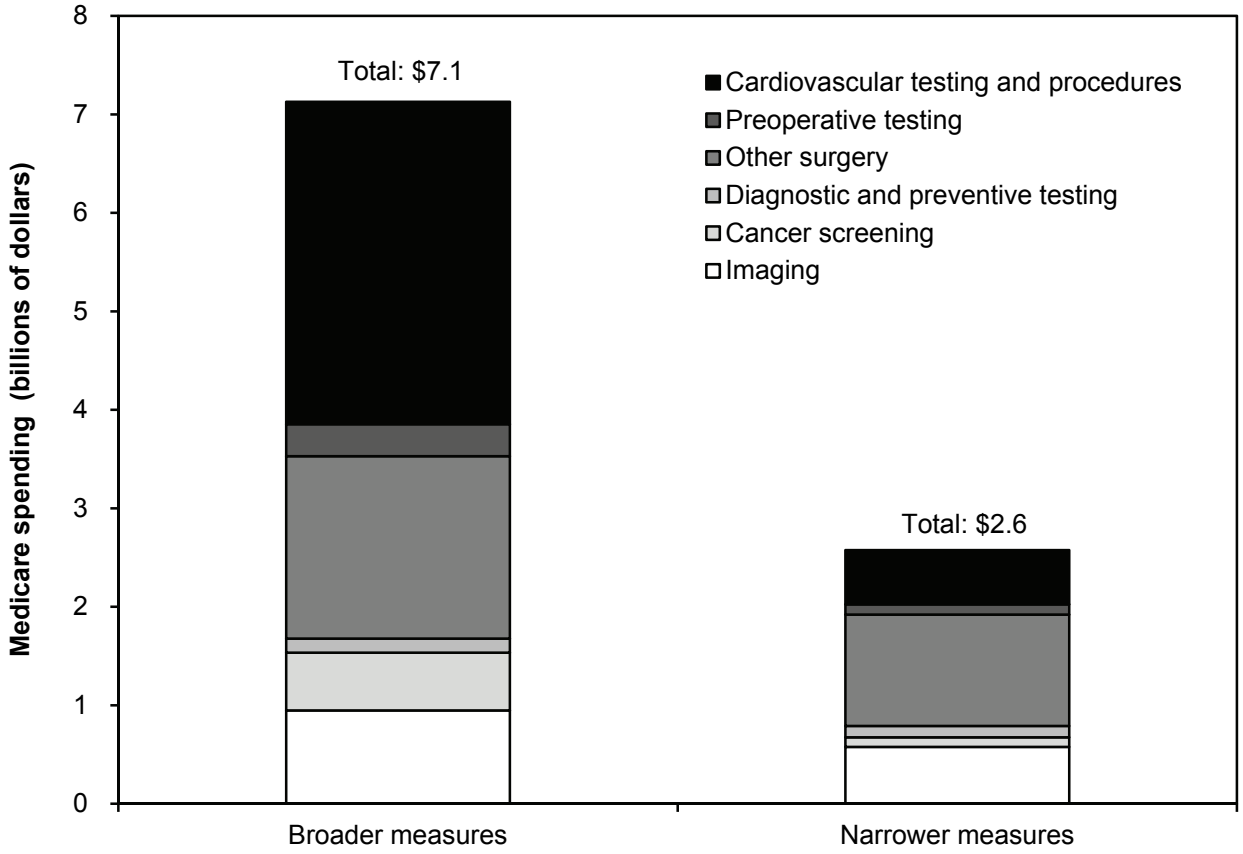


Note: "Count" refers to the number of unique services provided to fee-for-service Medicare beneficiaries.

Source: MedPAC analysis of 100 percent of Medicare claims using measures developed by Aaron Schwartz and colleagues. (Schwartz, A. L., B. E. Landon, A. G. Elshaug, et al. 2014. Measuring low-value care in Medicare. *JAMA Internal Medicine* 174: 1067–1076; Schwartz, A. L., M. E. Chernew, B.E. Landon, et al. 2015. Changes in low-value services in year 1 of the Medicare Pioneer Accountable Care Organization Program. *JAMA Internal Medicine* 175: 1815–1825).

- Following the methodology used in Chart 5-6 (described in the note), we assigned each of the 31 measures of low-value care to 1 of 6 clinical categories.
- Imaging and cancer screening accounted for 60 percent of the instances of low-value care per 100 beneficiaries among the broader versions of the measures. The imaging category includes back imaging for patients with nonspecific low-back pain and screening for carotid artery disease in asymptomatic patients. The cancer screening category includes prostate-specific antigen testing for men age 75 or older and colorectal cancer screening for older patients.
- Among the narrower versions of the measures, imaging and diagnostic and preventive testing accounted for 60 percent of the instances of low-value care per 100 beneficiaries.

Chart 5-8. Spending on services detected by selected measures of low-value care, by category, 2013



Note: Spending includes Medicare Part A and Part B program spending and beneficiary cost sharing for services detected by measures of low-value care. To estimate spending, we used standardized prices to adjust for regional differences in payment rates. The standardized price is the median payment amount per service in 2009, adjusted for the increase in payment rates between 2009 and 2012. This method was developed by Schwartz et al. (2014).

Source: MedPAC analysis of 100 percent of Medicare claims using measures developed by Aaron Schwartz and colleagues. (Schwartz, A. L., B. E. Landon, A. G. Elshaug, et al. 2014. Measuring low-value care in Medicare. *JAMA Internal Medicine* 174: 1067–1076; Schwartz, A. L., M. E. Chernew, B.E. Landon, et al. 2015. Changes in low-value services in year 1 of the Medicare Pioneer Accountable Care Organization Program. *JAMA Internal Medicine* 175: 1815–1825).

- The "cardiovascular testing and procedures" category includes stress testing for stable coronary disease and percutaneous coronary intervention with balloon angioplasty or stent placement for stable coronary disease. The "other surgery" category includes spinal injection for low-back pain and arthroscopic surgery for knee osteoarthritis. The "imaging" category includes back imaging for patients with nonspecific low-back pain and screening for carotid artery disease in asymptomatic patients.

- Cardiovascular testing and procedures and other surgery accounted for 72 percent of total spending on low-value care using the broader measures. Other surgery and imaging comprised two-thirds of spending on low-value care using the narrower measures.

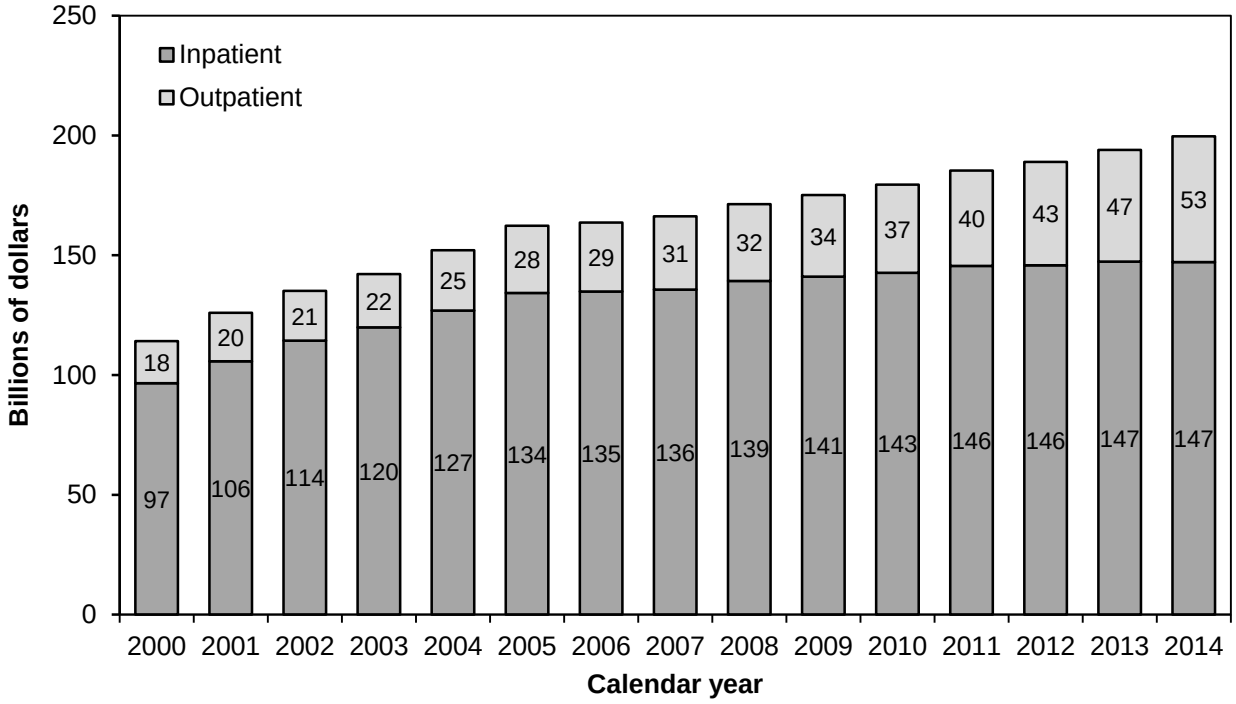
- The spending estimates probably understate actual spending on low-value care because they do not include downstream services (e.g., follow-up tests and procedures) that may result from the initial low-value service.

SECTION 6

Acute inpatient services

Short-term hospitals
Inpatient psychiatric facilities

Chart 6-1. Growth in Medicare's FFS payments for hospital inpatient and outpatient services, 2000–2014



Note: FFS (fee-for-service). Analysis includes inpatient services covered by the acute inpatient prospective payment system (PPS); psychiatric, rehabilitation, long-term care, cancer, and children's hospitals and units; outpatient services covered by the outpatient PPS; and other outpatient services. Payments include program outlays and beneficiary cost sharing, including hospital cost sharing for beneficiaries eligible for Medicare through end-stage renal disease.

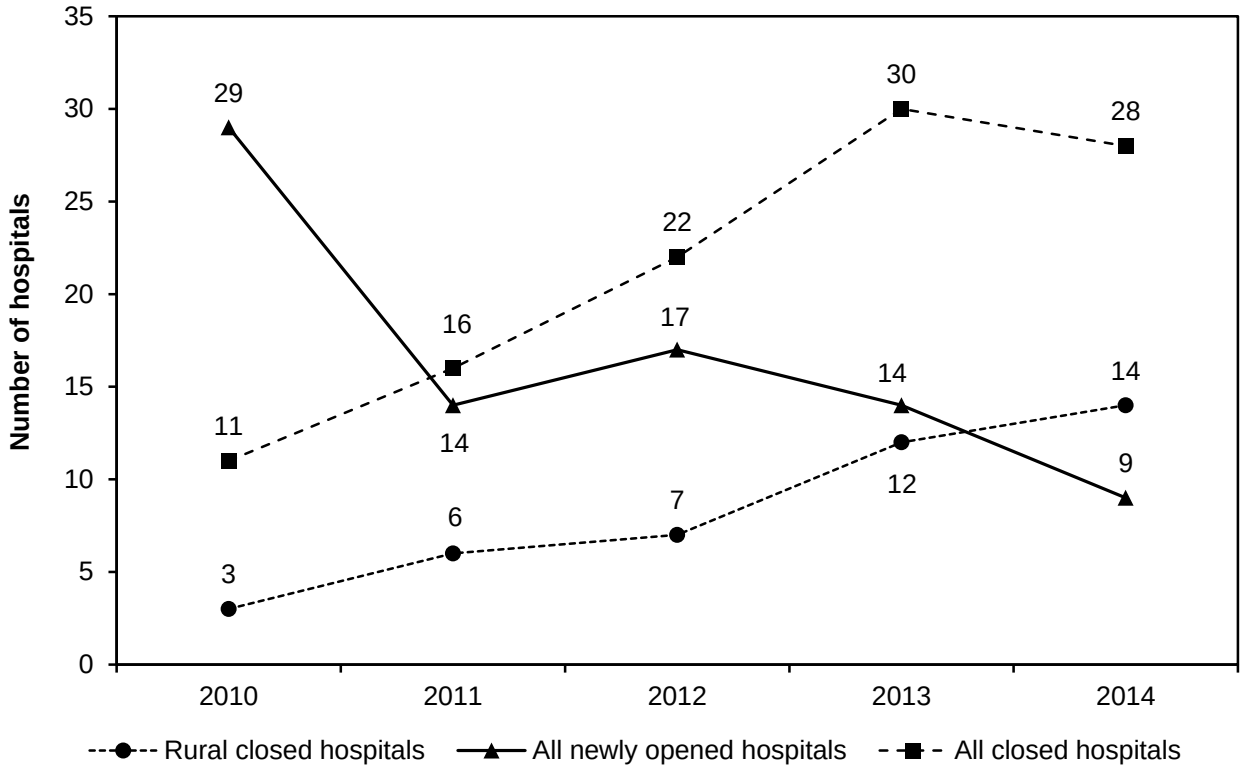
Source: CMS Office of the Actuary.

- Aggregate Medicare FFS inpatient spending was $147 billion and outpatient spending was $53 billion in 2014. From 2013 to 2014, inpatient spending was virtually unchanged, while outpatient spending increased nearly 13 percent.

- Inpatient spending increased substantially between 2001 and 2005 but remained relatively unchanged from 2005 to 2007. Spending for both inpatient and outpatient care began to increase in 2008, but beginning in 2011, inpatient spending began to plateau and outpatient spending grew significantly.

- Outpatient spending has increased as a share of total Medicare hospital spending in the past 14 years. In 2000, outpatient spending accounted for 16 percent of all hospital spending; in 2014, outpatient spending grew to over 26 percent of total Medicare hospital spending.

Chart 6-2. Annual changes in number of acute care hospitals participating in the Medicare program, 2010–2014



Note: "Hospitals" refers to general short-term acute care hospitals. The Commission's reported number of open and closed hospitals can change from year to year based on hospitals that enter Medicare as an acute care facility and later convert to a more specialized type of facility such as a long-term care hospital or critical access hospital.

Source: MedPAC analysis of CMS's Provider of Service file, inpatient prospective payment system final rule impact file, and hospital cost reports.

- The number of hospital closures exceeded the number of openings in 2014, with 28 acute care hospitals closing (less than 1 percent of all acute care hospitals participating in the Medicare program) and 9 hospitals starting participation in the Medicare program.
- In 2014, rural hospital closures accounted for half of all hospital closures. The number of rural hospital closures has gradually increased in recent years, from 3 in 2010 to 14 in 2014. Rural hospital closures could in part reflect declining inpatient volume at many rural hospitals.

Chart 6-3. Percent change in hospital employment overall and for selected occupations, 2010–2014

	Total hospital employment (May 2010)	Total hospital employment (May 2014)	Percent change in total hospital employment (2010–2014)
All hospital occupations	5,159,860	5,247,530	1.7%
Physicians and surgeons (DE)	122,200	153,380	25.5
Computer and math science	56,820	67,010	17.9
Life, physical, & social science	27,160	31,650	16.5
Pharmacists	58,680	66,010	12.5
Business and finance	96,960	107,520	10.9
Physician assistants	18,710	19,810	5.9
Diagnostic-related technologists	212,030	221,880	4.7
Management	189,430	194,930	2.9
Registered nurses	1,521,400	1,560,200	2.6
Community and social services	101,240	100,330	–0.9
Clinical laboratory technicians	165,040	161,370	–2.2
Office and administrative	744,850	700,250	–6.0
LPNs/LVNs	145,130	101,580	–30.0

Note: DE (direct employment [by the hospital]), LPN (licensed practical nurse), LVN (licensed vocational nurse). Sum of employment for selected occupations listed does not equal the total in the "All hospital occupations" row.

Source: MedPAC analysis of Bureau of Labor Statistics, Occupational Employment Statistics data set as of September 2014.

- The U.S. Bureau of Labor Statistics (BLS) survey of occupational employment data shows that from May 2010 to May 2014, hospital employment increased 1.7 percent.

- Five occupations with notable growth in the hospital sector from 2010 to 2014 include physicians and surgeons directly employed by hospitals (25.5 percent); computer and math science positions (17.9 percent); life, physical, and social science positions (16.5 percent); pharmacists (12.5 percent); and business and finance positions (10.9 percent). Growth in the overall number of hospital-employed physicians suggests that hospitals have been more active in recent years in hiring physicians directly. Growth in computer and math science positions may reflect hospitals' efforts to implement electronic health record systems.

- Four occupations with notable declines in employment in the hospital sector from 2010 to 2014 include LPNs and LVNs, office and administrative staff, clinical laboratory technicians, and community and social service positions (social workers). During this time, the number of LPN/LVNs declined 30 percent (by roughly 44,000 LPN/LVNs). By contrast, during the same time period, the number of registered nurses employed by hospitals increased 2.6 percent (roughly 39,000 registered nurses), suggesting a continued shift toward employing nurses with a higher level of training.

- More recent industry-level (as opposed to occupation-level) survey data from BLS suggest that overall hospital employment increased by 5 percent between May 2014 and January 2016. As of January 2016, hospitals accounted for approximately 3.4 percent of all U.S. nonfarm employment (data not shown).

Chart 6-4. Share of Medicare acute care hospital inpatient discharges by hospital group, 2014

Hospital group	Hospitals		Medicare discharges	
	Number	Share of total	Number (thousands)	Share of total
All PPS and CAHs	4,647	100%	9,528	100%
CAHs	1,336	28.8	322	3.4
PPS hospitals	3,311	71.3	9,206	96.6
Urban (PPS only)	2,459	52.9	8,192	86.0
Large urban	1,341	28.9	4,471	46.9
Other urban	1,118	24.1	3,721	39.1
Rural (PPS only)	852	18.3	1,014	10.6
Rural referral	97	2.1	237	2.5
Sole community	379	8.2	495	5.2
Medicare dependent	147	3.2	108	1.1
Other rural, <50 beds	113	2.4	43	0.5
Other rural, ≥50 beds	116	2.5	131	1.4
Tax status (PPS only)				
Voluntary	1,901	57.4	6,442	70.0
Proprietary	867	26.2	1,638	17.8
Government	543	16.4	1,126	12.2
Teaching status (PPS only)				
Major teaching	293	8.8	1,588	16.7
Other teaching	730	22.0	3,335	36.2
Nonteaching	2,288	69.1	4,283	46.5

Note: PPS (prospective payment system), CAH (critical access hospital). Maryland hospitals are excluded. Large urban areas are those with populations of more than 1 million. "Major teaching hospitals" are defined by a ratio of interns and residents to beds of at least 0.25. "Other teaching hospitals" have a ratio below 0.25. Data are limited to providers with complete 2014 cost reports. Hospitals in urban, rural, tax status, and teaching status categories are all PPS hospitals. Numbers may not sum to totals due to rounding.

Source: MedPAC analysis of PPS impact files and Medicare cost report data from CMS.

- In 2014, 3,311 hospitals provided 9.2 million discharges under Medicare's acute inpatient PPS and 1,336 CAHs provided 322,000 discharges, for a combined total of more than 4,600 hospitals providing 9.5 million Medicare discharges. The number of PPS discharges continued to decline from 2013 to 2014, in part because of a shift in services to the outpatient setting (data not shown).
- Approximately 13.5 percent of PPS hospitals are covered by three special payment provisions (rural referral centers (RRCs), sole community hospitals (SCHs), and Medicare dependent hospitals (MDHs)) intended to help rural facilities that are not CAHs; these facilities accounted for 8.8 percent of all discharges.
- About 90 percent of rural hospitals were given special payments through the CAH, RRC, SCH, or MDH program in 2014. Collectively, these three types of hospitals provide 87 percent of all rural Medicare discharges (data not shown).

Chart 6-5. Change in share of discharges by major diagnostic categories, 2006–2014

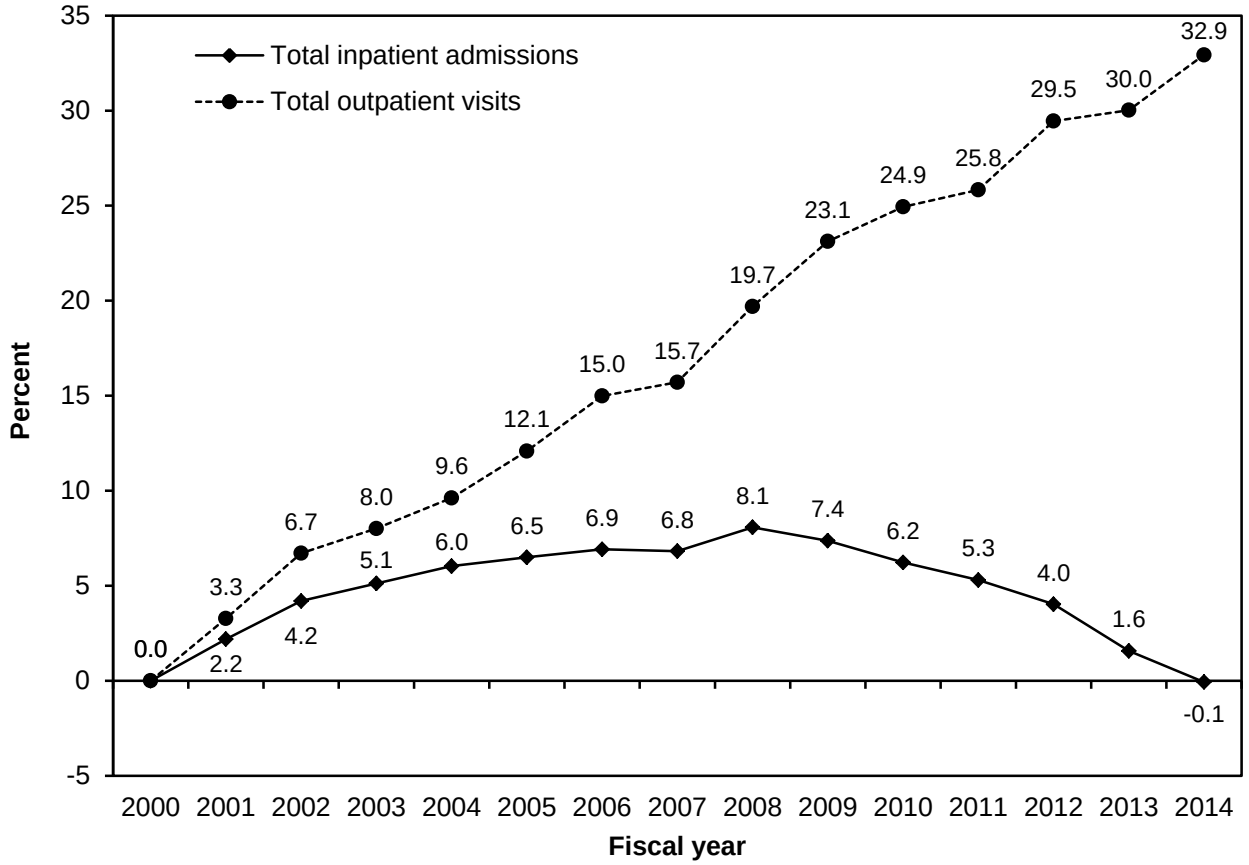
MDC number	MDC name	Share of all discharges 2006	Share of all discharges 2014	Percentage point change
5	Circulatory system	27%	20%	–7
4	Respiratory system	14	14	0
8	Musculoskeletal system	12	14	2
6	Digestive system	11	11	0
1	Nervous system	8	8	0
18	Infectious and parasitic diseases	4	8	4
11	Kidney and urinary tract	6	8	2
10	Endocrine, nutritional and metabolic	4	4	0
7	Hepatobiliary system and pancreas	3	3	0
9	Skin, subcutaneous tissue and breast	3	3	0
	Total	92	93	1

Note: MDC (major diagnostic category).

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

- In fiscal year 2014, 10 major diagnostic categories accounted for 93 percent of all discharges from hospitals paid under the inpatient prospective payment system.
- Circulatory system cases accounted for one-fifth of all inpatient discharges in 2014, a decline of 7 percentage points from 2006.
- Musculoskeletal system cases accounted for 14 percent of all inpatient discharges in 2014, up 2 percentage points from 2006.
- Infectious and parasitic disease cases accounted for 8 percent of all inpatient discharges in 2014, up 4 percentage points from 2006.
- Kidney and urinary tract cases accounted for 8 percent of all inpatient discharges in 2014, up 2 percentage points from 2006.

Chart 6-6. Cumulative change in total all-payer inpatient admissions and outpatient visits, 2000–2014

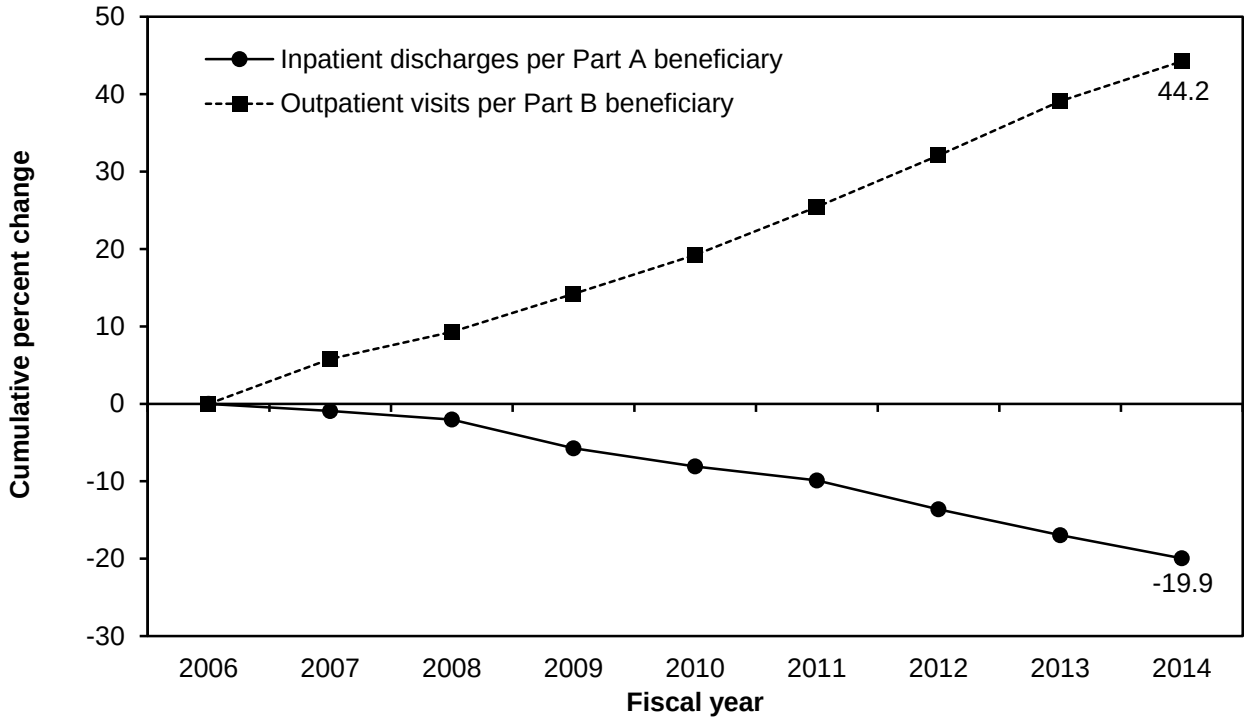


Note: "Cumulative change" is the total percent increase from 2000 through 2014. Data reflect admissions (all payers) to and outpatient visits at about 5,000 community hospitals. "Community hospitals" are defined as all nonfederal, short-term general, and other specialty hospitals. "Other specialty hospitals" include obstetrics and gynecology; eye, ear, nose, and throat; rehabilitation; orthopedic; and other individually described specialty services. Community hospitals include academic medical centers or other teaching hospitals if they are nonfederal short-term hospitals. Excluded are hospitals not accessible by the general public, such as prison hospitals or college infirmaries.

Source: American Hospital Association, AHA Hospital Statistics.

- In 2014, community hospitals provided nearly 693 million outpatient visits and slightly fewer than 33 million inpatient admissions (data not shown).
- Hospital outpatient service use grew much more rapidly from 2000 to 2014 than inpatient service use. Total hospital outpatient visits increased 33 percent from 2000 to 2014.
- Outpatient visits increased 2.9 percentage points from 2013 to 2014, or by nearly 5 million visits (data not shown).
- Total inpatient admissions grew by over 8 percent between 2000 and 2008 but have since declined. Inpatient admissions decreased by 1.7 percentage points from 2013 to 2014, or over 500,000 admissions (data not shown).

Chart 6-7. Cumulative change in Medicare outpatient services and inpatient discharges per FFS beneficiary, 2006–2014



Note: FFS (fee-for-service). Data pertain to short-term general and surgical hospitals, including critical access and children's hospitals.

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

- From 2006 to 2014, the number of Medicare inpatient discharges per FFS beneficiary declined by nearly 20 percent. From 2006 to 2008, the number of inpatient discharges per beneficiary was relatively flat, but beginning in 2008, the volume of discharges per beneficiary began to decline.

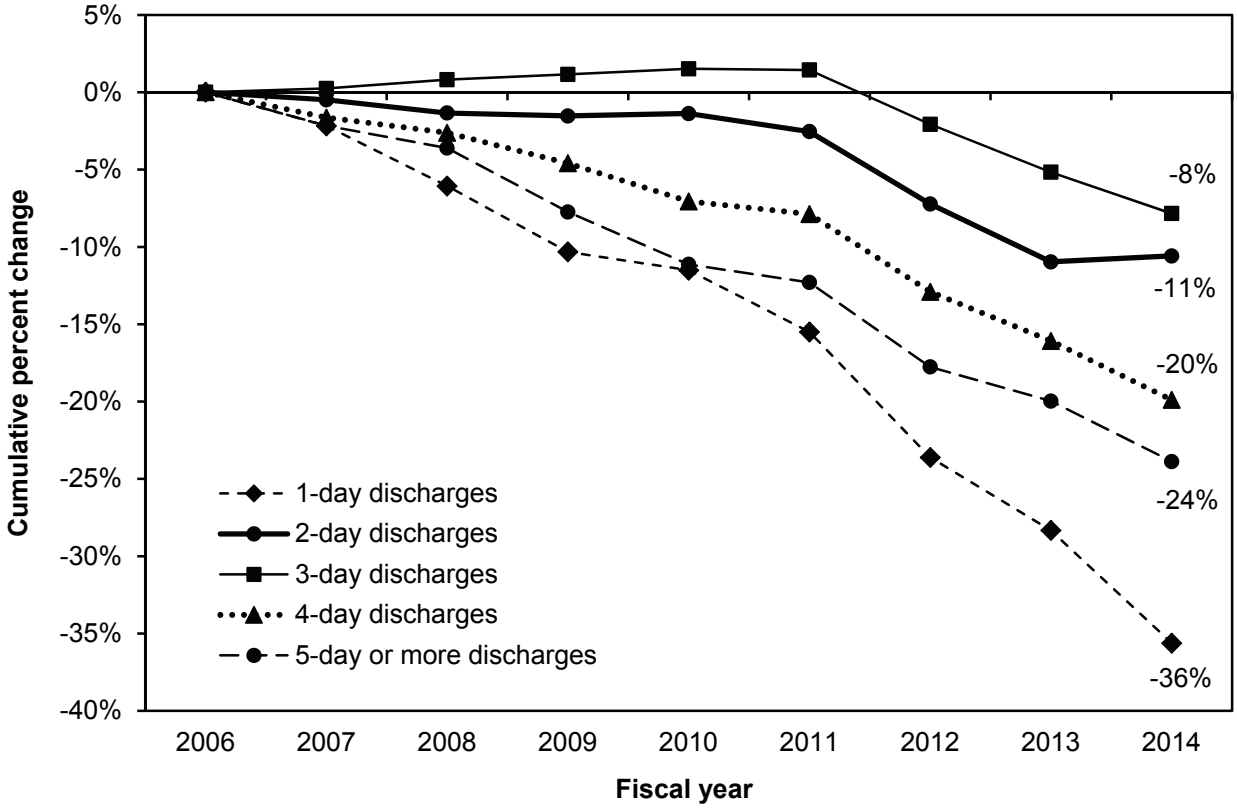
- From 2006 to 2014, the number of Medicare outpatient visits per FFS beneficiary increased 44 percent.

- Together these two trends suggest a shift in services from the inpatient to the outpatient setting, as well as a shift in billing for some services from physician offices to outpatient hospital departments.

- From 2013 to 2014, the number of Medicare inpatient discharges per FFS beneficiary declined approximately 2.9 percentage points, slightly more than the average annual decline from 2006 to 2013.

- From 2013 to 2014, the number of Medicare outpatient visits per FFS beneficiary increased 3.7 percentage points, slightly less than the average annual increase from 2006 to 2013.

Chart 6-8. Cumulative change in Medicare inpatient discharges per FFS beneficiary, by length of stay, 2006–2014



Note: FFS (fee-for-service). Data reflect short-term general and surgical hospitals, including critical access and children's hospitals.

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

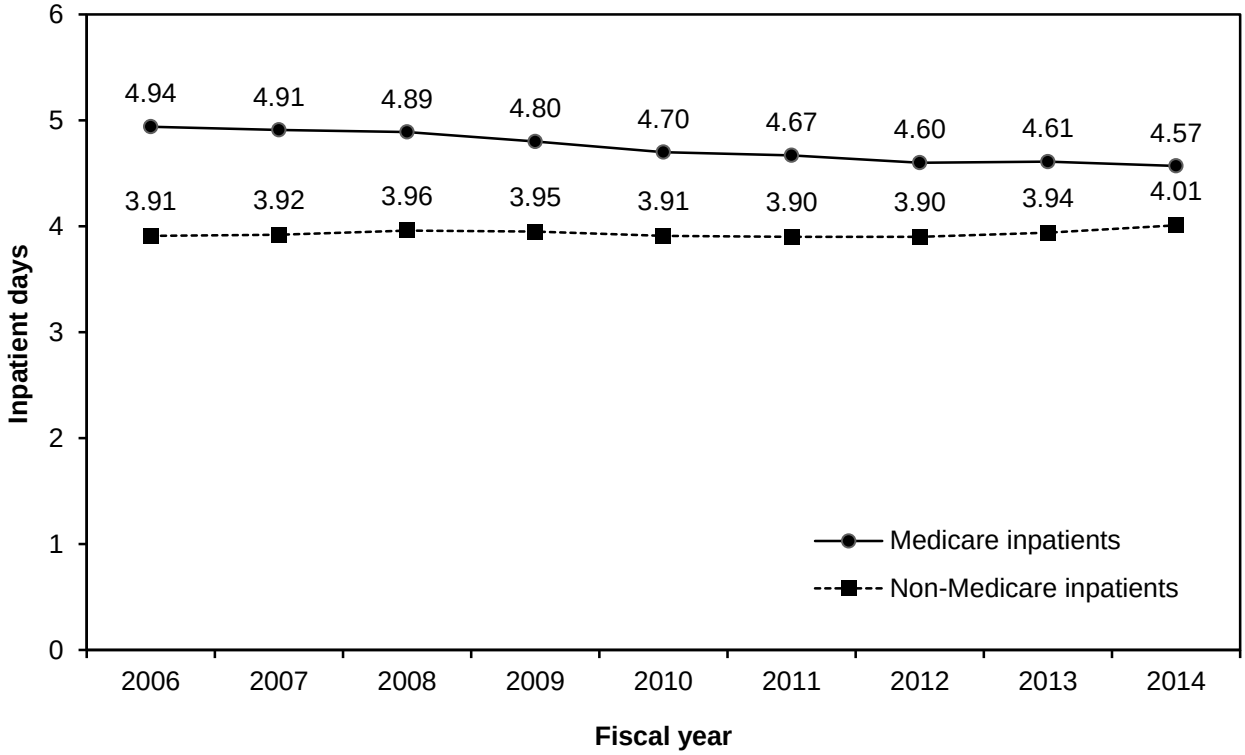
- In recent years, one-day inpatient discharges declined more rapidly than inpatient discharges of other lengths. From 2006 to 2014, one-day inpatient stays declined nearly 36 percent per FFS beneficiary. In 2014, there were approximately 1.2 million one-day discharges, representing 11 percent of all discharges (data not shown).

- From 2006 to 2014, three-day inpatient stays declined the least rapidly. From 2006 to 2011, three-day stays increased. However, three-day inpatient stays began to decline in 2011. In 2014, there were approximately 2 million three-day discharges, representing 18 percent of all discharges (data not shown).

- Collectively, inpatient discharges of five days or declined rapidly from 2006 to 2014, at –24 percent per beneficiary. Rates of decline for these longer stays were variable depending on the number of days, but ranged from 22 percent to 56 percent for the most common lengths (five-day, six-day, seven-day, and eight-day discharges). In 2014, there were approximately 4.6 million discharges of 5 or more days in length, representing 42 percent of all discharges (data not shown).

- From 2006 to 2014, inpatient surgical discharges per beneficiary declined approximately 26 percent (data not shown), or an average of 3.3 percent per year. Over the same period, inpatient medical discharges per beneficiary declined approximately 20 percent, or an average of 2.4 percent per year.

Chart 6-9. Trends in Medicare and non-Medicare inpatient lengths of stay, 2006–2014

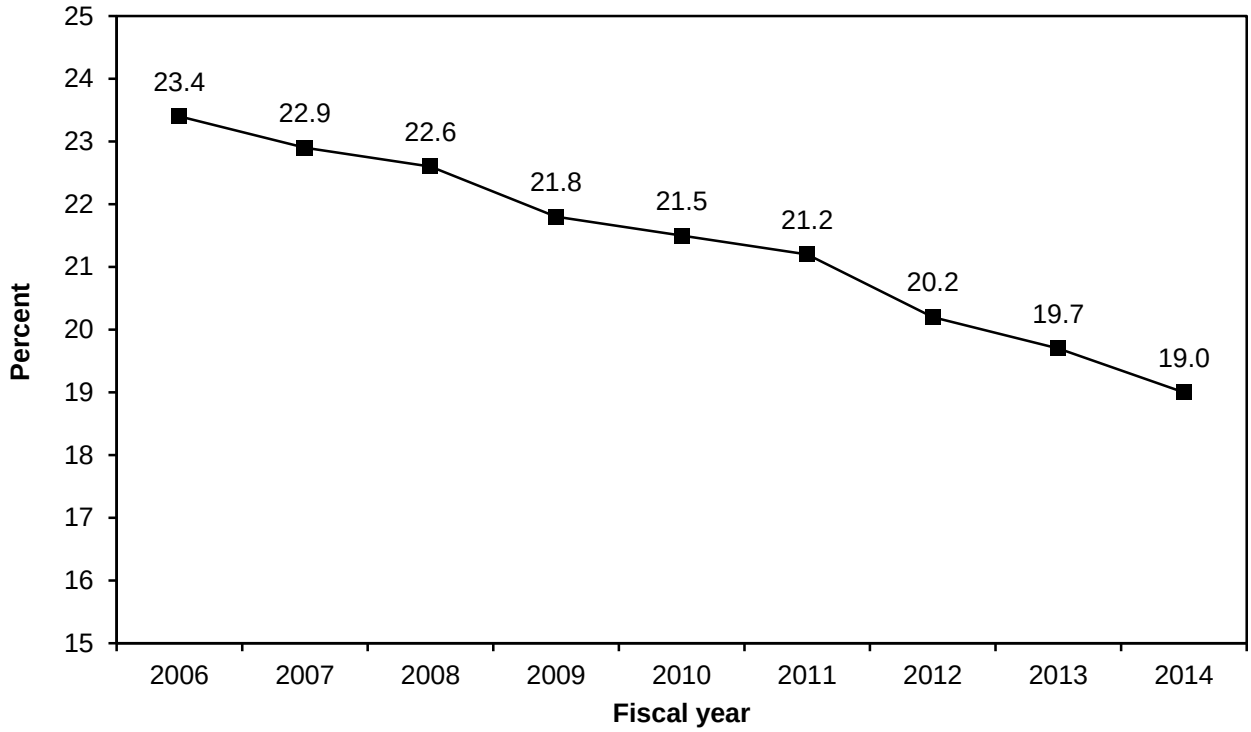


Note: Length of stay is calculated based on discharges and patient days for more than 3,000 hospitals covered by the inpatient prospective payment system. Chart excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data from CMS.

- While Medicare length of stay fell between 2006 and 2014, the average length of stay for non-Medicare inpatients was relatively flat. Between 2006 and 2014, Medicare inpatient length of stay fell 7.5 percent, while the inpatient length of stay for all non-Medicare inpatients increased 2.6 percent.
- The decline in average length of inpatient stays for Medicare beneficiaries was slight between 2013 and 2014.
- In 2014, the average length of inpatient stays for Medicare beneficiaries was approximately one-half a day longer than for non-Medicare inpatients. In 2006, the difference was more than a full day.

Chart 6-10. Share of Medicare Part A fee-for-service beneficiaries with at least one hospitalization, 2006–2014



Note: Analysis excludes Medicare Advantage claims and claims for non–inpatient prospective payment system hospitals such as critical access hospitals and hospitals located in Maryland.

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

- The share of Medicare fee-for-service beneficiaries with Part A coverage who had at least one inpatient hospitalization in a given year declined by 4.4 percentage points from 2006 to 2014. In 2014, 19 percent of Medicare beneficiaries had at least one inpatient stay covered under Part A.

- Medicare fee-for-service beneficiaries with Part A coverage who used inpatient hospital services in 2014 had an average of 1.69 inpatient claims over the course of the year (data not shown), a decline of approximately 2 percent from 2006 (1.73 inpatient claims per year).

- A portion of the decline in beneficiaries' use of inpatient services could reflect the increase in the number of cases in which beneficiaries are served in outpatient observation status. In addition, this decline could also represent, in part, a secular trend in reduced inpatient use.

