

SECTION

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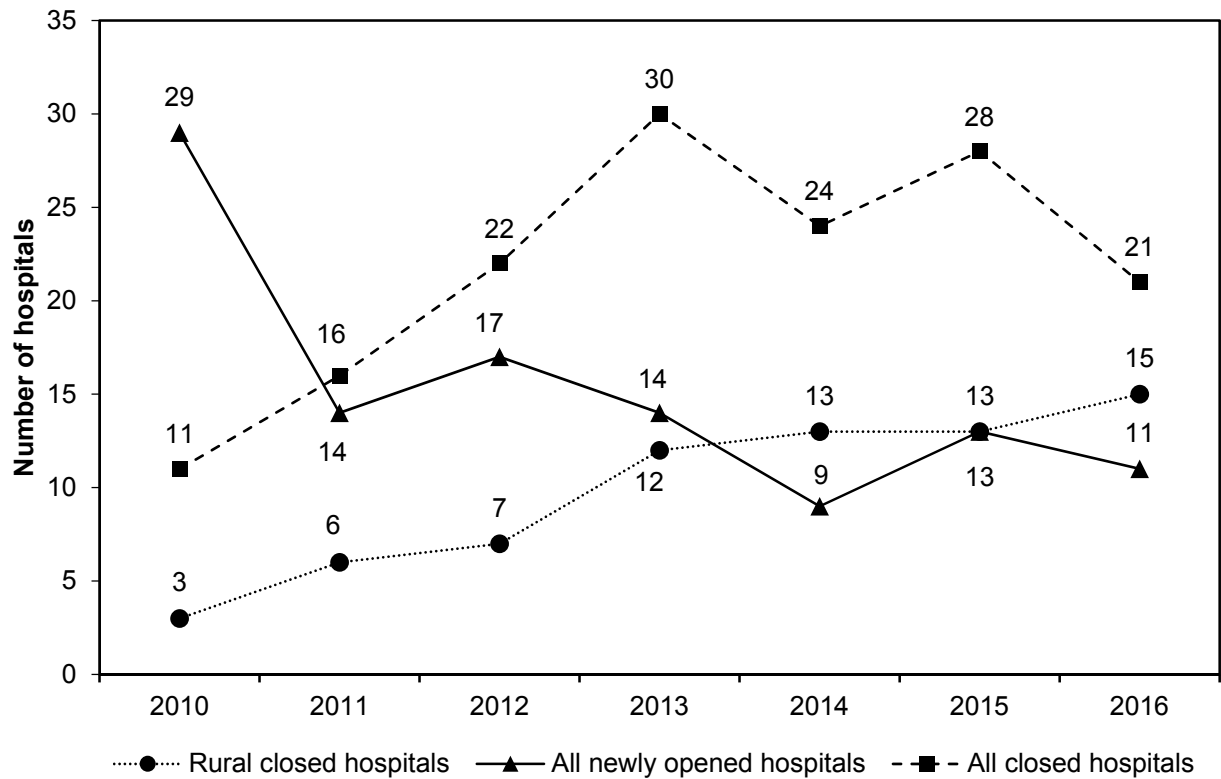
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**Acute inpatient services**  
**Short-term hospitals**  
**Inpatient psychiatric facilities**

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**Chart 6-1. Annual changes in number of acute care hospitals participating in the Medicare program, 2010–2016**

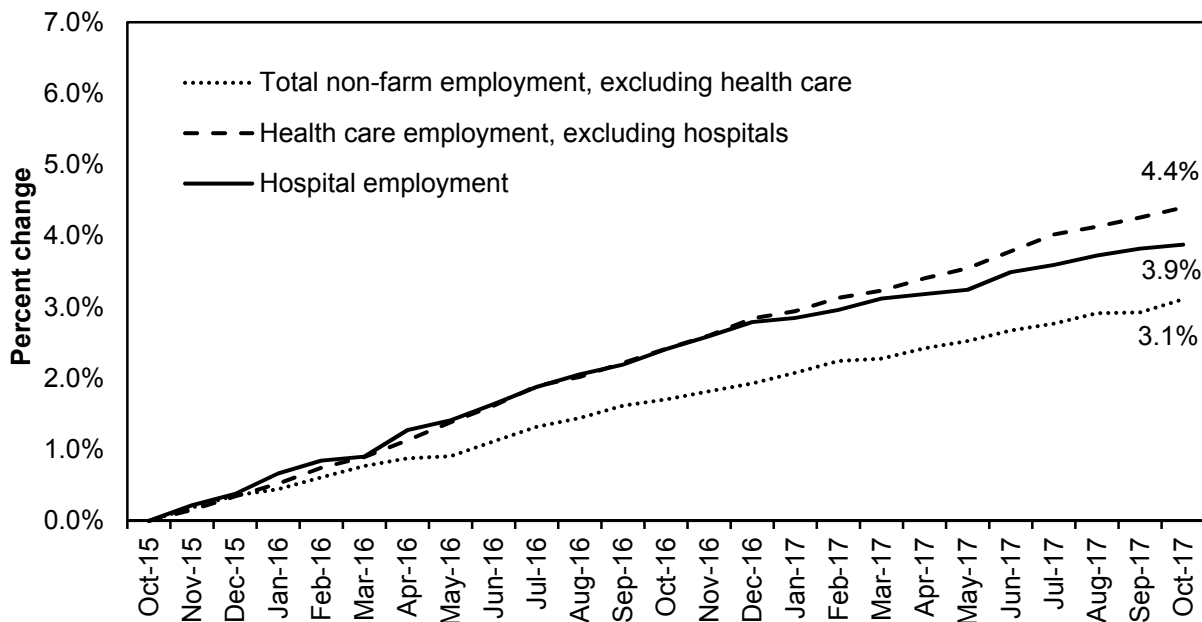


Note: "Hospitals" refers to general short-term acute care hospitals. The Commission's reported number of open and closed hospitals can change from year to year based on hospitals that enter Medicare as an acute care facility and later convert to a more specialized type of facility, such as a long-term 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 2016, with 21 acute care hospitals closing (less than 1 percent of all acute care hospitals participating in the Medicare program) and 11 hospitals starting participation in the Medicare program.
- In 2016, rural hospital closures accounted for over half of all hospital closures. A dozen or more rural hospitals have closed in each of the four most recent years (2013 to 2016). Rural hospital closures could in part reflect declining inpatient volume at many rural hospitals.
- In 2016, 4,585 acute care hospitals submitted claims to Medicare for inpatient services (data not shown).

**Chart 6-2. Percent change in hospital employment, 2015–2017**

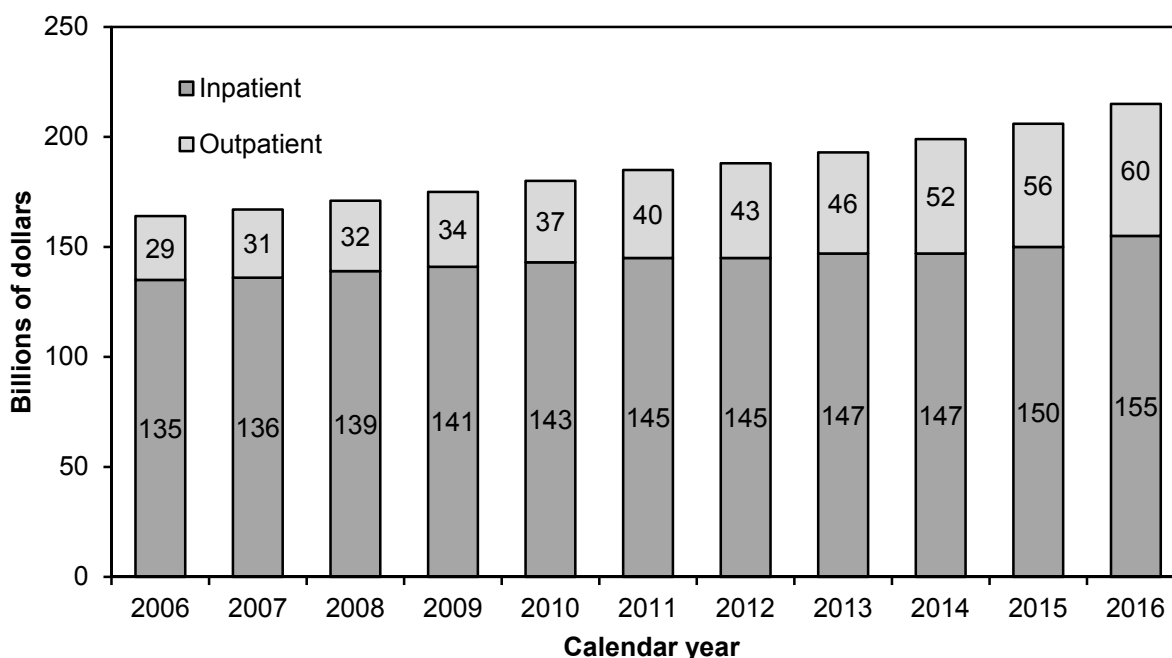


Note: "Total non-farm employment" is defined as all employment not of or relating to farms or farming.

Source: MedPAC analysis of Bureau of Labor Statistics, Current Employment Statistics data set as of December 2017.

- The Bureau of Labor Statistics survey of current employment data indicates that the number of individuals directly employed within the hospital industry increased 3.9 percent from October 2015 to October 2017. Employment in the rest of the health care sector increased 4.4 percent, and employment across the rest of the economy (non-farm minus health care) increased 3.1 percent.
- In the most recent year (from 2016 to 2017), hospital employment increased 1.4 percent, the rest of the health care sector increased 2.2 percent, and employment across the rest of the economy (non-farm minus health care) increased 1.3 percent.
- From 2015 to 2017, the number of hospital staff in health care clinical and technical occupations overall increased 6 percent (data not shown). Within this category, larger than average increases occurred for physician assistants (20 percent); pharmacists (9 percent); diagnostic-related technologists (7 percent); and registered nurses (6 percent). Licensed practical nurses/licensed vocational nurses were among the few occupations in this category with a decline in employment (–4 percent).
- From 2015 to 2017, the number of hospital staff in nonclinical occupations increased for just a few occupational categories: life and physical science research (18 percent); computer and math science (9 percent); and business and finance (7 percent) (data not shown). By contrast, growth in the number of employed individuals was lower than average in nonclinical occupational categories such as building and grounds (2 percent); management (1 percent); and food service (–1 percent). Some of these functions may have been outsourced in recent years.

**Chart 6-3. Growth in Medicare’s FFS payments for hospital inpatient and outpatient services, 2006–2016**



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 \$155 billion and outpatient spending was \$60 billion in 2016. From 2015 to 2016, inpatient spending increased 3.3 percent, while outpatient spending increased nearly 7.1 percent.
- Inpatient spending increased as much between 2015 and 2016 (\$5 billion) as it did between 2011 and 2015.
- Outpatient spending has increased as a share of total Medicare hospital spending in the past 10 years. In 2006, outpatient spending accounted for almost 18 percent of all Medicare spending for hospital services; in 2016, outpatient spending grew to almost 28 percent of total Medicare hospital spending.

**Chart 6-4. Share of Medicare acute care hospital inpatient discharges by hospital group, 2016**

Hospital group	Hospitals		Medicare discharges	
	Number	Share of total	Number (thousands)	Share of total
All PPS and CAHs	4,583	100%	9,488	100%
CAHs	1,345	29.4	309	3.3
PPS hospitals	3,238	70.7	9,179	96.7
Urban (PPS only)	2,431	53.0	8,225	86.7
Large urban	1,298	28.3	4,276	45.1
Other urban	1,115	24.3	3,922	41.3
Rural (PPS only)	807	17.6	954	10.1
Rural referral	92	2.0	226	2.4
Sole community	363	7.9	476	5.0
Medicare dependent	157	3.4	126	1.3
Other rural, <50 beds	112	2.4	44	0.5
Other rural, ≥50 beds	101	2.2	108	1.1
Tax status (PPS only)				
Voluntary	1,876	40.9	6,440	67.9
Proprietary	857	18.7	1,653	17.4
Government	505	11.0	1,084	11.4
Teaching status (PPS only)				
Major teaching	307	6.7	1,663	17.5
Other teaching	769	16.8	3,565	37.6
Nonteaching	2,162	47.2	3,950	41.6

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 2016 cost reports. Hospitals in urban, rural, tax status, and teaching status categories are all PPS hospitals. Components may not sum to totals due to rounding. The “Medicare dependent” hospital category includes 18 urban facilities located within metropolitan statistical areas. These 18 facilities are included in the “Medicare dependent” category but excluded from the “Rural (PPS only)” category, resulting in the rural subcategories not summing to the rural totals.