Chart 6-11. Share of inpatient admissions preceded by emergency department visit, by location, 2006–2014

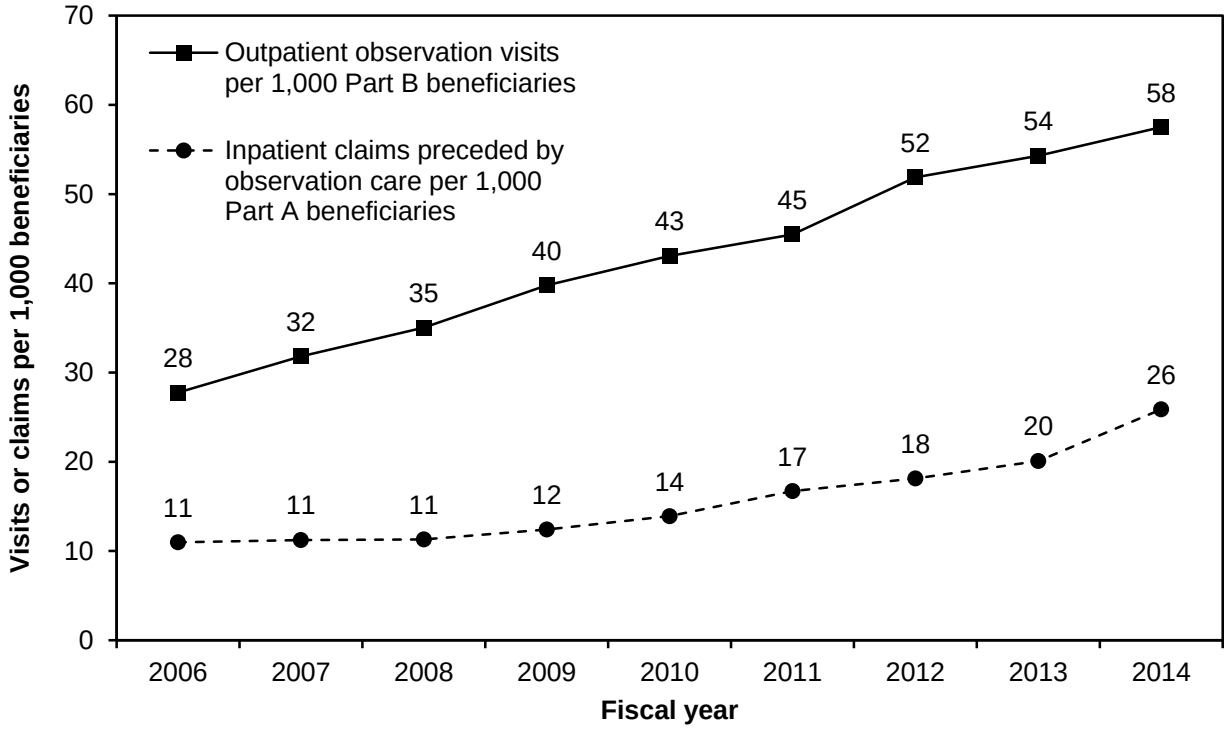
	Percent 2014	Average annual percent change 2006–2013	Percent change 2013–2014
All hospitals	71.3%	1.8%	0.2%
Urban	70.9	1.8	0.1
Large urban	72.7	1.7	0.0
Other urban	69.0	2.1	0.2
Rural	74.5	1.9	0.9
Rural referral	74.2	1.9	1.1
Sole community	74.0	1.9	1.1
Medicare dependent	76.3	1.9	1.2
Other rural, <50 beds	64.3	1.4	–3.9
Other rural, ≥50 beds	78.3	2.0	1.2
Tax status			
Voluntary	70.2	1.7	0.1
Proprietary	70.7	1.9	0.6
Government	68.1	2.2	0.4
Teaching status			
Major teaching	62.4	1.6	0.4
Other teaching	69.0	1.9	0.0
Nonteaching	73.6	1.9	0.3

Note: Figures are reported for fiscal years. Analysis excludes Medicare Advantage claims and claims for non–inpatient prospective payment system hospitals such as critical access hospitals and hospitals located in Maryland.

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

- In 2014, 71 percent of inpatient admissions entered the hospital through the emergency department (ED).
- From 2013 to 2014, the share of inpatient admissions entering the hospital through the ED was largely unchanged, following several years of increases. From 2006 to 2013, the average annual percent change in the share of inpatient admissions entering the hospital through the ED was 1.8 percent.
- The share of inpatient admissions preceded by an ED visit is consistently higher for rural hospitals than for urban hospitals. In 2014, nearly 75 percent of inpatient admissions provided at rural hospitals were preceded by an ED visit. By contrast, approximately 71 percent of inpatient admissions provided at urban hospitals were preceded by an ED visit. From 2013 to 2014, the smallest rural hospitals saw a 3.9 percent decline in inpatient admissions preceded by an ED visit.

Chart 6-12. Number of Medicare outpatient observation visits and inpatient claims preceded by observation care per 1,000 beneficiaries increased from 2006 to 2014



Source: Medicare hospital cost reports and Medicare outpatient claims data.

- In 2014, Medicare beneficiaries had approximately 2.9 million observation visits. Among this total, approximately 1 million were observation visits that preceded an inpatient stay and 1.9 million were exclusively outpatient stays (data not shown).
- The number of Medicare inpatient admissions preceded by observation care increased 136 percent from 2006 to 2014, from 11 admissions per 1,000 Part A beneficiaries to 26 admissions per 1,000 beneficiaries.
- The number of Medicare outpatient observation visits increased 107 percent from 2006 to 2014. During this period, the rate of outpatient observation visits per Part B beneficiary increased from approximately 28 visits per 1,000 beneficiaries to 58 visits per 1,000 beneficiaries.
- The length of outpatient observation visits increased in recent years. From 2006 to 2014, the average length of outpatient observation visits increased by approximately 4 hours, from 25.6 hours in 2006 to 28.0 hours in 2014 (data not shown).
- In 2014, approximately 317,000 observation visits were 48 hours or longer, representing approximately 11 percent of all observation stays (data not shown).
- The number of observation visits increased by similar amounts for patients with a prior admission and for patients without a prior admission, suggesting the growth is not primarily driven by the Hospital Readmission Reduction Program, which penalizes hospitals for excess preventable inpatient readmissions (see Chart 6-13).

Chart 6-13. Potentially preventable readmission rates for selected conditions, 2010–2014

Reason for initial admission	2010	2011	2012	2013	2014	Percentage point change, 2010–2014
All	12.9%	12.4%	11.9%	11.3%	11.0%	–1.9
AMI	17.3	16.9	16.1	15.0	14.3	–3.0
Heart failure	19.5	19.2	18.4	17.6	17.0	–2.5
Pneumonia	13.1	12.6	12.1	11.5	11.5	–1.6
COPD	16.8	16.5	15.9	15.1	14.7	–2.1

Note: AMI (acute myocardial infarction), COPD (congestive obstructive pulmonary disease). Rates are adjusted for changes in the mix of patients.

Source: MedPAC analysis of 2010–2014 Medicare claims data and 3M™ potentially preventable readmissions software.

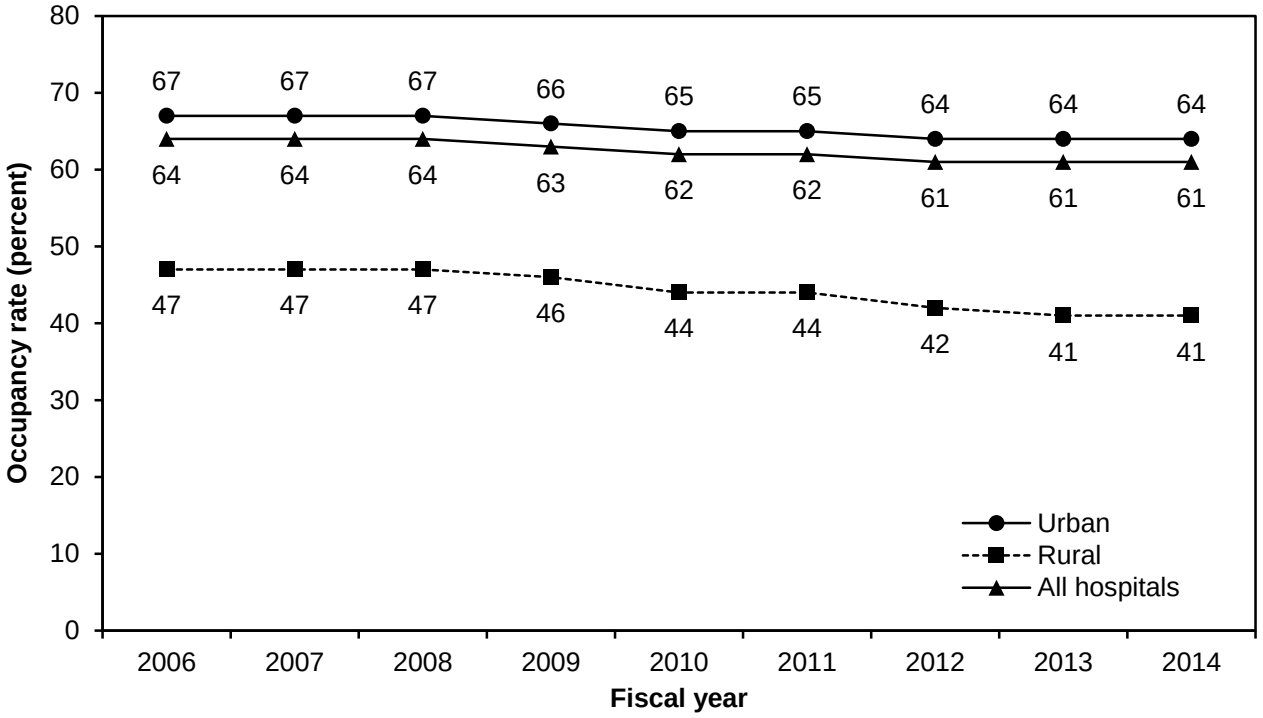
- The Congress enacted the Hospital Readmission Reduction Program (HRRP) in 2010, with penalties for hospitals that have above-average readmission rates for select conditions starting in 2013.

- Rates of potentially preventable readmissions declined across all conditions between 2010 and 2014, not just for those covered by the readmission reduction program. Across all conditions, potentially preventable readmission rates declined 1.9 percentage points, from 12.9 percent of discharges in 2010 to 11.0 percent in 2014.

- The three conditions covered under the HRRP beginning in 2013 have experienced declines in potentially preventable readmission rates. Readmissions for acute myocardial infarction declined 3 percentage points from 2010 to 2014. Readmissions for heart failure declined 2.5 percentage points from 2010 to 2014. Readmissions for pneumonia cases declined 1.6 percentage points over the same period. Chronic obstructive pulmonary disorder (COPD) was not included in HRRP until 2015, but COPD readmissions declined 2.1 percentage points over this period.

- The decline in readmissions is not primarily due to an increase in observation stays. From 2011 to 2016, only 20 percent to 25 percent of the decline in readmissions can be accounted for by increased use of outpatient observation (data not shown).

Chart 6-14. Hospital occupancy rates, 2006–2014



Note: "Hospital occupancy rates" are defined as total bed days used (including swing bed days) and observation bed days used, minus nursery bed days used, over total bed days available. A consistent cohort of approximately 3,300 prospective payment system and critical access hospitals was used in this analysis.

Source: MedPAC analysis of Medicare hospital cost reports.

- In the aggregate, hospital occupancy rates have been relatively stable over the past decade but have edged down slightly in more recent years as total inpatient admissions have fallen. In 2014, occupancy rates were 61 percent across all hospitals, their lowest level in the past 12 years (not all years are shown).

- Occupancy rates are generally higher for urban than for rural hospitals. In 2014, the aggregate occupancy rate for urban hospitals was 64 percent and the aggregate occupancy rate for rural hospitals was 41 percent.

- The decline in occupancy rates from 2006 to 2014 has been more rapid for rural hospitals than for urban hospitals. During this period, rural occupancy rates declined by about 6 percentage points and urban occupancy rates declined by about 3 percentage points.

- Occupancy rates vary across markets and are inversely correlated with the number of beds per capita in a market. The 10 major metropolitan areas with the lowest number of beds per capita had an average occupancy rate of 68 percent, while the 10 markets with the highest number of beds per capita had an average occupancy rate of 61 percent (data not shown). For example, in 2014, the market-wide occupancy rate in Atlanta (with 1.8 beds per 1,000 people) was 72 percent compared with 55 percent in St. Louis, MO (with over 3.4 beds per 1,000 people) (data not shown).

Chart 6-15. Medicare inpatient payments, by source and PPS hospital group, 2014

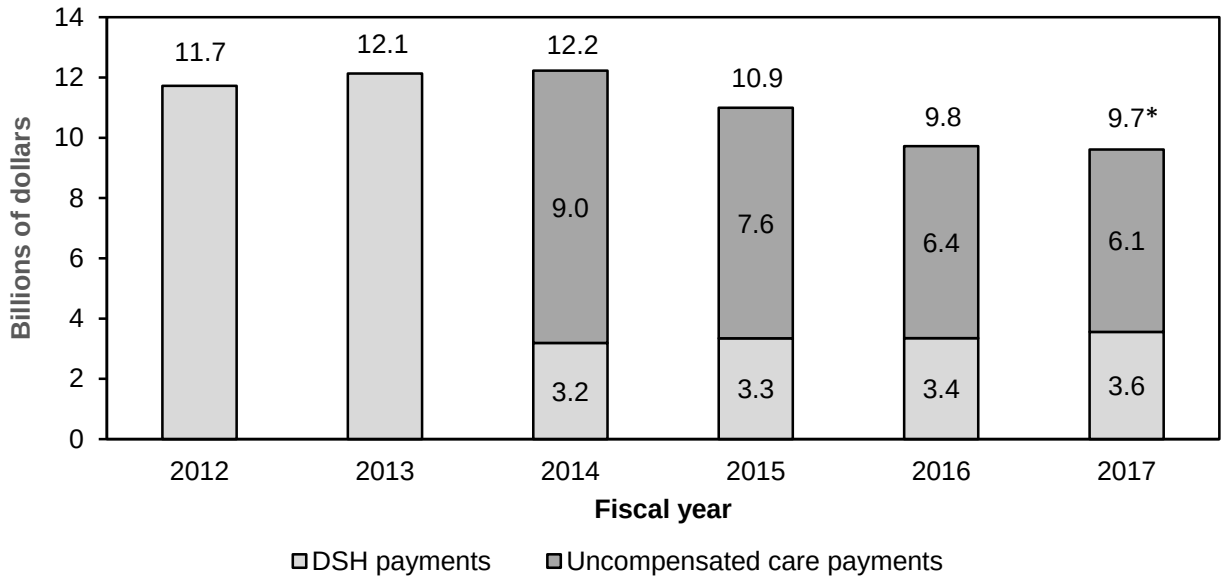
	Percent of total payments						
Hospital group	Base	IME	DSH	UC	Outlier	Additional rural hospital	Total payments (millions)
All PPS hospitals	78.7%	5.2%	2.4%	8.2%	4.1%	1.4%	$112,210
Urban PPS	78.5	5.6	2.8	8.3	4.3	0.6	103,085
Rural PPS	80.5	0.8	1.7	5.0	1.2	10.9	9,124
Large urban	76.6	6.8	3.0	8.9	4.8	0.0	59,906
Other urban	81.2	3.9	2.5	7.4	3.7	1.4	43,180
Rural referral	87.2	0.7	2.6	7.8	1.8	0.0	2,105
SCH (HSP rate)	75.0	0.1	0.0	0.0	0.3	25.2	3,142
SCH (federal rate)	80.9	2.7	2.7	8.0	2.0	3.6	1,754
Medicare dependent	80.0	0.0	1.9	5.6	1.2	11.3	833
Other rural, <50 beds	78.9	0.0	2.5	7.4	1.6	9.6	294
Other rural, ≥50 beds	84.0	1.2	2.8	8.4	1.5	2.1	996
Voluntary	79.5	5.5	2.4	7.2	4.1	1.3	79,594
Proprietary	82.5	1.9	3.0	8.9	2.9	0.9	17,734
Government	70.0	7.6	3.7	11.0	5.3	2.6	14,882
Major teaching	64.8	15.6	3.4	10.1	6.1	0.0	28,292
Other teaching	81.0	3.6	2.7	8.0	3.7	1.0	40,249
Nonteaching	85.5	0.0	2.2	6.6	3.1	2.7	43,669

Note: PPS (prospective payment system), IME (indirect medical education), DSH (disproportionate share), UC (uncompensated care), SCH (sole community hospital), HSP (hospital-specific payment). Chart includes hospitals covered by the inpatient prospective payment system but excludes critical access hospitals. The "Medicare-dependent" hospital category includes facilities paid at either the HSP or the federal rate. Percentages may not sum to 100 percent due to rounding. Percentages were generated by simulating payments using 2014 payment rules applied to the actual number of cases in 2014. Direct graduate medical education payments are excluded. "Additional rural hospital" payments are the total payments made to hospitals beyond the federal base rate, including SCH, Medicare-dependent hospital, and low-volume add-on payments. For SCHs paid the HSP rate, the additional rural hospital payments also include the payments they received indirectly—attributable to the costs associated with residency programs, low-income patients, and outlier cases.

Source: MedPAC analysis of claims and impact file data from CMS.

- Medicare inpatient payments in 2014 to hospitals covered by the acute inpatient prospective payment system (IPPS) exceeded $112 billion. About $103 billion (92 percent) went to urban hospitals and $9 billion (8 percent) went to rural hospitals. This figure does not reflect $2.7 billion in payments to critical access hospitals (CAHs) for inpatient care. Cost-based reimbursement for post-acute care in CAH swing beds results in payments that are significantly above what CAHs would have been paid under the IPPS.
- Base payments accounted for 78.7 percent of all inpatient payment in 2014. Special payments—including IME, DSH, UC, and outlier payments, as well as additional payments to rural hospitals through the SCH and Medicare-dependent hospital programs—accounted for 21.3 percent of all inpatient payments.
- In 2014, uncompensated care payments for each eligible hospital were based on each hospital's number of Medicaid and Supplemental Security Income patient days.
- Outlier payments accounted for 4.1 percent of total inpatient payments in 2014, or approximately $4.6 billion.

Chart 6-16. Medicare inpatient disproportionate share and uncompensated care payments, 2012–2017



Note: DSH (disproportionate share). Chart includes hospitals covered by the inpatient prospective payment system. The chart excludes hospitals not eligible for DSH payments or uncompensated care payments: critical access hospitals, hospitals in Maryland, and sole community hospitals paid hospital-specific rates.
*While data for 2012 through 2016 represent DSH and uncompensated care payment levels finalized by CMS, data for 2017 represent payment levels proposed by CMS.

Source: CMS hospital inpatient prospective payment systems (IPPS) for acute care hospitals and long-term care hospital prospective payment system final rule regulations from fiscal years 2012 to 2016 and the CMS IPPS for acute care hospitals and long-term care hospital prospective payment system proposed rule regulations for fiscal year 2017.

- Before 2014, hospitals received approximately $12 billion in aggregate Medicare DSH hospital payments annually. The traditional DSH payment formula was based on hospitals' share of patients with Medicaid and Supplemental Security Income.

- Beginning in 2014, DSH payments are calculated as 25 percent of the operating DSH payment the hospital would have received under the traditional DSH formula (noted above). Aggregate DSH payments have been approximately $3 billion per year since the policy change, and for fiscal year 2017, CMS has proposed $3.6 billion in DSH payments.

- Beginning in 2014, DSH hospitals are also eligible to receive uncompensated care payments. These payments are calculated as a fixed pool of dollars equal to 75 percent of the DSH payment received under the traditional DSH formula, minus an amount that increases in proportion to the decline in the share of the uninsured population. The amount of uncompensated care payments declined $2.6 billion between 2014 and 2016 due to the declining uninsured population. For fiscal year 2017, CMS proposed $6.1 billion in uncompensated care payments.

- From fiscal year 2013 to 2014, inpatient DSH payments declined by approximately $9 billion, but in 2014 hospitals were eligible to receive $9 billion in uncompensated care payments that were paid separately from the inpatient payment system.

- On net, the sum of DSH and uncompensated care payments declined $2 billion between 2012 and 2017 ($11.7 billion to $9.7 billion) due to the decline in the uninsured population.

Chart 6-17. Discharge destination of Medicare fee-for-service beneficiaries, 2006–2014

Destination	2006	2013	2014	Percentage point change 2006–2014
Home self-care	52.3%	46.8%	46.0%	–6.3%
Skilled nursing or swing bed	18.8	20.7	21.0	2.2
Home with organized home health care	13.8	16.5	16.8	3.1
Inpatient rehabilitation facility	3.4	3.6	3.8	0.4
Long-term care hospital	0.9	1.2	1.2	0.3
Inpatient psychiatric facility	0.4	0.5	0.5	0.1
Hospice	1.6	2.7	2.9	1.2
Other setting (e.g., ICF, nursing facility)	2.0	1.7	1.6	–0.4
Transferred to other acute care hospital	2.5	2.1	2.2	–0.3
Left against medical advice	0.6	0.8	0.8	0.2
Died in hospital	3.8	3.4	3.3	–0.5

Note: ICF (intermediate care facility). Numbers may not sum to 100 percent due to rounding. Percentage point changes were calculated using unrounded numbers.

Source: Medicare inpatient claims data.

- In 2014, 46 percent of all Medicare fee-for-service patients were discharged from an acute care hospital to home under self-care, without any organized post-acute care. The share of beneficiaries discharged home under self-care has decreased since 2006 with greater use of various post-acute care providers, particularly home health care, skilled nursing care, and hospice.

- About one in five beneficiaries are discharged to skilled nursing care, either in a skilled nursing facility (SNF) or hospital swing bed. The share of beneficiaries being discharged to SNF-level care increased 2.2 percentage points between 2006 and 2014.

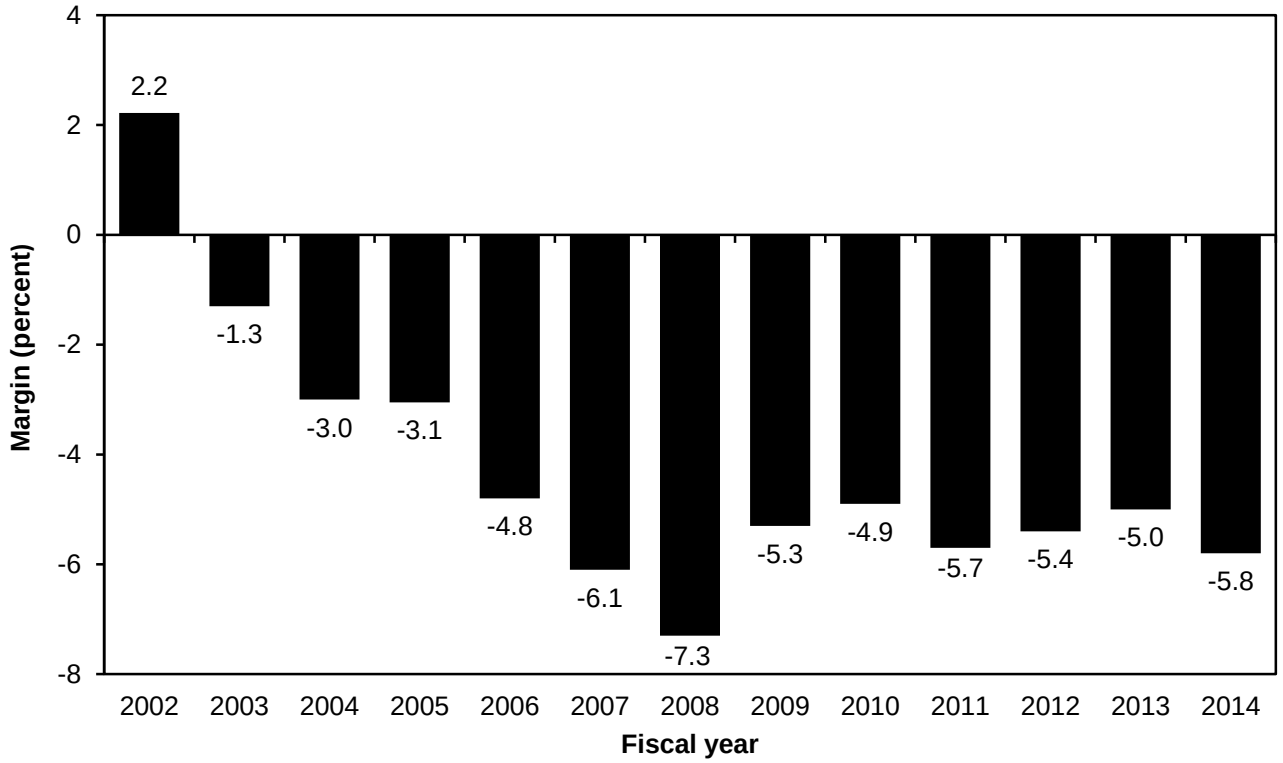
- An increasing share of beneficiaries is being discharged home with organized home health care, from 13.8 percent of discharges in 2006 to 16.8 percent in 2014.

- In 2014, about 5 percent of beneficiaries were discharged to hospital-level post-acute care in an inpatient rehabilitation facility (3.8 percent) or long-term care hospital (1.2 percent), an increase of 0.7 percentage points since 2006.

- Discharges to hospice care have shown substantial growth, rising from 1.6 percent of discharges in 2006 to 2.9 percent of discharges in 2014. A little more than half of these hospice discharges were to medical facility–level care rather than home care.

- The share of patients dying in the hospital or being transferred to another acute care hospital has been declining.

Chart 6-18. Overall Medicare margin, 2002–2014



Note: A margin is calculated as revenue minus costs, divided by revenue. Data reflect Medicare-allowable costs and exclude critical access hospitals. "Overall Medicare margins" cover the costs and payments of acute inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services, as well as graduate medical education and bad debts. Maryland hospitals are excluded from this analysis.

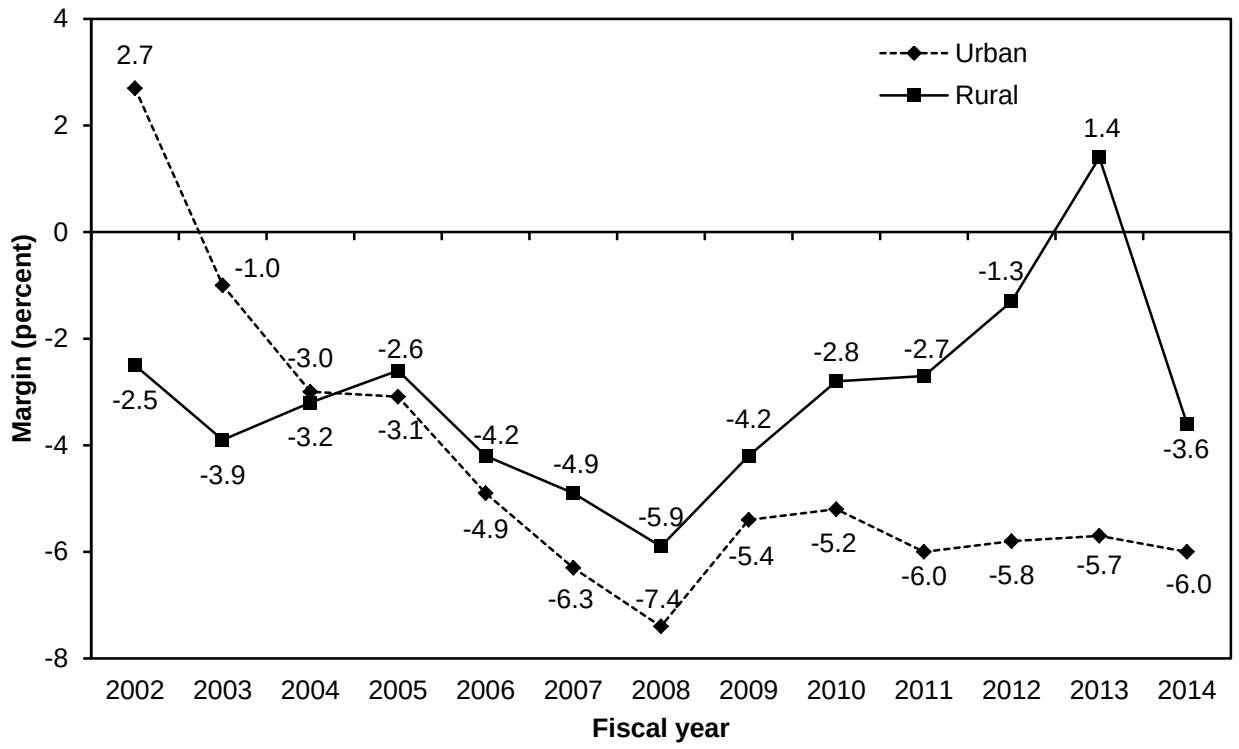
Source: MedPAC analysis of Medicare cost report data from CMS.

- The overall Medicare margin incorporates payments and costs for acute inpatient, outpatient, skilled nursing, home health care, and inpatient psychiatric and rehabilitative services, as well as direct graduate medical education, bad debts, Medicare payments for health information technology, and (starting in 2014) uncompensated care payments. The overall margin follows a trend similar to that for the Medicare inpatient margin.

- The overall Medicare margin in 2002 was 2.2 percent. In 2014, it was –5.8 percent.

- In 2014, 25 percent of hospitals had overall Medicare margins of 5.9 percent or higher and another 25 percent had margins of –15.6 percent or lower. About 39 percent of hospitals had positive overall Medicare margins in 2013 (data not shown).

Chart 6-19. Overall Medicare margin, by urban and rural location, 2002–2014



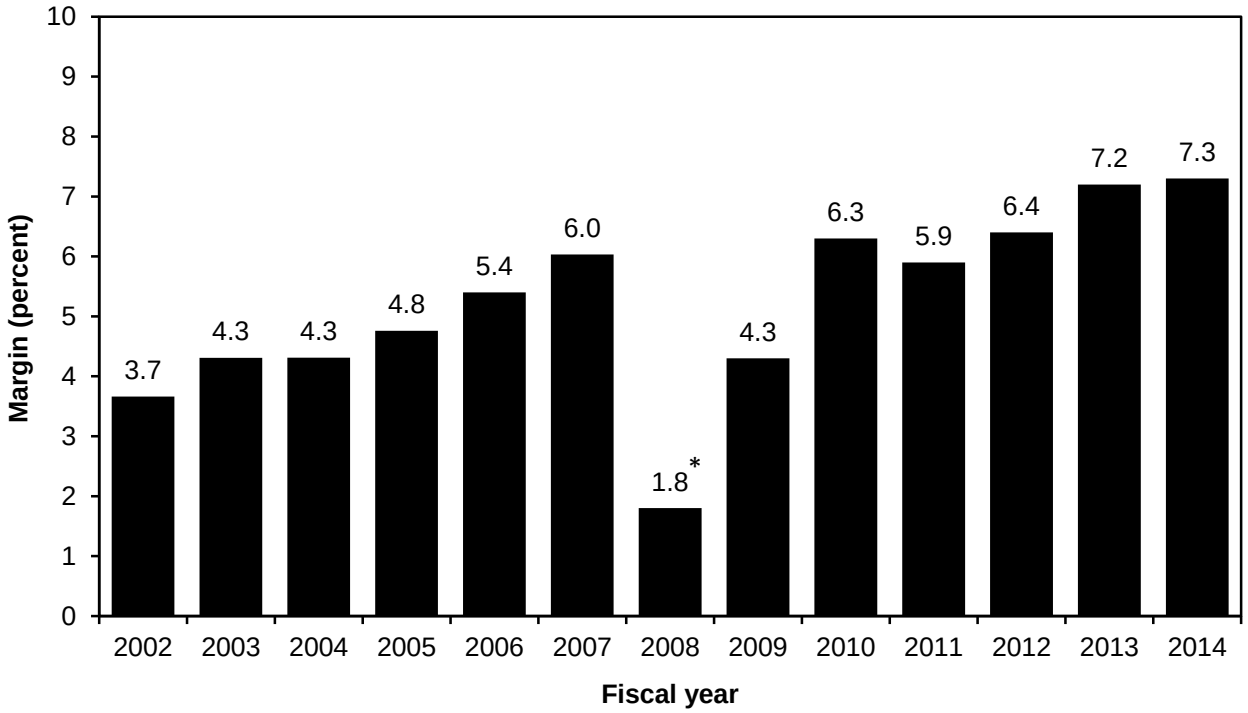
Note: A margin is calculated as revenue minus costs, divided by revenue. Data reflect Medicare-allowable costs and exclude critical access hospitals. "Overall Medicare margins" cover the costs and payments of acute hospital inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services, as well as direct graduate medical education and bad debts. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of Medicare cost report data from CMS.

- As with inpatient margins, overall Medicare margins historically were higher for urban hospitals than for rural hospitals, but since 2005, overall Medicare margins for rural hospitals have exceeded those for urban hospitals. The difference is about 2.4 percentage points in 2014.

- The difference in overall Medicare margins between urban and rural hospitals narrowed throughout the middle of the past decade. In 2002, the overall margin for urban hospitals was 2.7 percent, compared with –2.5 percent for rural hospitals. In 2004, the overall Medicare margin for urban hospitals was –3.0 percent, compared with –3.2 percent for rural hospitals. Policy changes made in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 helped to improve the relative financial position of rural hospitals. Further legislation to assist rural hospitals was implemented after 2008. Most recently, in 2014, the overall Medicare margin for urban hospitals was –6.0 percent compared with –3.6 percent for rural hospitals.

Chart 6-20. Hospital total all-payer margin, 2002–2014



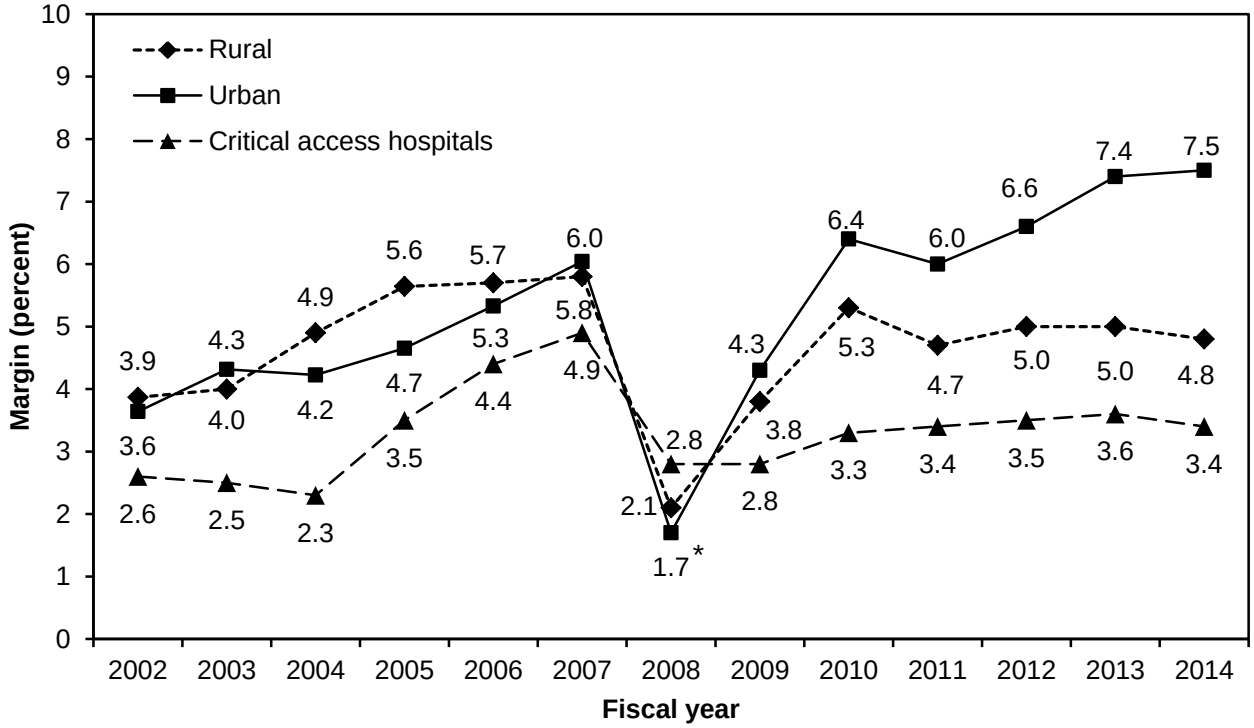
Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals. Maryland hospitals are excluded from this analysis.
*The significant drop in total margin includes investment losses stemming from the decline of the U.S. stock market in 2008.

Source: MedPAC analysis of Medicare cost report data from CMS.

- The total hospital margin for all payers—Medicare, Medicaid, other government, and private payers—reflects the relationship of all hospital revenues to all hospital costs, including inpatient, outpatient, post-acute, and nonpatient services. The total margin also includes nonpatient revenue, such as investment income. Other types of margins we track—Medicare inpatient margin and overall Medicare margin—are operating margins that do not include investment income.

- From 2002 to 2007, total margins increased to the highest level in a decade. In 2008, the total margin declined to 1.8 percent. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which resulted in a corresponding decline in total margins. In 2014, total margins increased to 7.3 percent from 7.2 percent in 2013, reaching their highest levels since we started tracking total all-payer margins.

Chart 6-21. Hospital total all-payer margin, by urban and rural location and critical access hospitals, 2002–2014



Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue such as investment revenues. Maryland hospitals are excluded from this analysis. *The significant drop in total margin for all three categories in part reflects investment losses resulting from the U.S. stock market decline of 2008.

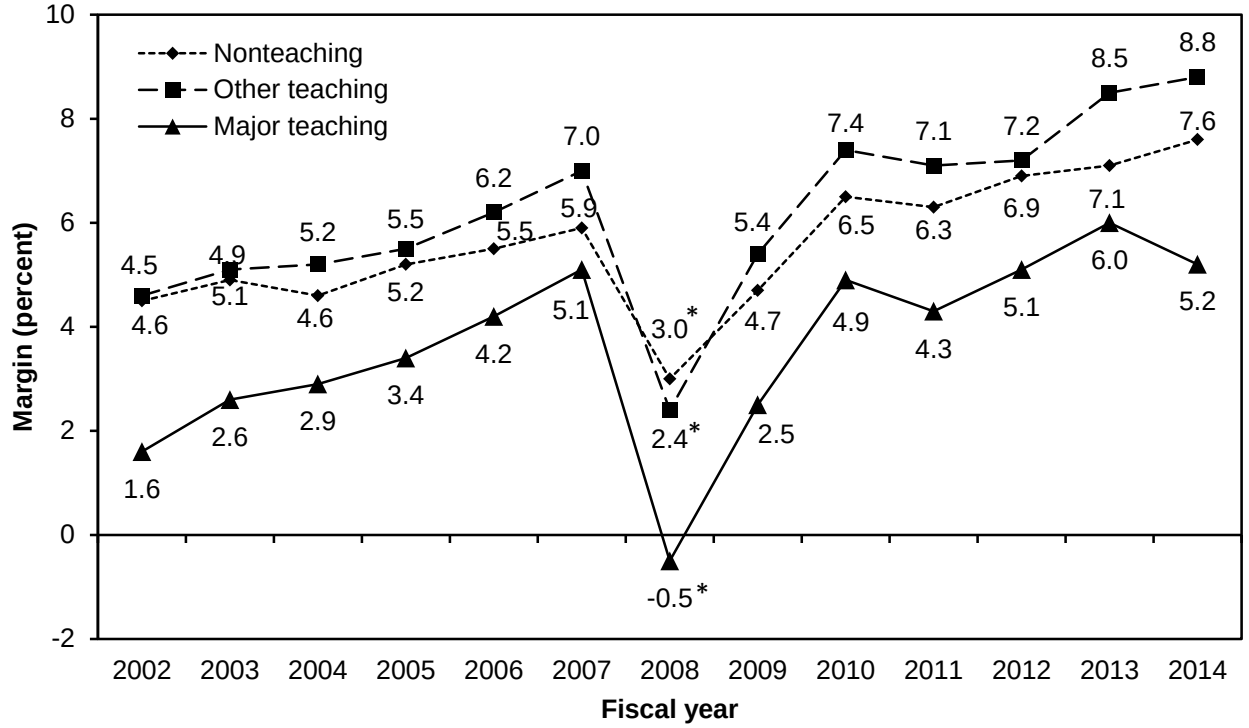
Source: MedPAC analysis of Medicare cost report data from CMS.

- Since 2009, urban hospitals have had higher total (all-payer) margins than rural hospitals. In 2014, total margins were 7.5 percent for urban hospitals and 4.8 percent for rural hospitals. From 2009 to 2013, the growth in urban and rural total all-payer margins reflects low cost growth and increasing private-payer reimbursement rates.

- In 2008, both rural and urban hospitals experienced their lowest level of total (all-payer) margins in the past 15 years. Hospitals' total margins include all patient care services funded by all payers, plus nonpatient revenue, such as investment revenue. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which in turn resulted in a corresponding decline in total margins. Other types of margins we track—Medicare inpatient margin and overall Medicare margin—are operating margins that do not include investment income.

- In general, all-payer margins for critical access hospitals have historically been lower than for other urban or rural hospitals.

Chart 6-22. Hospital total all-payer margin, by teaching status, 2002–2014



Note: "Major teaching hospitals" are defined by a ratio of interns and residents to beds of 0.25 or greater, while "other teaching hospitals" have a ratio of less than 0.25. A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals. Maryland hospitals are excluded from this analysis.
*The significant drop in total margin for all three categories in part reflects investment losses resulting from the U.S. stock market decline of 2008.

Source: MedPAC analysis of Medicare cost report data from CMS.

- The total all-payer margins for major teaching hospitals have consistently been lower than those for other teaching and nonteaching hospitals. In 2014, the total margin for major teaching hospitals stood at 5.2 percent, compared with other teaching hospitals and nonteaching hospitals at 8.8 percent and 7.6 percent, respectively.

- Beginning in 2002, major teaching hospitals' total (all-payer) margins steadily increased, reaching 5.1 percent in 2007. However, in 2008, this trend was interrupted by a steep decline in their investment revenues, resulting in a negative total margin. Since then, total margins have recovered and remain above their historic average.

Chart 6-23. Medicare margins, by teaching and disproportionate share status, 2014

Hospital group	Share of hospitals	Share of Medicare inpatient payments	Overall Medicare margin
All hospitals	100%	100%	–5.8%
Major teaching	10	27	–4.0
Other teaching	23	33	–5.2
Nonteaching	67	40	–7.5
Both IME and DSH	30	57	–4.1
IME only	4	3	–14.6
DSH only	53	33	–6.3
Neither IME nor DSH	14	6	–13.5

Note: IME (indirect medical education), DSH (disproportionate share). Numbers may not sum to totals due to rounding. Maryland hospitals and critical access hospitals are excluded from this analysis.

Source: MedPAC analysis of 2014 Medicare cost report data from CMS.

- By contrast with all-payer total margins, major teaching hospitals had the highest Medicare inpatient and overall Medicare margins in 2014. Their better financial performance was largely due to the additional payments they received from the IME and DSH adjustments to their inpatient payments.

- Hospitals that received only IME payments, and not DSH payments, had the lowest Medicare margins. In 2014, the overall Medicare margin of these hospitals was –14.6 percent, well below the margins of major teaching hospitals (–4.0 percent) and the all-hospital average (–5.8 percent).

- Major teaching hospitals have higher Medicare margins than other hospitals, but in contrast they have lower total (all-payer) margins than other hospitals (see Chart 6-22).

Chart 6-24. Financial pressure leads to lower costs

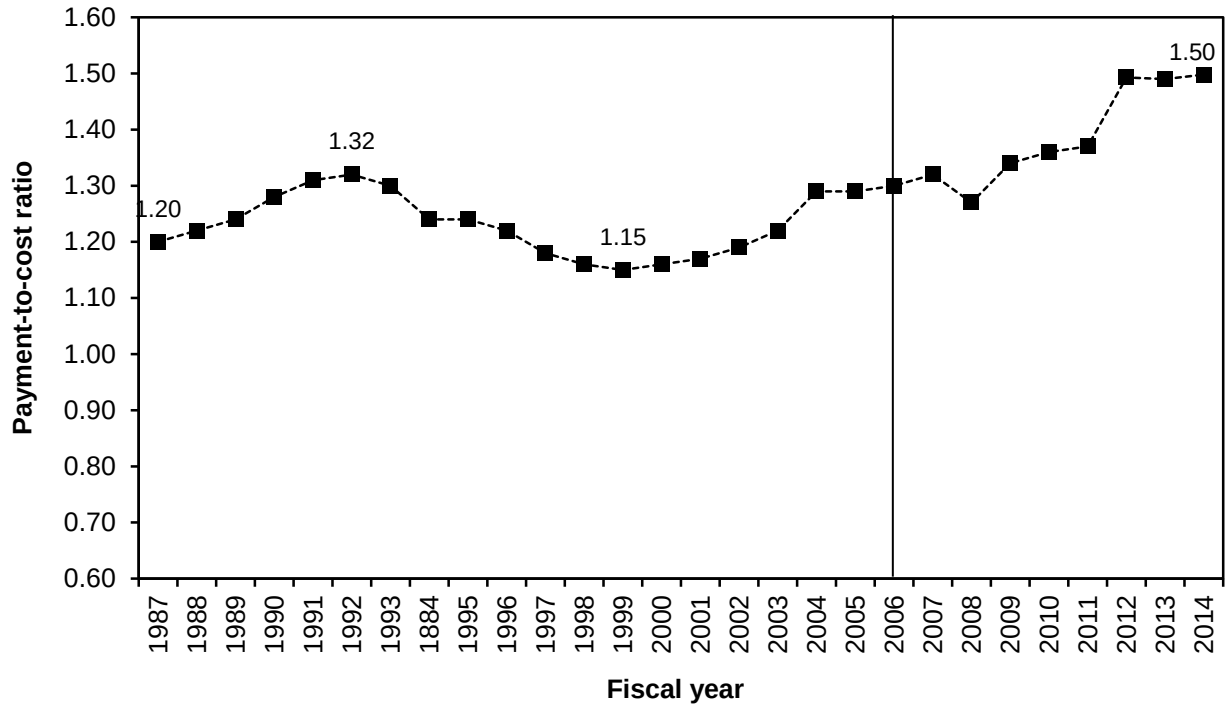
	Level of financial pressure, 2009–2014		
	High pressure (non-Medicare margin ≤ 1%)	Medium pressure	Low pressure (non-Medicare margin > 5%)
Number of hospitals	693	433	1,649
Financial characteristics, 2014 (medians)			
Non-Medicare margin (private, Medicaid, uninsured)	–5.0%	3.3%	13.5%
Standardized cost per discharge (as a share of the national median)			
For-profit and nonprofit hospitals	92	99	102
Nonprofit hospital	93	100	103
For-profit hospital	90	96	100
Annual growth in cost per discharge, 2011–2014	3%	3%	3%
Overall 2014 Medicare margin (medians)	6%	–2%	–8%
Patient characteristics (medians)			
Total hospital discharges in 2014	3,751	5,090	7,457
Medicare share of inpatient days	41%	39%	39%
Medicaid share of inpatient days	11	9	8
Medicare case-mix index	1.36	1.47	1.59

Note: The sample includes all hospitals that had complete cost reports on file with CMS by October 2015. "High-pressure hospitals" are defined as those with a median non-Medicare profit margin of 1 percent or less from 2009 to 2014 and with a net worth that grew by less than 1 percent per year over that period if the hospital's Medicare profits had been zero. "Low-pressure hospitals" are defined as those with a median non-Medicare profit margin greater than 5 percent from 2009 to 2014 and a net worth that grew by more than 1 percent per year over that period if the hospital's Medicare profits had been zero. "Medium-pressure hospitals" are those that fit into neither the high- nor the low-pressure categories. "Standardized costs" are adjusted for hospital case mix, wage index, outliers, transfer cases, interest expense, and the effect of teaching and low-income Medicare patients on hospital costs.

Source: MedPAC analysis of Medicare cost report and claims files from CMS.

- Higher financial pressure tends to lead to lower standardized costs per discharge. Hospitals with lower volume, lower case mix, and higher Medicaid charges are more likely to be under financial pressure.
- In 2014, hospitals under higher financial pressure had standardized costs per discharge at or below 93 percent of the national median and a median Medicare margin of 6 percent. By contrast, hospitals under lower financial pressure had standardized costs per discharge above 100 percent and a median Medicare margin of −8 percent.

Chart 6-25. Change in the private payer payment-to-cost ratio for hospital services, 1987–2014



Note: Calculations are based on data from community hospitals (including critical access hospitals and Maryland hospitals) and cover all hospital services. The private payer payment-to-cost ratio includes self-pay patients. Data for 2006–2014 exclude Medicare and Medicaid managed care patients from the private payer payment-to-cost ratio. Starting in 2012, the American Hospital Association survey shifted from hospitals reporting bad debts as an expense to reporting bad debts as a reduction in revenue, resulting in an increase in the payment-to-cost ratio from 2011 to 2012.

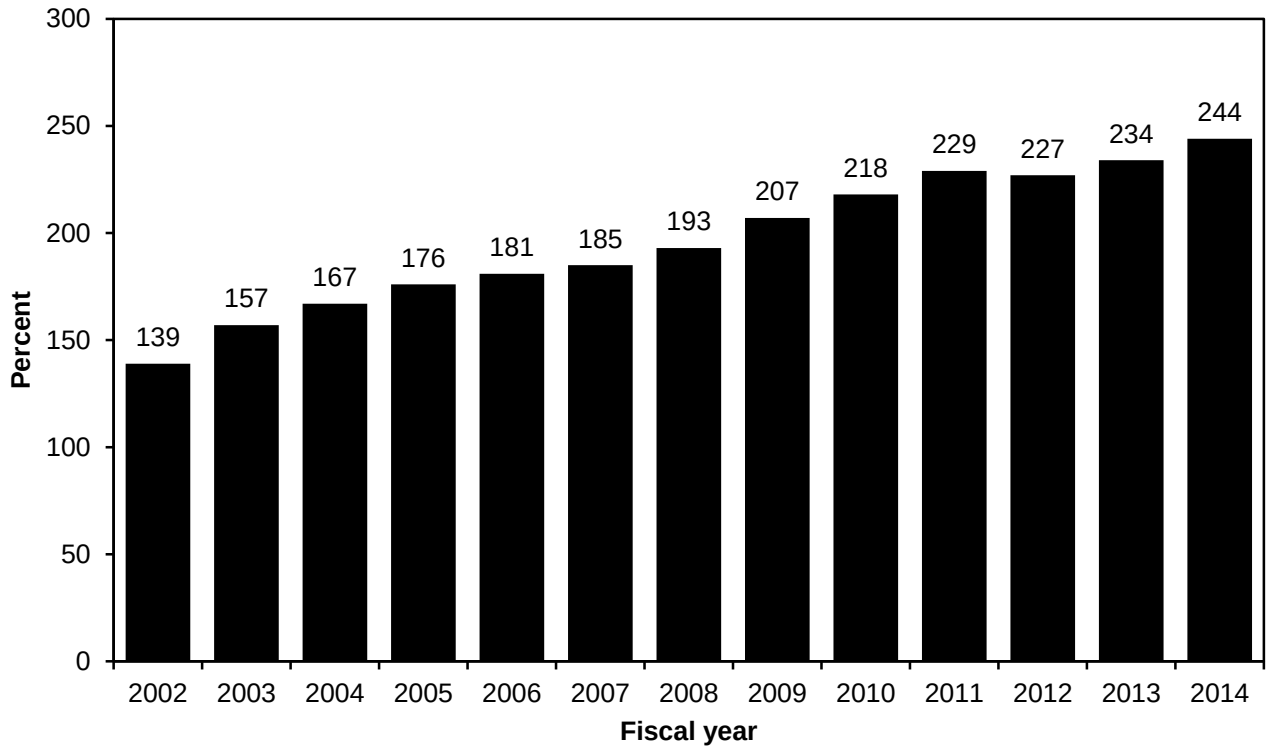
Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

- The private payer payment-to-cost ratio reflects hospitals' weighted average profit margin on all service lines of business such as inpatient, outpatient, and hospital-owned physician practices. In 2014, the private payer payment-to-cost ratio was 1.50. This ratio includes payments and costs attributed to uninsured patients who pay for their own services (self-pay).

- The private payer payment-to-cost ratio for hospital services has fluctuated over time in part because of shifts in the relative bargaining power of hospitals and insurers. In 1992, hospitals' private payer payment-to-cost ratio was 1.32. However, with the expansion of health maintenance organizations and movements to narrow networks, the private payer payment-to-cost ratio declined to 1.15 by 1999. Between 2000 and 2012, the payment-to-cost ratio rose to approximately 1.50.

- From 2012 to 2014, the payment-to-cost ratio was relatively flat at around 1.50. During this period, total hospital profits increased from 6.4 percent in 2012 to a 30-year high of 7.3 percent in 2014 (see Chart 6-20), in part due to a decline in uncompensated care as more patients gained insurance (see Chart 6-16).

Chart 6-26. Markup of hospital charges above costs for Medicare services, 2002–2014



Note: Analysis includes all community hospitals (including critical access hospitals and hospitals in Maryland). Markups are calculated as the amount of charges over the amount of costs, minus the amount that charges equal costs (charges/costs – 1).

Source: American Hospital Association Annual Survey of Hospitals.

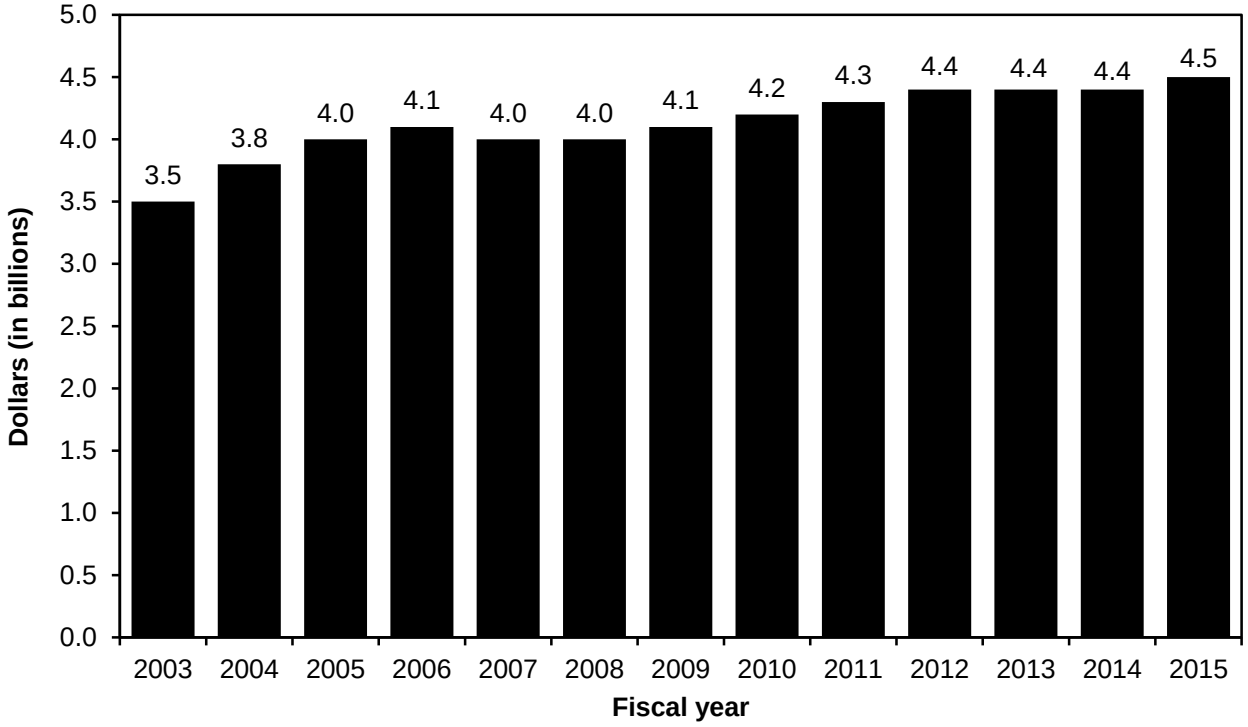
- The average markup of hospitals' charges above costs rose from 139 percent in 2002 to 244 percent in 2014. Hospital charges ($649 billion) were more than three times costs ($189 billion) in 2014.

- Rapid growth in charges may have little impact on hospital financial performance because few patients pay full charges. However, charge growth may significantly affect uninsured patients, who may pay full charges. More rapid growth in charges (relative to growth in costs) may reflect hospitals' attempts to maximize revenue from private payers (who often structure their payments as a discount off charges). The unusually large increases in charges in 2003 and 2004 may have resulted from some hospitals manipulating Medicare outlier payments. Toward the end of fiscal year 2003, Medicare revised its outlier policy in an attempt to curb hospitals' opportunity to increase their outlier payments through excessive increases in charges.

- The markup of charges over costs is generally higher for urban hospitals (254 percent in 2014) than for rural hospitals (167 percent in 2014) (data not shown).

- Among urban hospitals in 2014, the markup of charges over costs was higher for for-profit hospitals (462 percent) than for nonprofit hospitals (246 percent). Rural for-profit hospitals have a higher markup of charges over costs (361 percent) than nonprofit hospitals (185 percent) (data not shown).

Chart 6-27. Medicare payments to inpatient psychiatric facilities, 2003–2015



Note: Spending for inpatient psychiatric care furnished in scatter beds in acute care hospitals (and paid for under the acute care inpatient prospective payment system) is not included in this chart.

Source: CMS Office of the Actuary.

- The inpatient psychiatric facility prospective payment system started January 1, 2005. It was phased in over a three-year period.
- Medicare program spending for beneficiaries' care in inpatient psychiatric facilities grew an average of 2.1 percent per year between 2003 and 2015.

Chart 6-28. Inpatient psychiatric facilities, 2004–2014

Type of IPF	2004	2006	2008	2010	2012	2013	2014	Average annual change 2004–2013	Average annual change 2013–2014
All	1,658	1,648	1,633	1,596	1,566	1,560	1,563	–0.7%	0.2%
Urban	1,326	1,308	1,288	1,259	1,237	1,229	1,229	–0.8	0.0
Rural	332	340	345	337	329	331	333	0.0	0.6
Freestanding	352	396	419	447	450	462	464	3.1	0.4
Hospital-based units	1,306	1,252	1,214	1,149	1,116	1,098	1,099	–1.9	0.1
Nonprofit	950	903	865	807	761	740	724	–3.0	–2.2
For profit	327	348	357	386	435	465	485	4.5	4.3
Government	381	397	411	403	370	355	354	–0.8	–0.3

Note: IPF (inpatient psychiatric facility). Data are from facilities that submitted valid Medicare cost reports in the given fiscal year. Numbers may not sum to totals due to missing data.

Source: MedPAC analysis of Medicare cost report files from CMS.

- Between 2004 and 2013, the number of IPFs that filed Medicare cost reports fell, on average, almost 1 percent per year. Between 2013 and 2014, the supply of IPFs held steady.

- A growing share of Medicare IPF users receives care in for-profit facilities. Between 2004 and 2014, the number of for-profit IPFs grew, on average, more than 4 percent per year. Since 2004, the number of nonprofit IPFs has fallen 2.9 percent per year, on average, compared with a 4.5 percent increase in for-profit IPFs.

Chart 6-29. Number of inpatient psychiatric facility cases declined between 2013 and 2014

	2004	2006	2008	2010	2012	2013	2014	Average annual change 2004–2013	Average annual change 2013–2014
Cases	483,271	474,417	442,759	447,897	450,731	442,554	436,799	–1.0%	–1.3%
Cases per 1,000 FFS beneficiaries	13.2	13.1	12.5	12.4	12.1	11.8	11.6	–1.3	–1.2
Spending per FFS beneficiary	$96.9	$104.9	$109.0	$115.5	$117.5	$114.5	$115.2	1.9	0.6
Payment per case	$7,328	$7,989	$8,742	$9,288	$9,718	$9,739	$9,910	3.2	1.8
Payment per day	$627	$677	$728	$782	$819	$809	$821	2.9	1.6
Length of stay (in days)	12.7	13.0	13.1	13.0	12.8	12.9	12.9	0.2	–0.2

Note: FFS (fee-for-service). Numbers of cases and beneficiaries reflect Medicare FFS use of services furnished in inpatient psychiatric facilities (IPFs). Scatter bed cases and spending are excluded, as are cases and spending for beneficiaries enrolled in Medicare Advantage plans.

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

- The number of IPF cases has declined, on average, about 1 percent per year since 2004.

Chart 6-30. One diagnosis accounted for almost three-quarters of IPF cases in 2014

MS–DRG	Diagnoses	Percentage
885	Psychosis	72.9%
057	Degenerative nervous system disorders without MCC	6.9
884	Organic disturbances and mental retardation	6.1
897	Alcohol/drug abuse or dependency, no rehabilitation, without MCC	4.8
881	Depressive neurosis	3.3
882	Neurosis except depressive	1.2
895	Alcohol/drug abuse or dependency with rehabilitation, without MCC	1.1
880	Acute adjustment reaction and psychosocial dysfunction	0.7
056	Degenerative nervous system disorders with MCC	0.5
886	Behavioral and developmental disorders	0.4
883	Disorders of personality and impulse control	0.4
894	Alcohol/drug use—left AMA	0.3
896	Alcohol/drug abuse or dependency without rehabilitation, with MCC	0.2
876	OR procedure with principal diagnosis of mental illness	0.1
081	Nontraumatic stupor and coma without MCC	0.1
887	Other mental disorders	0.1
080	Nontraumatic stupor and coma with MCC	0.0
	Nonpsychiatric MS–DRGs	1.0
	Total	100.0

Note: IPF (inpatient psychiatric facility), MS–DRG (Medicare severity diagnosis related group), MCC (major comorbidity or complication), AMA (against medical advice), OR (operating room).

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

- Medicare patients in IPFs are generally assigned 1 of 17 psychiatric MS–DRGs.
- The most frequently occurring IPF diagnosis—accounting for about 73 percent of IPF discharges in 2014—was psychosis. This broad category includes patients with principal diagnoses of schizophrenia, bipolar disorder, and major depression.
- In 2014, the next most common discharge diagnosis, accounting for almost 7 percent of IPF cases, was degenerative nervous system disorder without MCC.

Chart 6-31. Characteristics of IPF users, 2014

Characteristic	Share of all IPF users	Share of users with more than one IPF stay
Current eligibility status*		
Aged	41.1%	28.7%
Disabled	58.8	71.2
ESRD only	0.1	0.1
Age (years)		
<45	23.4	31.0
45–64	34.9	39.8
65–79	25.6	20.3
80+	16.1	8.9
Race		
White	77.9	74.3
African American	16.0	18.9
Hispanic	2.8	3.3
Other	3.3	3.5
All	100.0	28.0

Note: IPF (inpatient psychiatric facility), ESRD (end-stage renal disease). Numbers may not sum to totals due to rounding.
*Some aged beneficiaries are also disabled.

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

- Almost 59 percent of Medicare beneficiaries who had at least one IPF stay in 2014 qualified for Medicare because of a disability. These beneficiaries tend to be younger and poorer than the typical fee-for-service beneficiary.
- Twenty eight percent of Medicare beneficiaries who used an IPF in 2014 had more than one IPF stay during the year. These beneficiaries were far more likely than all IPF users to be disabled.
- A majority of beneficiaries admitted to IPFs are dually eligible for Medicare and Medicaid (data not shown). In 2014, 57 percent of Medicare beneficiaries with at least one IPF stay were dually eligible for at least one month of the year.

SECTION 7

Ambulatory care

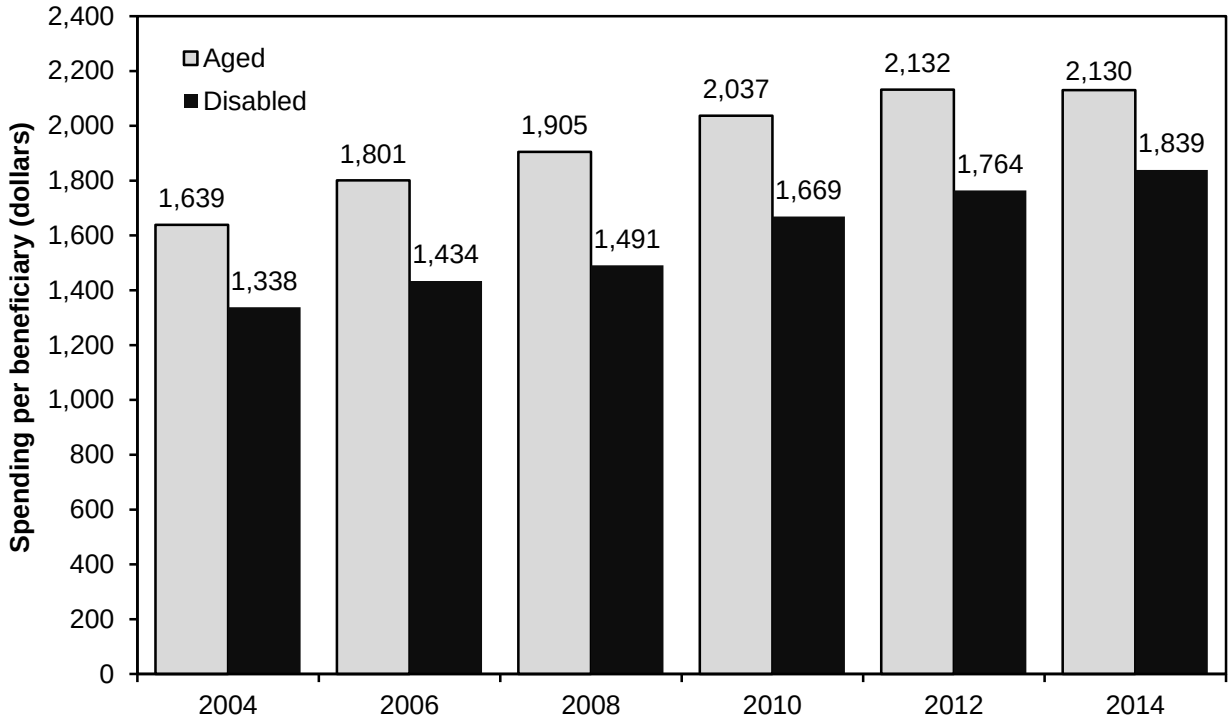
Physicians and other health professionals

Hospital outpatient services

Ambulatory surgical centers

Imaging services

Chart 7-1. Medicare spending per FFS beneficiary on services in the fee schedule for physicians and other health professionals, 2004–2014



Note: FFS (fee-for-service). Dollar amounts are Medicare spending only and do not include beneficiary cost sharing. The category "disabled" excludes beneficiaries who qualify for Medicare because they have end-stage renal disease. All beneficiaries ages 65 and over are included in the "aged" category.

Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2016. THIS CHART REFLECTS DATA FROM THE 2015 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2016 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.

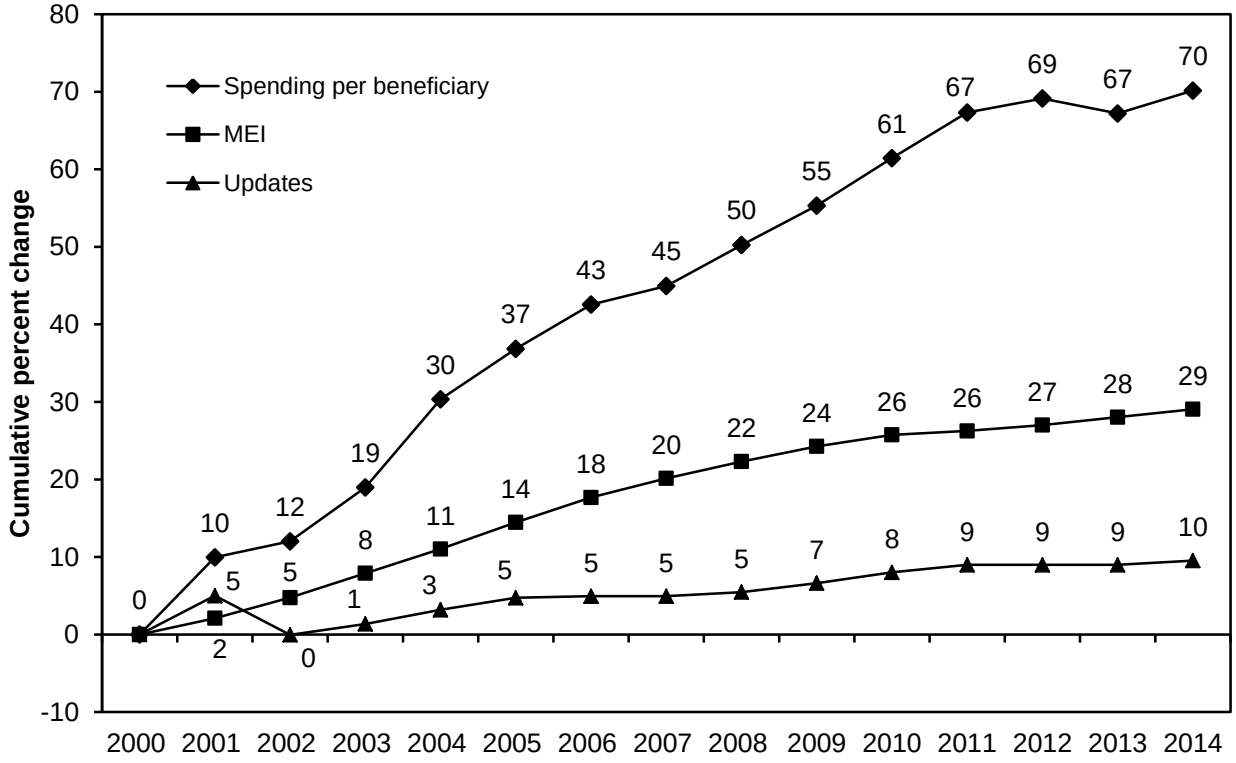
- The fee schedule for physicians and other health professionals includes a broad range of services such as office visits, surgical procedures, and diagnostic and therapeutic services furnished in all health care settings. "Other health professionals" refers to nurse practitioners, physician assistants, chiropractors, physical therapists, and other clinicians. Fee schedule spending was $69 billion in 2014.

- Except for a small decrease in spending in 2013 (data not shown), FFS spending per beneficiary for fee schedule services has increased annually. From 2004 to 2014, spending per beneficiary grew at a cumulative rate of 31 percent.

- Growth in spending on fee schedule services is one of several factors contributing to Part B premium increases over this period.

- Per capita spending for disabled beneficiaries (under age 65) is lower than per capita spending for aged beneficiaries. In 2014, for example, per capita spending for disabled beneficiaries was $1,839 compared with $2,130 for aged beneficiaries.

Chart 7-2. Volume growth has caused physician spending to increase faster than input prices and payment updates, 2000–2014



Note: MEI (Medicare Economic Index).

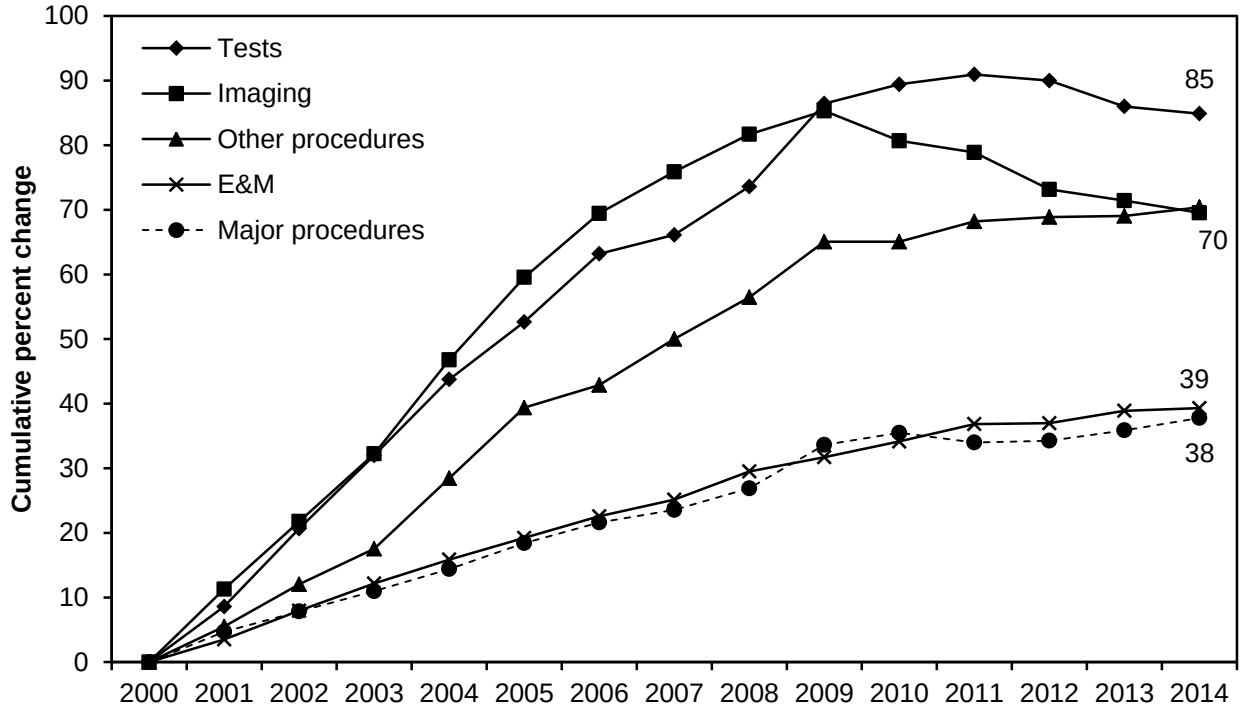
Source: The annual report of the Boards of Trustees of the Medicare trust funds 2015.
AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2016. THIS CHART REFLECTS DATA FROM THE 2015 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2016 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.

- From 2000 to 2014, Medicare spending per beneficiary for services paid under the fee schedule for physicians and other health professionals increased by a cumulative 70 percent.

- Spending per beneficiary grew much more rapidly over the period than both the fee schedule payment rate updates and the MEI. Payment updates grew cumulatively by 10 percent, and the MEI increased 29 percent.

- Growth in the volume of services contributed much more to the increase in Medicare spending than payment rate updates. Both factors—volume growth and updates—combined to increase revenue for physicians and other health professionals.

Chart 7-3. Growth in volume per beneficiary of physician and other health professional services, 2000–2014



Note: E&M (evaluation and management). "Volume" refers to the units of service multiplied by relative value units from the fee schedule for physicians and other health professionals. Volume for all years is measured on a common scale, with relative value units for 2014. Volume growth for E&M from 2009 to 2010 is not directly observable because of a change in payment policy for consultations. To compute cumulative volume growth for E&M through 2014, we used a growth rate for 2009 to 2010 of 1.85 percent, which is the average of the 2008 to 2009 growth rate of 1.7 percent and the 2010 to 2011 growth rate of 2.0 percent.

Source: MedPAC analysis of claims data for 100 percent of Medicare beneficiaries.

- From 2000 to 2014, the volume of some services furnished by physicians and other health professionals grew much more than others.
- The volume of tests grew by 85 percent, the volume of imaging grew by 70 percent, and the volume of "other procedures" (i.e., other than major procedures) also grew by 70 percent. The comparable growth rates for E&M services and major procedures were only 39 percent and 38 percent, respectively.
- Volume growth increases Medicare spending, limiting funds available for other priorities in the federal budget and requiring taxpayers and beneficiaries to contribute more to the Medicare program. Rapid volume growth may be a sign that some services in the fee schedule for physicians and other health professionals are mispriced.

Chart 7-4. Medicare beneficiaries reported better ability to get timely appointments with physicians compared with privately insured individuals, 2012–2015

	Medicare (ages 65 and older)				Private insurance (ages 50–64)			
Survey question	2012	2013	2014	2015	2012	2013	2014	2015
Unwanted delay in getting an appointment: Among those who needed an appointment, "How often did you have to wait longer than you wanted to get a doctor's appointment?"								
For routine care								
Never	77%[b]	73%	72%[a]	72%[a]	72%[b]	69%	69%[a]	69%[a]
Sometimes	17	20	20[a]	19[a]	21	23	23[a]	23[a]
Usually	3	3	3	4	3	4	4	4
Always	2	3	3	3	3	3	3	3
For illness or injury								
Never	84[b]	82	83[a]	82[a]	80[b]	77	79[a]	77[a]
Sometimes	12	14	12[a]	13[a]	16	17	16[a]	17[a]
Usually	2	2	2	3	2[b]	3	2	3
Always	1	1	1[a]	2	2	2	2[a]	2

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample sizes for each group (Medicare and privately insured) were 4,000 in all years. Sample sizes for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured samples in the given year.
[b] Statistically significant difference (at a 95 percent confidence level) from 2015 within the same insurance coverage category.

Source: MedPAC-sponsored annual telephone surveys conducted 2012–2015.

- Most Medicare beneficiaries have one or more doctor appointments in a given year. Their ability to schedule timely appointments is one indicator of access that we examine.
- Medicare beneficiaries (ages 65 and older) report better access to physicians for appointments than privately insured individuals ages 50 to 64. For example, in 2015, 72 percent of Medicare beneficiaries compared with 69 percent of privately insured individuals reported "never" having to wait longer than they wanted to get an appointment for routine care.
- Medicare beneficiaries also reported more timely appointments for injury and illness than their privately insured counterparts.
- Appointment scheduling for illness and injury is better than for routine care appointments for both Medicare beneficiaries and privately insured individuals.

Chart 7-5. Medicare and privately insured patients who were looking for a new physician reported more difficulty finding one in primary care, 2012–2015

	Medicare (ages 65 and older)				Private insurance (ages 50–64)			
Survey question	2012	2013	2014	2015	2012	2013	2014	2015
Looking for a new physician: "In the past 12 months, have you tried to get a new …?" (Percent answering "Yes")								
Primary care physician	7%	7%	8%	7%[a]	7%[b]	8%	8%	9%[a]
Specialist	13[b]	14	17	16	18	16[b]	17	18
Getting a new physician: Among those who tried to get an appointment with a new physician, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it …"								
Primary care physician								
No problem	72	70	67	67	75[b]	67	63	63
Small problem	14	11	16	18	9[b]	15	16	18
Big problem	14	17	15	14	15	18	19	17
Specialist								
No problem	87	86	85	87[a]	86[b]	87[b]	85	82[a]
Small problem	6	8	7	7	7	6	9	8
Big problem	7	5	7	6	7	7	6[b]	9

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample sizes for each group (Medicare and privately insured) were 4,000 in all years. Sample sizes for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured samples in the given year.
[b] Statistically significant difference (at a 95 percent confidence level) from 2015 within the same insurance coverage category.

Source: MedPAC-sponsored annual telephone surveys, conducted 2012–2015.

- In 2015, only 7 percent of Medicare beneficiaries and 9 percent of privately insured individuals reported looking for a new primary care physician. This finding suggests that most people were either satisfied with their current physician or did not need to look for one.
- Of the 7 percent of Medicare beneficiaries who looked for a new primary care physician in 2015, 32 percent reported problems finding one: 14 percent reported their problem as "big," and 18 percent reported their problem as "small." Although this number indicates that only about 2 percent of the total Medicare population reported problems finding a primary care physician, the Commission is concerned about the continuing trend of greater problems accessing primary care.
- Of the 9 percent of privately insured individuals who looked for a new primary care physician in 2015, 35 percent reported problems finding one: 17 percent reported their problem as "big," and 18 percent reported their problem as "small."
- In 2015, Medicare beneficiaries and privately insured individuals were more likely to report problems accessing a new primary care physician than a new specialist.

Chart 7-6. Access to physician care was better for Medicare beneficiaries than privately insured individuals, but minorities in both groups reported unwanted delays more frequently, 2015

	Medicare (ages 65 and older)			Private insurance (ages 50–64)		
Survey question	All	White	Minority	All	White	Minority
Unwanted delay in getting an appointment: Among those who needed an appointment, "How often did you have to wait longer than you wanted to get a doctor's appointment?"						
For routine care						
Never	72%[a]	74%[ab]	64%[b]	69%[a]	70%[ab]	66%[b]
Sometimes	19[a]	18[ab]	23[b]	23[a]	23[a]	23
Usually	4	4	5	4	4	6
Always	3	3[b]	6[b]	3	3[b]	5[b]
For illness or injury						
Never	82[a]	83[ab]	76[b]	77[a]	78[a]	74
Sometimes	13[a]	12[a]	15[a]	17[a]	17[a]	20[a]
Usually	3	3	4	3	3	2
Always	2	1[ab]	4[b]	2	2[ab]	3[b]

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample size for each group (Medicare and privately insured) was 4,000 in 2015. Sample size for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured populations in the given race category.
[b] Statistically significant difference (at a 95 percent confidence level) by race within the same insurance category.

Source: MedPAC-sponsored telephone surveys conducted in 2015.

- In 2015, Medicare beneficiaries (ages 65 and older) reported better access to physicians for appointments than privately insured individuals ages 50 to 64.
- Access varied by race, with minorities more likely than Whites to report access problems in both insurance categories. For example, in 2015, 83 percent of White Medicare beneficiaries reported "never" having to wait longer than they wanted to get an appointment for an illness or injury compared with 76 percent of minority beneficiaries.

Chart 7-7. Minorities in Medicare were less likely to report a big problem in finding a new specialist than White beneficiaries, 2015

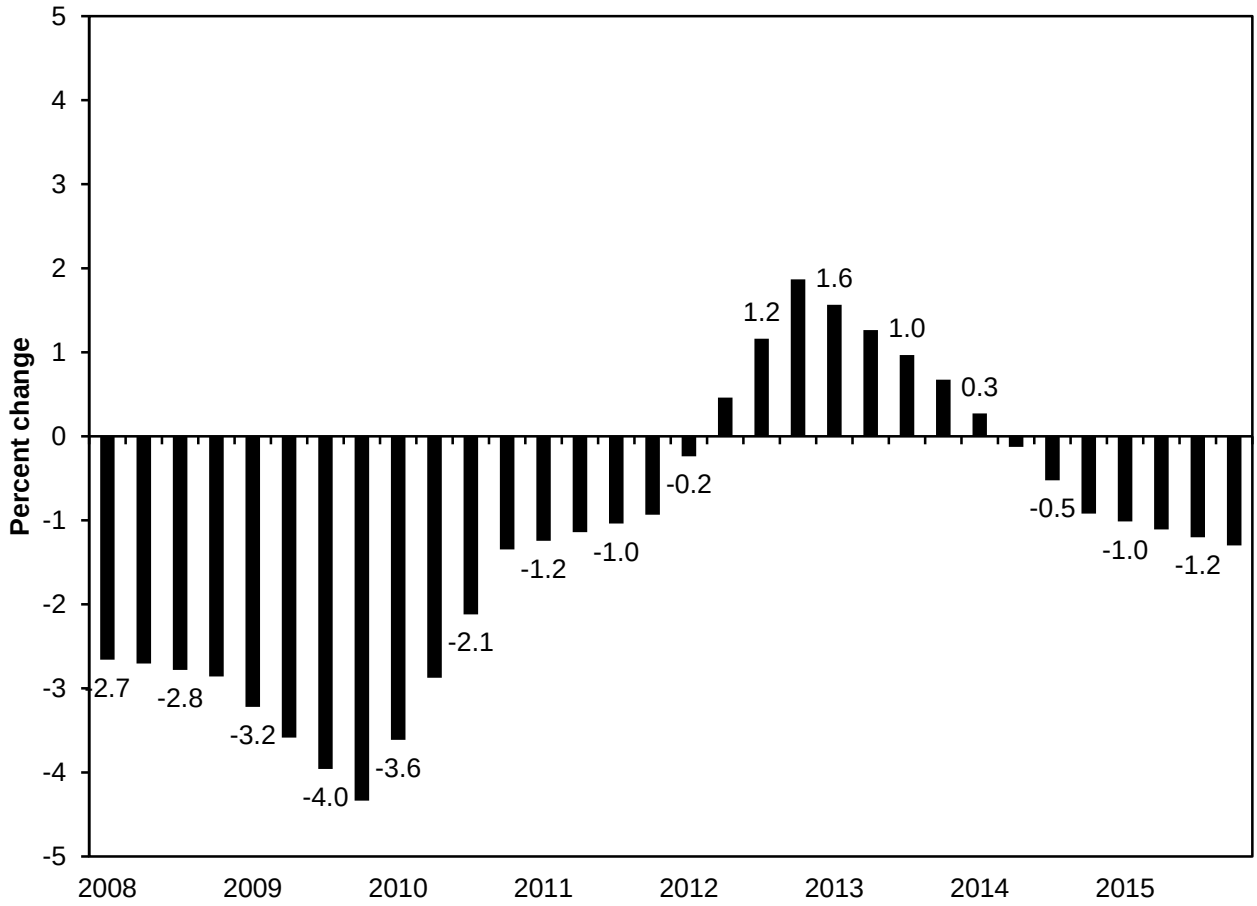
	Medicare (ages 65 and older)			Private insurance (ages 50–64)		
Survey question	All	White	Minority	All	White	Minority
Looking for a new physician: "In the past 12 months, have you tried to get a new …?"						
Primary care physician	7%[a]	7%[a]	8%	9%[a]	9%[a]	10%
Specialist	16	16[a]	15	18	19[a]	16
Getting a new physician: Among those who tried to get an appointment with a new physician, "How much of a problem was it finding a primary care doctor/specialist who would treat you? Was it …"						
Primary care physician						
No problem	67	66	68	63	63	62
Small problem	18	17	20	18	18	18
Big problem	14	15	12	17	17	19
Specialist						
No problem	87[a]	87	86	82[a]	84	77
Small problem	7	6	10	8	8	11
Big problem	6	7	4[a]	9	8	12[a]

Note: Numbers may not sum to 100 percent due to rounding. Missing responses ("Don't Know" or "Refused") are not presented. Overall sample size for each group (Medicare and privately insured) was 4,000 in 2015. Sample size for individual questions varied.
[a] Statistically significant difference (at a 95 percent confidence level) between the Medicare and privately insured populations in the given race category.

Source: MedPAC-sponsored telephone surveys conducted in 2015.

- Among the small percentage of Medicare beneficiaries looking for a specialist, minorities were less likely than Whites to report a big problem finding one. For the privately insured, minorities were more likely than Whites to report a big problem finding a specialist.

Chart 7-8. Changes in physicians' professional liability insurance premiums, 2008–2015

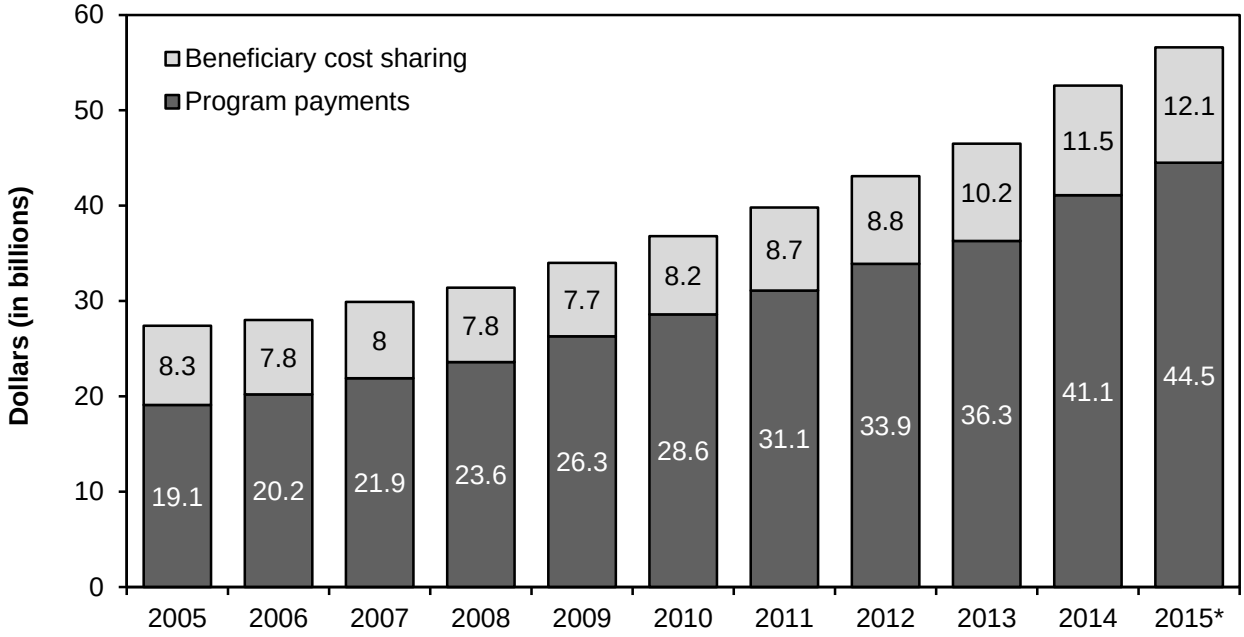


Note: Bars represent a four-quarter moving average percent change.