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

- In 2016, 3,238 hospitals provided almost 9.2 million discharges under Medicare’s acute inpatient PPS, and 1,345 CAHs provided 309,000 discharges. The number of discharges declined from 2015 to 2016 at both PPS hospitals and CAHs (data not shown).
- Approximately 19 percent of PPS hospitals were 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 9 percent of all discharges.
- About 91 percent of rural hospitals were paid through the CAH, RRC, or SCH provisions or MDH Program in 2016. Collectively, these four types of hospitals accounted for 90 percent of all rural Medicare discharges.

**Chart 6-5. Change in share of discharges by major diagnostic category, 2006 to 2016**

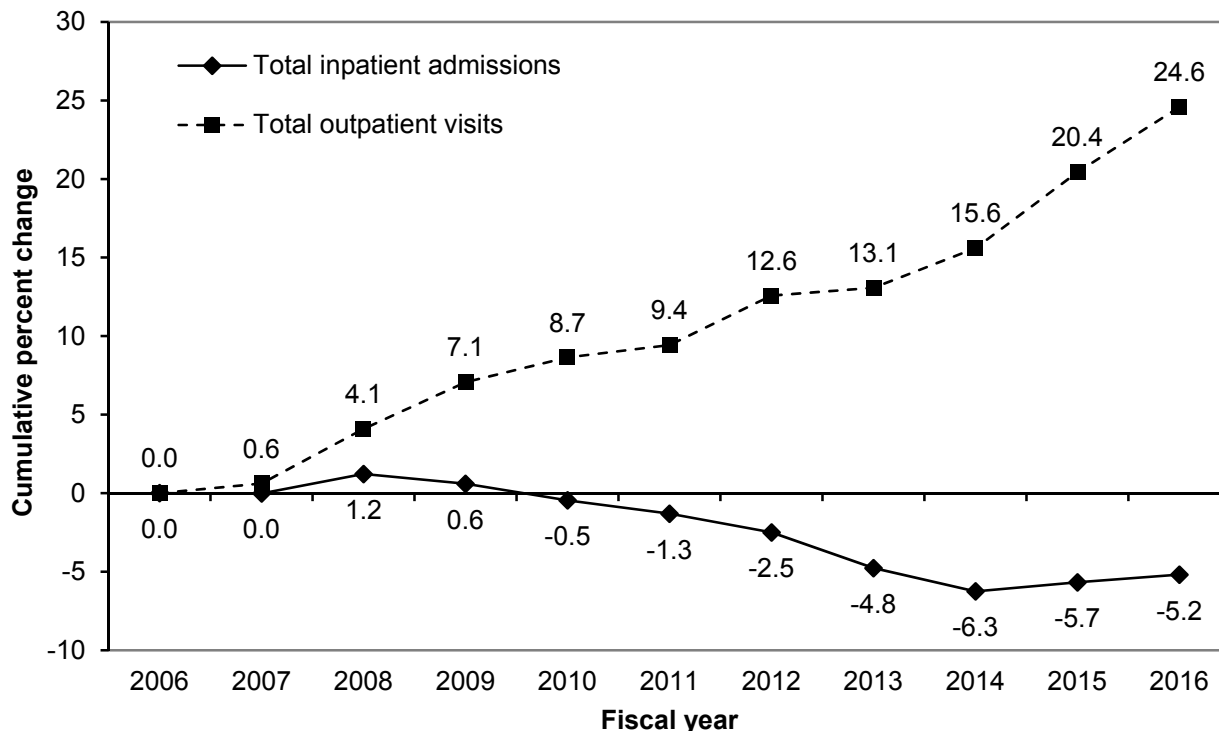
MDC number	MDC name	Share of all discharges 2006	Share of all discharges 2016	Percentage point change
5	Circulatory system	27%	20%	-7
8	Musculoskeletal system	12	14	2
4	Respiratory system	14	13	-1
6	Digestive system	11	10	-1
18	Infectious and parasitic diseases	4	9	5
1	Nervous system	8	8	0
11	Kidney 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	92	0

Note: MDC (major diagnostic category).

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

- In 2016 (and 2006), 10 major diagnostic categories accounted for 92 percent of all discharges from hospitals paid under the inpatient prospective payment system.
- Circulatory system discharges accounted for one-fifth of all inpatient discharges in 2016, a decline of 7 percentage points from 2006.
- Musculoskeletal system discharges accounted for 14 percent of all inpatient discharges in 2016, up 2 percentage points from 2006. This increase is due to growth in the number of discharges for major joint replacement surgery.
- Infectious and parasitic disease discharges accounted for 9 percent of all inpatient discharges in 2016, up 5 percentage points from 2006.

**Chart 6-6. Cumulative change in all-payer hospital outpatient visits and inpatient admissions, 2006–2016**



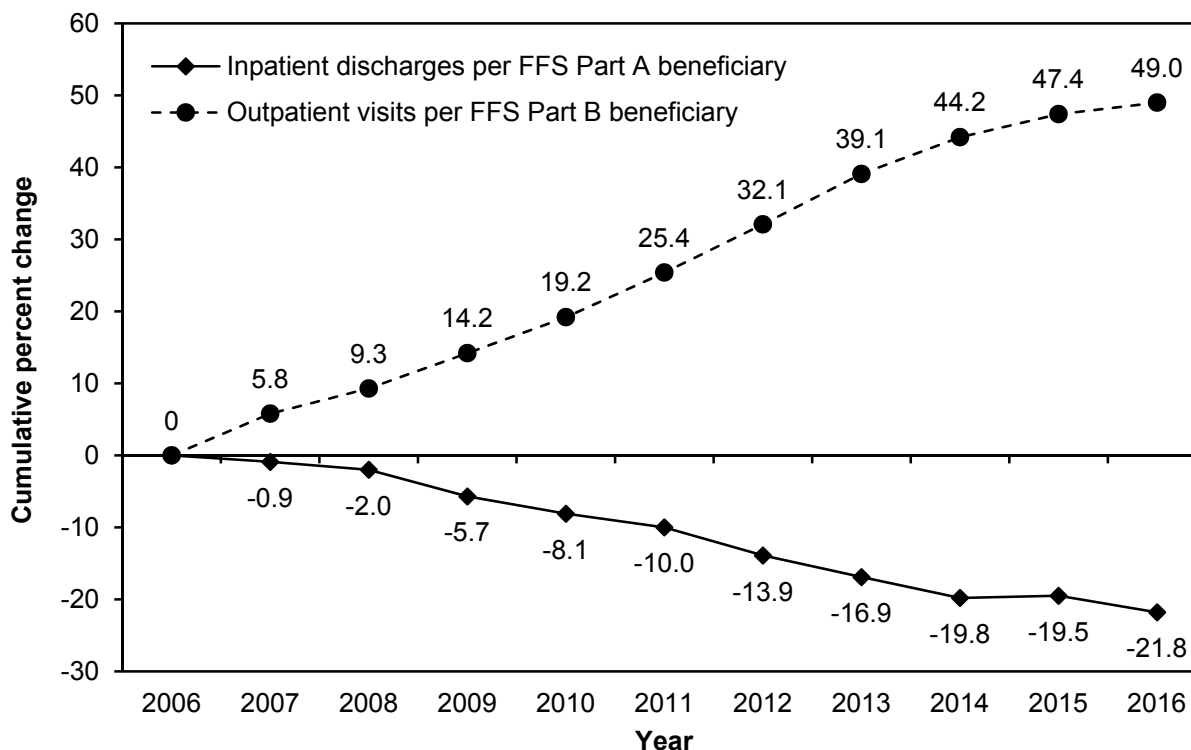
Note: Cumulative change is the total percentage change from 2006 through 2016. Data are admissions to and outpatient visits at about 5,000 community hospitals. Inpatient data exclude separate nursing home units.

Source: American Hospital Association, AHA Hospital Statistics.

- In 2016, community hospitals provided a total of nearly 747 million outpatient visits and 33 million inpatient admissions across all patients (data not shown).
- All-payer hospital outpatient service use grew rapidly between 2006 and 2016, while inpatient service use declined overall. From 2006 to 2016, the number of outpatient visits increased about 25 percent. By contrast, over the same period, the number of all-payer inpatient admissions declined more than 5 percent.
- All-payer outpatient and inpatient service use both increased from 2014 to 2016. Over this period, the number of outpatient visits increased by 9.0 percentage points, the most rapid growth observed in over a decade. Over the same period, the number of inpatient admissions increased 1.1 percentage points.



**Chart 6-7. Cumulative change in Medicare outpatient visits and inpatient discharges per FFS beneficiary, 2006–2016**

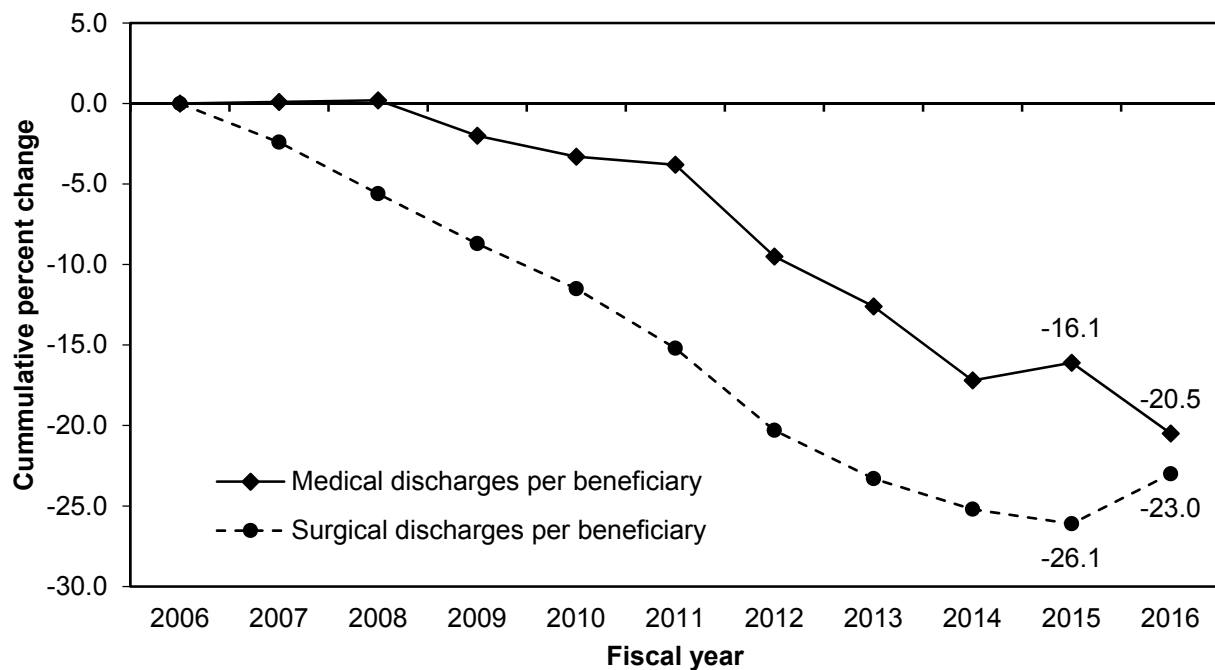


Note: FFS (fee-for-service). Data are for short-term general and surgical hospitals, including critical access and children's hospitals. Years for outpatient visits are calendar years, and years for inpatient discharges are fiscal years.