Source: CMS, Office of the Actuary. Data are from CMS's Professional Liability Physician Premium Survey.

- Professional liability insurance (PLI) accounts for 4.3 percent of total payments under the physician fee schedule.
- The change in PLI premiums over the last 14 years reflects a cyclical pattern, alternating between periods of low premiums—characterized by high investment returns for insurers and vigorous competition—and high premiums—characterized by declining investment returns and market exit.
- Premiums increased from 2002 through 2006 (data not shown) and then declined from the second quarter of 2007 through the first quarter of 2012. Premiums grew slowly from the second quarter of 2012 through the first quarter of 2014 and began falling during the second quarter of 2014.

Chart 7-9. Spending on hospital outpatient services covered under the outpatient PPS, 2005–2015



Note: PPS (prospective payment system). Spending amounts are for services covered by the Medicare outpatient PPS. They do not include services paid on separate fee schedules (e.g., ambulance services and durable medical equipment) or those paid on a cost basis (e.g., corneal tissue acquisition and flu vaccines) or payments for clinical laboratory services. *Estimate.

Source: CMS, Office of the Actuary.

- Overall spending by Medicare and beneficiaries on hospital outpatient services covered under the outpatient PPS from calendar year 2005 to 2015 increased by 107 percent, reaching $56.6 billion. The Office of the Actuary projects continued growth in total spending, averaging 9 percent per year from 2015 to 2017.

- In 2001, the first full year of the outpatient PPS, spending under the PPS was $20.1 billion, including $12.1 billion by the program and $8.0 billion in beneficiary cost sharing (data not shown). Spending under the outpatient PPS is expected to rise to almost $57 billion in 2015 ($44.5 billion in program spending, $12.1 billion in beneficiary copayments). The outpatient PPS accounted for about 7 percent of total Medicare program spending in 2015.

- Beneficiary cost sharing under the outpatient PPS includes the Part B deductible and coinsurance for each service. Under the outpatient PPS, beneficiary cost sharing is generally higher than for other sectors, about 22 percent in 2014. Chart 7-13 provides more detail on coinsurance.

Chart 7-10. Most hospitals provide outpatient services

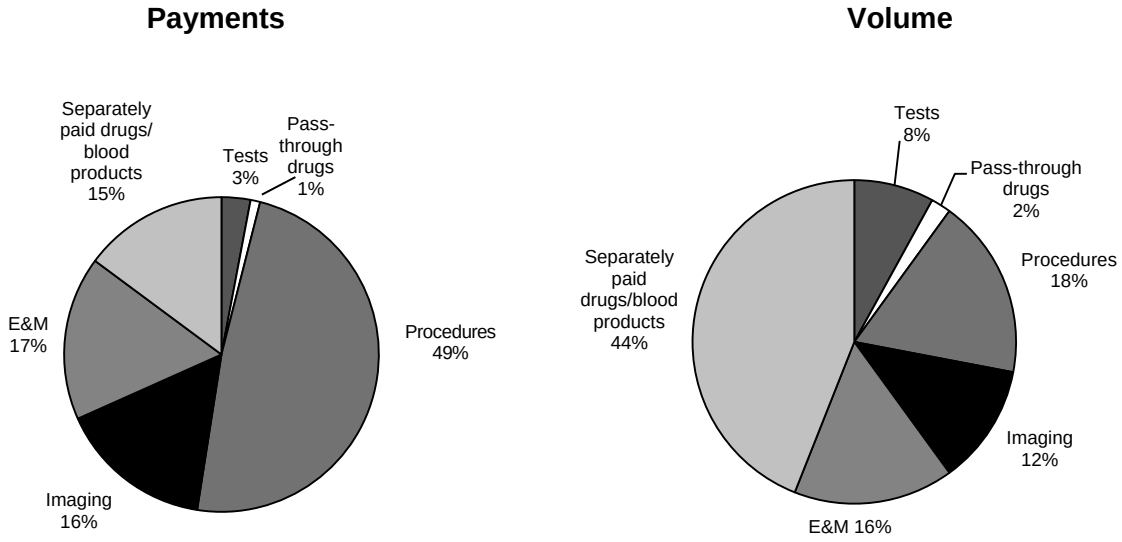
Year	Hospitals	Percent offering		
		Outpatient services	Outpatient surgery	Emergency services
2006	3,651	94%	86%	N/A
2008	3,607	94	87	N/A
2010	3,518	95	90	N/A
2012	3,483	95	91	93%
2013	3,456	96	92	93
2014	3,429	96	92	93
2015	3,395	96	92	93

Note: N/A (not applicable). We list emergency services from 2006 through 2010 as "N/A" because the data source we used in this chart changed the variable for identifying hospitals' provision of emergency services. We believe this change in variable definition makes it appear that the percentage of hospitals providing emergency services increased sharply from 2010 to 2012, but we question whether such a large increase actually occurred. This chart includes services provided or arranged by short-term hospitals and excludes long-term, Christian Science, psychiatric, rehabilitation, children's, critical access, and alcohol/drug hospitals.

Source: Medicare Provider of Services files from CMS.

- The number of hospitals that furnish services under Medicare's outpatient prospective payment system has declined slowly since 2006.
- The share of hospitals providing outpatient services remained stable, and the share offering outpatient surgery steadily increased from 2006 through 2013 and remained stable since then. The share offering emergency services has remained stable over the period we are able to measure accurately.

Chart 7-11. Payments and volume of services under the Medicare hospital outpatient PPS, by type of service, 2014



Note: PPS (prospective payment system), E&M (evaluation and management). Payments include both program spending and beneficiary cost sharing but do not include hold-harmless payments. Services are grouped into the following categories, according to the Berenson–Eggers Type of Service classification developed by CMS: evaluation and management, procedures, imaging, and tests. Pass-through drugs and separately paid drugs and blood products are classified by their payment status indicator. Percentages for payments do not sum to 100 percent because of rounding.

Source: MedPAC analysis of standard analytic file of outpatient claims for 2014.

- Hospitals provide many types of services in their outpatient departments, including emergency and clinic visits, imaging and other diagnostic services, laboratory tests, and ambulatory surgery.
- The payments for services are distributed differently from volume. For example, in 2014, procedures accounted for 49 percent of payments but only 18 percent of volume.
- Procedures (e.g., endoscopies, surgeries, and skin and musculoskeletal procedures) accounted for the greatest share of payments for services (49 percent) in 2014, followed by evaluation and management services (17 percent), imaging services (16 percent), and separately paid drugs and blood products (15 percent).

Chart 7-12. Hospital outpatient services with the highest Medicare expenditures, 2014

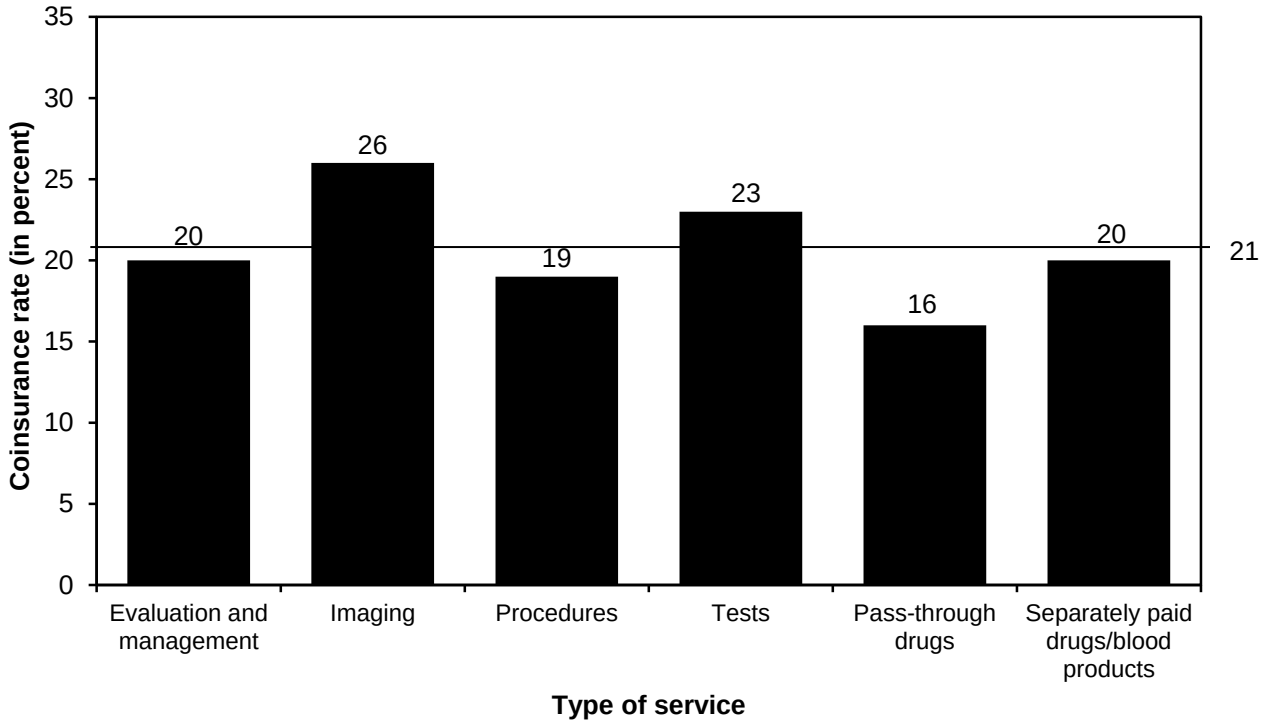
APC title	Share of payments	Volume (thousands)	Payment rate
Total	46%		
Clinic visits	5	27,474	$93
All emergency visits	5	13,018	260
Extended assessment & management composite	3	1,489	1,199
Diagnostic cardiac catheterization	2	493	2,587
Level I plain film except teeth	2	16,981	57
Level II cardiac imaging	2	855	1,154
Level II implantation of cardioverter-defibrillators	2	30	32,145
Transcatheter placement of intracoronary drug-eluting stents	2	125	7,714
Cataract procedures with IOL insert	2	494	1,766
Level I implantation of cardioverter-defibrillators	2	34	25,018
Level II echocardiogram without contrast	2	1,795	427
Lower gastrointestinal endoscopy	1	1,089	737
Level II endovascular revascularization of the lower extremity	1	85	9,120
Level III radiation therapy	1	1,336	510
Coronary angioplasty, valvuloplasty, and level I endovascular revascularization of the lower extremity	1	158	4,410
Level II drug administration	1	13,112	44
Cardiac electrophysiologic, evaluation, and ablation composite	1	42	13,115
Level II laparoscopy	1	155	3,648
Level III nerve injections	1	798	670
Level III drug administration	1	4,832	106
Insertion/replacement/conversion of permanent dual chamber pacemaker or pacing electrode	1	50	10,588
Level V drug administration	1	1,564	300
Level III cystourethroscopy and other genitourinary procedures	1	265	2,007
Combined abdomen and pelvis CT with contrast	1	1,197	390
Level IV drug administration	1	2,592	172
PET imaging	1	340	1,311
Level I upper gastrointestinal procedures	1	820	670
Average APC		445	156

Note: APC (ambulatory payment classification), IOL (intraocular lens), CT (computed tomography), PET positron emission tomography. The payment rate for "all emergency visits" is a weighted average of payment rates from 10 APCs.

Source: MedPAC analysis of 100 percent analytic files of outpatient claims for calendar year 2014.

- Although the outpatient prospective payment system covers thousands of services, expenditures are concentrated in a few categories that have high volume, high payment rates, or both.

Chart 7-13. Medicare coinsurance rates, by type of hospital outpatient service, 2014



Note: We grouped services into the following categories, according to the Berenson–Eggers Type of Service classification developed by CMS: evaluation and management, imaging, procedures, and tests. We classified pass-through drugs and separately paid drugs and blood products by their payment status indicators. The coinsurance rate for procedures and pass-through drugs is less than 20 percent because the coinsurance amount for services in the outpatient prospective payment system cannot exceed the hospital inpatient deductible. Therefore, services that have very high payment rates in the outpatient prospective payments system have coinsurance rates below 20 percent.

Source: MedPAC analysis of the standard analytic files of outpatient claims for 2014.

- Before CMS began using the outpatient prospective payment system (PPS), beneficiary coinsurance payments for hospital outpatient services were based on hospital charges, while Medicare payments were based on hospital costs. As hospital charges grew faster than costs, coinsurance represented an increasingly large share of total payments.

- In adopting the outpatient PPS, the Congress froze the dollar amounts for coinsurance. Consequently, beneficiaries' share of total payments has declined over time.

- The coinsurance rate differs for each service. Some services, such as imaging, have relatively high rates of coinsurance—26 percent in 2014. Other services, such as evaluation and management, have coinsurance rates of 20 percent.

- In 2014, the average coinsurance rate was about 21 percent (shown by the horizontal line in the chart). There is a small discrepancy between the average coinsurance rate of 21 percent and the average cost sharing of 22 percent listed in Chart 7-9 because the cost sharing includes both coinsurance and the Part B deductible.

Chart 7-14. Effects of hold-harmless and SCH transfer payments on hospitals' outpatient revenue, 2012–2014

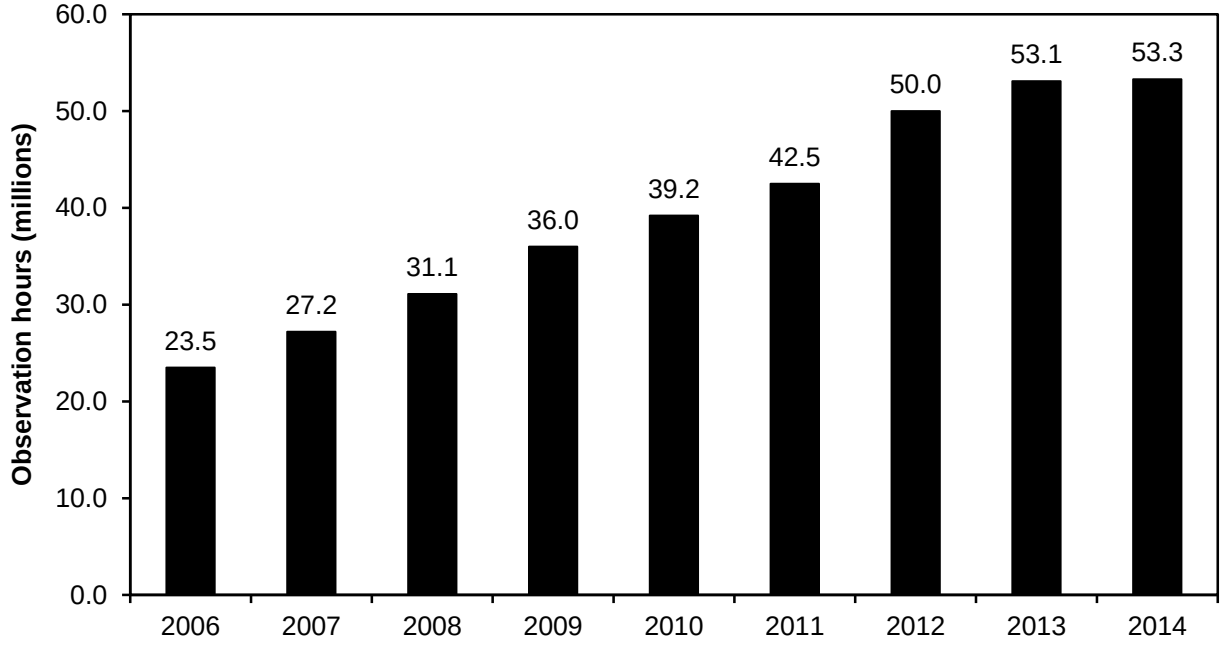
Hospital group	2012 Number of hospitals	2012 Share of payments from hold harmless and SCH transfer	2013 Number of hospitals	2013 Share of payments from hold harmless and SCH transfer	2014 Number of hospitals	2014 Share of payments from hold harmless and SCH transfer
All hospitals	3,041	0.4%	2,971	0.1%	2,917	0.0%
Urban	2,178	–0.3	2,117	–0.4	2,083	–0.4
Rural SCHs	372	8.4	365	6.3	372	5.6
Rural ≤100 beds	362	4.2	359	0.8	337	–0.4
Other rural	129	–0.1	130	–0.4	125	–0.4
Major teaching	261	–0.3	259	–0.3	267	–0.3
Other teaching	717	–0.1	697	–0.2	684	–0.2
Nonteaching	2,063	1.2	2,015	0.5	1,966	0.4

Note: SCH (sole community hospital).

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

- Medicare implemented the hospital outpatient prospective payment system (PPS) in 2000. Previously, Medicare paid for hospital outpatient services on the basis of hospital costs. Recognizing that some hospitals might receive lower payments under the outpatient PPS than under the earlier system, the Congress established transitional corridor payments. The corridors were designed to make up part of the difference between payments that hospitals would have received under the old payment system and those under the new outpatient PPS.
- Transitional corridor payments expired for most hospitals at the end of 2003. However, some rural hospitals continued to receive a special category of transitional corridor payments called "hold harmless" (HH) through 2012. Qualifying hospitals receive the greater of the payments they would have received from the previous system or the actual outpatient PPS payments.
- Hospitals that qualified for HH payments in 2004 and 2005 included rural SCHs and other small rural hospitals (100 or fewer beds). After 2005, small rural hospitals continued to be eligible for HH payments, but SCHs no longer qualified. In 2006, CMS implemented a policy (the "SCH transfer") that increased outpatient payments to rural SCHs by 7.1 percent above the standard rates. This policy is made budget neutral by reducing payments to all other hospitals. Finally, the Congress reestablished HH payments for SCHs that had 100 or fewer beds in 2009 and extended HH payments to all SCHs in 2010 and 2011. HH payments for SCHs that had more than 100 beds expired on March 1, 2012, and expired for SCHs and rural hospitals that had 100 or fewer beds on January 1, 2013.
- HH payments and the SCH transfer represented 0.4 percent of total outpatient PPS payments for all hospitals in 2012. However, the percentage of total outpatient payments from these policies was 8.4 percent for rural SCHs and 4.2 percent for small rural hospitals. Data from 2013 and 2014 indicate transfer and HH payments to rural SCHs were 6.3 percent of their outpatient revenue in 2013 and 5.6 percent in 2014. HH payments were only 0.8 percent of total outpatient payments to small rural hospitals in 2013. In 2014, HH payments were completely eliminated for small rural hospitals, and the SCH transfer policy reduced their revenue by 0.4 percent.

Chart 7-15. Number of observation hours increased, 2006–2014



Source: MedPAC analysis of Limited Data Set claims for the outpatient prospective payment system 2006–2014.

- Hospitals use observation care to determine whether a patient should be hospitalized for inpatient care, transferred to an alternative treatment setting, or sent home.
- Medicare began providing separate payments to hospitals for some observation services on April 1, 2002. Previously, the observation services were packaged into the payments for the emergency department or clinic visits that occurred with observation care.
- The number of observation hours (both packaged and separately paid) has increased substantially, from about 23 million in 2006 to 53 million in 2014. Before 2006, it was difficult to count the total number of observation hours because hospitals were not required to report packaged observation hours on Medicare claims.

Chart 7-16. Number of Medicare-certified ASCs increased by 15 percent, 2007–2014

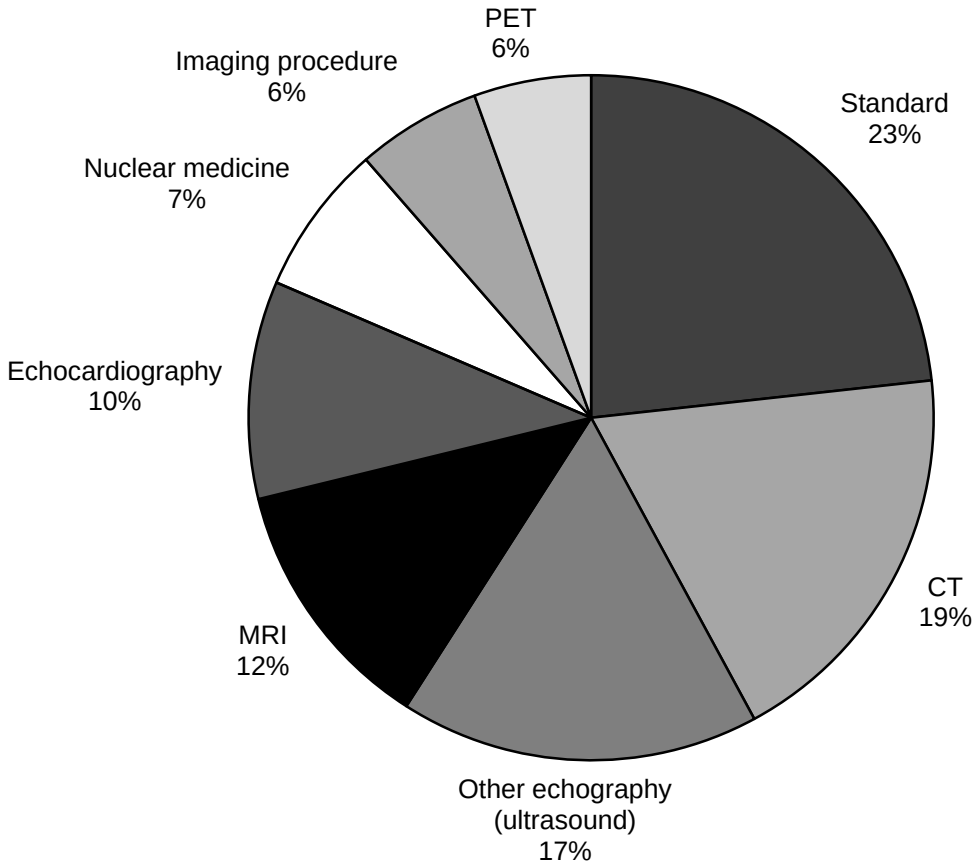
	2007	2008	2009	2010	2011	2012	2013	2014
Medicare payments (billions of dollars)	$2.9	$3.1	$3.2	$3.3	$3.4	$3.6	$3.7	$3.8
Number of centers	4,740	4,929	5,039	5,123	5,205	5,271	5,343	5,446
New centers	343	281	221	193	198	171	167	176
Closed or merged centers	79	81	111	109	116	105	95	73
Net percent growth in number of centers from previous year	5.6%	4.0%	2.2%	1.7%	1.6%	1.3%	1.4%	1.9%
Percent of all centers that are:								
For profit	95	95	95	95	95	95	95	95
Nonprofit	4	4	3	3	3	3	3	3
Government	1	1	2	1	1	1	2	2
Urban	92	92	92	92	92	93	93	93
Rural	8	8	8	8	8	7	7	7

Note: ASC (ambulatory surgical center). Medicare payments include program spending and beneficiary cost sharing for ASC facility services. Totals may not sum to 100 percent due to rounding.

Source: MedPAC analysis of Provider of Services file from CMS 2014. Payment data are from CMS, Office of the Actuary.

- ASCs are distinct entities that furnish ambulatory surgical services not requiring an overnight stay. The most common ASC procedures are cataract removal with lens insertion, upper gastrointestinal endoscopy, colonoscopy, and nerve procedures.
- Total Medicare payments for ASC services increased by 4.1 percent per year, on average, from 2007 through 2014. Payments per ASC fee-for-service beneficiary grew by 3.8 percent per year during this period (data not shown). Between 2013 and 2014, total payments rose by 3.1 percent and payments per beneficiary grew by 3.1 percent.
- The number of Medicare-certified ASCs grew at an average annual rate of approximately 2 percent from 2007 through 2014. Each year from 2007 through 2014, an average of 219 new facilities entered the market, while an average of 96 closed or merged with other facilities.
- The slower growth in the number of ASCs from 2009 through 2014 may reflect the substantially higher rates that Medicare pays for ambulatory surgical services in hospital outpatient departments than in ASCs, the very slow growth of national health care spending and Medicare spending, and the significant increase in hospital employment of physicians.

Chart 7-17. Medicare spending for imaging services under the fee schedule for physicians and other health professionals, by type of service, 2014



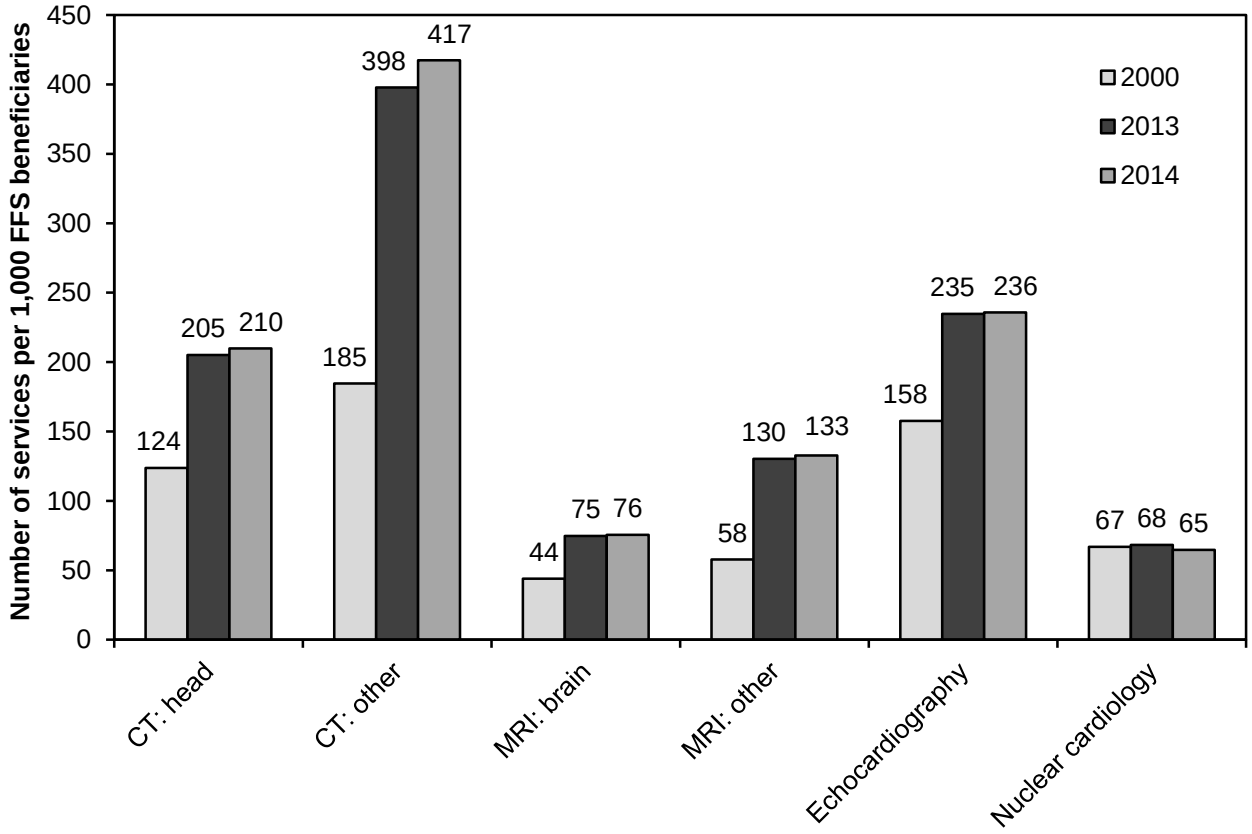
Note: PET (positron emission tomography), MRI (magnetic resonance imaging), CT (computed tomography). "Standard" imaging includes chest, musculoskeletal, and breast X-rays. "Imaging procedures" include stereoscopic X-ray guidance for delivery of radiation therapy, fluoroguide for spinal injection, and other interventional radiology procedures. Medicare payments include program spending and beneficiary cost sharing for fee schedule imaging services provided in all settings. Payments include carrier-priced codes but exclude radiopharmaceuticals.

Source: MedPAC analysis of the 100 percent physician/supplier procedure summary file from CMS 2014.

- Almost one-third of Medicare spending for imaging under the fee schedule for physicians and other health professionals in 2014 was for CT and MRI studies. About one-quarter was for various types of ultrasound (echocardiography and other echography).

- Medicare and beneficiaries spent a total of $9.3 billion for imaging services under the fee schedule in 2014. Spending declined from $9.6 billion in 2013 (–3.1 percent) (data not shown). The decline in spending was largely due to a 1.1 percent drop in the number and complexity of imaging services per beneficiary in 2014, the reduction of practice expense payments for certain types of imaging, and the shift in billing of imaging services from freestanding offices to hospital outpatient departments (where the technical component of the service is paid under the hospital outpatient prospective payment system instead of the fee schedule).

Chart 7-18. Growth in the number of CT, MRI, and cardiac imaging services per 1,000 FFS beneficiaries, 2000–2014



Note: CT (computed tomography), MRI (magnetic resonance imaging), FFS (fee-for-service). Data include imaging services paid under the fee schedule for physicians and other health professionals that were provided in all settings but exclude technical component–only services. The number of echocardiography and nuclear cardiology services excludes add-on services.

Source: MedPAC analysis of the 100 percent physician/supplier procedure summary files from CMS 2000, 2013, and 2014.

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- The number of CT and MRI scans per 1,000 fee-for-service beneficiaries grew rapidly from 2000 to 2014. For example, the number of CT scans of parts of the body other than the head ("CT: other") more than doubled from 2000 to 2014 (from 185 per 1,000 beneficiaries to 417).

- The number of echocardiography studies per 1,000 beneficiaries grew by 49 percent from 2000 to 2013 and stayed about the same in 2014.

- The number of nuclear cardiology studies per 1,000 beneficiaries rose by 2 percent from 2000 to 2013 and fell by 5 percent in 2014.

SECTION 8

Post-acute care

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

Chart 8-1. Number of post-acute care providers remained stable in 2015

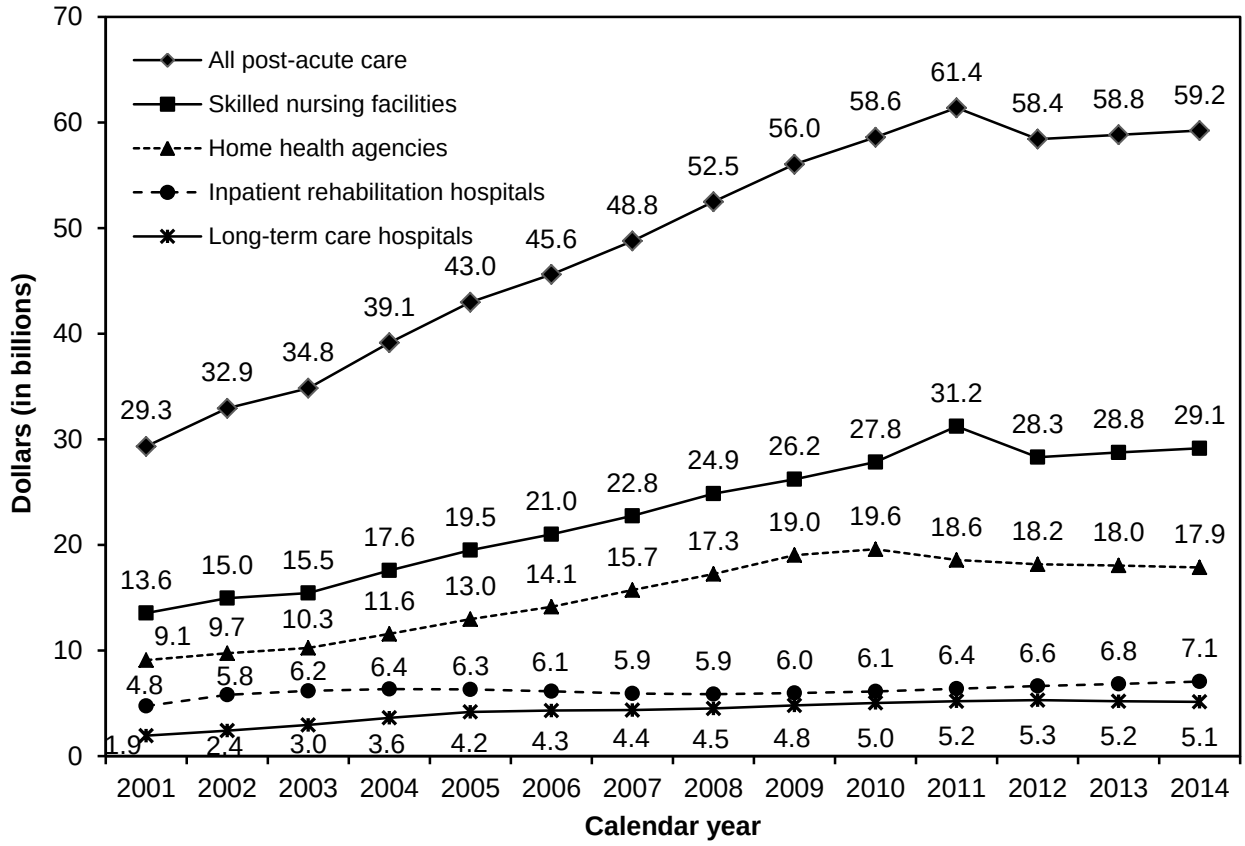
	2007	2009	2011	2013	2014	2015	Average annual percent change 2007–2014	Percent change 2014–2015
Home health agencies	9,291	10,568	12,054	12,613	12,461	12,346	4.3%	–0.9%
Inpatient rehabilitation facilities	1,202	1,196	1,165	1,161	1,177	1,182	–0.3	0.4
Long-term care hospitals	396	427	437	432	422	426	0.9	0.9
Skilled nursing facilities	15,047	15,062	15,120	15,163	15,173	15,223	0.1	0.3

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

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

- The number of home health agencies declined slightly in 2014 and 2015 after several years of substantial growth. The decline in agencies was concentrated in Texas and Florida, two states that saw considerable growth following the implementation of the prospective payment system in October 2000.
- Most inpatient rehabilitation facilities (IRFs) are distinct units in acute care hospitals; only about one-fifth are freestanding facilities. However, because hospital-based units tend to have fewer beds, they account for only about half of Medicare discharges from IRFs.
- In spite of a moratorium on new long-term care hospitals (LTCHs) beginning in October 2007, the number of these facilities continued to grow through 2011. The number of LTCHs has since decreased from 437 in 2011 to 426 in 2015.
- The total number of skilled nursing facilities (SNFs) has increased slightly since 2007, and the mix of facilities shifted from hospital-based to freestanding facilities. In 2015, hospital-based facilities made up 5 percent of all SNF facilities, down from 8 percent in 2005 (data not shown).

Chart 8-2. Growth in Medicare's post-acute care expenditures has slowed since 2012



Note: These numbers represent only program spending; they do not include beneficiary copayments.

Source: CMS Office of the Actuary 2016.

- Increases in fee-for-service (FFS) spending on post-acute care have slowed in part because of expanded enrollment in managed care under Medicare Advantage (Medicare Advantage spending is not included in this chart). The slowest growth in FFS spending on post-acute care since 2001 occurred between 2012 and 2014.

- FFS spending on inpatient rehabilitation hospitals declined between 2004 and 2008, reflecting policies intended to ensure that patients who do not need this intensity of services are treated in less-intensive settings. However, spending on inpatient rehabilitation hospitals has increased since 2008.

- FFS spending on skilled nursing facilities increased sharply in 2011, reflecting CMS's adjustment for the implementation of the new case-mix groups (resource utilization groups, version IV) beginning October 2010. Once CMS established that the adjustment it made was too large, it lowered the adjustment, and spending dropped in 2012.

Chart 8-3. Freestanding SNFs and for-profit SNFs account for the majority of facilities, Medicare stays, and Medicare spending

	Facilities		Medicare-covered stays		Medicare payments (billions)	
Type of SNF	2006	2014	2006	2014	2006	2014
Totals	15,178	15,005	2,454,263	2,344,173	$19.5	$27.0
Freestanding	92%	95%	89%	94%	94%	97%
Hospital based	8	5	11	6	6	3
Urban	67	72	79	83	81	85
Rural	33	28	21	17	19	15
For profit	68	70	67	72	73	76
Nonprofit	26	25	29	24	24	21
Government	5	5	4	3	3	3

Note: SNF (skilled nursing facility). Totals may not sum to 100 percent due to rounding and missing values.

Source: MedPAC analysis of the Provider of Services and Medicare Provider Analysis and Review files, 2006 and 2014.

- The mix of where beneficiaries receive SNF services has shifted toward freestanding, urban, and for-profit facilities.
- In 2014, freestanding facilities accounted for 94 percent of stays and an even larger share of Medicare's payments (97 percent).
- Urban facilities accounted for 72 percent of facilities, 83 percent of stays, and 85 percent of Medicare payments in 2014.
- In 2014, for-profit facilities accounted for 70 percent of facilities, but proportionally higher shares of stays and Medicare payments (72 percent and 76 percent, respectively).

Chart 8-4. SNF service use declined between 2013 and 2014

Volume measure	2008	2010	2012	2013	2014	Percent change 2013–2014
Covered admissions per 1,000 FFS beneficiaries	73	72	68	67	66	–1.4%
Covered days (in thousands)	1,977	1,938	1,861	1,835	1,808	–1.5
Covered days per admission	27.0	27.1	27.4	27.6	27.6	0.0

Note: SNF (skilled nursing facility), FFS (fee-for-service). Data include 50 states and the District of Columbia. Yearly figures presented in the table are rounded, but the percent-change column was calculated using unrounded data.

Source: Calendar year data from CMS, Office of Information Products and Data Analytics, 2015.

- In 2014, 4.5 percent of beneficiaries used SNF services, down slightly from 2011 (data not shown).
- Between 2013 and 2014, admissions per 1,000 FFS beneficiaries declined 1.4 percent, paralleling the decline in inpatient hospital use. An acute hospital stay of three or more days is a prerequisite for Medicare coverage of SNF care.
- During the same period, covered days declined at a similar rate (–1.5 percent) so the covered days per admission remained the same (27.6 days).

Chart 8-5. Freestanding SNF Medicare margins remain high despite reductions in payments

	2004	2006	2008	2010	2012	2013	2014
All	13.8%	12.8%	16.7%	19.4%	14.1%	13.2%	12.5%
Rural	16.1	13.5	17.9	19.4	13.0	12.1	10.6
Urban	13.3	12.7	16.4	19.4	14.2	13.3	12.9
Nonprofit	3.8	3.2	7.2	10.8	5.7	5.0	3.9
For profit	16.1	15.1	19.0	21.5	16.2	15.3	14.9

Note: SNF (skilled nursing facility).

Source: MedPAC analysis of freestanding SNF cost reports 2004–2014.

- Though lower than in recent years, the Medicare margin for freestanding SNFs in 2014 exceeded 10 percent for the 15th consecutive year (not all years are shown). After reaching over 21 percent in 2011 (not shown), the margins have declined for two reasons: Current law requires market basket increases to be offset by a productivity adjustment, and sequestration began lowering payments in April 2013 by 2 percent on an annualized basis.

- In 2014, on average, urban facilities had higher Medicare margins than rural facilities even though rural facilities have higher base rates than urban facilities. In aggregate, for-profit SNFs had considerably higher Medicare margins than nonprofit SNFs, reflecting their larger size, their lower cost growth, and their higher share of the more profitable therapy case-mix groups (the ultra-high and very high groups).

- In 2014, total margins (the margin across all payers and all lines of business) for freestanding facilities remained positive (1.9 percent, the same as in 2013, data not shown).

Chart 8-6. Cost and payment differences explain variation in Medicare margins for freestanding SNFs in 2014

Characteristic	Highest margin quartile (*n* = 3,186)	Lowest margin quartile (*n* = 3,186)	Ratio of highest quartile to lowest quartile
Cost measures			
Standardized cost per day	$254	$369	0.7
Standardized cost per discharge	$11,120	$14,185	0.8
Average daily census (patients)	89	67	1.3
Average length of stay (days)	45	37	1.2
Revenue measures			
Medicare payment per day	$489	$428	1.1
Medicare payment per discharge	$22,728	$16,107	1.4
Share of days in intensive therapy	85%	77%	1.1
Share of medically complex days	4	5	0.8
Medicare share of facility revenue	25	15	1.7
Patient characteristics			
Case-mix index	1.40	1.31	1.1
Share of dual-eligible beneficiaries	39%	27%	1.4
Share of minority beneficiaries	13	5	2.6
Share of very old beneficiaries	29	34	0.9
Medicaid share of days	65	58	1.1
Facility mix			
Percent for profit	90%	58%	N/A
Percent urban	78	67	N/A

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

Source: MedPAC analysis of freestanding SNF cost reports 2014.

- Medicare margins varied widely across freestanding SNFs. One-quarter of SNFs had Medicare margins at or below 2.4 percent, and one-quarter of facilities had Medicare margins at or above 21.2 percent (data not shown).

- High-margin SNFs had lower costs per day (30 percent lower costs than low-margin SNFs), after adjusting for wage and case-mix differences, and higher revenues per day (1.1 times the revenues per day of low-margin SNFs).

- Facilities with the highest Medicare margins had higher case-mix indexes, higher shares of beneficiaries who were dually eligible for Medicare and Medicaid, and higher shares of minority beneficiaries.

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

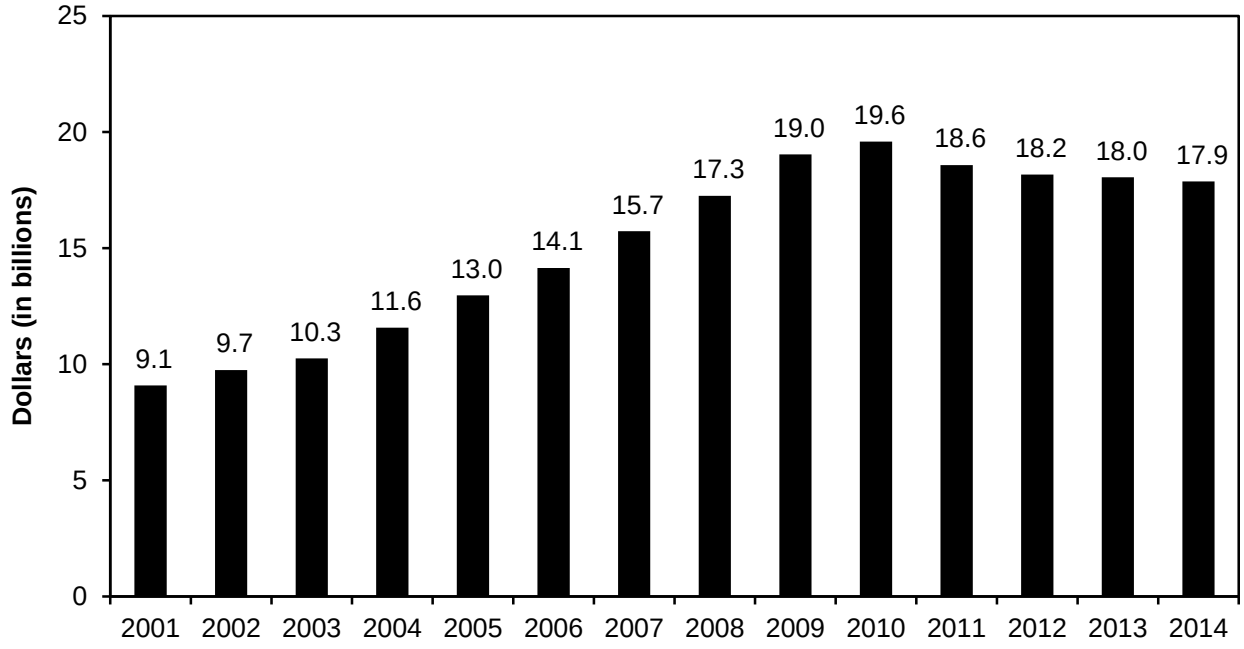
	Relatively efficient SNFs	All SNFs
Performance in 2014		
Community discharge rate	47.3%	37.3%
Readmission rate	9.2%	10.9%
Standardized cost per day	$277	$303
Medicare revenue per day	$492	$450
Medicare margin	20.0%	11.8%
Total margin	3.5%	1.7%
Facility case-mix index	1.43	1.35
Medicare average length of stay	35 days	40 days
Occupancy rate	89%	87%
Number of beds	120	100
Share of ultra-high therapy days	63%	52%
Share of medically complex days	4.7%	4.6%
Medicaid share of facility days	58%	61%
Share of urban	78%	66%
Share of for profit	83%	70%

Note: SNF (skilled nursing facility). The analysis includes 11,637 freestanding facilities. SNFs were defined as "efficient" by their cost per day (2011–2013) and two quality measures (community discharge and readmission rates) for the same period. Efficient SNFs were those in the best third of the distribution of one measure and not in the bottom third on any measure in each of three years. Eight percent of SNFs qualified as relatively efficient. Costs per day were standardized for differences in case mix (using the nursing component relative weights) and wages. Quality measures were rates of risk-adjusted community discharge and readmission for patients with potentially avoidable conditions within 100 days of hospital discharge. Quality measures were calculated for all facilities with at least 25 stays. "Ultra-high therapy days" include days with at least 720 minutes per week of therapy. "Medically complex days" were defined as those assigned to clinically complex or special-care case-mix groups.

Source: MedPAC analysis of quality measures for 2011–2014 and Medicare cost report data for 2011–2014.

- "Relatively efficient SNFs" were defined as consistently providing relatively low-cost and high-quality care compared with other SNFs.
- Compared with other SNFs, relatively efficient SNFs furnished considerably higher quality (higher discharge to community rates and lower readmission rates) and had costs per day that were 8 percent lower.
- Compared with other SNFs, relatively efficient SNFs treated more complex patients, had a higher share of ultra-high therapy days, were larger, and had slightly higher occupancy rates.

Chart 8-8. Spending on home health care, 2001–2014



Source: CMS Office of the Actuary.

- In October 2000, the prospective payment system (PPS) replaced the previous Medicare payment system for home health care. At the same time, eligibility for the benefit broadened slightly.

- Home health care spending has risen rapidly under the PPS. Spending rose by about 10 percent per year between 2001 and 2009; spending peaked in 2010 and has declined slightly since then.

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

	2002	2013	2014	Percent change 2013–2014	Cumulative percent change 2002–2014
Number of users (in millions)	2.5	3.5	3.4	–1.3%	36.0%
Percent of beneficiaries who used home health care	7.2%	9.3%	9.1%	–2.2	26.0
Episodes (in millions)	4.1	6.7	6.6	–2.1	60.1
Episodes per home health patient	1.6	1.9	1.9	–0.8	17.7
Visits per home health episode	18.9	17.0	17.5	3.1	–7.4
Visits per home health patient	30.8	32.9	33.6	2.2	9.1
Average payment per episode	$2,335	$2,674	$2,689	0.5	15.1

Note: Yearly figures presented in the table are rounded, but the percent-change columns were calculated using unrounded data.

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

- The number of home health episodes has increased since 2002. The number of beneficiaries using home health care has also increased since 2002, but at a lower rate than the growth in episodes. In 2014, 3.4 million beneficiaries used the home health benefit.
- The number of visits per episode decreased from 2002 to 2014. However, this decline was offset by an increase in the average number of episodes per patient, which increased from 1.6 in 2002 to 1.9 in 2014. Beneficiaries received fewer visits in an episode but had more 60-day episodes of care. As a result, the average number of visits increased from about 31 visits per home health user in 2002 to about 34 visits per home health user in 2014.

Chart 8-10. Home health episodes not preceded by a hospitalization accounted for the majority of services in 2013

	Number of episodes (in millions)		Cumulative growth	Share of episodes	
	2001	2013		2001	2013
Episodes not preceded by a hospitalization or PAC stay:					
First	0.8	1.4	80%	20%	21%
Subsequent	1.3	3.0	137	32	45
Subtotal	2.1	4.5	115	53	66
Episodes preceded by a hospitalization or PAC stay:					
First	1.6	1.9	18	40	27
Subsequent	0.3	0.5	60	8	7
Subtotal	1.9	2.3	25	47	34
Total	3.9	6.9	72	100%	100%

Note: PAC (post-acute care). "First" indicates no home health episode in the 60 days preceding the episode. "Subsequent" indicates the episode started within 60 days of the end of a preceding episode. "Episodes not preceded by a hospitalization or PAC stay" indicates that there was no hospitalization or PAC stay in the 15 days before the start of the episode. "Episodes preceded by a hospitalization or PAC stay" indicates the episode occurred less than 15 days after a stay in a hospital (including a long-term care hospital, skilled nursing facility, or inpatient rehabilitation facility). The number of episodes presented in the table is rounded, but the cumulative-growth column was calculated using unrounded data. Components may not sum to subtotals or totals due to rounding.

Source: CMS Datalink file 2013.

- The rise in the average number of episodes per beneficiary coincides with a relative shift away from using home health care as a PAC service.
- During the 2001 through 2013 period, the number of episodes not preceded by a hospitalization or PAC stay increased by 115 percent compared with a 25 percent increase in episodes that were preceded by a hospitalization or PAC stay. During that period, the share of all episodes not preceded by a hospitalization or PAC stay rose from about 53 percent to 66 percent.
- Beneficiaries for whom the majority of home health episodes in 2013 were preceded by a hospitalization or other post-acute stay had different characteristics from community-admitted beneficiaries. Community-admitted home health users were more likely to be dually eligible for Medicare and Medicaid, had more home health episodes, and had more episodes with a high share of home health aide services compared with post-acute users of home health (data not shown). Community-admitted users generally had fewer chronic conditions, tended to be older, and were more likely to have dementia and Alzheimer's disease (data not shown).

Chart 8-11. Medicare margins for freestanding home health agencies

	2013	2014	Percent of agencies 2014
All	12.7%	10.8%	100%
Geography			
Mostly urban	13.1	11.2	85
Mostly rural	11.0	8.5	15
Type of control			
For profit	13.7	12.2	89
Nonprofit	10.0	6.4	11
Volume quintile (lowest to highest)			
First	6.1	4.0	20
Second	7.8	5.4	20
Third	8.9	7.6	20
Fourth	11.2	10.0	20
Fifth	14.8	12.5	20

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

Source: MedPAC analysis of 2013–2014 Medicare Cost Report files from CMS.

- In 2014, freestanding home health agencies (HHAs) (85 percent of all HHAs) had an aggregate margin of 10.8 percent. HHAs that served mostly urban patients in 2014 had an aggregate margin of 11.2 percent; HHAs that served mostly rural patients had an aggregate margin of 8.5 percent. The 2014 margin is consistent with the historically high margins the home health industry has experienced under the prospective payment system. The margin from 2001 to 2014 averaged 16.5 percent (data not shown), indicating that most agencies have been paid well in excess of their costs under the prospective payment system.

- For-profit agencies in 2014 had an average margin of 12.2 percent, and nonprofit agencies had an average margin of 6.4 percent.

- Agencies that serve more patients have higher margins. The agencies in the lowest volume quintile in 2014 had an aggregate margin of 4.0 percent, while those in the highest quintile had an aggregate margin of 12.5 percent.

Chart 8-12. Number of IRF FFS patients was stable in 2014

	2004	2012	2013	2014	Average annual percent change 2004–2013	Percent change 2013–2014
Number of IRF cases	495,000	373,000	373,000	376,000	–3.1%	0.7%
Cases per 10,000 FFS beneficiaries	135.6	100.1	99.7	99.9	–3.4	0.2
Payment per case	$13,290	$17,995	$18,258	$18,632	3.6	2.0
Average length of stay (in days)	12.7	12.9	12.9	12.8	0.2	–0.4

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). Numbers of cases reflect Medicare FFS utilization only. Yearly figures presented in the table are rounded, but the percent-change columns were calculated using unrounded data.

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

- The number of Medicare FFS IRF cases grew rapidly throughout the 1990s and the early years of the IRF prospective payment system, reaching a peak of about 495,000 in 2004.
- After CMS renewed its enforcement of the compliance threshold in 2004, IRF volume declined substantially. Between 2004 and 2008, the number of IRF cases fell almost 8 percent per year (data not shown). After 2008, volume began to increase slowly. Between 2013 and 2014, volume was fairly stable, rising less than 1 percent.
- In recent years, the number of IRF cases per 10,000 FFS beneficiaries has held steady at about 100. Relatively few Medicare beneficiaries use IRF services because, to qualify for Medicare coverage, IRF patients must be able to both tolerate and benefit from intensive rehabilitation therapy, which typically consists of at least three hours of therapy a day for at least five days a week.
- Medicare payments per IRF case rose, on average, 3.6 percent per year between 2004 and 2013. Payments per case grew 2.0 percent between 2013 and 2014.

Chart 8-13. Most common types of inpatient rehabilitation facility cases, 2014

Type of case	Share of cases
Stroke	19.5%
Neurological conditions	13.1
Fracture of the lower extremity	12.2
Debility	10.3
Brain injury	8.7
Major joint replacement of lower extremity	7.8
Other orthopedic conditions	7.7
Cardiac conditions	5.6
Spinal cord injury	4.6
All other	10.6

Note: "Neurological conditions" includes multiple sclerosis, Parkinson's disease, polyneuropathy, and neuromuscular disorders. "Fracture of the lower extremity" includes hip, pelvis, and femur fractures. Patients with debility have generalized deconditioning not attributable to other conditions. "Other orthopedic conditions" excludes fractures of the hip, pelvis, and femur and hip and knee replacements. "All other" includes conditions such as amputations, arthritis, and pain syndrome. Numbers may not sum to 100 percent due to rounding.

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

- In 2014, the most frequently occurring case type among beneficiaries admitted to inpatient rehabilitation facilities (IRFs) was stroke, which accounted for 19.5 percent of Medicare fee-for-service cases.

- The number and share of Medicare cases with neurological conditions has grown significantly over the past decade. Between 2004 and 2014, the number of neurological cases grew 93 percent, even as the total number of Medicare IRF cases declined 23 percent (data not shown). As a result, in 2014, neurological conditions made up 13.1 percent of all Medicare cases in IRFs, compared with 5.2 percent in 2004 (2004 data not shown).

Chart 8-14. Inpatient rehabilitation facilities' Medicare margin by type of facility, 2004–2014

	2004	2006	2008	2010	2012	2013	2014
All IRFs	16.7%	12.4%	9.3%	8.7%	11.2%	11.6%	12.5%
Hospital based	12.2	9.6	3.8	–0.5	0.8	0.2	1.0
Freestanding	24.7	17.5	18.2	21.4	23.9	24.4	25.3
Urban	17.0	12.6	9.5	9.0	11.6	12.0	13.0
Rural	13.2	10.1	6.9	4.7	6.5	6.5	6.4
Nonprofit	12.8	10.6	5.2	2.1	2.4	1.4	2.1
For profit	24.4	16.3	16.9	19.6	23.1	23.6	24.3

Note: IRF (inpatient rehabilitation facility).

Source: MedPAC analysis of cost report data from CMS.

- Between 2013 and 2014, the aggregate IRF Medicare margin rose from 11.6 percent to 12.5 percent. The aggregate margin has risen steadily since 2009, after a period of declining, though healthy, margins.

- Margins varied by ownership, with for-profit IRFs having substantially higher margins. At the same time, Medicare margins in freestanding IRFs far exceeded those of hospital-based facilities. Nevertheless, a quarter of hospital-based IRFs had Medicare margins greater than 11 percent (data not shown), indicating that many hospitals can manage their IRF units profitably. Further, despite the comparatively low average margin in hospital-based IRFs, evidence suggests that these units make a positive financial contribution to their parent hospitals. Commission analysis found that in 2013, the aggregate Medicare margin for acute care hospitals with IRF units was a percentage point higher than the margin of hospitals without IRF units (data not shown).

- Higher unit costs are a major driver of low margins in both hospital-based and nonprofit IRFs. However, the Commission has found that the mix of case types in IRFs is also correlated with profitability. IRFs with the highest margins have a higher share of neurological cases and a lower share of stroke cases. Further, we have observed differences in the types of stroke and neurological cases admitted to high- and low-margin IRFs. Stroke cases in the highest margin IRFs are much less likely to have paralysis than are stroke cases in the lowest margin IRFs. Neurological cases in the highest margin IRFs are much more likely to have a neuromuscular disorder (such as amyotrophic lateral sclerosis) than are neurological cases in the lowest margin IRFs (data not shown).

- The Commission has found that high-margin IRFs have patients who are, on average, less severely ill in the acute care hospital than patients admitted to low-margin IRFs. Once admitted to and assessed by the IRF, however, the average patient profile changes, with patients treated in high-margin IRFs appearing to be more disabled than those in low-margin IRFs. This finding suggests the possibility that assessment and coding practices may contribute to greater revenues in some IRFs (data not shown).

Chart 8-15. Low standardized costs led to high margins for both hospital-based and freestanding IRFs, 2014

Characteristic	Lowest cost quartile	Highest cost quartile
Median cost per discharge		
All	$10,583	$18,888
Hospital based	10,992	18,881
Freestanding	10,437	19,833
Median Medicare margin		
All	26.1%	−21.3%
Hospital based	19.5	−21.3
Freestanding	31.1	−21.7
Median		
Number of beds	42	18
Occupancy rate	70%	50%
Case-mix index	1.29	1.21
Share of facilities in the quartile that are:		
Hospital based	43%	95%
Freestanding	57	5
Nonprofit	30	65
For profit	66	18
Government	4	17
Urban	94	70
Rural	6	30

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for differences in wages across geographic areas, differences in case mix across providers, and differences across providers in the prevalence of high-cost outliers, short-stay outliers, and transfer cases.

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

- IRFs with the lowest standardized costs (those in the lowest cost quartile) had a median standardized cost per discharge that was 44 percent less than that of the IRFs with the highest standardized costs (those in the highest cost quartile).
- IRFs with the lowest costs tended to be larger: The median number of beds was 42 compared with 18 in the highest cost quartile. In addition, IRFs with the lowest costs had a higher median occupancy rate (70 percent vs. 50 percent). These results suggest that low-cost IRFs benefit from economies of scale.
- Low-cost IRFs were disproportionately freestanding and for profit. Still, 43 percent of IRFs in the lowest cost quartile were hospital based and 30 percent were nonprofit. By contrast, in the highest cost quartile, 95 percent were hospital based and almost two-thirds were nonprofit.

Chart 8-16. The top 25 MS–LTC–DRGs made up two-thirds of LTCH discharges in 2014

MS–LTC–DRG	Description	Discharges	Percentage
189	Pulmonary edema and respiratory failure	16,017	12.0%
207	Respiratory system diagnosis with ventilator support 96+ hours	15,224	11.4
871	Septicemia without ventilator support 96+ hours with MCC	8,809	6.6
177	Respiratory infections and inflammations with MCC	3,733	2.8
592	Skin ulcers with MCC	3,663	2.7
208	Respiratory system diagnosis with ventilator support <96 hours	3,105	2.3
949	Aftercare with CC/MCC	2,864	2.1
539	Osteomyelitis with MCC	2,785	2.1
682	Renal failure with MCC	2,437	1.8
919	Complications of treatment with MCC	2,321	1.7
314	Other circulatory system diagnoses with MCC	1,981	1.5
190	Chronic obstructive pulmonary disease with MCC	1,975	1.5
870	Septicemia with ventilator support 96+ hours	1,966	1.5
862	Postoperative and post-traumatic infections with MCC	1,955	1.5
559	Aftercare, musculoskeletal system and connective tissue with MCC	1,947	1.5
166	Other respiratory system OR procedures with MCC	1,925	1.4
4	Tracheostomy with ventilator support 96+ hours or primary diagnosis except face, mouth, and neck without major OR	1,840	1.4
193	Simple pneumonia and pleurisy with MCC	1,809	1.3
291	Heart failure and shock with MCC	1,739	1.3
638	Diabetes with CC	1,665	1.2
570	Skin debridement with MCC	1,629	1.2
853	Infectious and parasitic diseases with OR procedure with MCC	1,600	1.2
981	Extensive OR procedure unrelated to principal diagnosis with MCC	1,568	1.2
560	Aftercare, musculoskeletal system and connective tissue with CC	1,359	1.0
602	Cellulitis with MCC	1,328	1.0
	Top 25 MS–LTC–DRGs	87,244	65.1
	Total	134,004	100.0

Note: MS–LTC–DRG (Medicare severity–long-term care–diagnosis related group), LTCH (long-term care hospital), MCC (major complication or comorbidity), CC (complication or comorbidity), OR (operating room). MS–LTC–DRGs are the case-mix system for LTCHs. Components may not sum to totals due to rounding.

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

- Cases in LTCHs are concentrated in a relatively small number of MS–LTC–DRGs. In 2014, the top 25 MS–LTC–DRGs accounted for 65 percent of all cases.
- The most frequent diagnosis in LTCHs in 2014 was pulmonary edema and respiratory failure. Nine of the top 25 diagnoses were respiratory conditions or involved prolonged mechanical ventilation.

Chart 8-17. The number of Medicare LTCH cases and users continued to decrease between 2013 and 2014

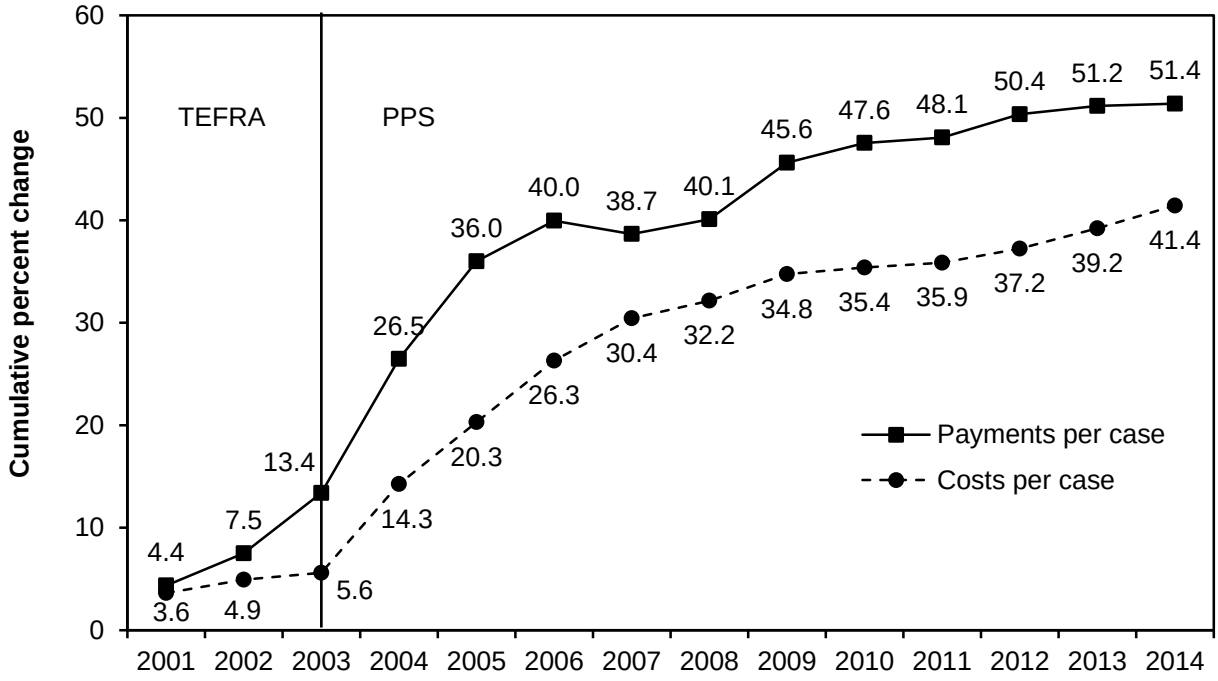
						Average annual change		
	2008	2010	2012	2013	2014	2008–2012	2012–2013	2013–2014
Cases	130,869	134,683	140,463	137,827	133,984	2.4%	–1.9%	–2.8%
Cases per 10,000 FFS beneficiaries	36.9	37.4	37.7	36.6	35.7	0.7	–2.8	–2.6
Spending per FFS beneficiary	$129.8	$144.2	$148.8	$146.7	$142.7	4.7	–1.4	–2.8
Payment per case	$35,200	$38.582	$39,493	$40,070	$40,015	3.9	1.5	–0.1
Length of stay (in days)	26.7	26.6	26.2	26.5	26.3	–0.6	1.0	–0.7
Users	115,328	118,322	123,652	121,532	118,288	2.4	–1.7	–2.7

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

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

- Controlling for the number of FFS beneficiaries, the number of LTCH cases declined 2.6 percent between 2013 and 2014. This two-year decline that began in 2013 is due at least in part to a congressional moratorium that limited growth in the number of LTCHs.
- Between 2013 and 2014, the number of beneficiaries who had LTCH stays (“users”) decreased by 2.7 percent.

Chart 8-18. LTCHs' per case costs increased more than payments in 2014



Note: LTCH (long-term care hospital), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). Percentage changes are calculated based on consistent two-year cohorts of LTCHs.

Source: MedPAC analysis of Medicare cost report data from CMS.

- In the first years of the PPS, costs per case increased rapidly, following a surge in payments per case. Between 2005 and 2007, growth in cost per case slowed considerably because regulatory changes to Medicare's payment policies for LTCHs slowed growth in payment per case to an average of 1.3 percent per year.

- For most of the past decade, LTCHs held cost growth below the rate of market basket increases, likely because of ongoing concerns about possible changes to Medicare's payment policies for LTCH services. The slowest growth in average cost per case occurred between 2009 and 2011, when the average cost per case increased less than 1 percent per year.

- Starting in 2011, the average cost per case increased more rapidly each year, equaling 2.2 percent between 2013 and 2014.

Chart 8-19. The aggregate average LTCH Medicare margin fell in 2013 and 2014

Type of LTCH	Share of discharges	Medicare margin					
		2009	2010	2011	2012	2013	2014
All	100%	5.7%	6.8%	6.9%	7.5%	6.8%	4.9%
Urban	94	6.0	7.1	7.1	7.7	7.0	4.9
Rural	6	–3.0	0.6	3.1	3.7	2.5	4.1
Nonprofit	13	–0.7	–0.3	0.5	–0.2	–1.4	–2.8
For profit	85	7.4	8.4	8.5	9.3	8.7	6.9
Government	2	N/A	N/A	N/A	N/A	N/A	N/A

Note: LTCH (long-term care hospital), N/A (not applicable). Margins for government-owned providers are not shown. They operate in a different context from other providers, so their margins are not necessarily comparable.

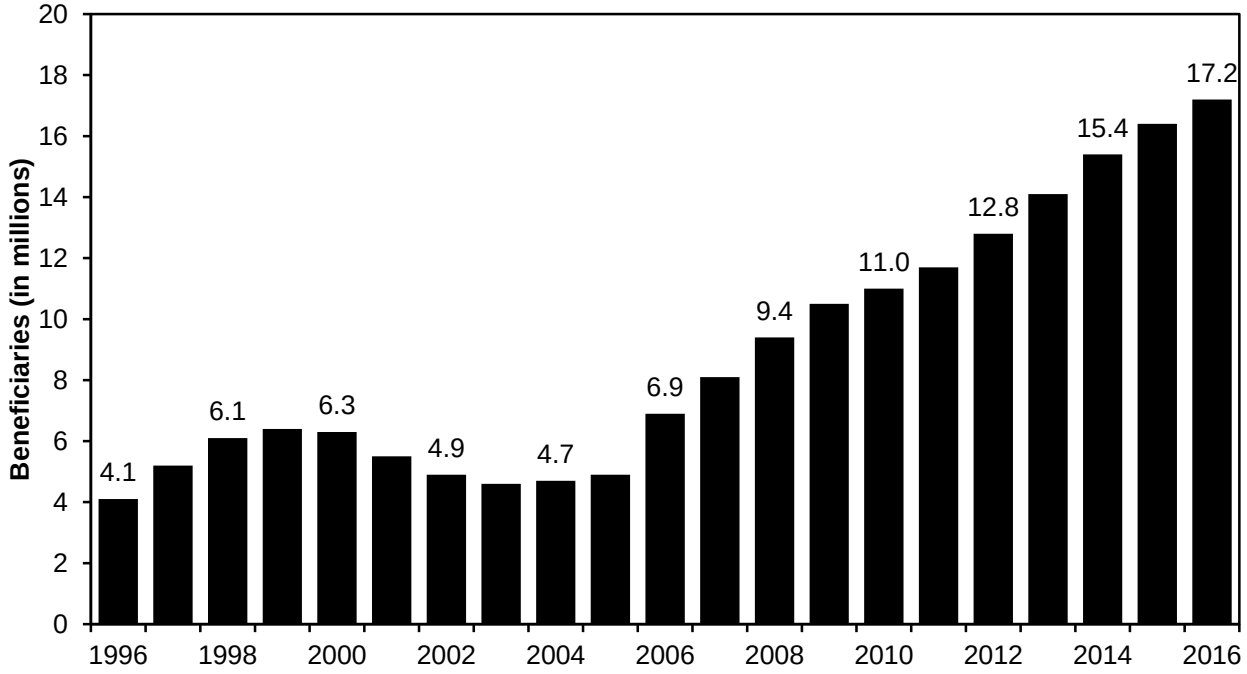
Source: MedPAC analysis of cost report data from CMS.

- After implementation of the prospective payment system on October 1, 2002, LTCHs' Medicare margins increased rapidly for all LTCH provider types, climbing to 11.9 percent in 2005 (data not shown). Margins then fell as growth in payments per case leveled off.
- From 2009 through 2012, LTCH margins climbed as providers consistently held cost growth below that of payment growth.
- In 2013, the aggregate LTCH margin fell from 7.5 percent (in 2012) to 6.8 percent, primarily because of the first year of a three-year phase-in of the downward adjustment for budget neutrality and the effect of sequestration beginning on April 1, 2013. The aggregate LTCH margin fell further to 4.9 percent in 2014.
- Financial performance in 2014 varied across LTCHs. The aggregate Medicare margin for for-profit LTCHs (which accounted for 85 percent of all Medicare discharges from LTCHs) decreased from 8.7 percent in 2013 to 6.9 percent in 2014. The aggregate margin for nonprofit LTCHs fell from –1.4 percent in 2013 to –2.8 percent in 2014. These declines were from cost growth that exceeded growth in payments.

SECTION 9

Medicare Advantage

Chart 9-1. Enrollment in MA plans, 1996–2016



Note: MA (Medicare Advantage).

Source: Medicare managed care contract reports and monthly summary reports, CMS.

- Medicare enrollment in MA plans that are paid on an at-risk capitated basis is at an all-time high, at 17.2 million enrollees (31 percent of all Medicare beneficiaries). Enrollment rose rapidly throughout the 1990s, peaking at 6.4 million enrollees in 1999, but then declined to a low of 4.6 million enrollees in 2003. MA enrollment has increased steadily since 2003. The Medicare program paid the MA plans about $170 billion in 2015 to cover Part A and Part B services for MA enrollees.

Chart 9-2. MA plans available to almost all Medicare beneficiaries

	CCPs					
	HMO or local PPO	Regional PPO	Any CCP	PFFS	Any MA plan	Average plan offerings per county
2009	88%	91%	99%	100%	100%	34
2010	91	86	99	100	100	21
2011	92	86	99	63	100	12
2012	93	76	99	60	100	12
2013	95	71	99	59	100	12
2014	95	71	99	53	100	10
2015	95	70	98	47	99	9
2016	96	73	99	47	99	9

Note: MA (Medicare Advantage), CCP (coordinated care plan), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). These data do not include plans that have restricted enrollment or are not paid based on the MA plan bidding process (special needs plans, cost plans, employer-only plans, and certain demonstration plans).

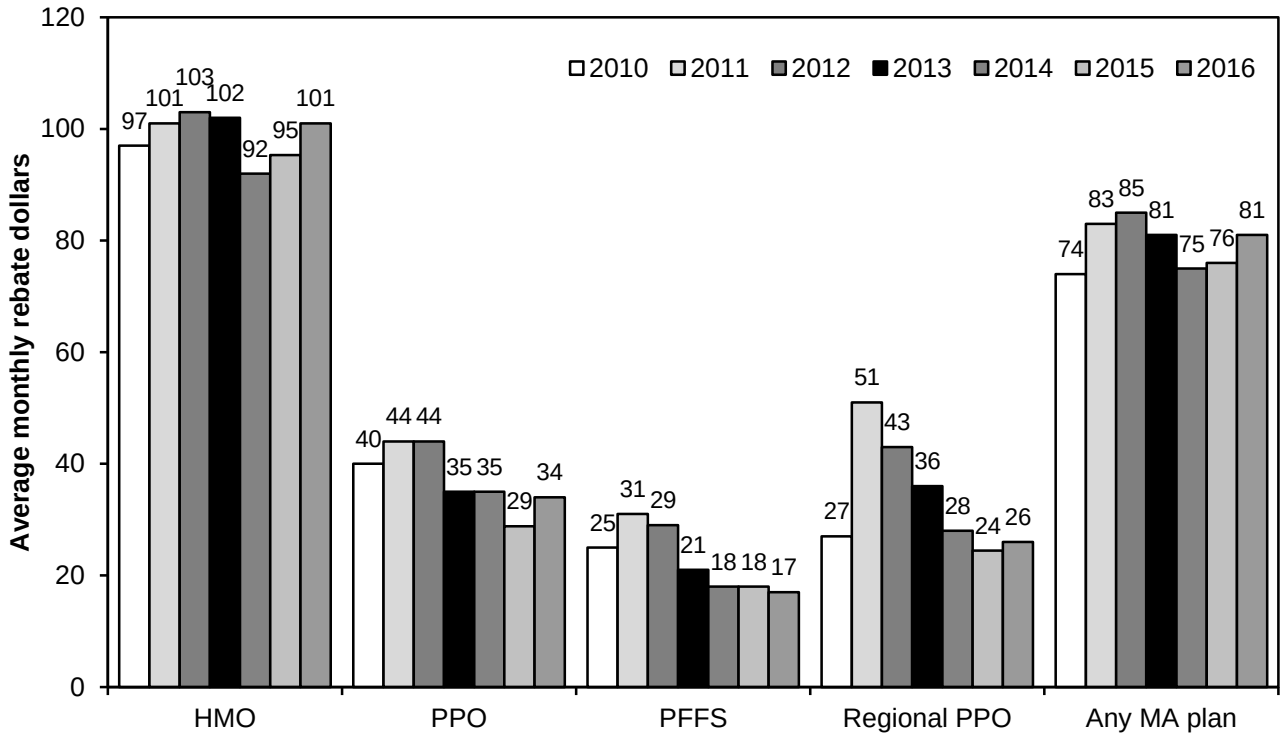
Source: MedPAC analysis of plan bid data from CMS.

- There are four types of MA plans, three of which are CCPs. Local CCPs include HMOs and local PPOs, which have comprehensive provider networks and limit or discourage use of out-of-network providers. Local CCPs may choose which individual counties to serve. Regional PPOs cover entire state-based regions and have networks that may be looser than those required of local PPOs. Since 2011, PFFS plans (but not CCPs) are required to have networks in areas with two or more CCPs. In other areas, PFFS plans are not required to have networks, and enrollees are free to use any Medicare provider.

- Local CCPs are available to 96 percent of Medicare beneficiaries in 2016, and regional PPOs are available to 73 percent of beneficiaries; the availability of both plan types has increased from 2013. For the past 10 years, almost all Medicare beneficiaries have had MA plans available: 99 percent in 2016, up from 84 percent in 2005 (2005 data not shown).

- The number of plans from which beneficiaries may choose in 2016 is the same as last year. In 2016, beneficiaries can choose from an average of 9 plans operating in their counties (this figure is the simple average of plans per county; if counties were enrollee weighted, the average would be 18). This availability has decreased from the peak in 2009, reflecting network requirements for PFFS plans and CMS's 2010 effort to reduce the number of duplicative plans and plans with low enrollment. The decrease in plan choices from 2010 to 2016 was due to the reduction in the number of PFFS and regional PPO plans.

Chart 9-3. Average monthly rebate dollars, by plan type, 2010–2016



Note: HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service), MA (Medicare Advantage). Employer group waiver and special needs plans are excluded.

Source: MedPAC analysis of bid and plan finder data from CMS.

- Perhaps the best summary measure of plan generosity is the average rebate, which plans receive to provide additional benefits. Plans are awarded rebates for bidding under their benchmarks. The rebates must be returned to the plan members in the form of extra benefits. The extra benefits may be supplemental benefits, lower cost sharing, or lower premiums.

- HMOs have had, by far, the highest rebates because they tend to bid lower than other types of plans. Average rebates for HMOs have remained relatively stable over this period.

- For the three non-HMO categories, the rebates rose from 2010 to 2011 and declined through 2015.

- For all categories of non-PFFS plans, the rebates rose from 2015 to 2016.

Chart 9-4. Changes in enrollment vary among major plan types

Plan type	Total enrollees (in thousands) February 2012	February 2013	February 2014	February 2015	February 2016	Percent change 2015–2016
Local CCPs	11,382	12,580	13,809	14,824	15,588	5%
Regional PPOs	930	1,060	1,221	1,237	1,315	6
PFFS	518	417	309	260	238	–8

Note: CCP (coordinated care plan), PPO (preferred provider organization), PFFS (private fee-for-service). Local CCPs include health maintenance organizations and local PPOs.

Source: CMS health plan monthly summary reports.

- Enrollment in local CCPs grew by 5 percent over the past year. Enrollment in regional PPOs grew by 6 percent, while enrollment in PFFS plans continued to decline. Combined enrollment in the three types of plans grew by 5 percent from February 2015 to February 2016.

Chart 9-5. MA and cost plan enrollment by state and type of plan, 2016

State or territory	Medicare eligibles (in thousands)	Distribution (in percent) of enrollees by plan type					
		HMO	Local PPO	Regional PPO	PFFS	Cost	Total
U.S. total	55,576	20%	8%	2%	0%	1%	32%
Alabama	966	16	9	2	0	0	27
Alaska	83	0	0	0	0	0	0
Arizona	1,145	35	2	1	0	0	39
Arkansas	600	9	3	5	3	0	21
California	5,709	38	1	0	0	0	39
Colorado	798	30	3	0	0	3	37
Connecticut	635	23	3	1	0	0	26
Delaware	183	5	4	0	0	0	9
Florida	4,060	29	3	9	0	0	41
Georgia	1,541	11	15	7	1	0	33
Hawaii	248	19	26	1	0	0	46
Idaho	286	18	14	0	0	0	33
Illinois	2,085	9	10	0	0	0	20
Indiana	1,161	6	14	4	0	0	24
Iowa	578	5	11	0	0	2	18
Kansas	492	6	7	0	1	0	15
Kentucky	869	6	15	6	0	0	27
Louisiana	802	27	2	3	0	0	31
Maine	309	15	8	0	1	0	24
Maryland	942	3	2	0	0	4	10
Massachusetts	1,229	15	4	1	0	0	20
Michigan	1,915	13	18	1	0	0	33
Minnesota	922	13	4	0	0	39	56
Mississippi	564	8	3	4	0	0	16
Missouri	1,145	19	6	3	1	0	30
Montana	204	1	18	0	1	0	20
Nebraska	317	7	3	0	2	1	13
Nevada	458	31	4	0	0	0	35
New Hampshire	267	4	2	0	1	0	8
New Jersey	1,506	12	4	0	0	0	16
New Mexico	377	20	11	0	0	0	32
New York	3,369	27	6	3	1	0	37
North Carolina	1,788	14	15	2	0	0	31
North Dakota	119	0	2	0	0	17	19
Ohio	2,171	18	13	3	0	1	35
Oklahoma	684	11	5	1	1	0	18
Oregon	763	28	16	0	0	0	45
Pennsylvania	2,549	25	14	0	0	0	40
Puerto Rico	777	70	3	0	0	0	73
Rhode Island	205	33	1	1	0	0	36
South Carolina	953	7	5	11	1	0	24
South Dakota	157	0	5	0	0	16	21
Tennessee	1,245	25	10	1	0	0	36
Texas	3,683	19	8	4	1	1	32
Utah	350	28	6	0	0	0	35
Vermont	133	1	2	4	1	0	8
Virgin Islands	20	0	0	0	0	0	1
Virginia	1,366	6	4	2	2	2	17
Washington	1,205	26	4	0	0	0	30
Washington, D.C.	89	2	5	0	0	7	14
West Virginia	418	2	21	1	1	2	28
Wisconsin	1,061	19	12	2	1	5	39
Wyoming	97	0	1	0	2	1	3

Note: MA (Medicare Advantage), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). Cost plans are not MA plans; they submit cost reports rather than bids to CMS. Component percentages may not sum to totals due to rounding.

Source: CMS enrollment and population data 2016.

Chart 9-6. MA plan benchmarks, bids, and Medicare program payments relative to FFS spending, 2016

	All plans	HMOs	Local PPOs	Regional PPOs	PFFS
Benchmarks/FFS	107%	106%	109%	103%	111%
Bids/FFS	94	90	105	98	108
Payments/FFS	102	101	108	101	110

Note: MA (Medicare Advantage), FFS (fee-for-service), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service).

Source: MedPAC analysis of plan bid data from CMS October 2015.

- Since 2006, plan bids have partly determined the Medicare payments they receive. Plans bid to offer Part A and Part B coverage to Medicare beneficiaries (Part D coverage is bid separately). The bid includes plan administrative cost and profit. CMS bases the Medicare payment for a private plan on the relationship between its bid and its applicable benchmark.

- The benchmark is an administratively determined bidding target. Legislation established the formula, being phased in by 2017, for calculating benchmarks in each county, based on percentages (ranging from 95 percent to 115 percent) of each county's per capita Medicare spending.

- If a plan's bid is above the benchmark, then the plan receives the benchmark as payment from Medicare, and enrollees have to pay an additional premium that equals the difference. If a plan's bid is below the benchmark, the plan receives its bid plus a "rebate," defined by law as a percentage of the difference between the plan's bid and its benchmark. The percentage is based on the plan's quality rating, and it ranges from 50 percent to 70 percent. The plan must then return the rebate to its enrollees in the form of supplemental benefits, lower cost sharing, or lower premiums.

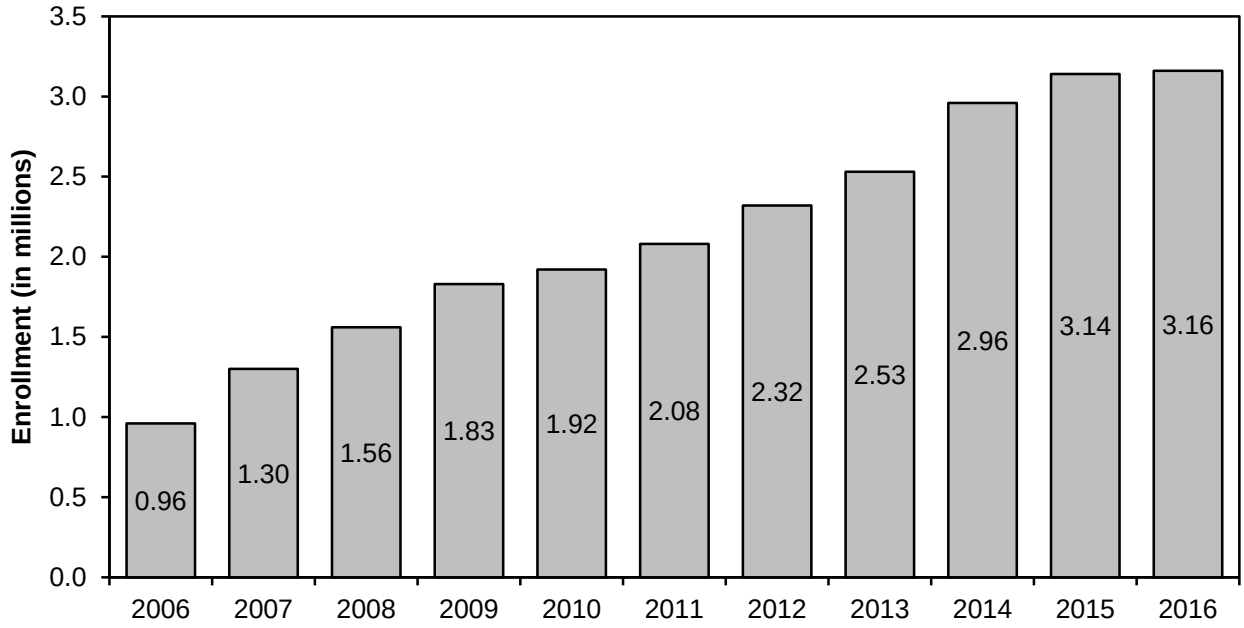
- We estimate that MA benchmarks average 107 percent of FFS spending when weighted by MA enrollment. The ratio varies by plan type because different types of plans tend to draw enrollment from different types of geographical areas.

- Plans' enrollment-weighted bids average 94 percent of FFS spending in 2016. We estimate that HMOs bid an average of 90 percent of FFS spending, while bids from other plan types average at least 98 percent of FFS spending. These numbers suggest that HMOs can provide the same services for less than FFS in the areas where they bid, while most other plan types tend to charge more.

- We project that 2016 MA payments will be 102 percent of FFS spending. It is likely this number will decline further over the next year as benchmarks are reduced relative to FFS levels to complete the transition to the requirements under the Patient Protection and Affordable Care Act of 2010.

- The ratio of payments relative to FFS spending varies by the type of MA plan. HMO and regional PPO payments are estimated to be 101 percent of FFS, while payments to PFFS and local PPOs average 110 percent and 108 percent of FFS, respectively.

Chart 9-7. Enrollment in employer group MA plans, 2006–2016



Note: MA (Medicare Advantage). Enrollment numbers are as of May for 2006, November for 2007, and February for 2008 through 2016.