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

- In 2016, Medicare accounted for approximately 53 million outpatient visits and 10 million inpatient admissions (data not shown).
- From 2006 to 2016, the number of Medicare outpatient visits per FFS beneficiary increased 49.0 percent. By contrast, over the same period, the number of Medicare inpatient admissions per FFS beneficiary declined nearly 22 percent.
- Together, these two trends suggest a shift in services from the inpatient to the outpatient setting. The growth in outpatient services also reflects a shift in some services from those provided in physician offices to those being billed as outpatient hospital services.
- From 2015 to 2016, the number of Medicare outpatient services per FFS beneficiary increased 1.6 percentage points, and Medicare inpatient discharges per FFS beneficiary declined 2.3 percentage points. Compared with growth in recent prior years, outpatient visits increased slightly more slowly and inpatient discharges continued to decline.

**Chart 6-8. Trends in medical and surgical inpatient discharges per beneficiary diverged, 2006–2016**

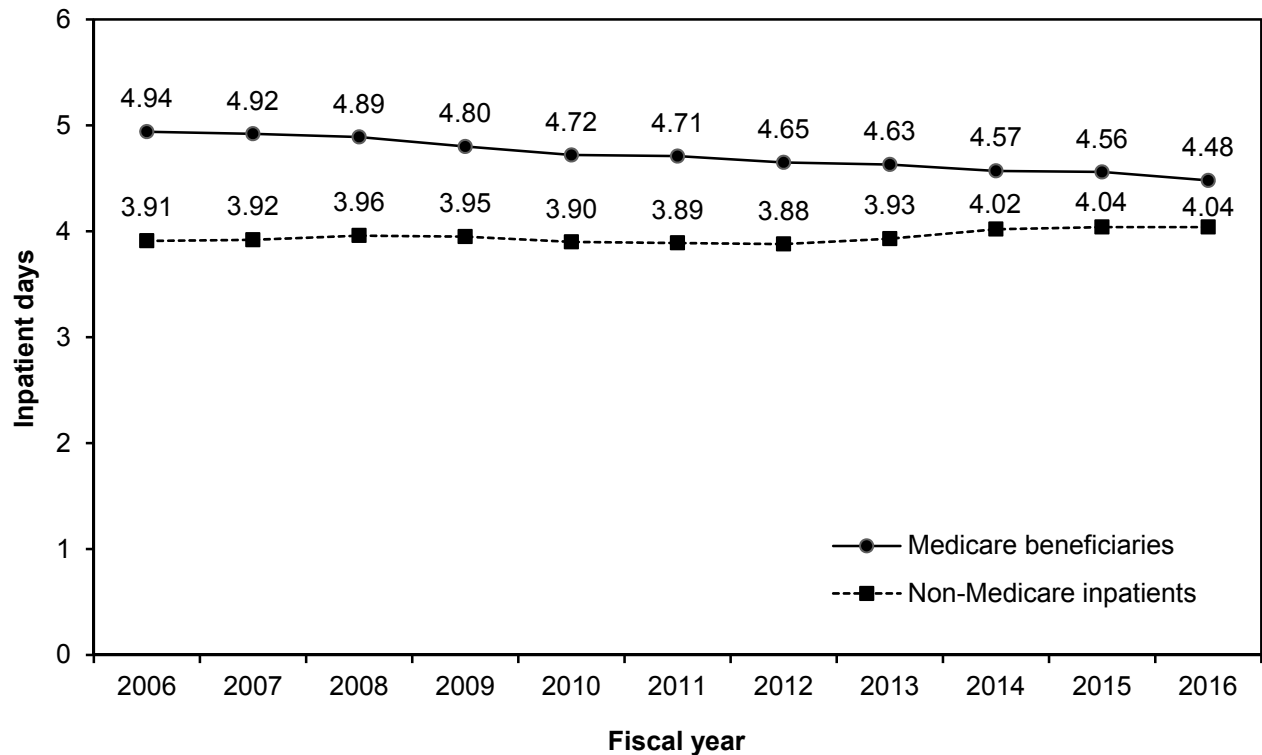


Note: Data are for short-term general and surgical hospitals, including critical access hospitals and children's hospitals.

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

- From 2006 to 2016, the volume of medical and surgical inpatient discharges per FFS beneficiary declined nearly 21 percent and 23 percent, respectively.
- From 2015 to 2016, the volume of surgical discharges increased 4.3 percent per beneficiary (data not shown) and 3.1 percentage points relative to cumulative change over the last decade. This increase is in part attributable to growth in the number of major joint replacement surgeries, infectious and disease surgeries, and stomach or esophageal surgeries.
- From 2015 to 2016, the volume of medical discharges declined 5.2 percent per beneficiary (data not shown) and 4.4 percentage points relative to cumulative change over the last decade. This decrease is in part attributable to a decline in the number of admissions for respiratory diagnoses such as pneumonia and chronic obstructive pulmonary disease and admissions for various types of circulatory system diagnoses.
- The increase in surgical discharges from 2015 to 2016 relative to medical discharges resulted in an increase in the overall average patient case mix for Medicare inpatient discharges of 3.4 percent, the largest increase in case mix observed in the last decade (data not shown).

**Chart 6-9. Trends in Medicare FFS and non-Medicare inpatient length of stay, 2006–2016**

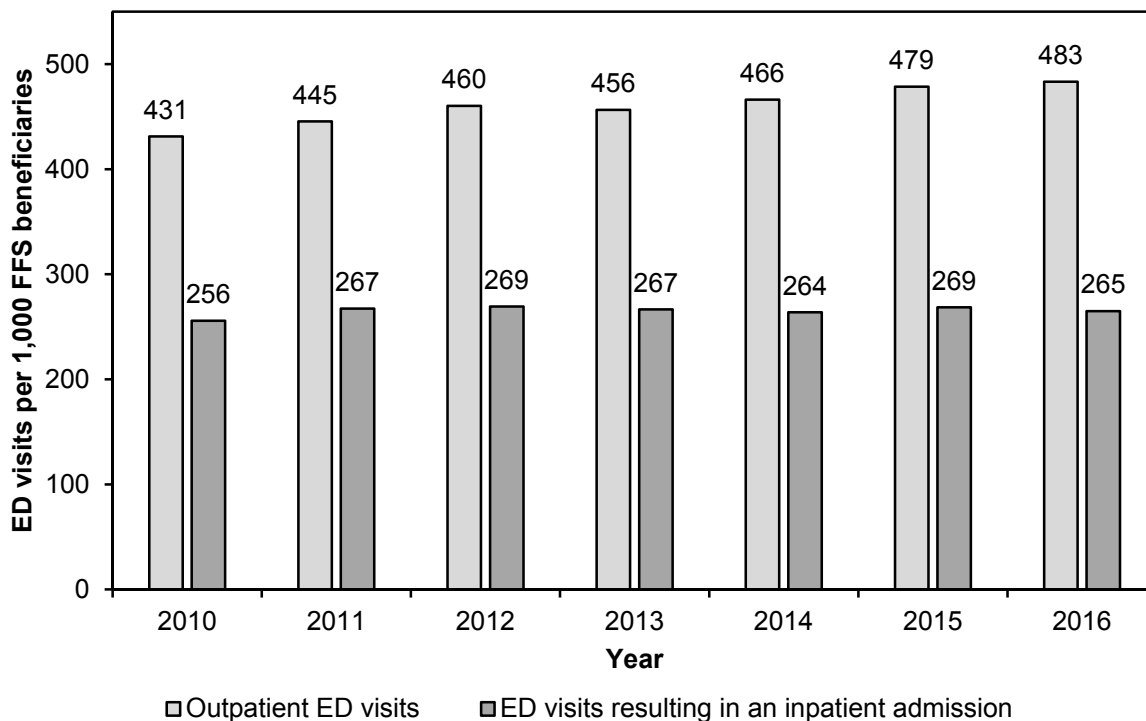


Note: FFS (fee-for-service). Length of stay is calculated from discharges and patient days for more than 3,000 hospitals covered by the acute inpatient prospective payment system. The chart excludes critical access hospitals.

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

- In 2016, 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.
- The average length of inpatient stays for Medicare beneficiaries declined slightly between 2015 and 2016.
- While Medicare length of stay fell between 2006 and 2016, the average length of stay for non-Medicare inpatients increased. Between 2006 and 2016, Medicare inpatient length of stay fell 9.3 percent, and the inpatient length of stay for all non-Medicare inpatients increased 3.3 percent.

**Chart 6-10. Hospital emergency department use per Medicare FFS beneficiary increased, 2010–2016**

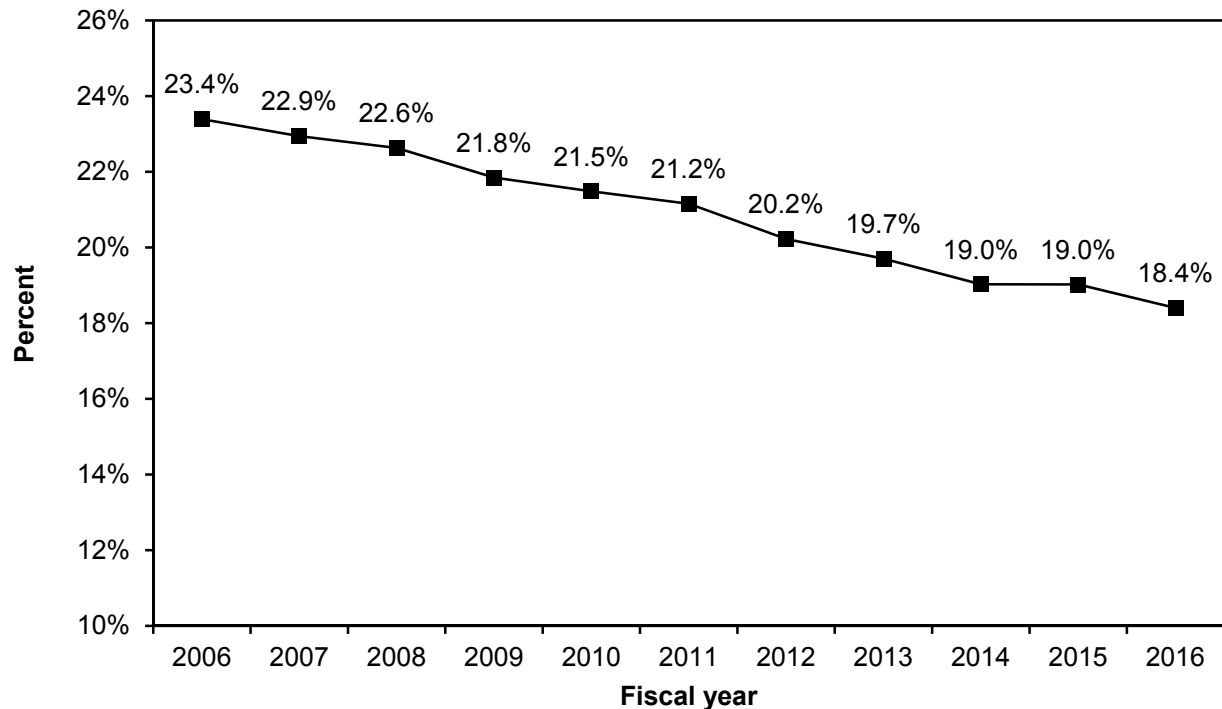


Note: FFS (fee-for-service), ED (emergency department). Years for outpatient ED visits are calendar years, and years for inpatient ED visits are fiscal years. Analysis excludes Medicare Advantage claims and claims for non-inpatient prospective payment system hospitals such as critical access hospitals and hospitals located in Maryland.

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

- In 2016, Medicare FFS beneficiaries accounted for 28 million visits to hospital emergency departments (EDs). Among these ED visits, 19 million were outpatient ED visits—those that did not result in an inpatient admission—and 10 million were inpatient ED visits—those that resulted in an inpatient admission (data not shown).
- From 2010 to 2016 the number of outpatient ED visits per 1,000 FFS beneficiaries increased from 431 to 483, or 12 percent.
- From 2010 to 2016, the number of ED visits resulting in inpatient admissions per 1,000 FFS beneficiaries increased from 256 to 265, or less than 4 percent.
- From 2010 to 2016, the number of outpatient ED visits billed at the highest of the five ED payment levels (Level 5) increased as a share of all ED visits, climbing from 19 percent to 27 percent of all Medicare ED visits. By contrast, during the same period, ED visits coded in the three lowest ED payment levels declined as a share of all Medicare ED visits. For example, the share of Level 3 ED visits declined as a share of all ED visits from 33 percent to 28 percent (data not shown).