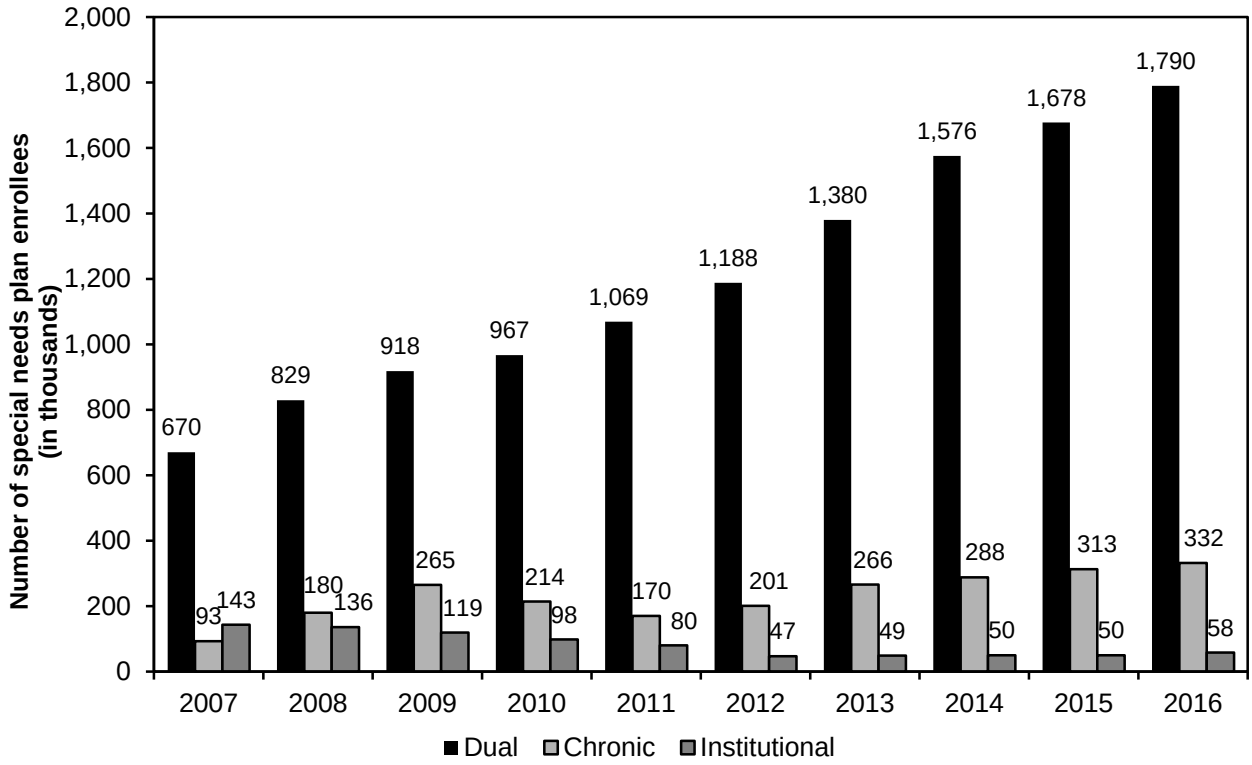
Source: CMS enrollment data.

- While most MA plans are available to any Medicare beneficiary residing in a given area, some MA plans are available only to retirees whose Medicare coverage is supplemented by their former employer or union. These plans are called employer group plans. Such plans are usually offered through insurers and are marketed to groups formed by employers or unions rather than to individual beneficiaries.

- As of February 2016, about 3 million enrollees were in employer group plans, or about 18 percent of all MA enrollees.

- Our analysis of MA bid data shows that employer group plans on average have bids that are higher relative to FFS spending than individual plans, meaning that group plans appear to be less efficient than individual market MA plans. Employer group plans bid an average of 103 percent of FFS, compared with 92 percent of FFS for individual plans (data not shown).

Chart 9-8. Number of special needs plan enrollees, 2007–2016



Source: CMS special needs plans comprehensive reports, May 2007, April 2008–2016.

- The Congress created special needs plans (SNPs) as a new Medicare Advantage (MA) plan type in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 to provide a common framework for the existing plans serving special needs beneficiaries and to expand beneficiaries' access to and choice among MA plans.

- SNPs were originally authorized for five years. SNP authority was extended several times, often subject to new requirements. Absent further congressional action, SNP authority will expire at the end of 2018.

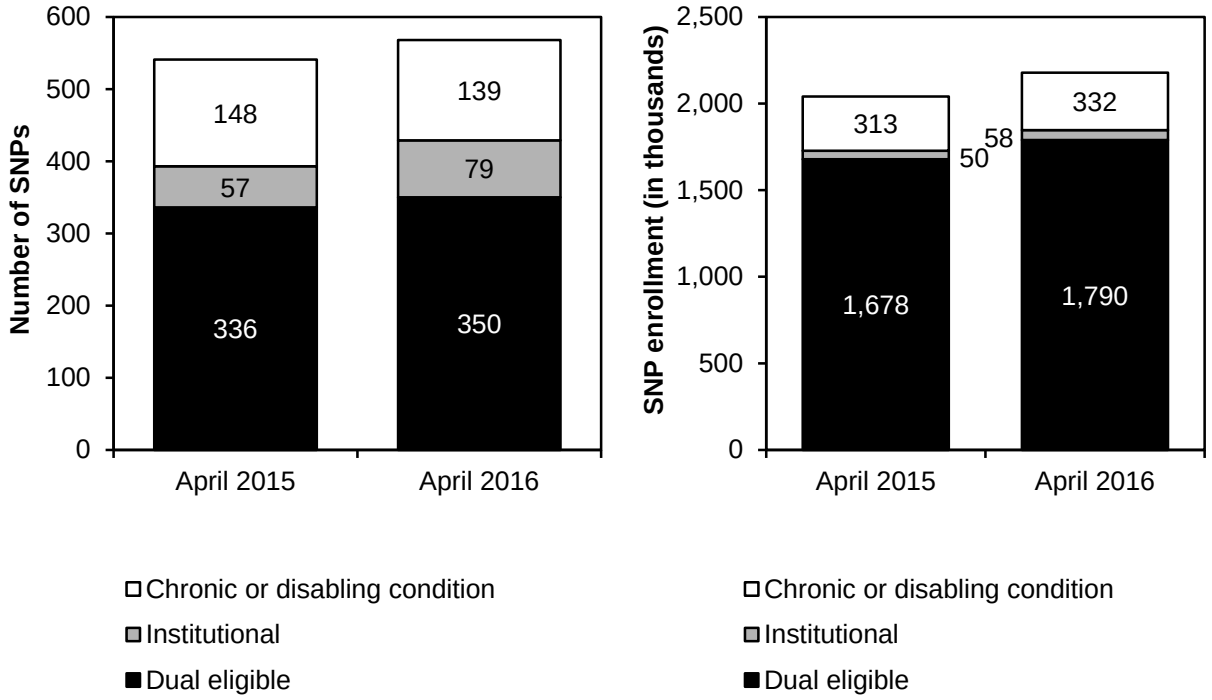
- CMS approves three types of SNPs: dual-eligible SNPs enroll only beneficiaries dually entitled to Medicare and Medicaid, chronic condition SNPs enroll only beneficiaries who have certain chronic or disabling conditions, and institutional SNPs enroll only beneficiaries who reside in institutions or are nursing-home certified.

- Enrollment in dual-eligible SNPs has grown continuously and is about 1.8 million in 2016.

- Enrollment in chronic condition SNPs has fluctuated as plan requirements have changed, but has risen annually since 2011.

- Enrollment in institutional SNPs declined steadily through 2012 but has held steady over the last few years and increased in 2016.

Chart 9-9. Number of SNPs and SNP enrollment rose from 2015 to 2016



Note: SNP (special needs plan).

Source: CMS special needs plans comprehensive reports, April 2015 and 2016.

- The number of SNPs increased by 5 percent from April 2015 to April 2016, and the number of SNP enrollees increased by 7 percent. All three types of SNPs showed increases in the number of plans and enrollment in those plans, except that the number of chronic disease SNPs decreased by about 6 percent.

- In 2016, most SNPs (62 percent) are for dual-eligible beneficiaries, while 24 percent are for beneficiaries with chronic conditions, and 14 percent are for beneficiaries who reside in institutions (or reside in the community but have a similar level of need).

- Enrollment in SNPs has grown from 0.9 million in May 2007 (not shown) to 2.2 million in April 2016.

- The availability of SNPs varies by type of special needs population served (data not shown). In 2016 83 percent of beneficiaries reside in areas where SNPs serve dual-eligible beneficiaries (up from 82 percent in 2015), 50 percent live where SNPs serve institutionalized beneficiaries (up from 47 percent in 2015), and 54 percent live where SNPs serve beneficiaries with chronic conditions (down from 55 percent).

Chart 9-10. Twenty most common condition categories among MA beneficiaries, as defined in the CMS–HCC model, 2014

Conditions (defined by HCC)	Percent of beneficiaries with listed condition	Percent of beneficiaries with listed condition and no others
Vascular disease	16.4%	2.0%
Diabetes with chronic complications	14.4	2.6
COPD	14.1	2.1
Diabetes without complications	13.2	4.8
Specified heart arrhythmias	11.2	1.4
CHF	11.1	0.6
Major depressive, bipolar, and paranoid disorders	8.7	1.6
Morbid obesity	5.8	0.7
Rheumatoid arthritis and inflammatory connective tissue disease	5.5	1.0
Breast, prostate, colorectal, and other cancers and tumors	5.2	1.5
Angina pectoris	3.5	0.3
Coagulation defects and other specified hematological disorders	3.5	0.3
Acute renal failure	2.8	0.1
Other significant endocrine and metabolic disorders	2.6	0.3
Ischemic or unspecified stroke	2.6	0.2
Seizure disorders and convulsions	2.5	0.3
Drug/alcohol dependence	2.2	0.2
Cardio-respiratory failure and shock	2.1	0.0
Chronic ulcer of skin, except pressure	1.8	0.1
Colorectal, bladder, and other cancers	1.7	0.3

Note: MA (Medicare Advantage), CMS–HCC (CMS–hierarchical condition category), COPD (chronic obstructive pulmonary disease), CHF (congestive heart failure). There are some differences between the conditions in this table and the analogous table in our 2015 data book. Most of these differences reflect a 2014 change in the condition categories that CMS used in the CMS–HCC model.

Source: MedPAC analysis of Medicare data files from Acumen LLC.

- CMS uses the CMS–HCC model to risk adjust capitated payments to MA plans so that payments better reflect the clinical needs of MA enrollees given the number and severity of their clinical conditions. The CMS–HCC model uses beneficiaries' conditions, which are collected into HCCs, to adjust the capitated payments.
- CMS previously used a version of the CMS–HCC model that had 70 HCCs, but this analysis uses a newer model that has 79 HCCs. Vascular disease is the most common HCC, but two diabetes HCCs combined are more common than vascular disease. Over 27 percent of MA enrollees are in one of those two diabetes HCCs.

Chart 9-11. Medicare private plan enrollment patterns, by age and Medicare–Medicaid dual-eligible status, December 2014

	As percent of Medicare population	Percent of category in FFS	Percent of category in plans
All beneficiaries	**100%**	**70%**	**30%**
Aged (65 or older)	84	69	31
Under 65	16	76	24
Non–dual eligible	**82**	**70**	**30**
Aged (65 or older)	73	69	31
Under 65	9	76	24
Dual eligible	**18**	**70**	**30**
Aged (65 or older)	10	64	36
Under 65	8	75	25
Dual-eligible beneficiaries by category (all ages)			
Full dual eligibility	**13**	**74**	**26**
Beneficiaries with partial dual eligibility			
QMB only	2	66	34
SLMB only	2	58	42
QI	1	54	46

Note: FFS (fee-for-service), QMB (qualified Medicare beneficiary), SLMB (specified low-income beneficiary), QI (qualified individual). Dual-eligible beneficiaries are eligible for Medicare and Medicaid. See accompanying text for an explanation of the categories of dual-eligible beneficiaries. "Plans" include Medicare Advantage plans as well as cost-reimbursed plans. Data exclude Puerto Rico because of the inability to determine specific dual-eligible categories. As of December 2014, Puerto Rico had 532,000 Medicare Advantage enrollees, which is nearly three-quarters of the Medicare-eligible population. Dual-eligible special needs plans in Puerto Rico had 272,000 enrollees in December 2014.

Source: MedPAC analysis of 2014 denominator and common Medicare environment files.

- Recent levels of Medicare plan enrollment among the dually eligible represent a significant increase over earlier years. In 2004, only 1 percent of dual-eligible beneficiaries were enrolled in plans, compared with 16 percent of non-dual-eligible beneficiaries. At the end of 2012, 23 percent of dual-eligible beneficiaries were in Medicare private plans, compared with 30 percent at the end of 2014.

- A substantial share of dual-eligible beneficiaries (43 percent (not shown in table)) are under the age of 65 and entitled to Medicare on the basis of disability or end-stage renal disease. Beneficiaries under age 65 are less likely than aged beneficiaries to enroll in Medicare plans (24 percent vs. 31 percent).

- Dual-eligible beneficiaries who have full dual eligibility—that is, those who have coverage for their Medicare out-of-pocket costs (premiums and cost sharing) as well as coverage for services such as long-term care services and supports—are less likely to enroll in private Medicare plans than beneficiaries with "partial" dual eligibility. Full dual-eligibility categories consist of beneficiaries with coverage through state Medicaid programs as well as certain QMBs and SLMBs who also have Medicaid coverage for services. The latter two categories are referred to as QMB-Plus and SLMB-Plus beneficiaries. Beneficiaries with partial dual eligibility have coverage for Medicare premiums (through the QI or SLMB program) or premiums and Medicare cost sharing, in the case of the QMB program. SLMB-only and QI beneficiaries have higher rates of plan enrollment (42 percent and 46 percent, respectively) than any other category shown in this chart, and the rates are higher than the average rate (30 percent) across all Medicare beneficiaries.

Chart 9-12. Distribution of MA plans and enrollment by CMS overall star ratings, March 2016

Plans and enrollment	Year 2016 star ratings: Number of stars						
	5	4.5	4	3.5	3	2.5	Any star rating
All plan types							
Number of plans	12	65	102	110	66	11	366
As share of rated plan enrollees	10%	28%	34%	19%	8%	1%	100%
HMOs							
Number of plans	12	45	72	79	49	11	268
As share of HMO enrollees	14%	23%	35%	19%	7%	1%	100%
Local PPOs							
Number of plans	0	20	27	24	11	N/A	82
As share of local PPO enrollees	N/A	53%	40%	5%	2%	N/A	100%
Regional PPOs							
Number of plans	0	0	1	4	5	N/A	10
As share of regional PPO enrollees	N/A	N/A	2%	63%	35%	N/A	100%
PFFS							
Number of plans	0	0	2	3	1	0	6
As share of PFFS enrollees	N/A	N/A	69%	24%	7%	N/A	100%

Note: MA (Medicare Advantage), PPO (preferred provider organization), N/A (not applicable), PFFS (private fee-for-service). For purposes of this table and the accompanying text, a plan is an MA contract, which can consist of several options with different benefit packages that are also referred to as "plans." Cost-reimbursed HMO plans are included in the data. No plan had an overall star rating below 2.5. Numbers may not sum to 100 percent due to rounding; enrollment totals are rounded results of the sum of unrounded numbers.

Source: MedPAC analysis of CMS star ratings and enrollment data, 2016.

- The star rating system is a composite measure of clinical processes and outcomes, patient experience measures, and measures of a plan's administrative performance. The overall star rating measures performance on Part C measures and Part D measures.

- The average overall star rating across all plans is 3.75, or 4.05 on an enrollment-weighted basis. There are 132 plans, with nearly 560,000 enrollees, that do not have a star rating because they are too new to be rated or there is insufficient information on which to base a rating. (In addition, certain plans, such as the Medicare–Medicaid plans participating in the financial alignment demonstration, are not included in the star rating system.)

(Chart continued next page)

Chart 9-12. Distribution of MA plans and enrollment by CMS overall star ratings, March 2016 (continued)

- Under the statutory provisions that introduced quality bonus payments beginning in 2012, plans with ratings of 4 stars or above receive bonus payments in the form of an increase in their benchmarks. Plan star ratings also determine the level of rebate dollars, with higher rated plans able to use a higher proportion of the difference between the plan bid and benchmark amounts to provide extra benefits to enrollees.

- Plans with a 5-star rating are able to enroll beneficiaries outside of the annual election period, on a year-round basis. The 5-star status of such plans is highlighted in the Medicare.gov website's Medicare Plan Finder.

- HMOs are the only plan type for which there are 5-star plans. Ten MA HMO plans and two cost-reimbursed HMO plans have 5-star ratings. The highest star rating attained by any local PPO is 4.5, whereas the highest rating for a regional PPO or a PFFS plan is 4. The majority of enrollees in regional PPO plans are in plans with a rating below 4 stars.

- Plans with ratings below 3 stars have an indicator of their status in the Medicare Plan Finder. CMS has the authority to terminate plans that have had three consecutive years of poor performance (a star rating below 3 stars) in either their MA or Part D performance.

- The criteria for determining plan star ratings change from year to year. Therefore, plan ratings across years are not entirely comparable. Beginning in 2012, a weighting approach was used that assigns greater weight to outcome measures and patient experience measures, with less weight assigned to process and administrative measures. In 2016, excluding two composite improvement measures, 60 percent of the weight of measures reflects Part C and Part D clinical quality measures (outcomes as well as clinical process measures); 22 percent of the weight represents patient experience measures; and the remaining 18 percent are administrative measures.

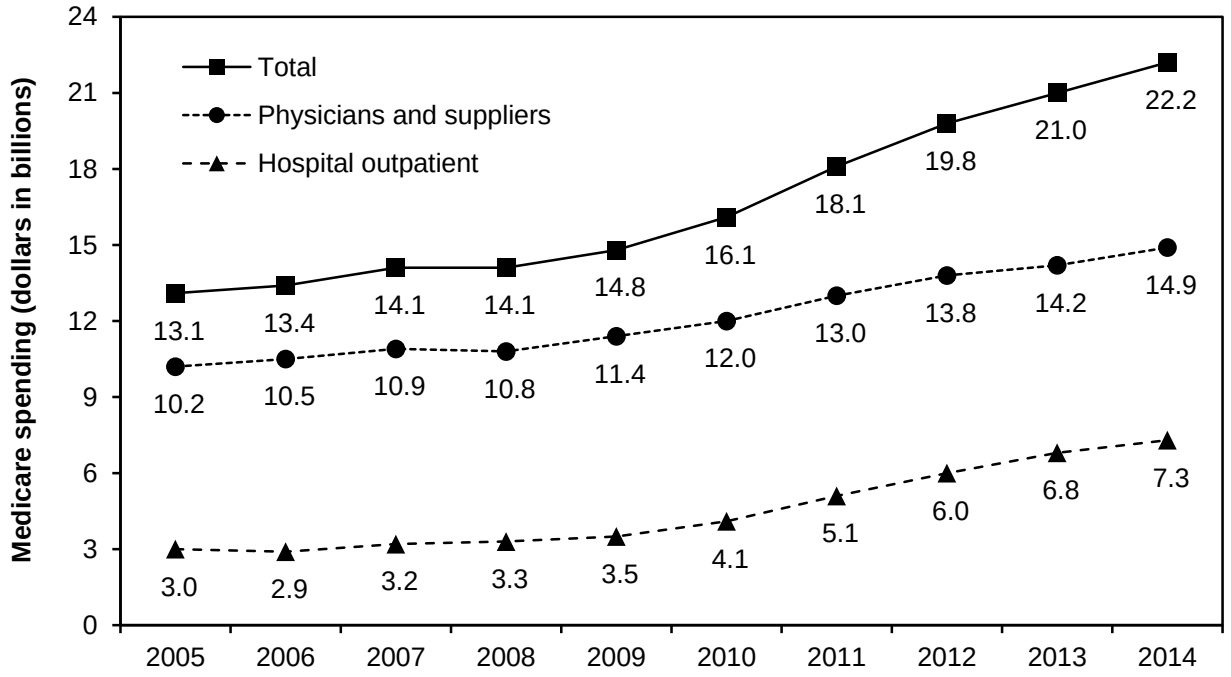
- The two year-over-year composite improvement measures—one each for Part C and Part D—account for 13 percent of the total weight for determining a Medicare Advantage Prescription Drug plan's overall star rating in 2016. These two measures were introduced in the 2013 star rating year, and as new measures were assigned a weight of 1 (the lowest weight of the possible weights of 1, 1.5, or 3). In 2014, the measures had a weight of 3 (the same weight as an outcome measure). For 2015 and 2016, the measures have a weight of 5, while all other measures remain at 1, 1.5, or 3. For high-performing plans that have little room for improvement in their measures, the plan's overall star rating can be computed without including the improvement measure.

- Another factor that can increase a plan's overall star rating is a reward factor that CMS adds to the overall star rating for plans that "have both high and stable relative performance."

SECTION 10

Prescription drugs

Chart 10-1. Medicare spending for Part B drugs furnished by physicians, suppliers, and hospital outpatient departments



Note: Data include Part B–covered drugs furnished by physicians, suppliers, and hospital outpatient departments, and exclude those furnished by dialysis facilities. "Medicare spending" includes program payments and beneficiary cost sharing. Data reflect all Part B drugs regardless of whether they are paid based on the average sales price plus 6 percent or another payment formula. Hospital outpatient spending only reflects drugs that are separately paid in that year and excludes critical access hospitals and hospitals located in Maryland, Guam, Samoa, and Saipan. Components may not sum to total due to rounding.

Source: MedPAC analysis of Medicare claims data from CMS.

- Spending by the Medicare program and beneficiaries on Part B drugs totaled about $22.2 billion in 2014, an increase of about 5.8 percent from 2013. Of this total, physicians and suppliers accounted for about two-thirds ($14.9 billion) and hospital outpatient departments (HOPDs) about one-third ($7.3 billion).

- Medicare's average sales price payment system for drugs began in 2005. Between 2005 and 2014, total spending grew at an average annual rate of 6 percent. Spending growth was slower from 2005 to 2009 (about 3.1 percent per year on average) and was more rapid from 2009 to 2014 (about 8.4 percent per year on average).

- Part B drug spending has been growing more rapidly for HOPDs than for physicians and suppliers. Between 2009 and 2014, Part B drug spending grew at an average annual rate of about 16.1 percent for HOPDs and 5.6 percent for physicians and suppliers.

- Part B drug spending trends can be affected by year-to-year changes in Medicare policy concerning which drugs are separately paid and which are packaged into payment for other services under the hospital outpatient prospective payment system (OPPS). For example, in 2014, the OPPS expanded packaging to include certain drugs that previously had been separately paid. Part B drug spending for HOPDs grew about 7.8 percent between 2013 and 2014. However, if drugs that had a change in their status between 2013 and 2014 (from separately paid to packaged or vice versa) are excluded from the calculation, then HOPD Part B drug spending grew at a rate of 11.4 percent between 2013 and 2014 (data not shown).

Chart 10-2. Top 10 Part B drugs furnished by physicians, suppliers, and hospital outpatient departments (dollars in millions), 2013 and 2014

	Total Part B drug spending		Physician and supplier Part B drug spending		Hospital outpatient Part B drug spending	
Part B drug	2013	2014	2013	2014	2013	2014
Rituximab	$1,507	$1,503	$859	$830	$648	$673
Ranibizumab	1,353	1,332	1,303	1,284	51	48
Aflibercept	1,078	1,296	1,012	1,216	66	80
Infliximab	1,101	1,176	731	758	370	418
Pegfilgrastim	1,099	1,174	615	625	484	549
Bevacizumab	1,035	1,064	592	578	444	486
Denosumab	631	768	420	494	211	274
Trastuzumab	503	561	264	282	239	279
Pemetrexed	548	560	290	281	259	279
Bortezomib	450	472	275	276	175	196
Total spending, top 10 Part B drugs	**9,305**	**9,905**	**6,359**	**6,623**	**2,946**	**3,281**
Total spending, all Part B drugs	**20,987**	**22,205**	**14,213**	**14,906**	**6,774**	**7,299**

Note: The 10 drugs shown in the chart reflect the top 10 Part B drug billing codes with the highest Medicare expenditures in 2014. Data for 2013 are also shown for comparison. Data include Part B–covered drugs furnished by physicians, suppliers, and hospital outpatient departments but exclude those furnished by dialysis facilities. "Drug spending" includes Medicare program payments and beneficiary cost sharing. Data reflect all Part B drugs regardless of whether they are paid based on the average sales price plus 6 percent or another payment formula. Hospital outpatient spending only reflects drugs that are separately paid in that year and excludes critical access hospitals and hospitals located in Maryland, Guam, Samoa, and Saipan. Components may not sum to total due to rounding.

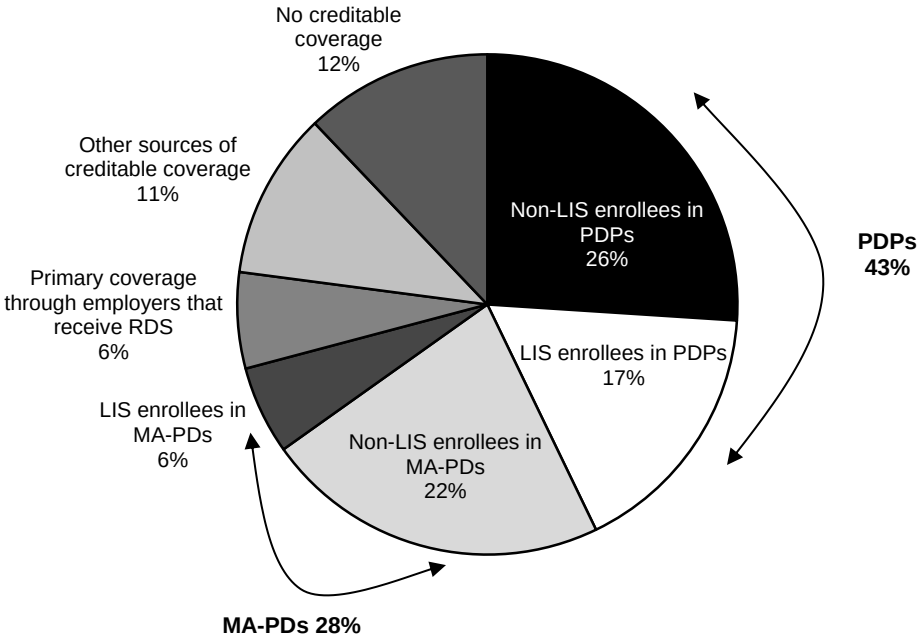
Source: MedPAC analysis of Medicare claims data from CMS.

- Medicare has more than 500 billing codes for Part B drugs, but spending is very concentrated. Medicare spending (including cost sharing) on the top 10 drugs, 9 of which were biologics, totaled nearly $10 billion in 2014, about 45 percent of all Part B drug spending that year.

- Many of the top 10 drugs are used to treat cancer or its side effects (rituximab, pegfilgrastim, bevacizumab, pemetrexed, denosumab, trastuzumab, and bortezomib). Drugs used to treat age-related macular degeneration (ranibizumab, aflibercept, and bevacizumab) and rheumatoid arthritis (rituximab and infliximab) are also included in the top 10.

- Medicare spending on immune globulin (for which there are several products billed through separate billing codes) amounted to nearly $1.1 billion in 2014 (data not shown).

Chart 10-3. In 2013, 88 percent of Medicare beneficiaries were enrolled in Part D plans or had other sources of creditable drug coverage



Note: LIS (low-income [drug] subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), RDS (retiree drug subsidy). "Creditable coverage" means the value of drug benefits is equal to or greater than that of the basic Part D benefit.

Source: MedPAC analysis of the Medicare Current Beneficiary Survey Access to Care file 2013.

- In 2013, more than three-quarters of Medicare beneficiaries either signed up for Part D plans or had prescription drug coverage through employer-sponsored plans under Medicare's RDS. (If an employer agrees to provide primary drug coverage to its retirees with a benefit value that is equal to or greater than that of Part D (called "creditable coverage"), Medicare provides the employer with a tax-free subsidy for 28 percent of each eligible individual's drug costs that fall within a specified range of spending.)

- The share of Medicare beneficiaries with primary coverage through employers that received the RDS (6 percent of beneficiaries) was substantially smaller than in 2012 (12 percent, data not shown) because of a shift of enrollees into Part D employer group waiver plans. That shift reflects changes made by the Patient Protection and Affordable Care Act of 2010 that increased the generosity of the Part D benefit by phasing out the coverage gap and by altering the tax treatment of drug expenses covered by the RDS.

- About 23 percent of Medicare beneficiaries received Part D's LIS in 2013. Of all LIS beneficiaries, about three-fourths of them (17 percent of all Medicare beneficiaries) were enrolled in stand-alone PDPs, and the remaining beneficiaries (6 percent) were in MA–PD plans.

(Chart continued next page)

Chart 10-3. In 2013, 88 percent of Medicare beneficiaries were enrolled in Part D plans or had other sources of creditable drug coverage (continued)

- Other enrollees in stand-alone PDPs accounted for 26 percent of all Medicare beneficiaries. Another 22 percent of non-LIS enrollees were in MA–PD plans.

- Eleven percent of Medicare beneficiaries had creditable drug coverage, but that coverage did not affect Medicare program spending. Examples of other sources of creditable coverage include the Federal Employees Health Benefits program, TRICARE, Department of Veterans Affairs, and employers not receiving the RDS.

- About 12 percent of Medicare beneficiaries had no drug coverage or coverage that was less generous than Part D's defined standard benefit.

Chart 10-4. Changes in parameters of the Part D defined standard benefit over time

	2006	2014	2015	2016	Cumulative change 2006–2016
Deductible	$250.00	$310.00	$320.00	$360.00	44%
Initial coverage limit	2,250.00	2,850.00	2,960.00	3,310.00	47%
Annual out-of-pocket threshold	3,600.00	4,550.00	4,700.00	4,850.00	35%
Total covered drug spending at annual out-of-pocket threshold	5,100.00	6,690.77	7,061.76	7,515.22	47%
Minimum cost sharing above the annual out-of-pocket threshold					
Copay for generic/preferred multisource drugs	2.00	2.55	2.65	2.95	48%
Copay for other prescription drugs	5.00	6.35	6.60	7.40	48%

Note: Under Part D's defined standard benefit, the enrollee pays the deductible and then 25 percent of covered drug spending (75 percent paid by the plan) until total covered drug spending reaches the initial coverage limit (ICL). Before 2011, enrollees exceeding the ICL were responsible for 100 percent of covered drug spending up to the annual out-of-pocket threshold. Beginning in 2011, enrollees pay reduced cost sharing in the coverage gap. For 2011 and later years, the amount of total covered drug spending at the annual out-of-pocket threshold depends on the mix of brand and generic drugs filled during the coverage gap. The amounts shown are for individuals not receiving Part D's low-income subsidy who have no other source of supplemental coverage. Cost sharing paid by most sources of supplemental coverage does not count toward this threshold. Above the out-of-pocket limit, the enrollee pays 5 percent coinsurance or the copays shown above, whichever is greater.

Source: CMS Office of the Actuary.

- The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 specified a defined standard benefit structure for Part D. In 2016, the standard benefit has a $360 deductible, 25 percent coinsurance on covered drugs until the enrollee reaches $3,310 in total covered drug spending, and then a coverage gap until out-of-pocket spending reaches the annual threshold. Before 2011, enrollees were responsible for paying the full discounted price of covered drugs filled during the coverage gap. Because of changes made by the Patient Protection and Affordable Care Act of 2010, enrollees pay reduced cost sharing for drugs filled in the coverage gap. In 2016, the cost sharing for drugs filled during the gap phase is 45 percent for brand-name drugs and 58 percent for generic drugs. Enrollees with drug spending that exceeds the annual threshold pay the greater of $2.95 to $7.40 per prescription or 5 percent coinsurance.

- Most parameters of this defined standard benefit structure have changed over time at the same rate as the annual change in average total drug expenses of Medicare beneficiaries. The benefit parameters have generally increased over time, with the exception of 2014. The parameters have grown cumulatively by 35 percent to 48 percent between 2006, the year Part D began, and 2016.

(Chart continued next page)

Chart 10-4. Changes in parameters of the Part D defined standard benefit over time (continued)

- Within certain limits, sponsoring organizations may offer Part D plans that have the same actuarial value as the defined standard benefit but a different benefit structure, and most sponsoring organizations do offer such plans. For example, a plan may use tiered copayments rather than 25 percent coinsurance or have no deductible but use cost-sharing requirements that are equivalent to a rate higher than 25 percent. Defined standard benefit plans and plans that are actuarially equivalent to the defined standard benefit are both known as “basic benefits.”

- Once a sponsoring organization offers one plan with basic benefits within a prescription drug plan region, it may also offer a plan with enhanced benefits—basic and supplemental coverage combined.

Chart 10-5. Characteristics of Medicare PDPs

	2015				2016			
	Plans		Enrollees as of February 2015		Plans		Enrollees as of February 2016	
	Number	Percent	Number (in millions)	Percent	Number	Percent	Number (in millions)	Percent
Total	1,001	100%	19.2	100%	886	100%	19.9	100%
Type of organization								
National	707	71	16.4	86	685	77	18.1	91
Other	294	29	2.8	14	201	23	1.8	9
Type of benefit								
Defined standard	0	0	0.0	0	0	0	0.0	0
Actuarially equivalent	454	45	10.6	55	438	49	11.6	58
Enhanced	547	55	8.6	45	448	51	8.4	42
Type of deductible								
Zero	420	42	9.3	49	290	33	9.8	49
Reduced	139	14	1.4	7	128	14	0.6	3
Defined standard*	442	44	8.5	44	468	53	9.6	48
Drugs covered in the gap								
Some coverage	261	26	2.0	10	199	22	2.5	12
None	740	74	17.2	90	687	78	17.5	88

Note: PDP (prescription drug plan). The PDPs and enrollment described here exclude employer-only plans and plans offered in U.S. territories. "National" data reflect the total number of plans for organizations with at least 1 PDP in each of the 34 PDP regions. Components may not sum to totals due to rounding. "Actuarially equivalent" includes both actuarially equivalent standard and basic alternative benefits. "Enhanced" refers to plans with basic plus supplemental coverage. *The defined standard benefit's deductible was $320 in 2015 and $360 in 2016.

Source: MedPAC analysis of CMS landscape, premium, and enrollment data.

- Between 2015 and 2016, the number of stand-alone PDPs decreased by 11 percent. Plan sponsors are offering 886 PDPs in 2016 compared with 1,001 in 2015.
- In 2016, 77 percent of all PDPs are offered by sponsoring organizations that have at least 1 PDP in each of the 34 PDP regions (shown as "national" organizations in the table). Plans offered by those national sponsors account for 91 percent of all PDP enrollment.
- For 2016, a smaller share of PDP offerings include enhanced benefits (basic plus supplemental coverage) than in 2015. The share of PDPs with actuarially equivalent benefits (having the same average value as the defined standard benefit but with alternative benefit designs) increased, and sponsors are offering no PDPs with the defined standard benefit in 2016. Actuarially equivalent plans continue to attract the largest share of PDP enrollees (58 percent), and the share of enrollees choosing to enroll in enhanced benefit plans decreased slightly from 45 percent to 42 percent between 2015 and 2016.
- A smaller share of PDPs includes gap coverage for some drugs (usually generics) in 2016 than in 2015, and the majority of PDP enrollees (88 percent) continue to enroll in plans that offer no additional benefits in the coverage gap. However, because of the changes made by the Patient Protection and Affordable Care Act of 2010, the Part D benefit now includes some coverage for medications filled during the gap phase. In addition, many PDP enrollees receive Part D's low-income subsidy, which effectively eliminates the coverage gap.

Chart 10-6. Characteristics of MA–PDs

	2015				2016			
	Plans		Enrollees as of February 2015		Plans		Enrollees as of February 2016	
	Number	Percent	Number (in millions)	Percent	Number	Percent	Number (in millions)	Percent
Totals	1,608	100%	10.6	100%	1,682	100%	11.2	100%
Type of organization								
Local HMO	1,123	70	7.6	72	1,205	72	8.1	72
Local PPO	409	25	1.9	18	409	24	2.0	18
PFFS	50	3	0.2	2	38	2	0.2	1
Regional PPO	26	2	0.9	8	30	2	0.9	8
Type of benefit								
Defined standard	39	2	0.1	1	30	2	0.1	1
Actuarially equivalent	268	17	2.9	27	185	11	1.4	13
Enhanced	1,301	81	7.6	72	1,467	87	9.7	86
Type of deductible								
Zero	1,014	63	6.0	57	933	55	5.5	49
Reduced	337	21	3.4	32	483	29	4.2	37
Defined standard*	257	16	1.2	11	266	16	1.6	14
Drugs covered in the gap								
Some coverage	703	44	4.8	45	744	44	5.2	47
None	905	56	5.8	55	938	56	6.0	53

Note: MA–PD (Medicare Advantage–Prescription Drug [plan]), HMO (health maintenance organization), PPO (preferred provider organization), PFFS (private fee-for-service). The MA–PD plans and enrollment described here exclude employer-only plans, plans offered in U.S. territories, 1876 cost plans, special needs plans, demonstrations, and Part B–only plans. Components may not sum to totals due to rounding. "Actuarially equivalent" includes both actuarially equivalent standard and basic alternative benefits. "Enhanced" refers to plans with basic plus supplemental coverage. *The defined standard benefit's deductible was $320 in 2015 and $360 in 2016.

Source: MedPAC analysis of CMS landscape, premium, and enrollment data.

- There are 5 percent more MA–PD plans in 2016 than in 2015. Sponsors are offering 1,682 MA–PD plans in 2016 compared with 1,608 the year before. HMOs remain the dominant kind of MA–PD plan, making up 72 percent of all (unweighted) offerings in 2016. The number of PFFS plans continues to decline, from 50 in 2015 to 38 in 2016. The number of drug plans offered by local PPOs remained the same at 409 plans, and the number of drug plans offered by regional PPOs increased from 26 plans to 30 plans between 2015 and 2016.

- A larger share of MA–PD plans than stand-alone prescription drug plans (PDPs) offer enhanced benefits (compare Chart 10-6 with Chart 10-5). In 2016, 51 percent of all PDPs have enhanced benefits compared with 87 percent of MA–PD plans. In 2016, enhanced MA–PD plans attracted 86 percent of total MA–PD enrollment.

- Fifty-five percent of MA–PD plans have no deductible in 2016. These plans attracted 49 percent of total MA–PD enrollees in 2016.

- MA–PD plans are more likely than PDPs to provide some additional benefits in the coverage gap. In 2016, about 44 percent of MA–PD plans include some gap coverage—the same as the year before. Those plans account for about 47 percent of MA–PD enrollment.

Chart 10-7. Change in average Part D premiums, 2012–2016

	Average monthly premium weighted by enrollment					Cumulative change in weighted average premium, 2012–2016
	2012	2013	2014	2015	2016	
All plans						
Basic coverage	$33	$32	$29	$26	$28	–15%
Enhanced coverage	26	28	30	33	33	30
Any coverage	30	30	29	30	31	4
PDPs						
Basic coverage	33	32	30	28	29	–11
Enhanced coverage	58	49	49	48	53	–9
Any coverage	38	39	38	37	39	4
MA–PDs, including SNPs						
Basic coverage	27	29	25	21	22	–19
Enhanced coverage	12	13	13	16	17	40
Any coverage	14	15	16	18	18	27
Base beneficiary premium	31.08	31.17	32.42	33.13	34.10	10

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), SNPs (special needs plans). All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PD plans exclude Part B–only plans, demonstrations, and 1876 cost plans. The MA–PD data reflect the portion of Medicare Advantage plans' total monthly premium attributable to Part D benefits for plans that offer Part D coverage. MA–PD premiums reflect rebate dollars that were used to offset Part D premium costs. The fact that average premiums for enhanced MA–PD plans are lower than for basic MA–PD plans could reflect several factors such as different plan sponsors, different counties of operation, and differences in the average health status of plan enrollees. Cumulative changes were calculated from unrounded data.

Source: MedPAC analysis of CMS landscape, plan report, and enrollment data.

- Between 2012 and 2016, the overall average premium paid by Part D enrollees has remained very stable at around $30 per month. However, year-to-year changes have differed by the type of benefit (basic vs. enhanced coverage) and type of plan (PDP vs. MA−PD), and they generally have not corresponded to changes observed in the base beneficiary premium.

- Over the five-year period, the average enrollee premium for basic coverage in PDPs ranged between a high of $33 per month in 2012 and a low of $28 in 2015, decreasing by a cumulative 11 percent. The average enrollee premium for PDPs offering enhanced coverage has decreased from $58 in 2012 to $53 in 2016, a cumulative 9 percent decline.

- Between 2012 and 2016, the average premium paid by beneficiaries enrolled in MA−PD plans with basic coverage ranged between a high of $29 per month in 2013 and a low of $21 in 2015, decreasing by a cumulative 19 percent. The average premium paid by beneficiaries enrolled in MA−PD plans offering enhanced coverage has increased from $12 in 2012 to $17 in 2016, a cumulative 40 percent increase.

Chart 10-8. Fewer premium-free (for LIS enrollees) PDPs in 2016

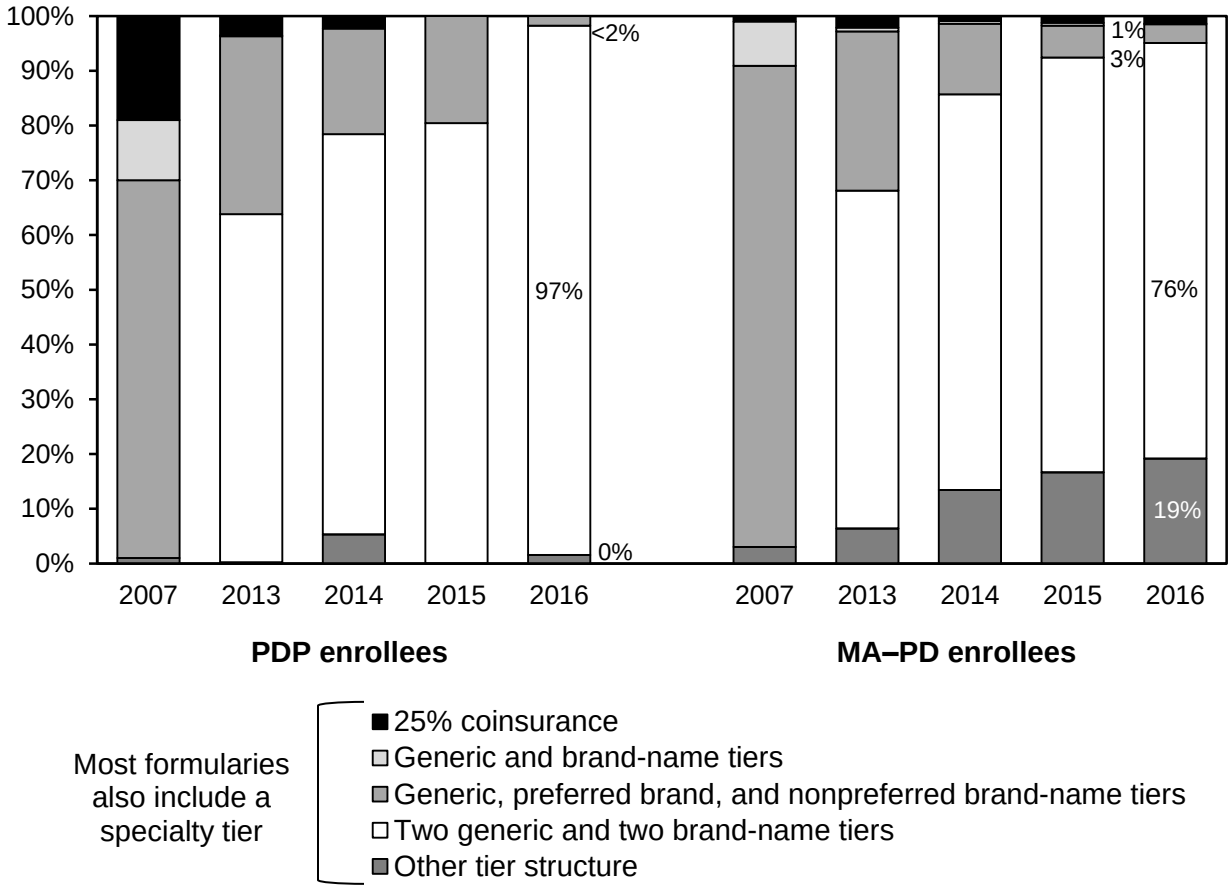
		Number of PDPs			Number of PDPs that have zero premium for LIS enrollees		
PDP region	State(s)	2015*	2016*	Difference	2015*	2016*	Difference
1	ME, NH	28	27	–1	9	9	0
2	CT, MA, RI, VT	27	26	–1	5	6	1
3	NY	25	22	–3	8	7	–1
4	NJ	29	25	–4	10	8	–2
5	DC, DE, MD	27	24	–3	10	10	0
6	PA, WV	29	29	0	9	9	0
7	VA	31	28	–3	9	7	–2
8	NC	29	26	–3	8	5	–3
9	SC	31	27	–4	7	4	–3
10	GA	30	27	–3	8	5	–3
11	FL	27	22	–5	4	3	–1
12	AL, TN	30	27	–3	12	7	–5
13	MI	31	28	–3	10	7	–3
14	OH	31	27	–4	8	5	–3
15	IN, KY	31	28	–3	10	7	–3
16	WI	29	27	–2	8	7	–1
17	IL	33	28	–5	10	9	–1
18	MO	31	28	–3	6	4	–2
19	AR	29	26	–3	6	4	–2
20	MS	28	24	–4	9	6	–3
21	LA	28	25	–3	11	7	–4
22	TX	32	28	–4	10	7	–3
23	OK	31	27	–4	10	6	–4
24	KS	29	25	–4	7	4	–3
25	IA, MN, MT, ND, NE, SD, WY	30	26	–4	5	5	0
26	NM	31	27	–4	7	8	1
27	CO	30	26	–4	7	6	–1
28	AZ	30	26	–4	12	10	–2
29	NV	32	28	–4	4	4	0
30	OR, WA	30	26	–4	10	9	–1
31	ID, UT	31	28	–3	12	9	–3
32	CA	32	28	–4	6	6	0
33	HI	25	21	–4	9	2	–7
34	AK	24	19	–5	7	6	–1
	Total	1,001	886	–115	283	218	–65

Note: LIS (low-income [drug] subsidy), PDP (prescription drug plan).
*The number of PDPs includes 27 plans in 2015 and 12 plans in 2016 that did not accept new enrollees because of CMS sanctions.