**Chart 6-11. Share of Medicare Part A fee-for-service beneficiaries with at least one hospitalization, 2006–2016**

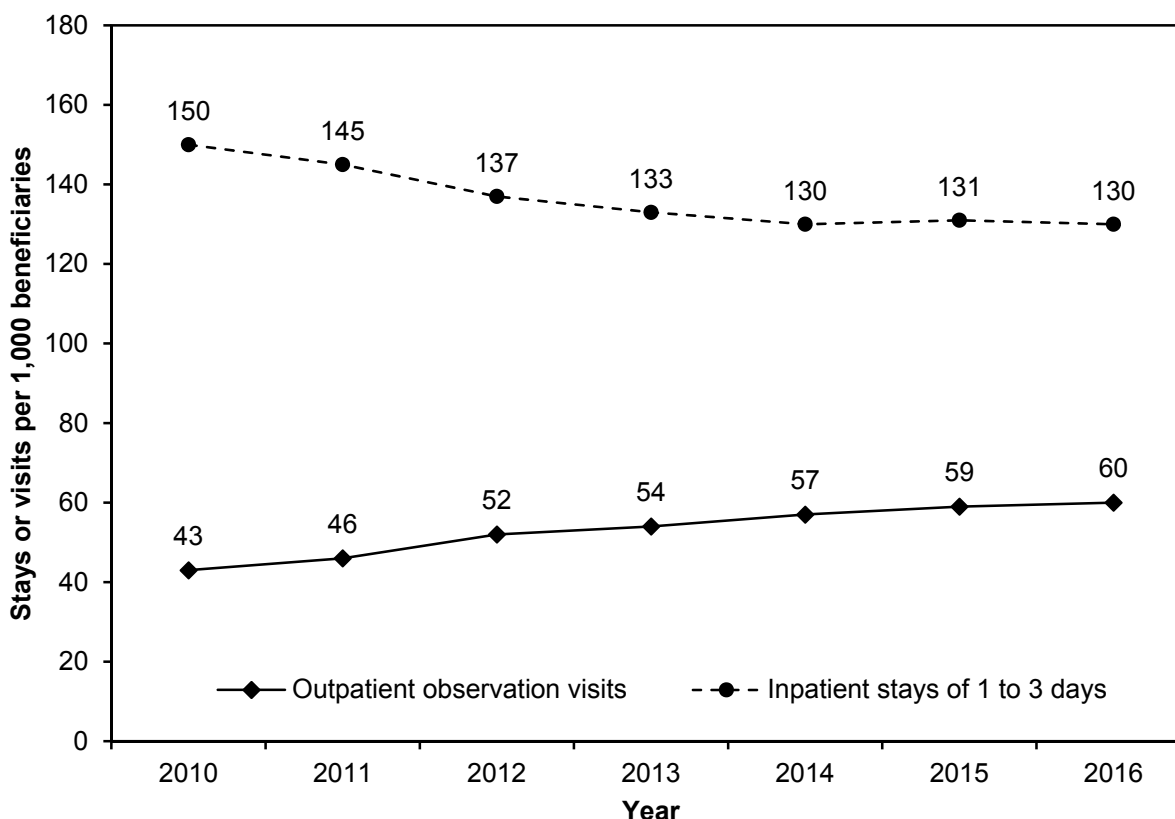


Note: Analysis excludes Medicare Advantage claims and claims for non-inpatient prospective payment system hospitals such as critical access hospitals and hospitals located in Maryland.

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

- From 2006 to 2016, the share of Medicare fee-for-service beneficiaries with Part A coverage who had at least one inpatient hospitalization declined 5 percentage points, from more than 23.4 percent of beneficiaries to 18.4 percent of beneficiaries.
- From 2015 to 2016, the share of Medicare fee-for-service beneficiaries with Part A coverage who had at least one inpatient hospitalization slightly decreased.
- Medicare fee-for-service beneficiaries with Part A coverage who used inpatient hospital services in 2016 had an average of 1.68 inpatient claims over the course of the year, slightly decreasing from the previous year (data not shown).
- A portion of the long-term decline in beneficiaries' utilization of inpatient services could reflect the increase in the number of cases in which beneficiaries are served in outpatient observation status (see Chart 6-12).

**Chart 6-12. Number of Medicare FFS outpatient observation visits per 1,000 beneficiaries relative to short inpatient stays, 2010 to 2016**



Note: FFS (fee-for-service). Years for outpatient visits are calendar years, and years for inpatient stays are fiscal years.

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

- In 2016, Medicare beneficiaries had approximately 2 million outpatient observation visits (data not shown).
- From 2010 to 2016, the number of outpatient observation visits per 1,000 beneficiaries increased by 17 visits, similar to the combined decline in inpatient discharges lasting between 1 and 3 days (20 fewer discharges per 1,000 beneficiaries between 2010 and 2016). This finding suggests that outpatient observation visits may account for a portion of the decline in short inpatient discharges.
- In 2016, the average length of an outpatient observation visit was 28 hours (data not shown).
- In 2016, nearly 250,000 outpatient observation visits were 48 hours or longer, representing approximately 12 percent of all observation stays (data not shown).

## Chart 6-13. Hospital patient experience measures, 2012–2016

H-CAHPS® measure	2012	2013	2014	2015	2016	Percentage point change, 2012–2016
Hospital rating	70%	71%	71%	72%	73%	3
Communication with nurses	78	79	79	80	80	2
Communication with doctors	81	82	82	82	82	1
Responsiveness of hospital staff	67	68	68	68	69	2
Communication about medicines	64	64	65	65	65	1
Cleanliness of hospital environment	73	74	74	74	75	2
Quietness of hospital environment	60	61	62	62	63	3
Discharge information	85	86	86	87	87	2
Recommend the hospital	71	71	71	72	72	1
Care transition*	—	51	52	52	52	—

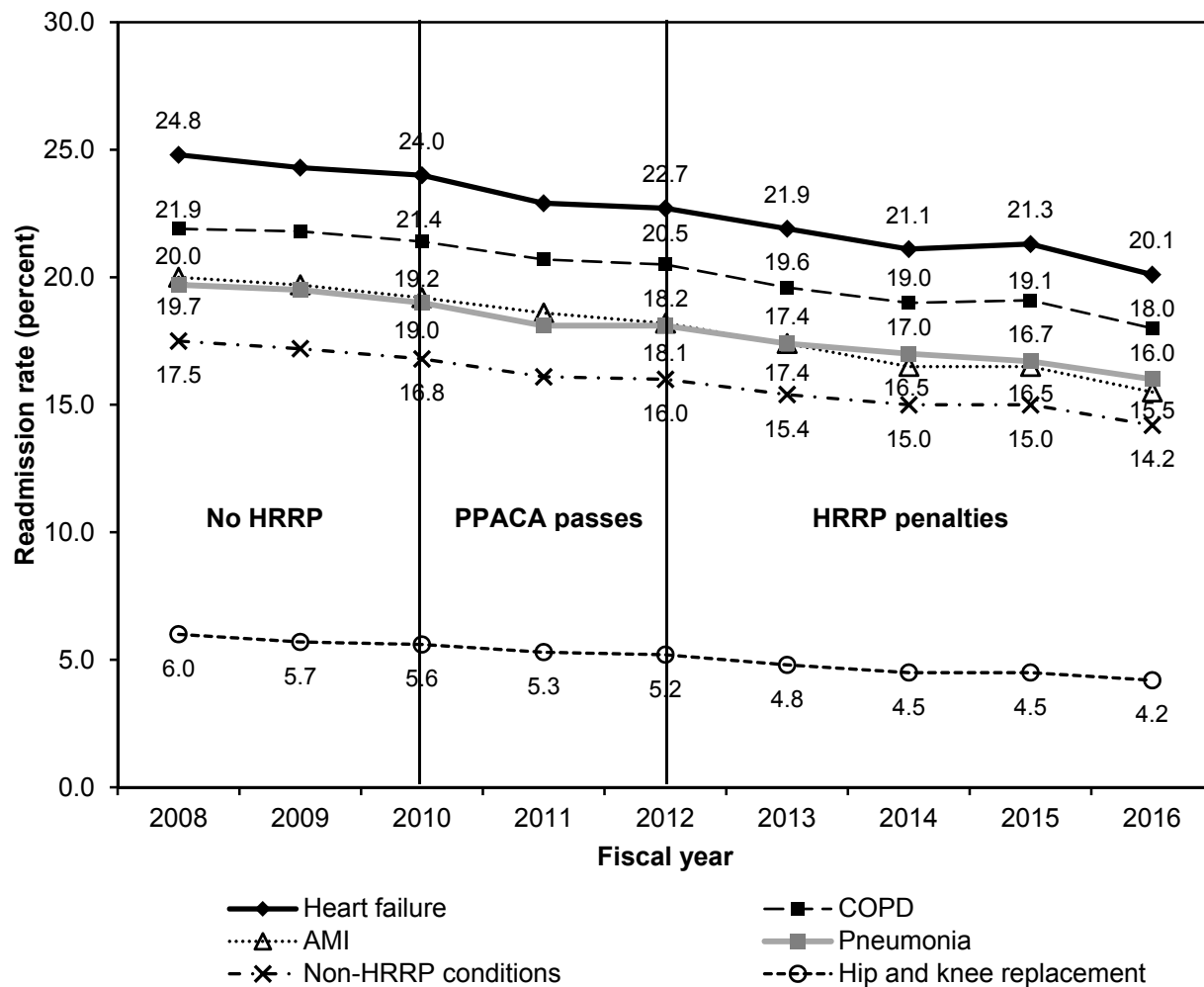
Note: H-CAHPS® (Hospital Consumer Assessment of Healthcare Providers and Systems®). H-CAHPS is a standardized 32-item survey of patients' evaluations of hospital care. The survey items are combined to calculate measures of patient experience for each hospital. The H-CAHPS measures included in the table are "top-box," or the most positive, response to H-CAHPS survey items. The top-box response is "Always" for four H-CAHPS composite measures (communication with nurses, communication with doctors, responsiveness of hospital staff, and communication about medicines) and two individual items (cleanliness of hospital environment and quietness of hospital environment), "Yes" for the discharge information composite, "9" or "10" (high) for the hospital rating item, "Definitely yes" for the recommend the hospital item, and "Strongly agree" for the care transition composite. Each year's results are based on a sample of hospital surveys of their patients from January to December. About 4,239 hospitals are included, and, on average, these hospitals had patient-level survey response rates of 28 percent.

\*The care transition measure was added to the H-CAHPS survey in 2013, and CMS began publicly reporting it in 2014.

Source: CMS summary of H-CAHPS public report of survey results tables.

- In 2008, CMS began publicly reporting H-CAHPS results on the Hospital Compare website. In 2013, Medicare began the value-based purchasing program, which makes incentive payments to hospitals based on the outcomes of certain quality measures. This program incorporates results from H-CAHPS.
- The share of patients who rated their hospital a 9 or 10 on a 10-point scale increased from 70 percent in 2012 to 73 percent in 2016.
- All nine hospital patient experience measures improved from 2012 to 2016. Two of the measures (hospital rating, quietness of hospital environment) improved by 3 percentage points.

**Chart 6-14. Risk-adjusted readmission rates fell after passage of the Hospital Readmissions Reduction Program**



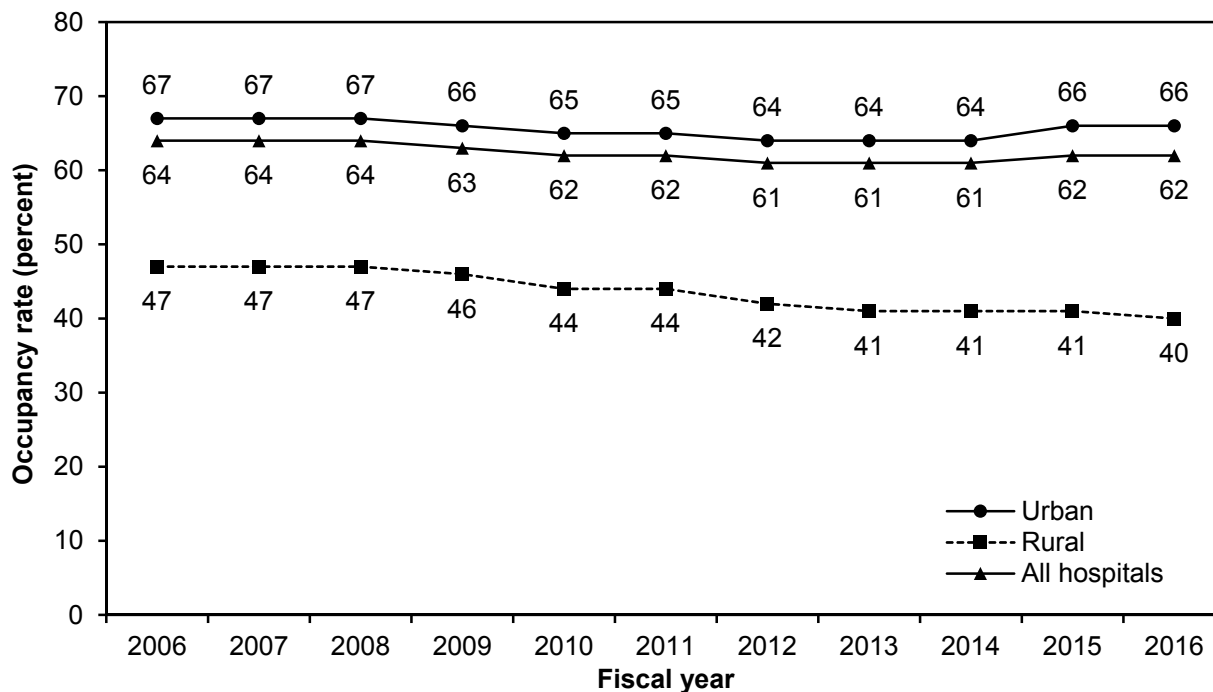
Note: HRRP (Hospital Readmissions Reduction Program), PPACA (Patient Protection and Affordable Care Act of 2010), AMI (acute myocardial infarction), COPD (chronic obstructive pulmonary disease). The pneumonia measure reflects the expanded definition used starting in fiscal year 2016, which includes simple pneumonia, aspiration pneumonia, and sepsis with pneumonia as a secondary diagnosis.

Source: MedPAC analysis of 2008 through 2016 Medicare claims files for Medicare FFS beneficiaries age 65 or older.

- The Congress enacted the HRRP in 2010, with penalties for hospitals that have above-average readmission rates for select conditions starting in 2013.
- Rates of unplanned readmissions declined across all conditions between 2010 and 2016. Rates declined faster for conditions covered by the HRRP program than other conditions.
- The Commission’s June 2018 report to the Congress presents data showing that the HRRP contributed to a significant decline in readmission rates without causing a material increase in emergency department visits, a material increase in observation stays, or a net adverse effect on mortality rates.



**Chart 6-15. Hospital occupancy rates, 2006–2016**



Note: "Hospital occupancy rates" were defined as total bed days (including swing bed days) and observation bed days used, minus nursery bed days used, divided by 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's Hospital Cost Reports.

- In the aggregate, hospital occupancy rates have been relatively stable over the past decade. From 2006 to 2014, occupancy rates declined slowly, by 3 percentage points, but between 2015 and 2016, occupancy rates remained stable at 62 percent.
- Occupancy rates are generally higher for urban than rural hospitals. In 2016, the aggregate occupancy rate for urban hospitals was 66 percent, and the aggregate occupancy rate for rural hospitals was 40 percent.
- The decline in occupancy rates from 2006 to 2016 has been greater for rural hospitals than for urban hospitals. During this period, rural occupancy rates declined about 7 percentage points, whereas urban occupancy rates declined 1 percentage point.

**Chart 6-16. Medicare inpatient payments, by source and PPS hospital group, 2016**

Hospital group	Share of total payments						Total payments (millions)
	Base	IME	DSH	UC	Outlier	Additional rural hospital*	
All PPS hospitals	80.9%	5.5%	2.6%	5.5%	3.9%	1.5%	\$116,322
Urban IPPS	80.8	5.9	2.8	5.7	4.21	0.7	107,299
Rural IPPS	81.7	0.9	1.0	3.3	1.2	11.8	9,023
Large urban	79.4	7.0	2.9	6.1	4.6	0.0	58,828
Other urban	82.6	4.6	2.6	5.1	3.6	1.4	48,438
Rural referral	88.8	0.9	2.1	5.3	2.1	0.7	2,218
SCH (federal rate)	82.3	4.3	1.4	6.9	2.6	2.6	1,113
SCH (HSP rate)	74.8	0.0	0.0	0.0	0.0	25.2	3,910
Medicare dependent	77.9	0.0	1.5	4.3	1.0	15.2	645
Other rural, <50 beds	82.6	0.1	1.5	5.0	2.0	8.8	339
Other rural, ≥50 beds	85.3	1.7	2.0	6.8	1.4	2.9	831
Voluntary	81.5	5.9	2.5	4.9	3.9	1.4	82,683
Proprietary	84.7	2.2	2.9	6.2	3.1	1.1	18,653
Government	72.8	8.0	3.2	7.8	5.3	3.0	14,986
Major teaching	67.8	16.1	3.2	6.9	5.9	0.2	30,125
Other teaching	83.6	3.7	2.7	5.5	3.4	1.1	43,934
Nonteaching	87.3	0.0	2.1	4.5	3.0	3.0	42,264

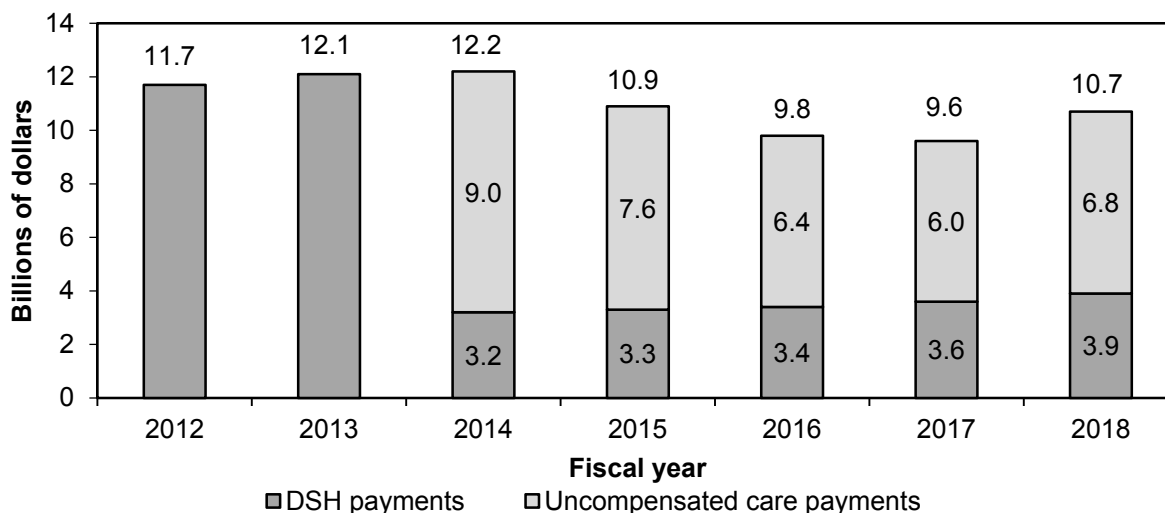
Note: PPS (prospective payment system), IME (indirect medical education), DSH (disproportionate share), UC (uncompensated care), IPPS (inpatient prospective payment system), SCH (sole community hospital), HSP (hospital-specific payment). The chart includes hospitals covered by the IPPS and excludes critical access hospitals. "Medicare-dependent" category includes facilities paid at either the HSP or the federal rate. Component percentages may not sum to 100 due to rounding. Simulated payments reflect 2016 payment rules applied to actual number of cases in 2016. 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 add-on payments, Medicare-dependent hospital add-on payments, and low-volume add-on payments. For SCHs paid the HSP, this category also includes 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.

- In 2016, Medicare inpatient payments to hospitals covered by the acute IPPS exceeded \$116 billion. About \$107 billion (92 percent) went to urban hospitals, and approximately \$9 billion (8 percent) went to rural hospitals, which does not include \$2.7 billion in payments to critical access hospitals (CAHs) for inpatient care. Cost-based reimbursement for CAHs results in payments significantly above what CAHs would be paid under the IPPS.
- In 2016, base Medicare severity–diagnosis related group payments accounted for about 81 percent of all inpatient payments. Special payments—including IME, DSH, UC, and outlier payments, as well as additional payments to rural hospitals through the SCH provision and Medicare-Dependent Hospital Program—accounted for 19 percent of all inpatient payments.
- In 2016, uncompensated care payments for each eligible hospital were based on each hospital's number of Medicaid days and days for Medicare beneficiaries receiving supplemental Social Security Disability Insurance.
- Outlier payments accounted for 3.9 percent of total inpatient payments in 2016, or about \$4.5 billion.

**Chart 6-17. Medicare inpatient disproportionate share payments and uncompensated care payments, 2012–2018**



Note: DSH (disproportionate share). The chart includes hospitals covered by the inpatient prospective payment system. The chart excludes hospitals not eligible for DSH payments: critical access hospitals, hospitals in Maryland, and sole community hospitals paid hospital-specific rates. Data represent DSH and uncompensated care payment levels finalized by CMS.

Source: CMS hospital inpatient prospective payment systems (IPPS) for acute care hospitals and long-term care hospital prospective payment system final rules from fiscal years 2012 to 2018.

- In 2012, hospitals received almost \$12 billion in aggregate Medicare DSH payments. The traditional DSH payment formula was based on hospitals' share of Medicaid patients and Medicare patients with Social Security Disability Insurance.
- Beginning in 2014, DSH payments were 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 to \$4 billion per year since the policy change. For fiscal year (FY) 2019, CMS has proposed \$4.1 billion in DSH payments (data not shown). The increase in DSH payments between 2018 and 2019 is due to CMS-estimated growth in inpatient discharges for FY 2019 and the annual update to IPPS payment rates.
- Beginning in 2014, DSH-eligible 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. These payments are distributed based on the share of uncompensated care each hospital provides. The amount of uncompensated care payments declined \$3 billion between 2014 and 2017 because of declines in the uninsured population. Uncompensated care payments increase in 2018 due to a mandated change to the method used to calculate the uninsured population. For fiscal year 2019, CMS has proposed \$8 billion in uncompensated care payments because it estimates the uninsured population will increase.
- From FY 2013 to 2014, inpatient DSH payments declined approximately \$9 billion, falling from \$12.1 billion to \$3.2 billion, but 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 \$1 billion between 2012 and 2018 because the decline in the uninsured population more than offset the growth in DSH (due to Medicaid expansion) and the growth in Medicare discharges.