Source: MedPAC based on 2015 and 2016 PDP landscape file provided by CMS.

- The total number of stand-alone PDPs decreased by 11 percent, from 1,001 in 2015 to 886 in 2016. The median number of plans offered in PDP regions decreased to 27 plans from 30 in 2015 (data not shown). In 2016, AK has the fewest stand-alone PDPs, with 19; The PA–WV region has the most, with 29.
- In 2016, 218 PDPs qualified to be premium free to LIS enrollees. With the exception of HI, which has only two plans with no premium for LIS enrollees, and Florida, which has only three, at least four PDPs are available in any given region. However, 12 plans were not accepting new enrollees because of CMS sanctions, reducing the number of premium-free options to 206 PDPs.

Chart 10-9. In 2016, most Part D enrollees are in plans that use a five-tier formulary structure



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Calculations are weighted by enrollment. All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PDs exclude demonstration programs, special needs plans, and 1876 cost plans. Components may not sum to totals due to rounding. Over 97 percent of stand-alone PDPs and MA−PDs have a specialty tier in addition to the tiers listed above.

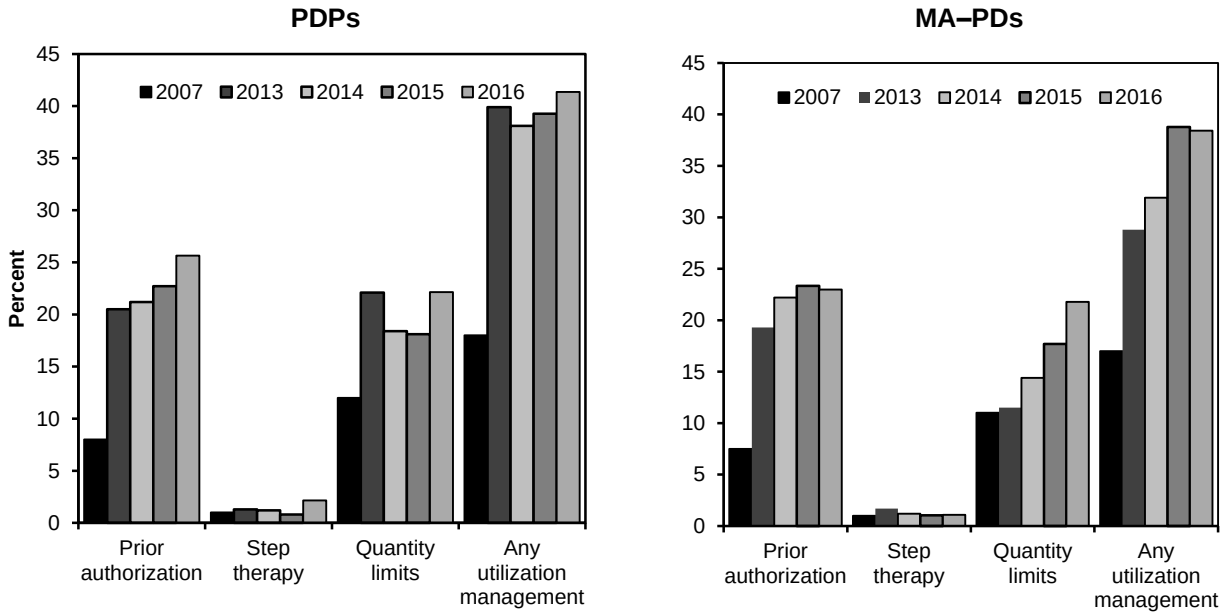
Source: MedPAC-sponsored analysis by NORC/Social and Scientific Systems analysis of formularies submitted to CMS.

- Most Part D enrollees choose plans that distinguish between preferred and nonpreferred brand-name drugs and preferred and nonpreferred generic drugs. In 2016, 97 percent of PDP enrollees are in plans that have two generic and two brand-name tiers, an increase from 80 percent in 2015. About 76 percent of MA–PD enrollees are in such plans in 2016, the same as in 2015.

- For enrollees in PDPs with two generic and two brand-name tiers, the median copay in 2016 is $39 for a preferred brand-name drug and $80 for a nonpreferred brand-name drug. The median copay for generic drugs is $1 for preferred-tier drugs and $4 for nonpreferred-tier drugs. For MA–PD enrollees, in 2016, the median copay is $45 for a preferred brand, $95 for a nonpreferred brand, and $3 and $10 for a generic drug on preferred and nonpreferred tiers, respectively. In 2016, some plans are offering a “value” tier with low or no copays.

- Most plans also use a specialty tier for drugs that have a negotiated price of $600 per month or more. In 2016, median cost sharing for a specialty-tier drug is 29 percent among PDPs and 33 percent among MA–PD plans.

Chart 10-10. In 2016, PDPs and MA–PDs apply some utilization management to about 40 percent of listed drugs



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Calculations are weighted by enrollment. All calculations exclude employer-only groups and plans offered in U.S. territories. In addition, MA–PD plans exclude demonstration programs, special needs plans, and 1876 cost plans. Values reflect the share of listed chemical entities that are subject to utilization management, weighted by plan enrollment. "Prior authorization" means that the enrollee must get preapproval from the plan before coverage. "Step therapy" refers to a requirement that the enrollee try specified drugs before being prescribed other drugs in the same therapeutic category. "Quantity limits" means that plans limit the number of doses of a drug available to the enrollee in a given time period.

Source: MedPAC-sponsored analysis by NORC/Social and Scientific Systems of formularies submitted to CMS.

- The number of drugs listed on a plan's formulary does not necessarily represent beneficiary access to medications. Plans' processes for nonformulary exceptions, prior authorization (preapproval from plans before coverage), quantity limits (plan limitations on the number of doses of a particular drug covered in a given period), and step therapy requirements (enrollees must try specified drugs before being prescribed other drugs in the same therapeutic category) can affect access to certain drugs.

- In 2016, the average enrollee in a stand-alone PDP faces some form of utilization management for about 41 percent of drugs listed on a plan's formulary, an increase from 39 percent in 2015. The average MA–PD enrollee faces some form of utilization management for 38 percent of drugs listed on a plan's formulary, a slight decrease from 39 percent in 2015. Part D plans typically use quantity limits or prior authorization to manage enrollees' prescription drug use.

- Among the drugs listed on plan formularies for stand-alone PDPs, the share that requires prior authorization increased from 23 percent in 2015 to 26 percent in 2016. Similarly, the share with quantity limits increased from 18 percent in 2015 to 22 percent in 2016. Among MA–PDs, the use of prior authorization remained steady, but use of quantity limits increased from 18 percent of listed drugs in 2015 to 22 percent in 2016. The share of drugs listed on plan formularies that require the use of step therapy remained very low for both stand-alone PDPs and MA–PDs.

Chart 10-11. Characteristics of Part D enrollees, 2013

	All Medicare	Part D	Plan type		Subsidy status	
			PDP	MA–PD	LIS	Non-LIS
Beneficiaries[a] (in millions)	55.1	37.8	24.2	13.7	12.4	25.4
Percent of all Medicare	100%	69%	44%	25%	22%	46%
Gender						
Male	45%	42%	42%	43%	40%	44%
Female	55	58	58	57	60	56
Race/ethnicity						
White, non-Hispanic	76	74	77	69	56	83
African American, non-Hispanic	10	11	11	11	20	7
Hispanic	9	10	7	14	16	7
Asian	3	3	3	3	5	2
Other	2	2	2	2	2	2
Age (years)[b]						
<65	19	20	22	16	42	9
65–69	26	23	22	26	15	27
70–74	19	20	19	22	12	23
75–79	14	14	14	15	10	16
80+	22	23	23	21	19	24
Urbanicity[c]						
Metropolitan	81	82	78	89	80	83
Micropolitan	10	10	12	7	11	10
Rural	8	8	10	4	9	7

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income [drug] subsidy). Percentages may not sum to 100 due to rounding.
[a]Figures for Medicare and Part D include all beneficiaries with at least one month of enrollment in the respective program. A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. For individuals who switch plan types during the year, classification into plan types is based on the greater number of months of enrollment.
[b]Age as of July 2013.
[c]Urbanicity is based on the Office of Management and Budget's core-based statistical areas as of February 2013. A metropolitan area contains a core urban area of 50,000 or more people, and a micropolitan area contains an urban core of at least 10,000 (but fewer than 50,000) people. About 1 percent of Medicare beneficiaries were excluded because of an unidentifiable core-based statistical area designation.

Source: MedPAC analysis of Medicare Part D denominator and Risk Adjustment System files from CMS.

- In 2013, 37.8 million Medicare beneficiaries (69 percent) enrolled in Part D at some point in the year. Most of them (24.2 million) were in stand-alone PDPs, with 13.7 million in MA–PD plans. Over 12 million enrollees received Part D's LIS.
- Compared with the overall Medicare population, Part D enrollees are more likely to be female and non-White. MA–PD enrollees are less likely to be disabled beneficiaries under age 65 and more likely to be Hispanic compared with PDP enrollees; LIS enrollees are more likely to be female, non-White, and disabled beneficiaries under age 65 compared with non-LIS enrollees.
- Patterns of enrollment by urbanicity for Part D enrollees were similar to the overall Medicare population: 82 percent in metropolitan areas, 10 percent in micropolitan areas, and the remaining 8 percent in rural areas.

Chart 10-12. Part D enrollment trends, 2007–2013

	2007	2010	2013	Average annual growth rate 2007–2010	2010–2013	2007–2013
Part D enrollment (in millions)*						
Total	26.1	29.7	37.8	4.4%	8.4%	6.4%
By plan type						
PDP	18.3	18.9	24.2	1.1	8.5	4.7
MA–PD	7.8	10.6	13.7	10.9	8.8	9.9
By subsidy status						
LIS	10.4	11.3	12.4	2.7	3.1	2.9
Non-LIS	15.7	18.4	25.4	5.5	11.4	8.4
By race/ethnicity						
White, non-Hispanic	19.4	22.0	28.1	4.3	8.5	6.4
African American, non-Hispanic	2.9	3.3	4.2	4.1	8.0	6.0
Hispanic	2.5	3.0	3.6	5.8	7.0	6.4
Other	1.3	1.4	1.9	3.9	10.6	7.2
By age (years)**						
<65	5.5	6.3	7.5	4.7	6.2	5.5
65–69	5.4	6.6	8.8	6.5	10.5	8.5
70–79	8.8	9.9	13.0	3.8	9.5	6.6
80+	6.4	7.1	8.5	3.2	6.5	4.8
Part D enrollment (in percent)						
Total	100%	100%	100%			
By plan type						
PDP	70	64	64			
MA–PD	30	36	36			
By subsidy status						
LIS	40	38	33			
Non-LIS	60	62	67			
By race/ethnicity						
White, non-Hispanic	74	74	74			
African American, non-Hispanic	11	11	11			
Hispanic	10	10	10			
Other	5	5	5			
By age (years)**						
<65	21	21	20			
65–69	21	22	23			
70–79	34	33	34			
80+	25	24	23			

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income [drug] subsidy). A beneficiary is classified as LIS if that individual received Part D's LIS at some point during the year. If a beneficiary was enrolled in both a PDP and an MA–PD plan during the year, that individual was classified into the type of plan with the greater number of months of enrollment. Numbers may not sum to totals due to rounding.
*Figures include all beneficiaries with at least one month of enrollment.
**Age figures are as of July of the respective year.

Source: MedPAC analysis of Medicare Part D denominator file from CMS.

(Chart continued next page)

Chart 10-12. Part D enrollment trends, 2007–2013 (continued)

- Part D enrollment grew faster between 2010 and 2013 (average annual growth rate (AAGR) of 8.4 percent) than between 2007 and 2010 (AAGR of 4.4 percent). Between 2010 and 2013, the largest growth in enrollment was observed for beneficiaries ages 65 to 69 (10.5 percent annually, on average), followed by beneficiaries ages 70 to 79 (9.5 percent annually, on average).

- While MA–PD plan enrollment grew faster between 2007 and 2010 (nearly 11 percent annually compared with about 1 percent annually, on average, for PDP plan enrollment), the growth rates were comparable between MA–PDs and PDPs between 2010 and 2013 (AAGR of 8.8 percent and 8.5 percent, respectively).

- The number of enrollees receiving the LIS grew modestly between 2007 and 2010 at 2.7 percent per year. Higher growth rates (3.1 percent) were observed between 2010 and 2013. The average annual growth in the number of non-LIS enrollees was also greater between 2010 and 2013 (11.4 percent) than it was between 2007 and 2010 (5.5 percent).Faster enrollment growth among non-LIS enrollees is partly attributable to the recent growth in employer group waiver plans that shifted beneficiaries into Part D plans from employer plans that had previously received Medicare's retiree drug subsidy (RDS) (see Chart 10-3 for information on the RDS).

Chart 10-13. Part D enrollment by region, 2013

PDP region	State(s)	Percent of Medicare enrollment		Percent of Part D enrollment			
				Plan type		Subsidy status	
		Part D	RDS	PDP	MA–PD	LIS	Non-LIS
1	ME, NH	63%	7%	82%	18%	42%	58%
2	CT, MA, RI, VT	67	11	71	29	39	61
3	NY	74	7	57	43	38	62
4	NJ	69	7	80	20	27	73
5	DE, DC, MD	55	10	86	14	36	64
6	PA, WV	72	6	57	43	30	70
7	VA	59	5	77	23	32	68
8	NC	71	5	74	26	34	66
9	SC	61	11	69	31	38	62
10	GA	68	5	63	37	38	62
11	FL	71	6	51	49	32	68
12	AL, TN	71	4	64	36	39	61
13	MI	74	7	78	22	27	73
14	OH	75	5	67	33	27	73
15	IN, KY	71	5	75	25	33	67
16	WI	67	6	62	38	27	73
17	IL	63	13	86	14	34	66
18	MO	70	5	67	33	30	70
19	AR	66	5	75	25	41	59
20	MS	69	2	83	17	49	51
21	LA	70	6	64	36	42	58
22	TX	67	6	68	32	38	62
23	OK	65	3	78	22	34	66
24	KS	68	3	83	17	26	74
25	IA, MN, MT, NE, ND, SD, WY	70	4	74	26	25	75
26	NM	67	4	58	42	36	64
27	CO	64	9	50	50	27	73
28	AZ	68	6	48	52	28	72
29	NV	64	6	52	48	26	74
30	OR, WA	64	7	54	46	29	71
31	ID, UT	63	6	54	46	25	75
32	CA	75	5	51	49	36	64
33	HI	70	2	37	63	27	73
34	AK	41	24	98	2	57	43
	Mean	69	6	64	36	33	67
	Minimum	41	2	37	2	25	43
	Maximum	75	24	98	63	57	75

Note: PDP (prescription drug plan), RDS (retiree drug subsidy), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income [drug] subsidy). Definition of regions is based on PDP regions used in Part D.

Source: MedPAC analysis of Part D enrollment data from CMS.

- Among Part D regions in 2013, all but three regions (Region 5 (DE, DC, MD), Region 7 (VA), and Region 34 (AK)) had over 60 percent of all Medicare beneficiaries enrolled in Part D. Beneficiaries were less likely to enroll in Part D in regions where employer-sponsored drug coverage continues to be available. For example, in Region 34, the share of Medicare beneficiaries enrolled in Part D was 41 percent, while the share of beneficiaries enrolled in employer-sponsored plans that received the RDS was 24 percent. In other regions (Region 5 and Region 7), many beneficiaries likely received their drug coverage through the Federal Employees Health Benefits Program, which does not receive the RDS.

(Chart continued next page)

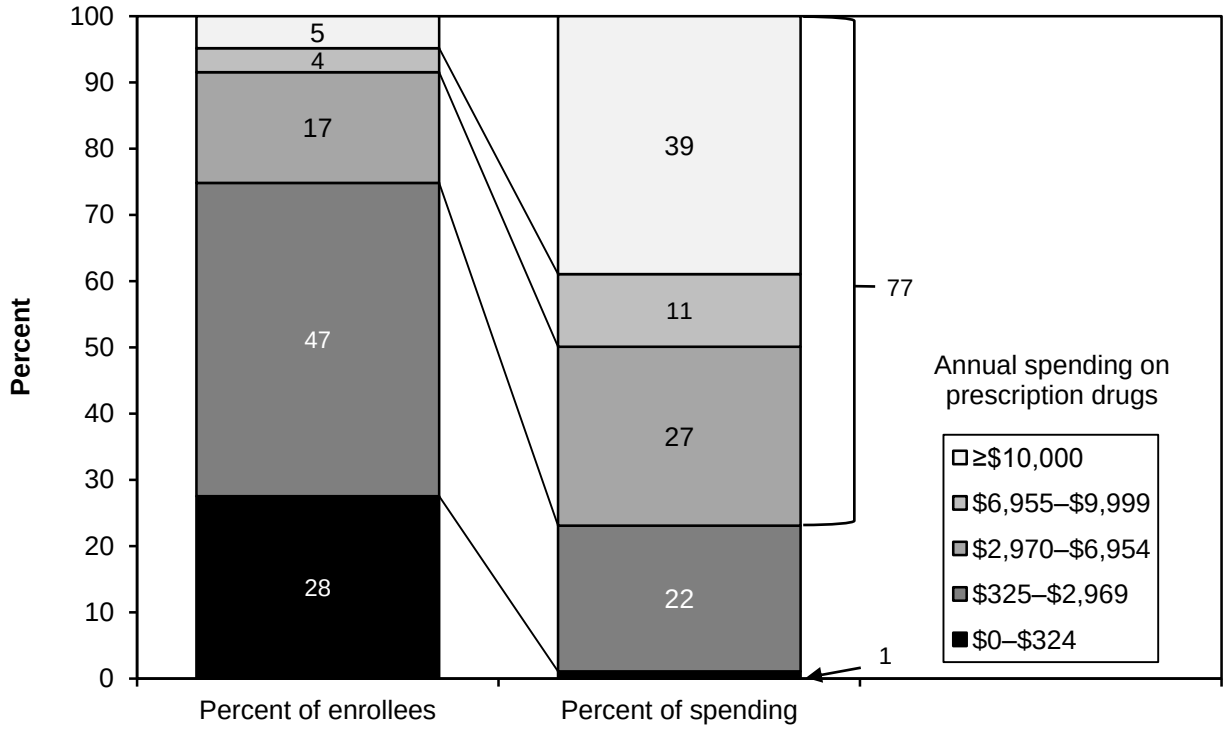
Chart 10-13. Part D enrollment by region, 2013 (continued)

- In 2013, all regions except Region 34 experienced a decrease in the number of beneficiaries who received the RDS (data not shown). The shift was likely motivated by changes made by the Patient Protection and Affordable Care Act of 2010 that increased the generosity of Part D coverage and altered the tax treatment of drug expenses covered by the RDS.

- Wide variation was seen in the shares of Part D beneficiaries who enrolled in PDPs and MA–PD plans across PDP regions. The pattern of MA–PD enrollment is generally consistent with enrollment in Medicare Advantage plans.

- The share of Part D enrollees receiving the LIS ranged from 25 percent in Region 25 (IA, MN, MT, NE, ND, SD, and WY) and in Region 31 (ID and UT) to 57 percent in Region 34 (AK). In 20 of the 34 PDP regions, LIS enrollees accounted for 30 percent to 50 percent of enrollment. In one region (Region 34 (AK)), LIS enrollees accounted for more than half of Part D enrollment.

Chart 10-14. The majority of Part D spending was incurred by only one-quarter of all Part D enrollees, 2013



Note: "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Annual spending cuts used for this analysis generally correspond to the parameters of the defined standard benefit. In 2013, an individual without Part D's low-income subsidy or other sources of supplemental coverage would have reached the catastrophic phase of the benefit at $6,954.52 in total drug spending, assuming that expenses for brand-name drugs accounted for 85.6 percent of total drug spending in the coverage gap. Components may not sum to totals due to rounding.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- Medicare Part D spending is concentrated in a subset of beneficiaries. In 2013, about 25 percent of Part D enrollees had annual spending of $2,970 or more, at which point enrollees were responsible for a higher proportion of the cost of the drug until their spending reached $6,955 under the defined standard benefit. These beneficiaries accounted for 77 percent of total Part D spending.

- The costliest 8 percent (shown as 9 percent in the chart due to rounding) of beneficiaries, those with drug spending above the catastrophic threshold under the defined standard benefit, accounted for 50 percent of total Part D spending. Sixty-five percent of beneficiaries with the highest spending received Part D's low-income [drug] subsidy (see Chart 10-15). Spending on prescription drugs is less concentrated than Medicare Part A and Part B spending. In 2012, the costliest 5 percent of beneficiaries accounted for 41 percent of annual Medicare fee-for-service (FFS) spending, and the costliest quartile accounted for 83 percent of Medicare FFS spending.

- In 2013, the share of Part D spending accounted for by the costliest 5 percent of enrollees increased to 39 percent from 35 percent in 2012.

Chart 10-15. Characteristics of Part D enrollees, by spending levels, 2013

	Annual drug spending		
	<$2,970	$2,970–$6,954	≥$6,955
Sex			
Male	43%	40%	41%
Female	57	60	59
Race/ethnicity			
White, non-Hispanic	74	75	71
African American, non-Hispanic	11	11	14
Hispanic	10	9	10
Other	5	5	6
Age (years)			
<65	17	20	40
65–69	25	19	17
70–74	20	19	15
75–80	15	16	12
80+	23	26	17
LIS status*			
LIS	27	41	65
Non-LIS	73	59	35
Plan type**			
PDP	61	70	77
MA–PD	39	30	23

Note: LIS (low-income [drug] subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. A small number of beneficiaries were excluded from the analysis because of missing data. Percentages may not sum to 100 due to rounding.
*A beneficiary was assigned LIS status if that individual received Part D's LIS at some point during the year.
**If a beneficiary was enrolled in both a PDP and an MA–PD plan during the year, that individual was classified in the type of plan with the greater number of months of enrollment.

Source: MedPAC analysis of Medicare Part D prescription drug event data and Part D denominator file from CMS.

- In 2013, Part D enrollees with annual drug spending between $2,970 and $6,954 and those with spending at or above $6,955 were more likely to be female than enrollees with annual spending below $2,970 (60 percent and 59 percent, respectively, compared with 57 percent).
- Part D enrollees with annual spending at or above $6,955 were more likely to be non-White; disabled, under age 65; and receiving the LIS compared with those with annual spending below $2,970.
- Most Part D enrollees with spending at or above $6,955 were enrolled in stand-alone PDPs (77 percent) compared with MA–PD plans (23 percent). In contrast, beneficiaries with annual spending below $2,970 were more likely to be in MA–PDs compared with those with higher annual spending (39 percent compared with 23 percent). This finding reflects the fact that most LIS enrollees are more costly on average and are in PDPs.

Chart 10-16. Part D spending and use per enrollee, 2013

	Part D	Plan type		LIS status	
		PDP	MA–PD	LIS	Non-LIS
Total gross spending (billions)*	$103.7	$74.8	$28.9	$51.6	$52.1
Total number of prescriptions (millions)	1,910	1,262	647	747	1,163
Average spending per prescription	$54	$59	$45	$69	$45
Per enrollee per month					
Total spending	$242	$275	$185	$377	$179
Out-of-pocket spending	32	33	30	7	44
Manufacturer gap discount	6	7	5	N/A	9
Plan liability	149	166	117	227	112
Low-income cost-sharing subsidy	46	57	27	143	N/A
Number of prescriptions	4.5	4.6	4.1	5.4	4.0

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]), LIS (low-income [drug] subsidy), N/A (not applicable). "Total gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file was used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status. "Out-of-pocket spending" includes all payments that count toward the annual out-of-pocket (OOP) spending threshold. "Plan liability" includes plan payments for drugs covered by both basic and supplemental (enhanced) benefits. In addition to the major categories shown in the chart, total spending includes amounts paid by other relatively minor payers such as group health plans, workers' compensation, and charities. "Number of prescriptions" is standardized to a 30-day supply.
*Total gross spending includes over $2.7 million in manufacturer discounts for brand-name drugs filled by non-LIS enrollees during the coverage gap.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- In 2013, gross spending on drugs for the Part D program totaled $103.7 billion, with about 72 percent ($74.8 billion) accounted for by Medicare beneficiaries enrolled in stand-alone PDPs. Part D enrollees receiving the LIS accounted for about 50 percent ($51.6 billion) of the total. Manufacturer discounts for brand-name drugs filled by non-LIS enrollees while they were in the coverage gap accounted for 2.6 percent of the total, or about 5 percent of the gross spending by non-LIS enrollees (data not shown).

- The number of prescriptions filled by Part D enrollees totaled 1.910 billion, with about two-thirds (1.262 billion) accounted for by PDP enrollees. The 33 percent of enrollees who received the LIS accounted for about 39 percent (0.747 billion) of the total number of prescriptions filled.

- In 2013, Part D enrollees filled 4.5 prescriptions at $242 per month on average, an increase from $235 per month (for 4.3 prescriptions) in 2012 (2012 data not shown). The average monthly plan liability for PDP enrollees ($166) was considerably higher than that of MA–PD enrollees ($117), while average monthly OOP spending was similar for enrollees in both types of plans ($33 vs. $30, respectively). The average monthly low-income cost-sharing subsidy was much higher for PDP enrollees ($57) compared with MA–PD enrollees ($27).

- Average monthly spending per enrollee for an LIS enrollee ($377) was more than double that of a non-LIS enrollee ($179), while the average number of prescriptions filled per month by an LIS enrollee was 5.4 compared with 4.0 for a non-LIS enrollee. LIS enrollees had much lower OOP spending, on average, than non-LIS enrollees ($7 vs. $44). Part D's LIS pays for most of the cost sharing for LIS enrollees, averaging $143 per month in 2013.

Chart 10-17. Trends in Part D spending and use per enrollee, 2007–2013

	Average spending and number of prescriptions						Average annual growth rate, 2007–2013	
	2007	2009	2010	2011	2012	2013	Number	Percent
Average spending								
All Part D	$212	$228	$231	$239	$235	$242	$5	2.2%
By LIS status								
LIS	301	339	348	364	362	377	13	3.8
Non-LIS	156	163	163	167	167	179	4	2.3
By plan type								
PDP	239	260	265	274	270	275	6	2.4
MA−PD	151	169	172	178	178	185	6	3.5
Average number of prescriptions*								
All Part D	3.9	4.1	4.2	4.3	4.3	4.5	0.1	2.2%
By LIS status								
LIS	4.6	5.0	5.1	5.1	5.2	5.4	0.1	2.9
Non-LIS	3.4	3.6	3.7	3.8	3.8	4.0	0.1	2.7
By plan type								
PDP	4.1	4.4	4.4	4.5	4.5	4.6	0.1	2.0
MA−PD	3.4	3.7	3.8	3.9	4.0	4.1	0.1	3.2

Note: LIS (low-income [drug] subsidy), PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. For purposes of classifying the PDE records by LIS status, monthly LIS eligibility information in Part D's denominator file was used. Estimates are sensitive to the method used to classify PDE records to each plan type and LIS status. Numbers may not sum to totals due to rounding.
*Number of prescriptions is standardized to a 30-day supply.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- Between 2007 and 2013, the average per capita spending for Part D–covered drugs grew at an average annual rate of 2.2 percent, or by about 14 percent cumulatively. Growth in average per capita spending has fluctuated over the years, ranging from a negative 1.5 percent growth between 2011 and 2012 to a growth of over 4 percent during the first few years of the program.

- Spending for non-LIS enrollees remained relatively flat compared with LIS enrollees (average annual growth rate of 2.3 percent compared with 3.8 percent) during the 2007 to 2013 period, resulting in a larger difference in per capita spending between the two groups—from $145 in 2007 to nearly $200 per member per month in 2013. The growth in the number of prescriptions filled by LIS and non-LIS enrollees was comparable during this period.

- The growth in per capita drug spending among MA−PD enrollees exceeded that of PDP enrollees during the 2007 to 2013 period (3.5 percent compared with 2.4 percent), but the average growth was the same for both PDP and MA−PD enrollees in terms of the dollar increase ($6), and the average per capita spending for MA−PD enrollees continued to be below that of PDP enrollees by about $90.

Chart 10-18. Top 15 therapeutic classes of drugs covered under Part D, by spending and volume, 2013

Top 15 therapeutic classes by spending	Dollars		Top 15 therapeutic classes by volume	Prescriptions	
	Billions	Percent		Millions	Percent
Diabetic therapy	$11.0	10.6%	Antihypertensive therapy agents	197.3	10.3%
Asthma/COPD therapy agents	7.6	7.3	Antihyperlipidemics	190.2	10.0
Antihyperlipidemics	7.5	7.2	Beta adrenergic blockers	119.5	6.3
Antipsychotics	5.8	5.5	Diabetic therapy	117.2	6.1
Antihypertensive therapy agents	5.6	5.4	Antidepressants	107.2	5.6
Peptic ulcer therapy	4.4	4.2	Peptic ulcer therapy	97.2	5.1
Antivirals	4.3	4.1	Diuretics	96.4	5.0
Antidepressants	3.8	3.7	Analgesics (narcotic)	82.6	4.3
Analgesics (narcotic)	3.5	3.4	Calcium channel blockers	82.3	4.3
Analgesic (anti-inflammatory/ antipyretic, non-narcotic)	3.5	3.4	Thyroid therapy	70.6	3.7
Anticonvulsant	3.2	3.1	Anticonvulsant	66.0	3.5
Antineoplastic enzyme inhibitors	2.6	2.5	Asthma/COPD therapy agents	51.3	2.7
Cognitive disorder therapy (antidementia)	2.5	2.4	Antibacterial agents	50.0	2.6
Calcium and bone metabolism regulators	2.0	1.9	Antianxiety agents	35.2	1.8
Anticoagulants	1.9	1.8	Analgesic (anti-inflammatory/ antipyretic, non-narcotic)	34.8	1.8
Subtotal, top 15 classes	69.1	66.6	Subtotal, top 15 classes	1,397.9	73.2
Total, all classes	103.7	100.0	Total, all classes	1,909.6	100.0

Note: COPD (chronic obstructive pulmonary disease). "Spending" (gross) reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. "Volume" is the number of prescriptions, standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. Components may not sum to totals due to rounding.

Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- The list of the top 15 therapeutic classes has been stable since 2007, with the majority of therapeutic classes on the list appearing every year. In 2013, spending on prescription drugs covered by Part D plans totaled $103.7 billion. The top 15 therapeutic classes by spending accounted for about two-thirds of the total. About 1.9 billion prescriptions were dispensed in 2013, with the top 15 therapeutic classes by volume accounting for about 73 percent of the total.

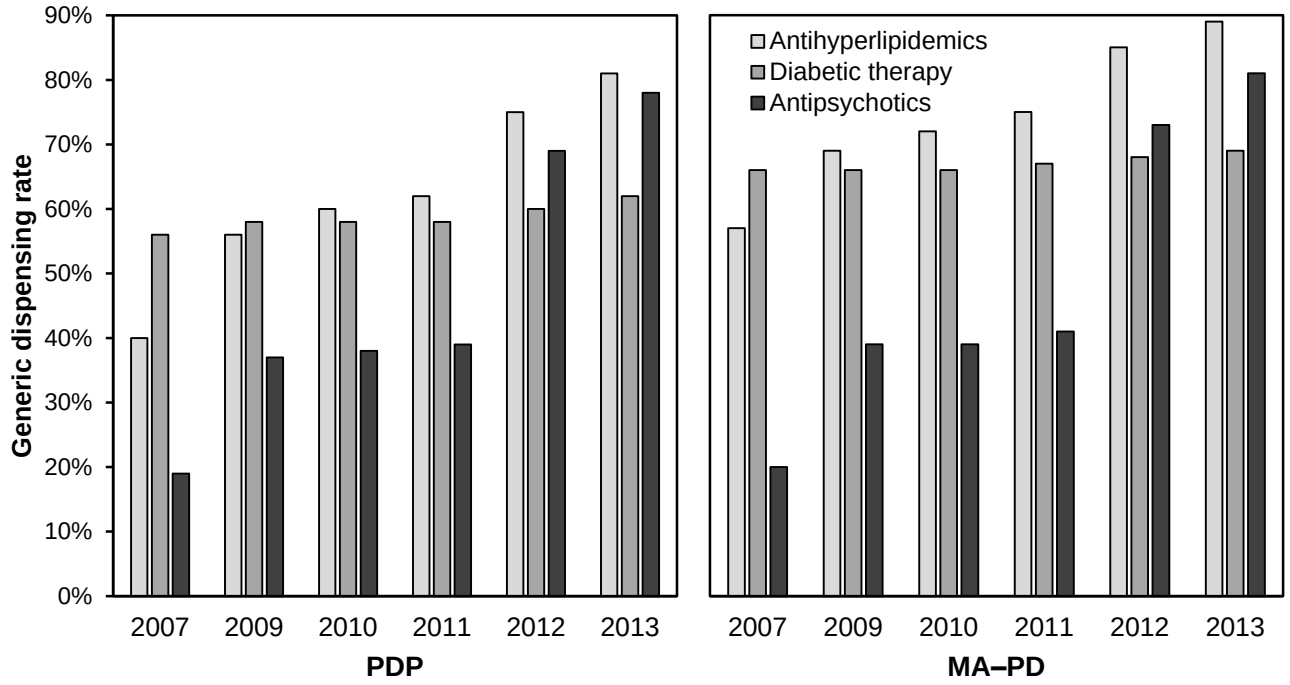
- In 2013, spending on drugs to treat diabetes totaled $11 billion, an increase of about 26 percent from $8.7 billion in 2012, while the number of prescriptions filled totaled 117.2 million, an increase of about 14 percent from 102.6 million in 2012 (2012 data not shown). Over 10 percent of the growth in spending on drugs to treat diabetes was due to the increase in the average price per standardized 30-day prescription.

- Antianxiety agents appeared on the top 15 list by volume for the first time since 2007. The number of prescriptions for antianxiety agents totaled 35.2 million in 2013 (up from 8.5 million in 2012) (2012 data not shown). The increase in the use of antianxiety agents reflects the addition of benzodiazepines to the list of Part D–covered drugs beginning in 2013.

Chart 10-18. Top 15 therapeutic classes of drugs covered under Part D, by spending and volume, 2013 (continued)

- Nine therapeutic classes are among the top 15 in both spending and volume. Central nervous system agents (antipsychotics, anticonvulsants, and antidepressants) and cardiovascular agents (antihyperlipidemics and antihypertensive therapy agents) dominate the list by spending, each accounting for slightly less than one-fifth of spending, while cardiovascular agents (antihyperlipidemics, antihypertensive therapy agents, beta-adrenergic blockers, calcium channel blockers, and diuretics) dominate the list by volume, accounting for about 50 percent of the prescriptions in the top 15 therapeutic classes.

Chart 10-19. Generic dispensing rate for selected therapeutic classes, by plan type, 2007–2013



Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). Prescriptions are standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. "Generic dispensing rate" is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event records are classified as PDP or MA–PD records based on the contract identification on each record.

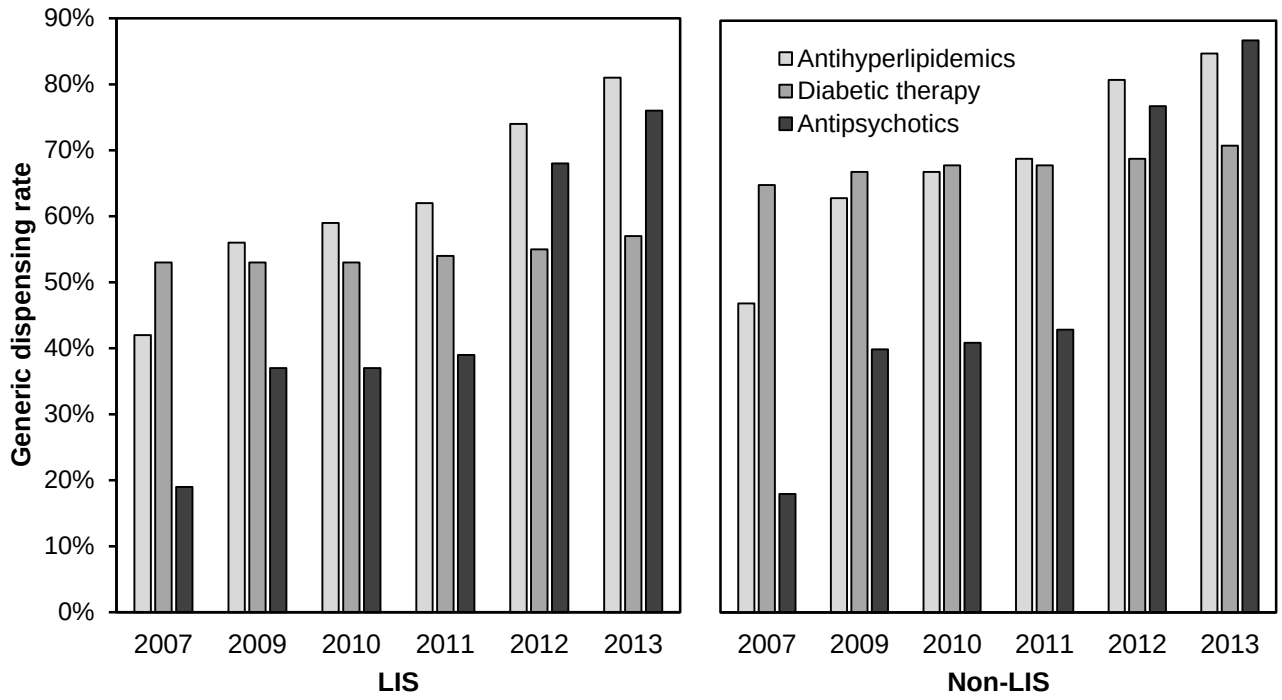
Source: MedPAC analysis of Medicare Part D prescription drug event data from CMS.

- The share of prescriptions that are for generic drugs (generic dispensing rate, or GDR) has increased steadily over the years, from 61 percent in 2007 to 84 percent in 2013 across all therapeutic classes (data not shown).

- The GDR in a given class depends, in large part, on the availability of generic drugs in the class. For example, the GDR for antipsychotics was among the lowest within the top 15 therapeutic classes until some of the key drugs came off patent and generic versions became available in 2011 and 2012. Other factors such as prescribing behavior and patients' medication needs and/or preferences can also affect the GDR.

- Between 2007 and 2013, GDRs for PDP enrollees were generally lower than those of MA–PD enrollees for most of the top 15 therapeutic classes. For example, GDRs for diabetic therapy among the MA–PD enrollees exceeded that of PDP enrollees by between 7 percentage points and 10 percentage points during this period. The difference in GDRs for antihyperlipidemics between MA–PD enrollees and PDP enrollees decreased during this period (from 17 percentage points in 2007 to about 8 percentage points in 2013), but antihyperlipidemics are still one of the classes with the largest difference in GDRs between PDPs and MA–PDs. Some of the difference in GDRs reflects the fact that, relative to MA–PDs, PDPs have a higher proportion of LIS enrollees, who are less likely to take a generic medication in a given therapeutic class (see Chart 10-20).

Chart 10-20. Generic dispensing rate for selected therapeutic classes, by LIS status, 2007–2013



Note: LIS (low-income [drug] subsidy). Prescriptions are standardized to a 30-day supply. Therapeutic classification is based on the First DataBank Enhanced Therapeutic Classification System 1.0. "Generic dispensing rate" is defined as the proportion of generic prescriptions dispensed within a therapeutic class. Part D prescription drug event (PDE) records are classified as LIS or non-LIS records based on monthly LIS eligibility information in Part D's denominator file. Estimates are sensitive to the method used to classify PDE records as LIS or non-LIS.

Source: MedPAC analysis of Medicare Part D prescription drug event data and Part D denominator file from CMS.

- Between 2007 and 2013, the share of prescriptions that are for generic drugs (generic dispensing rate, or GDR) has increased for both LIS and non-LIS enrollees. However, LIS enrollees have had a GDR consistently 4 percentage points to 5 percentage points lower than non-LIS enrollees in most of years after 2007.

- The difference in GDRs for antihyperlipidemics between LIS and non-LIS enrollees remained stable at around 7 percentage points to 8 percentage points for most of the years between 2007 to 2012, and decreased to 4 percentage points in 2013.

- Other notable differences in GDRs between LIS and non-LIS enrollees include a large and persistent difference of around 14 percentage points to 15 percentage points for diabetic therapy and a 9 percentage point and 11 percentage point difference in GDRs observed in 2012 and 2013, respectively, for antipsychotics (compared with a difference of less than 4 percentage points before 2012) after generic versions became available for some of the key drugs in the class. Multiple factors likely contribute to the difference in GDRs.

Chart 10-21. Drug spending and use and the characteristics of beneficiaries filling the most prescriptions, 2013

	Beneficiaries in the top 5 percent*		
		As a percent of Part D	All Part D
Number of beneficiaries (in millions)	1.8	5%	37.8
Aggregate spending and use			
Gross spending (in billions)	$19.7	19	$103.7
Number of prescriptions (in millions)	264	19	1,372
Average spending per prescription	$75		$76
Per enrollee per year			
Gross spending	$11,149		$2,906
Out-of-pocket spending	$487		$387
Number of prescriptions	149		38
Demographic characteristics			
Percent female	66%		58%
Percent White	72		74
Percent LIS	78		33
Percent PDP	76		64

Note: LIS (low-income [drug] subsidy), PDP (prescription drug plan). "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. "Out-of-pocket spending" includes all payments that count toward the annual out-of-pocket spending threshold. "Number of prescriptions" is based on counts of prescription drug events (PDEs) (not standardized to a 30-day supply).
*"Beneficiaries in the top 5 percent" is based on the volume of prescriptions filled by those who filled at least one prescription in 2013. Because roughly 7 percent of Part D enrollees did not fill any prescriptions for a Part D–covered drug in 2013, the "top 5 percent" translates to about 4.7 percent of all Part D enrollees. The figures reported in the table include claims for over 200 beneficiaries who did not have a record of Part D enrollment in the denominator file and claims that were missing beneficiary identification information. These claims accounted for about 34,000 prescriptions at a gross cost of over $2 million.

Source: MedPAC analysis of Medicare Part D PDE data and denominator file from CMS.

- In 2013, Part D enrollees in the top 5 percent (1.8 million), based on the number of prescriptions filled, accounted for $19.7 billion in gross spending (19 percent of total gross spending) for drugs covered under the Part D program. The number of prescriptions filled by enrollees in the top 5 percent totaled 264 million, or 19 percent of all prescriptions filled under the Part D program.

- In 2013, Part D enrollees in the top 5 percent each filled a total of 149 prescriptions at a gross cost of $11,149, on average, compared with an average of 38 prescriptions each at a gross cost of $2,906 for all Part D enrollees. Compared with the difference in gross spending and the number of prescriptions filled, the difference in beneficiary out-of-pocket spending between enrollees in the top 5 percent and all Part D enrollees was much smaller ($487 compared with $387).

- Compared with the overall Part D population, enrollees in the top 5 percent were more likely to be female and non-White. Nearly 80 percent of the enrollees in the top 5 percent received the low-income subsidy compared with 33 percent for all Part D enrollees, and 76 percent were enrolled in a stand-alone prescription drug plan compared with 64 percent for all Part D enrollees.

Chart 10-22. Part D spending and use, 2013

	Part D	Plan type	
		PDP	MA–PD
Total gross spending (billions)	$103.6	$72.3	$28.6
Total number of prescriptions (millions)	1,368	900	440
Average cost per prescription	$76	$80	$65
Total gross spending by specialty			
Primary care providers*	$60.3	$41.5	$17.5
Specialty and other providers	$43.3	$30.8	$11.2
Total number of prescriptions by specialty			
Primary care providers*	974.0	639.4	319.8
Specialty and other providers	394.2	260.7	119.8
Average cost per prescription			
Primary care providers*	$61.95	$64.96	$54.58
Specialty and other providers	$109.79	$117.97	$93.20

Note: PDP (prescription drug plan), MA–PD (Medicare Advantage–Prescription Drug [plan]). "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Part D prescription drug event (PDE) records are classified into plan types based on the contract identification on each record. Numbers may not sum to totals due to lack of information about plan type for some observations. "Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable with the 2013 prescription counts shown in Chart 10-16 through Chart 10-21.
*The definition of "primary care" used here is based on the definition used for the Primary Care Incentive Payment Program and includes practitioners who have a primary Medicare specialty designation of family practice, internal medicine, pediatrics, geriatrics, nurse practitioner and clinical nurse specialist, or physician assistant.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- In 2013, gross spending on drugs for the Part D program totaled $103.6 billion, with about 70 percent ($72.3 billion) accounted for by Medicare beneficiaries enrolled in PDPs, according to CMS's Part D claims data summarized at the prescriber level. The number of prescriptions (not adjusted for the number of days' supply) filled by Part D enrollees totaled about 1.37 billion, with about two-thirds (900 million) accounted for by PDP enrollees. The cost per prescription dispensed averaged $76 across all Part D enrollees. The average cost per prescription is higher among PDP enrollees ($80) compared with that of MA–PD enrollees ($65).

- Prescriptions written by primary care providers accounted for about 58 percent ($60.3 billion) of the gross spending and 71 percent (974 million) of prescriptions dispensed under the Part D program. The shares of spending and prescriptions written by primary care providers were lower in PDPs (about 57 percent of gross spending and about 71 percent of prescriptions) than in MA–PDs (about 61 percent of gross spending and about 73 percent of prescriptions).

- The average cost per prescription dispensed was lower among primary care providers (about $62) compared with specialty and other providers (about $110). The cost per prescription dispensed for PDP enrollees was higher than that of MA–PD enrollees regardless of the provider type (primary care vs. specialty and others).

Chart 10-23. Part D patterns of prescribing by provider type, 2013

	Part D	Provider type	
		Primary care*	Specialty/others
Number of individual prescribers (thousands)	1,043	420	623
Percent of all individual prescribers		40%	60%
Average beneficiary (patient) count	143	184	115
Average per beneficiary			
Gross spending	$592	$690	$523
Number of prescriptions	6.7	9.8	4.5
Prescribers in the top 1 percent based on number of prescriptions filled per beneficiary			
Number of individual prescribers	9,054	7,490	1,564
Percent of all individual prescribers		83%	17%
Total gross spending (billions)	$8.0	$6.8	$1.2
Percent of total gross spending	8%	11%	3%
Total number of prescriptions (millions)	131	115	16
Percent of all prescriptions filled	10%	12%	4%
Average per beneficiary			
Gross spending	$3,344	$3,049	$4,753
Number of prescriptions	44	44	45

Note: "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies. Numbers may not sum to totals due to rounding. "Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable to the 2013 prescription counts shown in Chart 10-16 through Chart 10-21.
*The definition of "primary care" used here is based on the definition used for the Primary Care Incentive Payment Program and includes practitioners who have a primary Medicare specialty designation of family practice, internal medicine, pediatrics, geriatrics, nurse practitioner and clinical nurse specialist, or physician assistant.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- In 2013, about 1 million individual providers wrote prescriptions for Medicare beneficiaries that were filled under Part D. Of those, about 40 percent were primary care providers and 60 percent were specialty or other types of providers.
- The average count of (Medicare-only) beneficiaries (patients) was higher among primary care providers compared with specialty and other types of providers—184 beneficiaries versus 115 beneficiaries.

(Chart continued next page)

Chart 10-23. Part D patterns of prescribing by provider type, 2013 (continued)

- On a per beneficiary basis, average gross spending for Part D prescriptions was higher for prescriptions written by primary care providers ($690) compared with the average for specialty and other providers ($523). Primary care providers also wrote more prescriptions per beneficiary, on average, than specialty and other providers: 9.8 compared with 4.5.

- More than 9,000 prescribers were among the top 1 percent of all prescribers, as ranked by the average number of Part D prescriptions filled per beneficiary in 2013. Of those prescribers, 83 percent were primary care providers and 17 percent were specialty and other providers.

- The top 1 percent of prescribers accounted for 8 percent of total gross spending and 10 percent of all prescriptions filled. Among primary care prescribers, results were more concentrated: The top 1 percent of prescribers accounted for 11 percent of gross spending and 12 percent of all prescriptions.

- Among the prescriptions that were written by prescribers in the top 1 percent of all prescribers in 2013, per beneficiary Part D spending averaged more than $3,000 for a total of 44 to 45 prescriptions filled.

Chart 10-24. Part D patterns of prescribing for selected specialties, 2013

	Number of individual Part D prescribers (thousands)	Share of all Part D prescribers (percent)	Average per beneficiary	
			Gross spending (in dollars)	Number of prescriptions
All Part D	1,042.6	100%	$592	6.7
All specialty/others	622.6	60	523	4.5
Selected specialties:				
Cardiology	22.7	4	597	9.3
Psychiatry	25.9	4	1,417	13.4
Neurology	13.1	2	2,213	7.9
Nephrology	7.9	1	1,315	10.0
Infectious disease	4.9	1	4,515	10.1
Endocrinology	5.3	1	1,460	8.9

Note: "Gross spending" reflects payments from all payers, including beneficiaries (cost sharing), but does not include rebates and discounts from pharmacies and manufacturers that are not reflected in prices at the pharmacies.
"Number of prescriptions" is a count of prescription drug events and is not adjusted for the size (number of days' supply) of the prescriptions. As such, they are not comparable with the 2013 prescription counts shown in Chart 10-16 through Chart 10-21.

Source: MedPAC analysis of Medicare Part D prescriber-level public use file from CMS.

- Cardiologists and psychiatrists were among the most numerous types of specialty care prescribers, each making up 4 percent of all individual Part D prescribers in 2013. An additional 2 percent of all Part D prescribers had a neurology specialty.
- Cardiologists wrote an average of 9.3 prescriptions per beneficiary for a combined $597 in average gross spending. That average number of prescriptions is considerably higher than the overall Part D average of 6.7 per beneficiary. However, average gross spending per beneficiary was about the same for cardiologists as for all Part D prescribers: $597 compared with $592, which reflects the widespread availability of generic cardiology medications.
- By comparison, other specialties had much higher Part D gross spending per beneficiary. Infectious disease specialists had the highest spending per beneficiary at $4,515, followed by neurologists at $2,213. Psychiatrists had the highest average number of prescriptions filled per beneficiary, at 13.4 compared with the overall average of 6.7.

SECTION 11

Other services

Dialysis
Hospice
Clinical laboratory

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

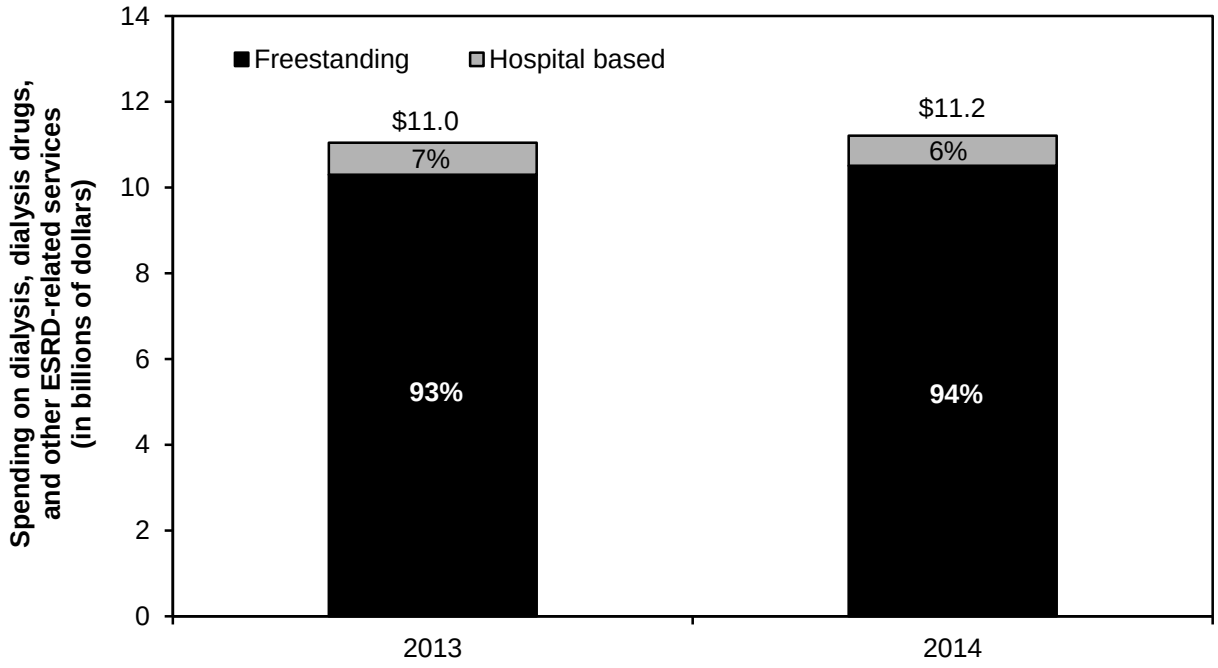
	2015	Average annual percent change 2010–2015	Average annual percent change 2014–2015
Total number of:			
Dialysis facilities	6,475	3%	3%
Hemodialysis stations	113,422	3	2
Mean number of hemodialysis stations per facility	18	–0.1	–0.3
	Percent of total		
Hospital based	7%	–5	–3
Freestanding	93	4	3
Urban	80	4	3
Rural, micropolitan	13	2	2
Rural, adjacent to urban	5	1	1
Rural, not adjacent to urban	3	2	3
Frontier	1	1	0
For profit	87	4	3
Nonprofit	13	–3	0

Note: "Nonprofit" includes facilities designated as either nonprofit or government. "Average annual percent change" is based on comparing 2010, 2014, and 2015 end-of-year files. Components may not sum to totals due to rounding.

Source: Compiled by MedPAC from the 2010, 2014, and 2015 CMS Dialysis Compare end-of-year files.

- Between 2010 and 2015, the number of freestanding and for-profit facilities increased, while hospital-based and nonprofit facilities decreased. Freestanding facilities increased from 90 percent to 93 percent of all facilities, and for-profit facilities increased from 83 percent to 87 percent of all facilities.
- Between 2010 and 2015, the proportion of facilities located in rural areas has remained relatively constant.
- Since 2010, the number of facilities has increased 3 percent per year. The average size of a facility has remained relatively constant, averaging about 18 dialysis treatment stations per facility (17.6 stations in 2010, 17.6 stations in 2014, and 17.5 stations in 2015).

Chart 11-2. Medicare spending for outpatient dialysis services furnished by freestanding and hospital-based dialysis facilities, 2013 and 2014



Note: ESRD (end-stage renal disease).

Source: Compiled by MedPAC from the 2013 and 2014 institutional outpatient files from CMS.

- In 2014, total spending for dialysis, dialysis drugs, and ESRD-related clinical laboratory tests was $11.2 billion. In 2014, Medicare paid all facilities under a modernized prospective payment system that includes in the payment bundle certain dialysis drugs and ESRD-related clinical laboratory tests that were separately paid before 2011. In 2013, most facilities were paid under the new PPS.
- Between 2013 and 2014, total ESRD expenditures increased by about 1 percent.
- Freestanding dialysis facilities treated most dialysis beneficiaries and accounted for 94 percent of expenditures in 2014.

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

	2003		2009		2013	
	Patients (thousands)	Percent	Patients (thousands)	Percent	Patients (thousands)	Percent
Total	452.2	100%	575.3	100%	661.6	100%
Dialysis	325.8	72	406.3	71	468.4	71
In-center hemodialysis	293.8	65	367.8	64	412.8	62
Home hemodialysis*	1.7	0.4	5.5	1	8.5	1
Peritoneal dialysis*	29.0	6	31.3	5	45.4	7
Unknown	1.3	0.3	1.7	0.3	1.7	0.3
Functioning graft and kidney transplants	126.4	28	168.9	29	193.3	29

Note: ESRD (end-stage renal disease). Totals may not equal sum of components due to rounding. Data include both Medicare and non-Medicare patients.
*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 2003 and 2013.
- 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 cleaned 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 2003 and 2013, the total number of in-center hemodialysis patients grew by 3 percent annually while the total number of peritoneal dialysis patients increased by 5 percent annually. Although a smaller proportion of all dialysis patients undergo home hemodialysis, the number of these patients grew 18 percent per year during this time period.
- Functioning graft patients are patients who have had a successful kidney transplant. Patients undergoing kidney transplant may receive either a living kidney or a cadaveric kidney donation. In 2013, 33 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

	Percent of total in 2013	Average annual percent change 2008–2013
Total (*N* = 661,648)	100%	4%
Age (years)		
0–17	1	0.3
18–44	16	1
45–64	44	4
65–79	30	6
80+	9	4
Sex		
Male	57	4
Female	43	3
Race/ethnicity		
White	62	4
African American	31	3
Native American	1	2
Asian American	6	6
Hispanic	17	6
Non-Hispanic	83	3
Underlying cause of ESRD		
Diabetes	37	4
Hypertension	25	5
Glomerulonephritis	16	2
Other causes	21	4

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.

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

- Among ESRD patients, 39 percent are over age 65. About 60 percent are White.
- Diabetes is the most common cause of renal failure.
- The number of ESRD patients increased by 4 percent annually between 2008 and 2013. Among the fastest growing groups of patients are Asian Americans and Hispanics.

Chart 11-5. Characteristics of Medicare fee-for-service dialysis patients, 2014

	Percent of all FFS dialysis patients
Age (years)	
Under 45	12%
45–64	38
65–74	26
75–84	18
85+	6
Sex	
Male	55
Female	45
Race	
White	48
African American	36
All other	16
Residence	
Urban county	82
Rural county, micropolitan	11
Rural county, adjacent to urban	5
Rural county, not adjacent to urban	2
Frontier county	1
Prescription drug coverage status	
Enrolled in Part D plan or other source of creditable drug coverage	89
LIS	58
Dually eligible for Medicare and Medicaid	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 2014, nearly 20 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, 2014

Type of facility	Percentage of freestanding facilities	Aggregate margin
All facilities	100%	2.1%
Urban	80	2.9
Rural	20	–2.7
Treatment volume (quintile)		
Lowest	20	–15.4
Second	20	–6.6
Third	20	–0.6
Fourth	20	3.8
Highest	20	8.1

Note: Margins include payments and costs for composite rate services, injectable drugs, and other end-stage renal disease–related services.

Source: Compiled by MedPAC from 2014 cost reports and the 2014 institutional outpatient file from CMS.

- For 2014, the aggregate Medicare margin for composite rate services and injectable drugs was 2.1 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 and 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 low-volume adjustment that is included in the new end-stage renal disease payment method that began in 2011.

Chart 11-7. Medicare hospice spending and average length of stay were virtually unchanged in 2014

	2000	2013	2014	Average annual change, 2000–2013	Change, 2013–2014
Beneficiaries in hospice (in millions)	0.534	1.315	1.324	7.2%	0.7%
Medicare payments (in billions)	$2.9	$15.1	$15.1	13.5%	–0.2%
Average length of stay among decedents (in days)	53.5	87.8	88.2	3.9%	0.5%
Median length of stay among decedents (in days)	17	17	17	0 days*	0 days*

Note: Average length of stay is calculated for decedents who used 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/her lifetime. Due to rounding, the percentage change displayed in the chart may not equal the percentage change calculated using the yearly data displayed in the chart.
*This figure reflects the raw change rather than the percentage change.

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

- The number of Medicare beneficiaries receiving hospice services has more than doubled since 2000 and grew modestly in 2014, suggesting that access to hospice care has increased.
- Average length of stay held steady at about 88 days between 2013 and 2014, after a long period of growth.
- Total Medicare payments to hospices were about $15.1 billion in 2014, about the same as 2013.

Chart 11-8. Hospice use increased across beneficiary groups from 2000 to 2014

	Share of decedents using hospice			Average annual percentage point change	Percentage point change
	2000	2013	2014	2000–2013	2013–2014
All	22.9%	47.3%	47.8%	1.9%	0.5%
FFS beneficiaries	21.5	46.2	46.7	1.9	0.5
MA beneficiaries	30.9	50.6	50.8	1.5	0.2
Dual eligibles	17.5	42.1	42.4	1.9	0.3
Non–dual eligibles	24.5	48.9	49.4	1.9	0.5
Age (years)					
<65	17.0	29.2	29.4	0.9	0.2
65–84	24.7	45.3	45.6	1.6	0.3
85+	21.4	55.0	56.0	2.6	1.0
Race/ethnicity					
White	23.8	49.2	49.7	2.0	0.5
Minority	17.3	37.0	37.6	1.5	0.6
Gender					
Male	22.4	43.3	43.7	1.6	0.4
Female	23.3	50.9	51.4	2.1	0.5
Beneficiary location					
Urban	24.3	48.5	48.9	1.9	0.4
Micropolitan	18.5	44.3	44.7	2.0	0.4
Rural, adjacent to urban	17.6	42.9	43.2	1.9	0.3
Rural, nonadjacent to urban	15.8	38.0	38.7	1.7	0.7
Frontier	13.2	32.3	32.3	1.5	0.0

Note: FFS (fee-for-service), MA (Medicare Advantage). "Beneficiary location" refers to the beneficiary's county of residence. Urban, micropolitan, and rural designations are based on the urban influence codes. The frontier category is defined as population density equal to or less than six persons per square mile.

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

- Hospice use grew in almost all beneficiary groups in 2014, 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 older, White, female, MA enrollees, not dual eligible, or living in an urban area were more likely to use hospice than their respective counterparts.

Chart 11-9. Number of Medicare-participating hospices has increased due to growth in for-profit hospices

	2000	2012	2013	2014
All hospices	2,255	3,727	3,925	4,092
For profit	672	2,199	2,418	2,590
Nonprofit	1,324	1,320	1,309	1,302
Government	257	208	198	200
Freestanding	1,069	2,643	2,844	3,027
Hospital based	785	568	553	535
Home health based	378	492	503	506
SNF based	22	23	25	24
Urban	1,424	2,670	2,885	3,016
Rural	788	983	992	991

Note: SNF (skilled nursing facility). Numbers may not sum to totals because of missing data for a small number of providers.

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

- There were nearly 4,100 Medicare-participating hospices in 2014. Most of them were for-profit hospices.
- Between 2000 and 2014, the number of Medicare-participating hospices grew by more than 1,800 providers. For-profit hospices accounted almost entirely for that growth.
- Growth in the number of providers has occurred predominantly among freestanding and home health–based providers. The number of hospital-based providers has declined.
- The number of hospices in rural areas changed little between 2013 and 2014.

Chart 11-10. Hospice cases and length of stay, by diagnosis, 2014

Diagnosis	Share of total cases	Percent of cases with length of stay greater than 180 days
Cancer (except lung cancer)	21%	10%
Circulatory, except heart failure	16	24
Alzheimer's and similar diseases	14	37
Heart failure	10	21
Lung cancer	8	9
Chronic airway obstruction, NOS	6	28
Respiratory disease	5	14
Nervous system, except Alzheimer's	4	32
Other	3	13
Genitourinary disease	3	8
Organic psychoses	3	24
Dementia	2	28
Digestive disease	2	9
Adult failure to thrive or debility, NOS	1	23
All	100	20

Note: NOS (not otherwise specified). Cases include all patients who received hospice care in 2014, not just decedents. "Diagnosis" reflects primary diagnosis on the beneficiary's last hospice claim. The percentage of cases with length of stay greater than 180 days reflects the share of hospice patients who received hospice care in 2014 whose lifetime length of hospice stay exceeded 180 days at the end of 2014 (or at the time of death or discharge in 2014 if the beneficiary was not enrolled in hospice at the end of 2014). "Share of total cases" column may not sum to 100 percent because of rounding.

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

- In 2014, the most common terminal diagnosis among Medicare hospice patients was cancer (all types), accounting for about 29 percent of cases. The next most common diagnoses were heart failure and other circulatory conditions (26 percent of cases) and neurological conditions (Alzheimer's disease, nervous system disorders, organic psychoses, and dementia) (23 percent of cases).

- Length of stay varies by diagnosis. Nearly one-quarter or more of hospice patients in 2014 with circulatory conditions, Alzheimer's disease, chronic airway obstruction, nervous system disorders other than Alzheimer's, organic psychoses, and dementia had lengths of stay exceeding 180 days. Long hospice stays were least common among beneficiaries with genitourinary disease, digestive disease, and cancer.

Chart 11-11. Hospice length of stay has changed little since 2012, after a more than decade-long period of growth in the longest stays

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
2001	54.9	3	6	17	57	146
2002	58.2	3	6	17	59	157
2003	62.2	3	6	17	62	170
2004	66.0	3	5	17	63	180
2005	71.3	3	5	17	67	194
2006	75.6	3	5	17	70	208
2007	79.7	3	5	17	73	222
2008	83.4	2	5	17	75	235
2009	84.4	3	5	17	76	237
2010	86.1	3	5	17	77	240
2011	86.3	2	5	17	78	240
2012	88.0	2	5	18	80	246
2013	87.8	2	5	17	79	246
2014	88.2	2	5	17	79	247

Note: Data reflect hospice length of stay for Medicare decedents who used hospice at the time of death or before death. "Length of stay" 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 denominator file and the Medicare Beneficiary Database from CMS.

- Average length of stay among decedents grew from nearly 54 days in 2000 to 88 days in 2012 and has held steady at about 88 days through 2014.
- In 2014, the 10 percent of hospice decedents with the longest stays (i.e., the 90th percentile) received 247 days or more of hospice care, similar to the two prior years. Before 2012, most growth in hospice length of stay occurred among decedents with the longest stays. Between 2000 and 2012, the 90th percentile in length of stay grew from 141 days to 246 days.
- Short stays in hospice have changed little since 2000. The median length of stay in hospice was about 17 days from 2000 to 2014. Hospice length of stay at the 25th percentile has been 5 or 6 days and at the 10th percentile has been 2 or 3 days since 2000.

Chart 11-12. Hospice length of stay among decedents, by beneficiary and hospice characteristics, 2014

	Average length of stay (in days)	Length of stay percentiles (in days)		
		10th	50th	90th
Beneficiary				
Diagnosis				
Cancer	53	3	18	130
Neurological	148	3	33	447
Heart/circulatory	89	2	14	262
Debility or adult failure to thrive	102	3	20	307
COPD	121	2	25	363
Other	48	2	7	124
Site of service				
Home	90	4	26	238
Nursing facility	110	3	21	329
Assisted living facility	154	5	51	441
Hospice				
For profit	107	3	21	314
Nonprofit	67	2	13	179
Freestanding	91	2	17	257
Home health based	71	2	16	192
Hospital based	58	2	13	152

Note: COPD (chronic obstructive pulmonary disease). Average length of stay is calculated for Medicare beneficiaries who died in 2014 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, COPD, or debility or adult failure to thrive have the longest stays, while beneficiaries with cancer have the shortest stays on average.
- Beneficiaries who receive hospice services in assisted living facilities and nursing facilities have longer stays on average than beneficiaries who receive care at home.
- For-profit and freestanding hospices have longer average lengths of stay than nonprofit and provider-based (home health– and hospital-based) hospices.

Chart 11-13. More than half of Medicare hospice spending in 2014 was for patients with stays exceeding 180 days

	Medicare hospice spending, 2014 (in billions)
All hospice users in 2014	$15.1
Beneficiaries with LOS > 180 days	8.8
Days 1–180	2.8
Days 181–365	2.8
Days 366+	3.2
Beneficiaries with LOS ≤ 180 days	6.1

Note: LOS (length of stay). LOS reflects the beneficiary's lifetime LOS as of the end of 2014 (or at the time of death or discharge in 2014 if the beneficiary was not enrolled in hospice at the end of 2014). All spending reflected in the chart occurred only in 2014. Break-out groups do not sum to total because of rounding and because they exclude about $0.1 billion in payments to hospices for physician visits.

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

- In 2014, Medicare hospice spending on patients with stays exceeding 180 days was nearly $9 billion, more than half of all Medicare hospice spending that year.
- About $3.2 billion, or about 20 percent, of Medicare hospice spending in 2014 was on hospice care for patients who had already received at least one year of hospice.

Chart 11-14. Hospice aggregate Medicare margins, 2007–2013

	Share of hospices (2013)	Medicare margin				
		2007	2010	2011	2012	2013
All	100%	5.8%	7.4%	8.8%	10.0%	8.6%
Freestanding	72	8.7	10.7	11.8	13.3	12.0
Home health based	13	2.3	3.2	6.1	5.7	2.2
Hospital based	14	–10.9	–16.6	–16.0	–16.8	–16.7
For profit	62	10.4	12.3	14.8	15.4	14.7
Nonprofit	33	1.6	3.0	2.4	3.7	1.2
Government	5	N/A	N/A	N/A	N/A	N/A
Urban	74	6.3	7.7	9.1	10.3	8.9
Rural	26	1.4	5.2	6.0	7.3	6.1
Below cap	89.3	6.1	7.7	9.1	10.4	8.8
Above cap	10.7	2.5	3.2	4.1	5.2	7.0
Above cap (including cap overpayments)	10.7	20.5	17.4	18.4	21.3	20.2

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 percentage of freestanding and provider-based (home health–based and hospital-based) hospices does not sum to 100 percent because skilled nursing facility–based hospices are not broken out separately. The percentage of hospices may not sum to 100 percent for other categories due to rounding.

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 8.6 percent in 2013, down from 10.0 percent in 2012. The implementation of the sequester beginning April 2013 accounts for this decline in the margin. The sequester reduced hospice revenues in the 2013 cost report year by about 1.3 percent.

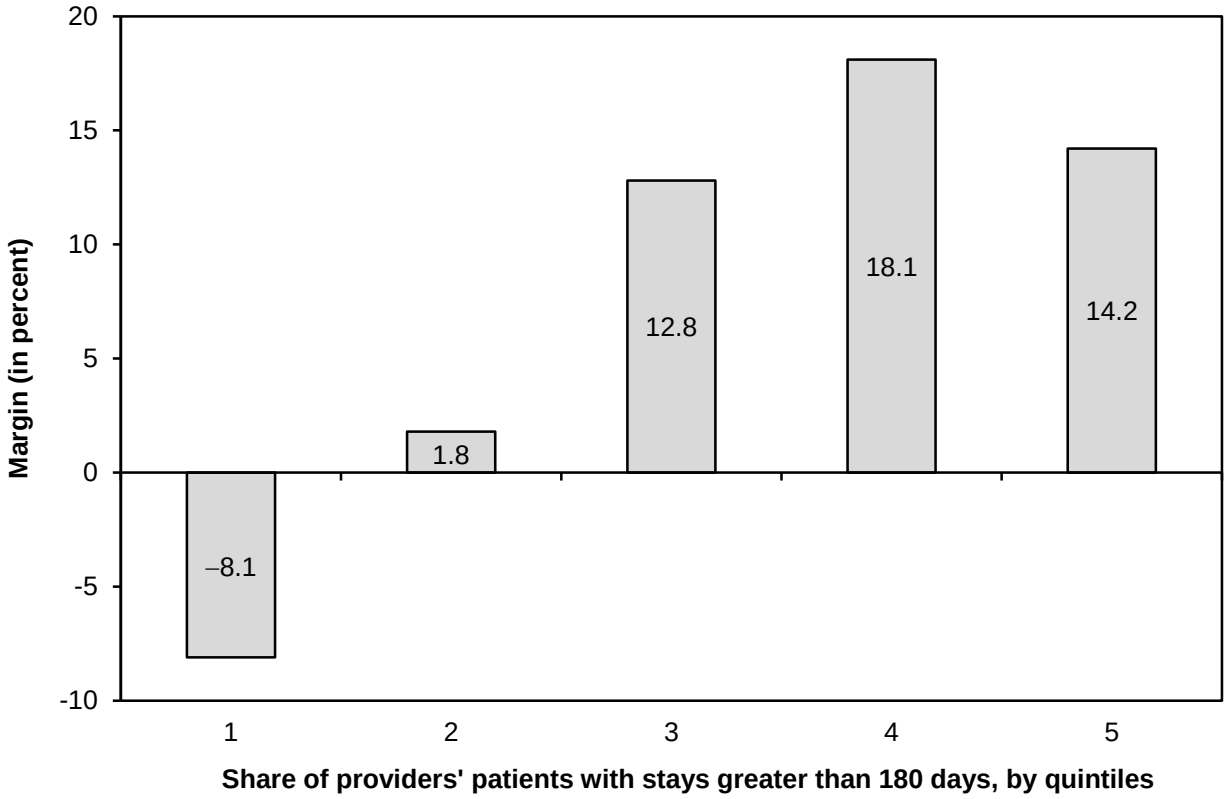
- Margin estimates do not include nonreimbursable costs associated with bereavement services and volunteers (which, if included, would reduce margins by at most 1.4 and 0.3 percentage points, respectively). Margins also do not include the costs and revenues associated with fundraising.

- Freestanding hospices had higher margins than provider-based (home health– and hospital-based) hospices, in part, because of differences in their indirect costs. Provider-based hospices' indirect costs are higher than those of freestanding providers and are likely inflated because of the allocation of overhead from the parent provider.

- In 2013, for-profit hospice margins were strong at 14.7 percent. The aggregate margin for nonprofit hospices was 1.2 percent. The subset of nonprofit hospices that were freestanding had a higher margin, 5.2 percent (not shown in chart).

- Hospices that exceeded the cap (Medicare's aggregate average per beneficiary payment limit) had a margin of more than 20 percent before the return of the cap overpayments.

Chart 11-15. Medicare margins were higher among hospices with more long stays, 2013



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.

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 provides an incentive for longer lengths of stay.
- Hospices with more patients who had stays greater than 180 days generally have higher margins. In 2013, hospices in the lowest length-of-stay quintile had a margin of –8.1 percent compared with an 18.1 percent margin for hospices in the second highest length-of-stay quintile.
- Margins were somewhat lower in the highest length-of-stay quintile (14.2 percent) compared with the second highest quintile (18.1 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 more than 20 percent before the return of overpayments (see Chart 11-14).

Chart 11-16. Hospices that exceeded Medicare's annual payment cap, selected years

	2002	2010	2011	2012	2013
Share of hospices exceeding the cap	2.6%	10.1%	9.8%	11.0%	10.7%
Average payments over the cap per hospice exceeding the cap (in thousands)	$470	$426	$424	$510	$460
Payments over the cap as a percent of overall Medicare hospice spending	0.6%	1.1%	1.1%	1.4%	1.3%

Note: The cap year is defined as the period beginning November 1 and ending October 31 of the following year. These estimates of hospices that exceeded the aggregate cap are based on the Commission's analyses. While the estimates are intended to approximate those of the Medicare claims-processing contractors, they are not necessarily identical to the contractors' estimates because of differences in available data and methodology.

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.

- The share of hospices exceeding the aggregate cap declined slightly from 11.0 percent in 2012 to 10.7 percent in 2013.
- Medicare payments over the cap represented 1.3 percent of total Medicare hospice spending in 2013.
- On average, above-cap hospices exceeded the cap by about $460,000 per provider in 2013, down from about $510,000 per provider in 2012.

Chart 11-17. Hospice live-discharge rates, 2012–2014

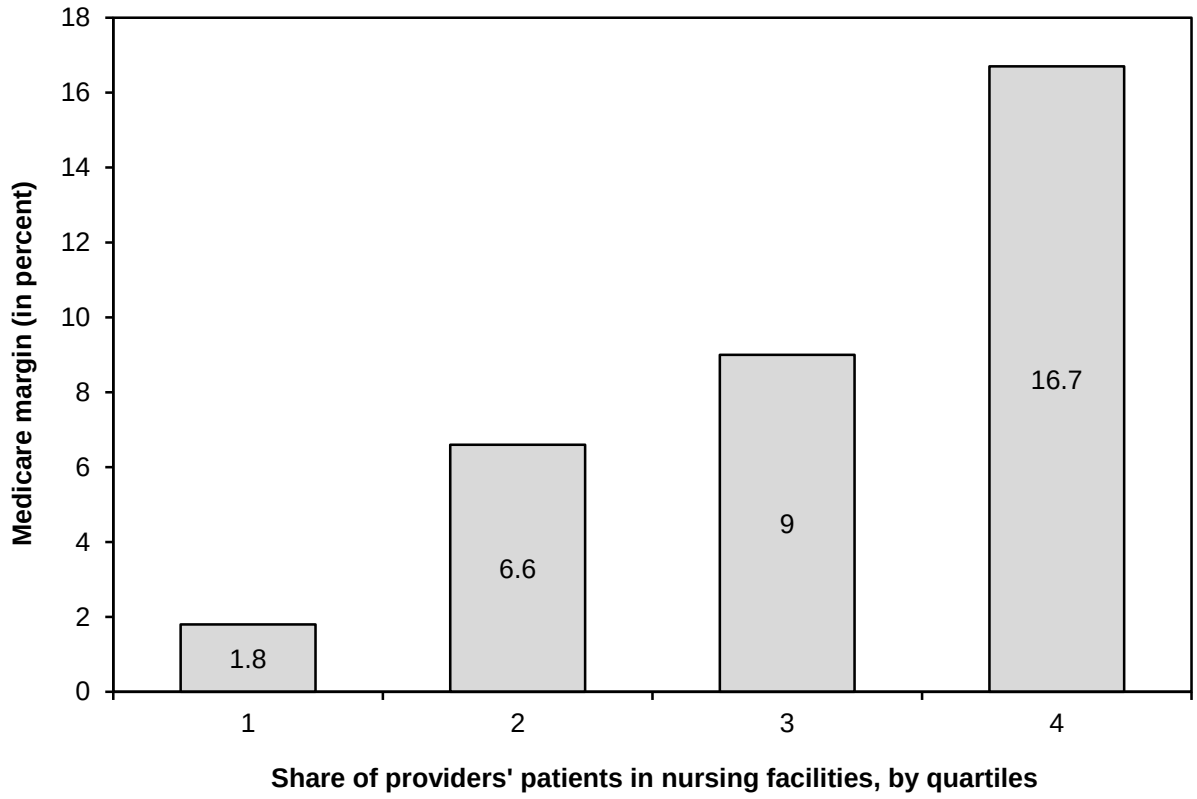
	2012	2013	2014
Live discharge as a share of all discharges	18.5%	18.4%	17.2%
Reason for live discharge			
No longer terminally ill	38	42	43
Beneficiary revocation	45	40	39
Transfer hospice providers	10	11	12
Move out of service area	5	5	5
Discharge for cause	2	2	2
Providers' rate of live discharge as a share of all discharges, by percentile			
10th percentile	9.3	9.3	8.5
25th percentile	13.0	13.2	12.3
50th percentile	19.4	19.4	18.7
75th percentile	30.8	30.2	30.1
90th percentile	50.0	47.4	50.0

Note: The information on reason for live discharge for 2012 is based on data reported for the last six months of 2012. A "discharge for cause" may occur under certain circumstances if the patient's behavior is disruptive, abusive, or uncooperative. Percentages may not sum to 100 due to rounding.

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

- In 2014, about 17.2 percent of hospice discharges were live discharges, down from 18.4 percent in 2013.
- In 2014, the most common reasons for live discharge were that the beneficiary was no longer terminally ill (43 percent) and the beneficiary revoked his or her hospice election and returned to conventional care (39 percent). Live discharges resulting from a patient transferring hospice providers, moving out of the hospice provider's service area, or being discharged for cause occurred less frequently.
- Live-discharge rates vary across providers. The 10 percent of hospices with the highest live-discharge rates (i.e., the 90th percentile) had live discharges account for half of their discharges in 2014.

Chart 11-18. Margins were higher among hospices with a greater share of their patients in nursing facilities, 2013

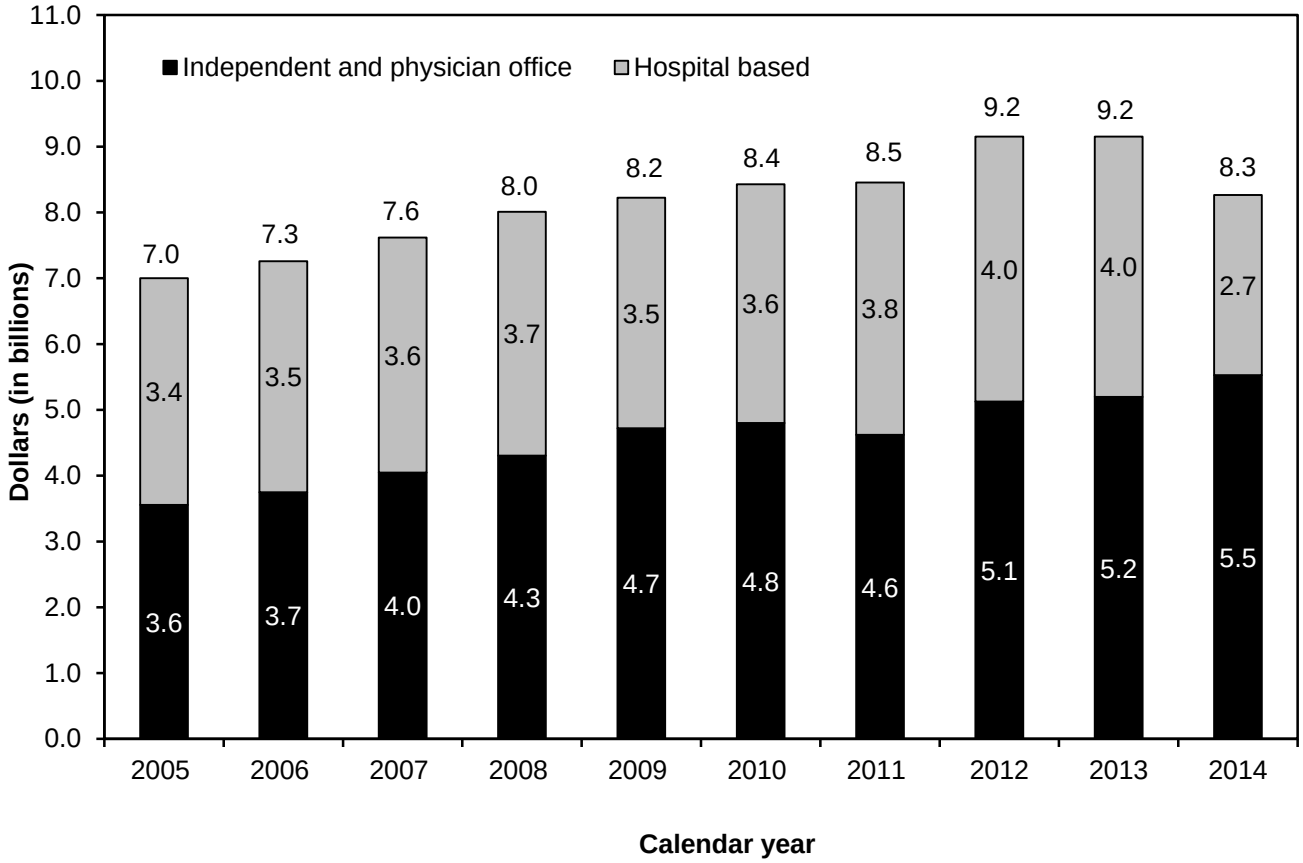


Note: Margins exclude overpayments to hospices that exceed the cap on the average annual Medicare payment per beneficiary. Margins are calculated based on Medicare-allowable, reimbursable costs.

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

- Hospices with a large share of their patients in nursing facilities have higher margins than other hospices.
- The higher profitability of hospices serving many nursing facility patients may be due to a combination of factors, such as longer lengths of stay, possible efficiencies in treating patients in a centralized location (e.g., lower mileage costs and less staff time for travel), and overlap in responsibilities between the hospice and the nursing facility.

Chart 11-19. Medicare spending for clinical laboratory services, 2005–2014



Note: Spending is for services paid under the clinical laboratory fee schedule. Hospital-based services are furnished in labs owned or operated by hospitals. Total spending appears on top of each bar. 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.
AT THE TIME THIS DATA BOOK WAS PREPARED, THE MEDICARE TRUSTEES' REPORT (WHICH IS THE CUSTOMARY SOURCE OF DATA FOR THIS CHART) HAD NOT YET BEEN RELEASED FOR 2016. THIS CHART REFLECTS DATA FROM THE 2015 MEDICARE TRUSTEES' REPORT. THE READER IS ADVISED TO CONSULT THE 2016 TRUSTEES' REPORT DIRECTLY, WHEN AVAILABLE, FOR THE MOST CURRENT VERSION OF THESE DATA.

- Medicare spending for clinical laboratory services in all settings grew by an average of 3.4 percent per year between 2005 and 2013. This growth was primarily driven by rising volume since there were very few increases in payment rates during those years.

- Medicare spending for lab services declined by 9.7 percent in 2014 because, beginning in 2014, most lab tests provided in hospital outpatient departments are no longer paid separately under the clinical lab fee schedule. Instead, most of these tests are packaged with their associated visits or procedures under the hospital outpatient prospective payment system.

- In 2014, independent and physician-office labs accounted for 67 percent of Medicare spending for all lab services; hospital-based labs accounted for the remaining 33 percent. Clinical lab services accounted for 1.4 percent of total Medicare spending in 2014 (data not shown).

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