**Chart 6-18. Discharge destination of Medicare fee-for-service beneficiaries served in acute care hospitals, 2006–2016**

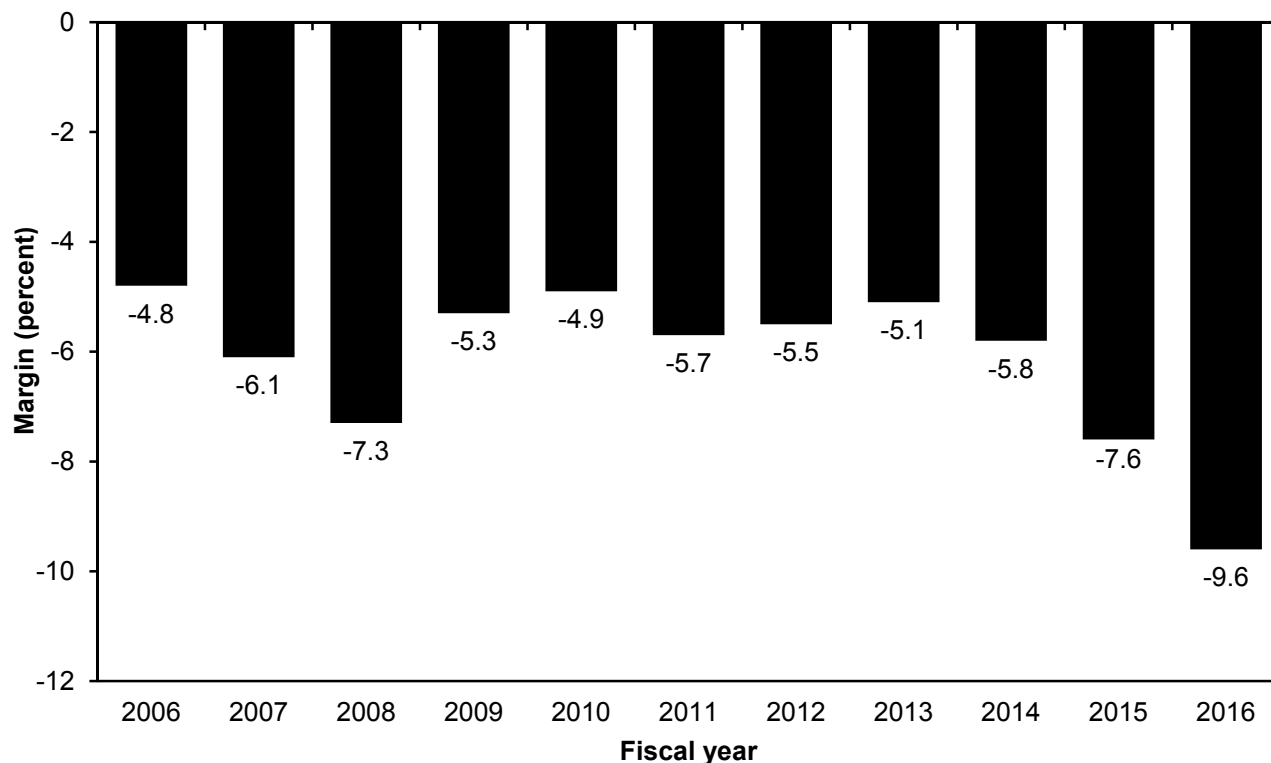
Destination	2006	2015	2016	Percentage point change 2006–2016
Home self-care	52.3%	45.5%	45.6	–6.7
Skilled nursing or swing bed	18.8	21.2	20.2	1.4
Home with organized home health care	13.8	16.9	17.5	3.7
Inpatient rehabilitation facility	3.4	3.9	4.0	0.6
Died in hospital	3.8	3.3	3.3	–0.5
Hospice	1.6	3.0	3.0	1.4
Transferred to other acute care hospital	2.5	2.1	1.9	–0.6
Other setting (e.g., ICF, nursing facility)	2.0	1.6	2.0	0.0
Long-term care hospital	0.9	1.2	1.2	0.3
Left against medical advice	0.6	0.8	0.9	0.3
Inpatient psychiatric facility	0.4	0.4	0.4	0.0

Note: ICF (intermediate care facility). Numbers may not sum due to rounding. These data include hospitals reimbursed by the Medicare inpatient prospective payment system and critical access hospitals.

Source: Medicare inpatient claims data.

- In 2016, about 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 post-acute care providers, particularly home health care, skilled nursing care, and hospice.
- In 2016, about 43 percent of all Medicare fee-for-service patients discharged from an acute care hospital were discharged to post-acute care services (skilled nursing facility (SNF), home health care agency, inpatient rehabilitation facility, or long-term care hospital). The share of beneficiaries discharged to post-acute care services increased about 8 percentage points between 2006 and 2016.
- About one in five beneficiaries is discharged to skilled nursing care, either in a SNF or hospital swing bed. The share of beneficiaries discharged to SNF-level care increased 1.4 percentage points between 2006 and 2016.
- An increasing share of beneficiaries are being discharged home with organized home health care, increasing from 13.8 percent of discharges in 2006 to 17.5 percent in 2016.
- From 2006 to 2016, discharges to hospice care increased from 1.6 percent of discharges to 3.0 percent of discharges. A little more than half of these hospice discharges are 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 declined between 2006 and 2016.

**Chart 6-19. Overall Medicare margin, 2006–2016**

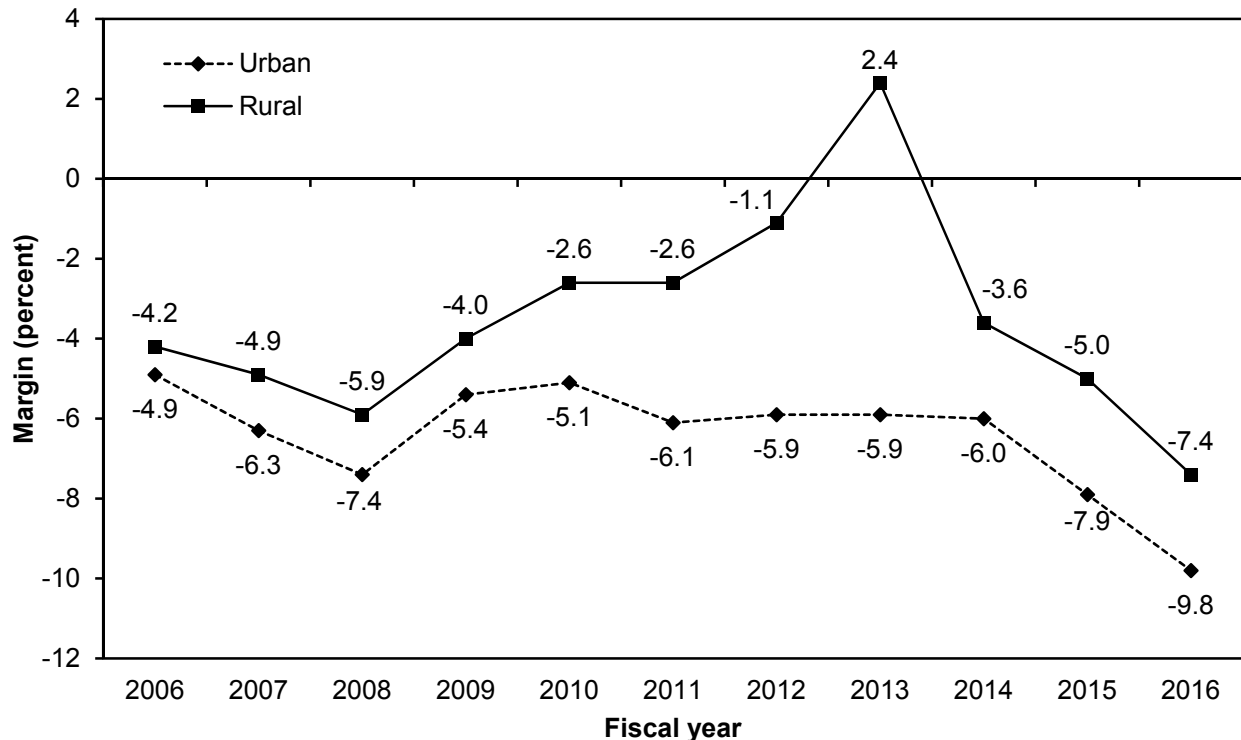


Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services, as well as graduate medical education, bad debts, Medicare payments for health information technology, and uncompensated care payments. 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 Medicare margin in 2006 was –4.8 percent. In fiscal year 2016, it was –9.6 percent.
- In 2016, 25 percent of hospitals had overall Medicare margins of 1.6 percent or higher, and another 25 percent had margins of –20.7 percent or lower (data not shown). About 30 percent of hospitals had positive overall Medicare margins in 2016.

**Chart 6-20. Overall Medicare margin, by urban and rural location, 2006–2016**

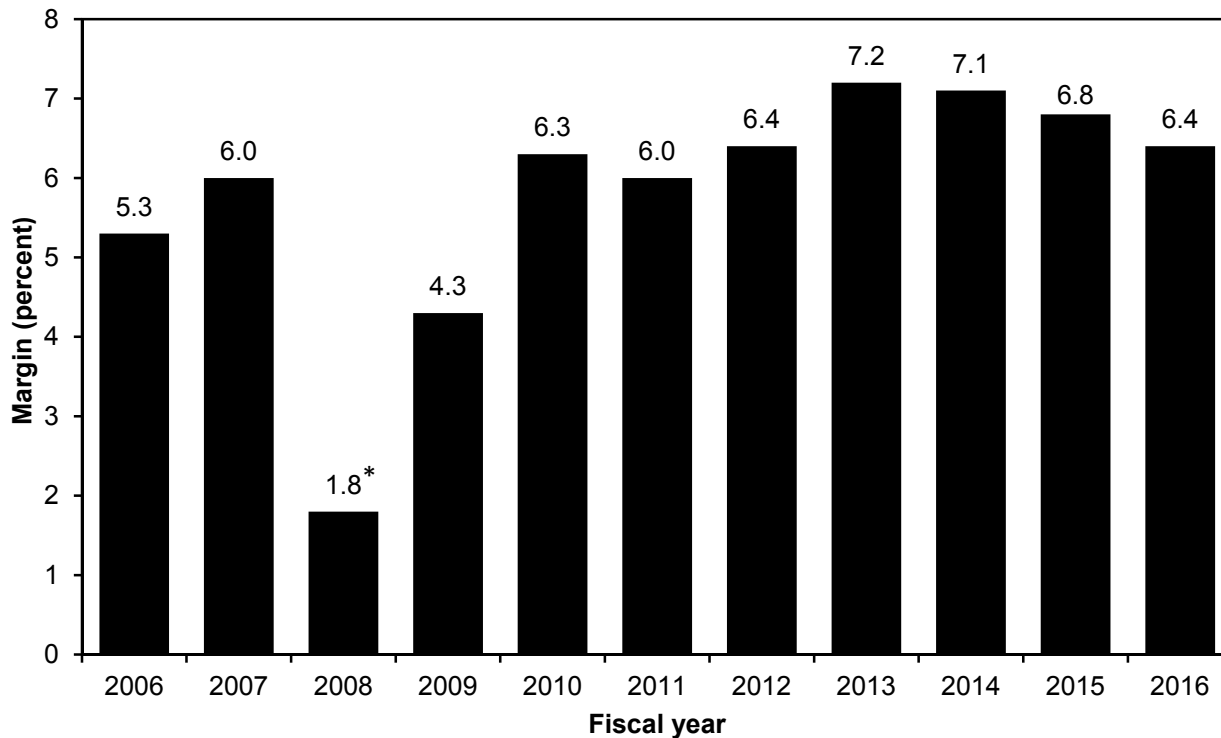


Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing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

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

- Overall Medicare margins historically were higher for urban hospitals than for rural hospitals; however, over the last decade, overall Medicare margins for rural hospitals have exceeded those for urban hospitals. In 2016, the difference between urban and rural hospital margins was about 2.4 percentage points.
- The difference in overall Medicare margins between urban and rural widened after 2009 as a result of legislation to assist rural hospitals implemented after 2008. Most recently, in 2016, the overall Medicare margin for urban hospitals was –9.8 percent, compared with –7.4 percent for rural hospitals.
- The overall Medicare margin includes inpatient and outpatient services, but not laboratory services. The rural margin rose to 2.4 percent by 2013 in part because of low-volume add-on payments and health information technology payments. However, in 2014, the rural margin fell to –3.6 percent because some unprofitable services that had been paid as laboratory services shifted into the outpatient payment system. These outpatient tests were a disproportionately large share of rural hospital payments, causing rural margins to fall faster than urban margins. Because of special rural add-on payments, rural margins continue to be higher than urban hospitals' margins.

**Chart 6-21. Hospital total all-payer margin, 2006–2016**

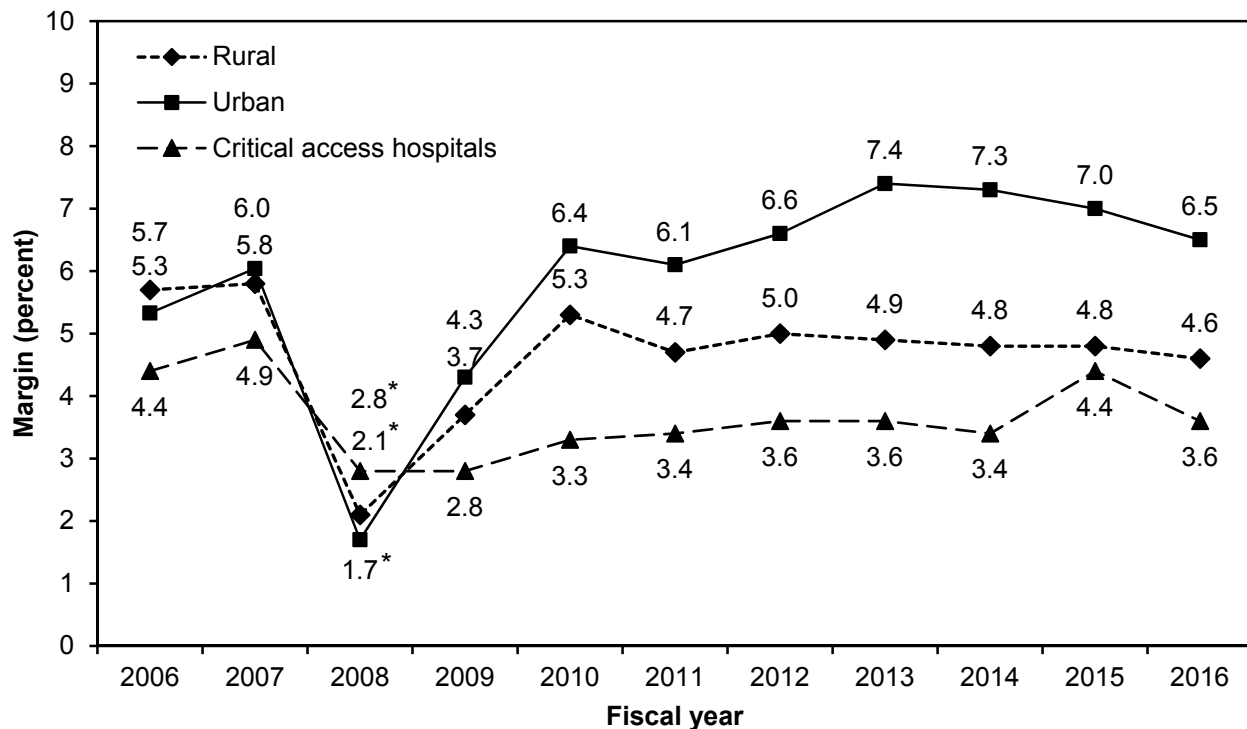


Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals and Maryland hospitals.  
 \*The significant drop in total margin includes investment losses 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.
- The 2008 decline in the U.S. stock market resulted in significant investment losses for hospitals, which resulted in a corresponding decline in total margin. From 2013 to 2015, all-payer margins were close to 7 percent, a level higher than the prior two decades. The all-payer margin decreased slightly to 6.4 percent in 2016.

**Chart 6-22. Hospital total all-payer margin, by urban and rural location and critical access hospitals, 2006–2016**



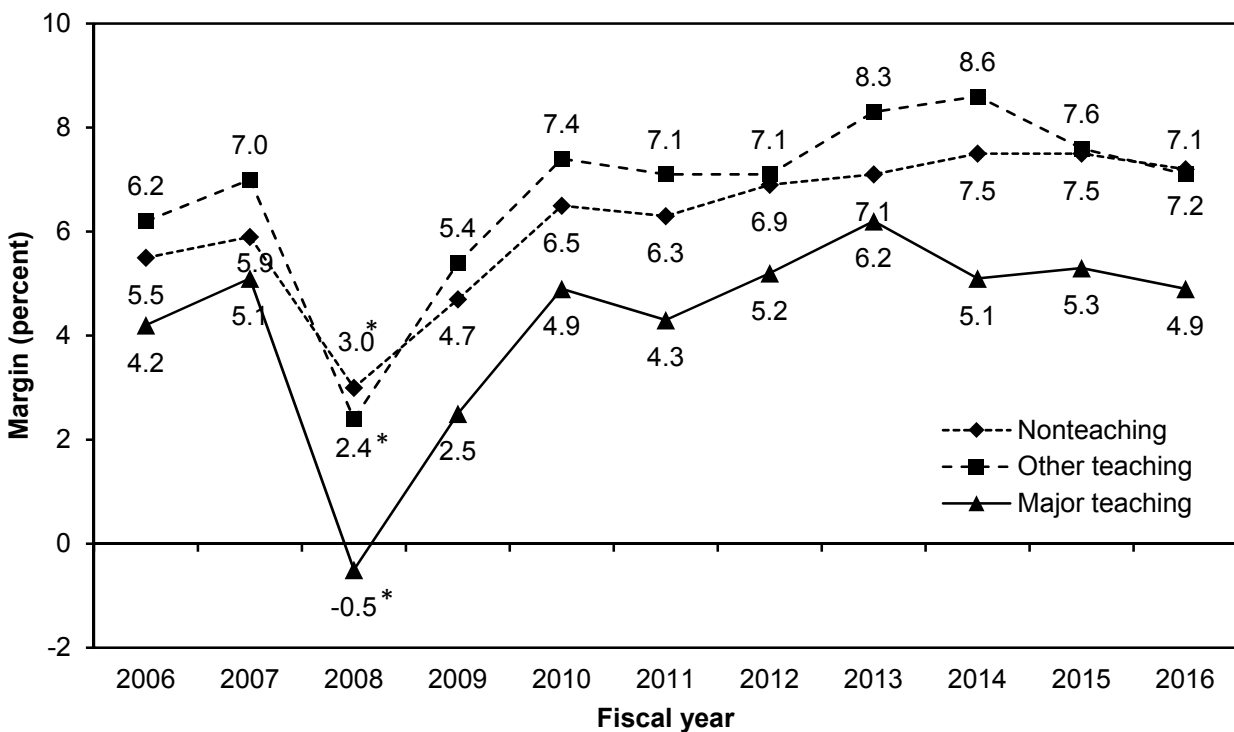
Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue such as investment revenues. Analysis excludes Maryland hospitals.  
\*Significant drop in total margin includes investment losses resulting 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 2016, total margins were 6.5 percent for urban hospitals and 4.6 percent for rural hospitals. From 2009 to 2013, the growth in urban and rural total all-payer margins reflected low cost growth and increasing private-payer reimbursement rates.
- In general, all-payer margins for critical access hospitals have historically been lower than for other urban or rural hospitals.



**Chart 6-23. Hospital total all-payer margin, by teaching status, 2006–2016**



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 greater than 0 and 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 and Maryland hospitals.

\*Significant drop in total margin includes 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 2016, the total margin for major teaching hospitals was 4.9 percent, comparatively lower than the total margins for other teaching hospitals (7.1 percent) and nonteaching hospitals (7.2 percent).
- Following several years of increasing margins, in 2008, total (all-payer) margins declined significantly because of losses in investment revenues. As a result, total margins for major teaching hospitals were negative in 2008. Since 2008, total margins for major teaching hospitals have recovered and remain above their historic average.

**Chart 6-24. Medicare margins by teaching and disproportionate share status, 2016**

Hospital group	Share of hospitals	Overall Medicare margin
All hospitals	100%	-9.6%
Major teaching	11	-8.6
Other teaching	24	-8.5
Nonteaching	65	-11.3
Both IME and DSH	32	-8.2
IME only	3	-16.0
DSH only	53	-10.7
Neither IME nor DSH	12	-15.3

Note: IME (indirect medical education), DSH (disproportionate share). Components may not sum to 100 percent due to rounding. Maryland hospitals are excluded from this analysis.

Source: MedPAC analysis of 2015 Medicare cost report data from CMS.

- By contrast with all-payer total margins, teaching hospitals (both major teaching and other teaching) had higher overall Medicare margins in 2016 compared with nonteaching hospitals. 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 do not receive DSH payments had the lowest Medicare margins. In 2016, the overall Medicare margins of these hospitals were -16.0 percent (IME only) and -15.3 percent (neither IME and DSH), well below the margins of hospitals that receive both IME and DSH (-8.2 percent).
- Major teaching hospitals have higher Medicare margins than nonteaching hospitals, but they have lower total (all-payer) margins than both other teaching and nonteaching hospitals (see Chart 6-23).

## Chart 6-25. Financial pressure leads to lower costs

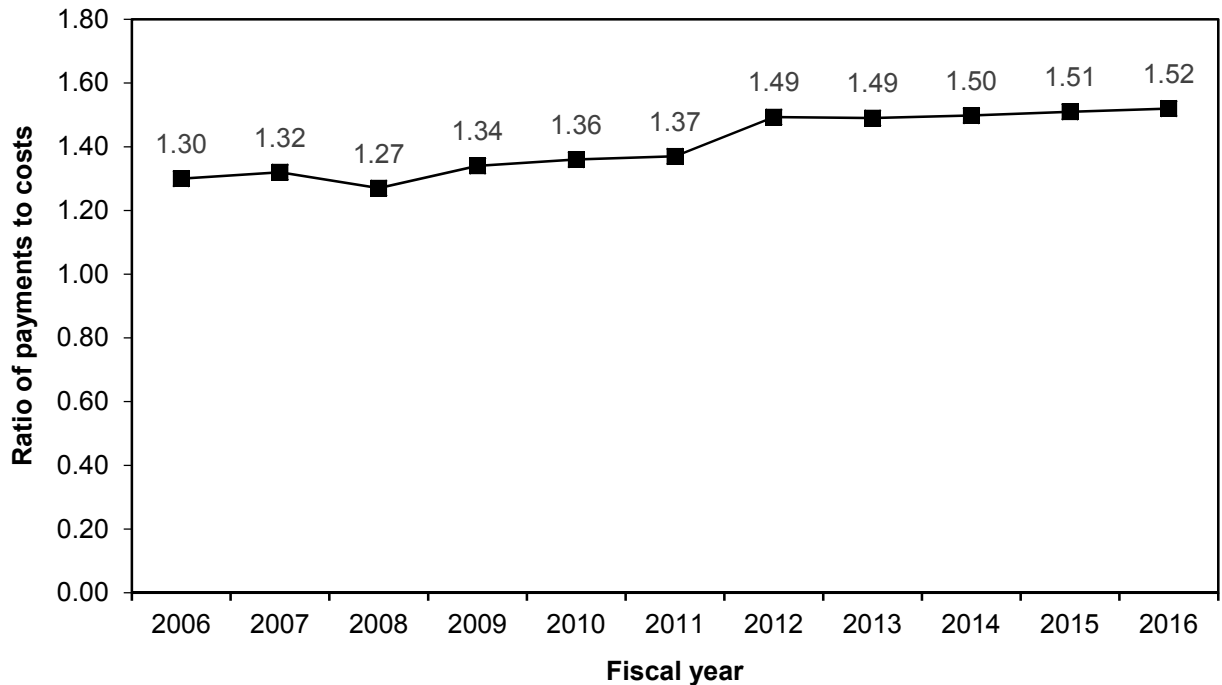
	Level of financial pressure, 2013–2015		
	High pressure (non-Medicare margin ≤ 1%)	Medium pressure	Low pressure (non-Medicare margin > 5%)
Number of hospitals	714	379	1,699
<b>Financial characteristics, 2016 (medians)</b>			
Non-Medicare margin (private, Medicaid, uninsured)	-2.7%	3.4%	14.0%
Standardized cost per discharge (as a share of the national median)			
For-profit and nonprofit hospitals	93	99	102
Nonprofit hospitals	93	99	103
For-profit hospitals	90	95	100
Annual growth in cost per discharge, 2013–2016	2.4%	2.6%	2.1%
Overall 2016 Medicare margin (medians)	0.1%	-4.6%	-11.4%
<b>Patient characteristics (medians)</b>			
Total hospital discharges in 2016	3,597	5,710	7,842
Medicare share of inpatient days	39%	37%	37%
Medicaid share of inpatient days	8%	8%	6%
Medicare case-mix index	1.42	1.53	1.64

Note: 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. The sample includes all hospitals that had complete cost reports on file with CMS by October 2017. “High-pressure hospitals” are defined as those with a median non-Medicare profit margin of 1 percent or less from 2013 to 2015 and 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 2013 to 2015 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.

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

- Higher financial pressure hospitals had 9 percent lower standardized costs per discharge than hospitals under a low level of financial pressure.
- Cost growth was similar for all categories of hospitals (between 2.1 percent and 2.6 percent), suggesting that hospitals’ cost differentials remain fairly stable across time.
- Hospitals with lower volume, lower case mix, and higher Medicare shares of discharges are more likely to be under financial pressure.

**Chart 6-26. Change in the private-payer ratio of payments to costs for hospital services, 2006–2016**

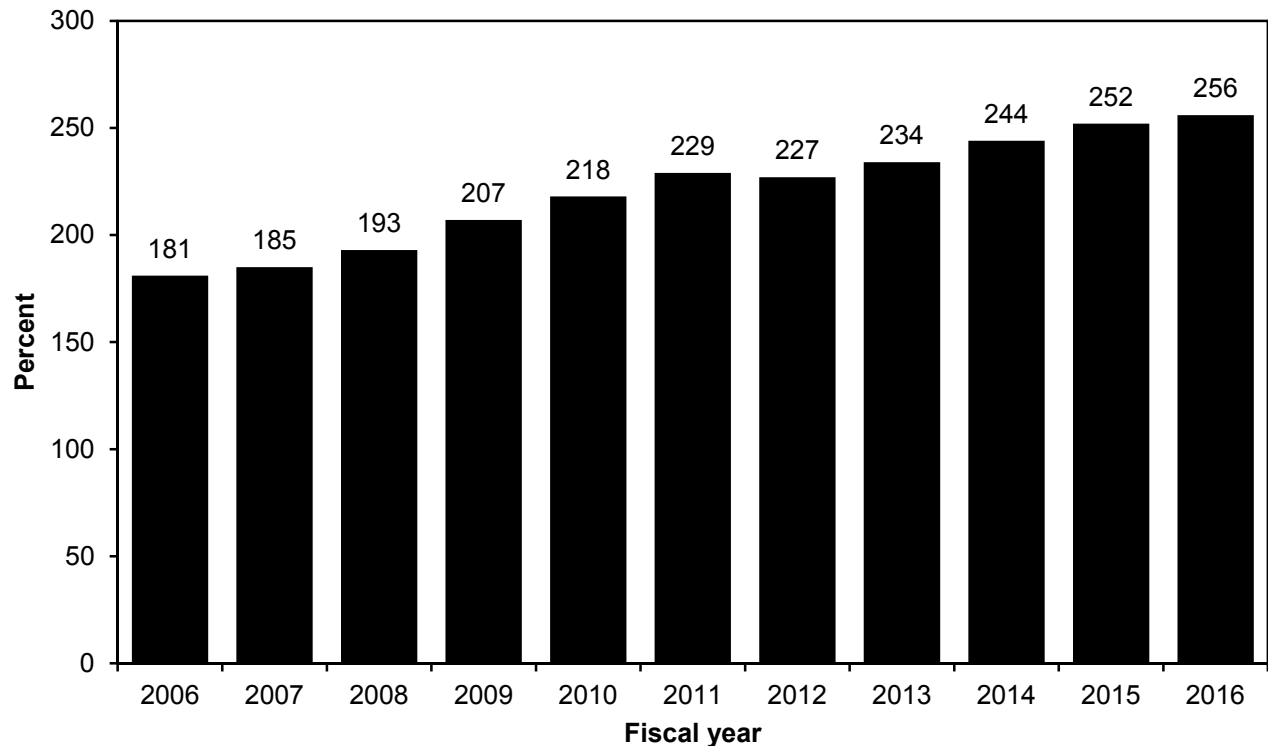


Note: Data are for community hospitals (including critical access hospitals and Maryland hospitals) and cover all hospital services. The private-payer ratio of payments to costs includes self-pay patients. Data for 2006 to 2010 exclude Medicare and Medicaid managed care patients from the private-payer ratio of payments to costs. In 2012, hospitals began excluding data related to bad debt and charity care from their reported charges and payments.

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

- The private-payer ratio of payments to costs reflects hospitals' weighted average profit margin on all service lines of business, such as inpatient, outpatient, and hospital-owned physician practices. In 2016, the private-payer ratio of payments to costs was 1.52. 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. For example, in 1992, hospitals' private-payer payment-to-cost ratio was 1.32, but it declined to 1.15 in 1999 with the expansion of health management organizations and movements to narrow insurance networks (data not shown). Over the last decade, the private-payer payment-to-cost ratio has increased to its historically highest level.
- From 2012 to 2016, the private-payer ratio of payments to costs was relatively flat at around 1.50. During this period, total hospital profit margins remained near 7 percent (see Chart 6-21), in part because of a decline in uncompensated care as more patients gained insurance.

**Chart 6-27. Markup of hospital charges above costs for Medicare services, 2006–2016**

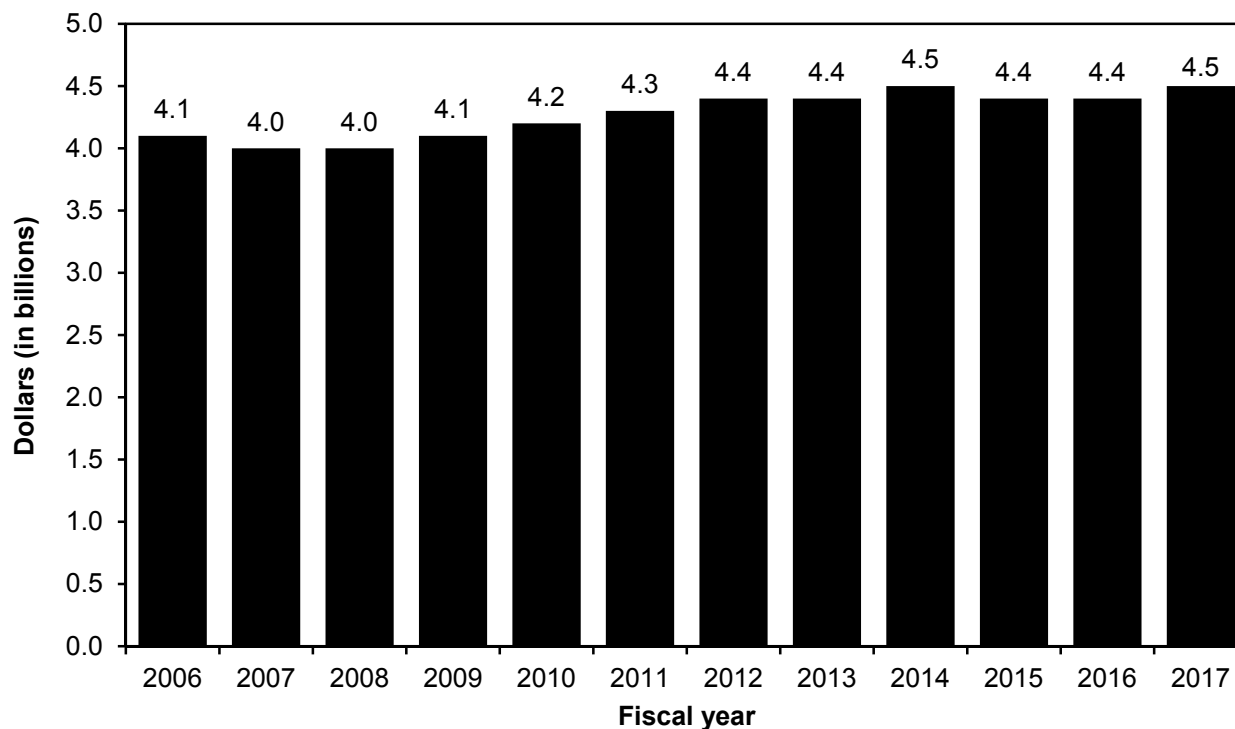


Note: Analysis includes all community hospitals (including critical access hospitals and hospitals in Maryland). Markups are calculated as the amount of charges over the amount of costs, minus the amount that charges equal costs (charges/costs – 1). Medicare managed care charges are not included.

Source: American Hospital Association Annual Survey of Hospitals.

- The average markup of hospitals' charges above costs rose from 181 percent in 2006 to 256 percent in 2016. Hospital charges (\$729 billion) were over three times costs (\$205 billion) in 2016 (data not shown).
- 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 markup of charges over costs in 2016 is generally higher for urban hospitals (266 percent) than for rural hospitals (182 percent) (data not shown).
- Among urban hospitals in 2016, the markup of charges over costs was higher for for-profit hospitals (521 percent) than for nonprofit hospitals (264 percent). Rural for-profit hospitals have a higher markup of charges over costs (415 percent) than rural nonprofit hospitals (204 percent) (data not shown).

**Chart 6-28. Medicare payments to inpatient psychiatric facilities remained steady in 2017**



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 1 percent per year between 2006 and 2017.

## Chart 6-29. Inpatient psychiatric facilities, 2006–2016

Type of IPF	2006	2010	2015	2016	Average annual change	
					2006–2015	2015–2016
All	1,647	1,596	1,571	1,587	–0.5%	1.0%
Urban	1,308	1,260	1,239	1,252	–0.6	1.0
Rural	339	336	330	332	–0.3	0.6
Freestanding	396	447	481	497	2.2	3.3
Hospital-based units	1,251	1,149	1,090	1,090	–1.5	0.0
Nonprofit	902	807	723	726	–2.4	0.4
For profit	348	386	504	512	4.2	1.6
Government	397	403	344	349	–1.6	1.5

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

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

- Between 2006 and 2015, the number of IPFs that filed Medicare cost reports fell, on average, 0.5 percent per year. Between 2015 and 2016, the number of IPFs grew 1 percent.
- A growing share of Medicare IPF users receive care in for-profit facilities. Between 2006 and 2015, the number of for-profit IPFs grew more than 4 percent per year, on average. Over the same period, the number of nonprofit IPFs fell more than 2 percent per year, on average. The number of for-profit IPFs continued to grow in 2016.

**Chart 6-30. One diagnosis accounted for almost three-quarters of Medicare IPF cases in 2016**

MS-DRG	Diagnosis	Share
885	Psychosis	70.9%
884	Organic disturbances and mental retardation	6.6
057	Degenerative nervous system disorders without MCC	6.5
897	Alcohol/drug abuse or dependency, no rehabilitation, without MCC	4.7
881	Depressive neurosis	4.4
895	Alcohol/drug abuse or dependency with rehabilitation, without MCC	1.6
882	Neurosis except depressive	1.3
880	Acute adjustment reaction and psychosocial dysfunction	0.9
883	Disorders of personality and impulse control	0.6
056	Degenerative nervous system disorders with MCC	0.6
894	Alcohol/drug use—left AMA	0.3
886	Behavioral and developmental disorders	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
887	Other mental disorders	0.1
081	Nontraumatic stupor and coma without MCC	<0.1
080	Nontraumatic stupor and coma with MCC	<0.1
	Nonpsychiatric MS-DRGs	0.9
	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). Totals may not sum to 100 percent due to rounding.

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 71 percent of IPF discharges in 2016—was psychosis. This broad category includes patients with principal diagnoses of schizophrenia, bipolar disorder, and major depression.
- In 2016, the next most common discharge diagnosis, accounting for almost 7 percent of IPF cases, was organic disturbances and mental retardation.



## Chart 6-31. Characteristics of Medicare IPF users, 2016

Characteristic	Share of all IPF users	Share of users with more than one IPF stay
Current eligibility status*		
Aged	41.7%	29.0%
Disabled	58.2	70.9
ESRD only	0.1	0.1
Age (years)		
<45	23.1	30.7
45–64	34.6	39.6
65–79	27.1	21.5
80+	15.3	8.2
All	100.0	27.9

Note: IPF (inpatient psychiatric facility), ESRD (end-stage renal disease). Components 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.

- Of Medicare beneficiaries who had at least one IPF stay in 2016, 58.2 percent qualified for Medicare because of a disability. These beneficiaries tend to be younger and poorer than the typical fee-for-service beneficiary.
- Approximately 28 percent of Medicare beneficiaries who used an IPF in 2016 had more than one IPF stay during the year. These beneficiaries were far more likely than all IPF users to be disabled, often because of a psychiatric diagnosis.

