



ASPE

ISSUE BRIEF

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MEDICARE'S BENDING COST CURVE July 28, 2014

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Executive Summary:

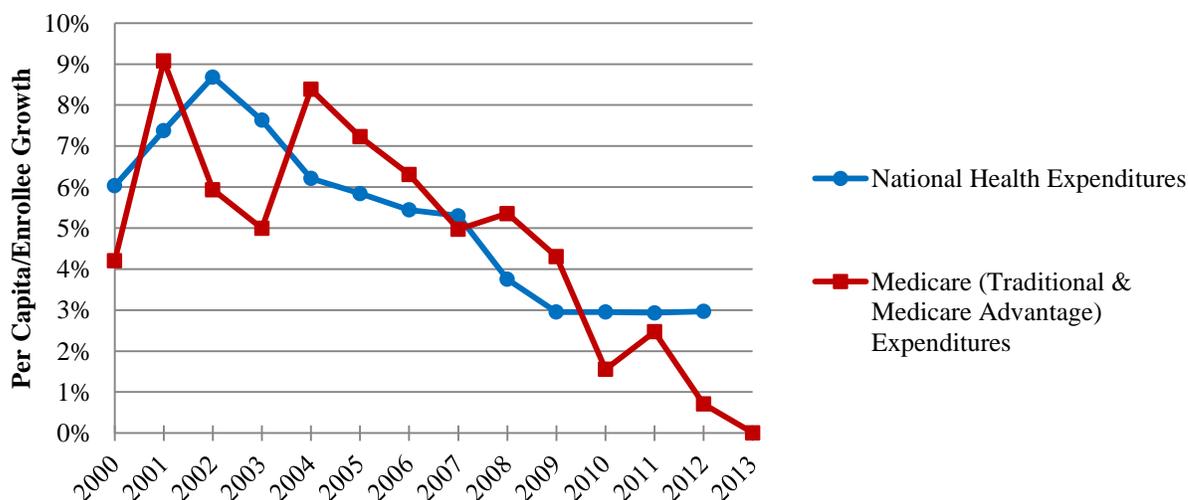
The rate of national health care spending growth per person has been on a downward trajectory in recent years (see Figure 1). This downward trend has been especially significant for the Medicare program since 2009. In fact, the most recent data show that the average per enrollee annual spending growth rate for the Medicare program (including both Traditional Medicare and the Medicare Advantage (MA) program) for 2009-2012 was one-third of the average growth rate from 2000-2008: 2.3 percent versus 6.3 percent (data not shown in table).¹ The preliminary estimate of the per enrollee expenditure growth rate for Medicare in 2013 is only 0.1 percent. In other words, there was essentially no growth in Medicare expenditures on a per capita basis last year. The number of beneficiaries covered by the program is rising by about 3 percent per year, and the aggregate (across all beneficiaries) estimated Medicare expenditure growth rate for 2013 is 3 percent.² Early claims data as well as Treasury data on Medicare payments from the first half of 2014 indicate that very slow per capita growth has continued so far this year, although final spending growth estimates will not be available for some time.³

¹ Growth percentages for total Medicare spending calculated from Centers for Medicare and Medicaid Services National Health Expenditure Accounts. Growth rate for 2006, used to calculate average growth rate for 2000-2008, only includes Parts A and B to avoid artificially high growth from introduction of the Part D program.

² Personal communication, Centers for Medicare and Medicaid Services Office of the Actuary, estimated per capita spending growth for calendar year 2013.

³ ASPE analysis of current Q1 2014 Medicare claims data; *Monthly Treasury Statements of Receipts and Outlays of the United States Government*; *Monthly Budget Review for June 2014* (Washington, D.C.: Congressional Budget Office, July 8, 2014).

Figure 1
Per Capita/Enrollee Spending Growth Rates for
National Health Expenditures and Medicare, 2000-2012



Data Source: 2000-2012 data from CMS National Health Expenditure Accounts, preliminary 2013 Medicare per enrollee spending growth rate estimate from Centers for Medicare and Medicaid Services Office of the Actuary.

Note: Growth rate for 2006 only includes Parts A and B to avoid artificially high growth from introduction of the Part D program.

Due to the recent slowdown in spending growth, the Medicare Board of Trustees and the Congressional Budget Office (CBO) have both lowered their projections of Medicare spending in future years.⁴ In the 2014 Medicare Trustees Report, released on July 28, OACT projects that the solvency of the Hospital Insurance (HI) Trust Fund will be extended an additional 4 years beyond last year's projection from 2026 to 2030.

The improved outlook in the Trustees Report is due, in part, to:

1. Lower-than-expected spending in 2013 for most HI-related service categories, especially for inpatient hospital care
2. Lower projected utilization assumptions for inpatient hospital services; and
3. Lower case mix increase assumptions for skilled nursing facilities and home health agencies, indicating patients in these settings are healthier than expected.

Medicare spending growth for other services and items is also low for a variety of reasons.⁵

⁴ *Medicare - April 2014 Baseline* (Washington, D.C.: Congressional Budget Office); *Medicare - August 2010 Baseline* (Washington, D.C.: Congressional Budget Office, August 2010); Office of the Actuary, *National Health Expenditure Projections 2012-2022* (Baltimore, MD: Centers for Medicare & Medicaid Services, 2013); Office of the Actuary, *National Health Expenditure Projections 2008-2018* (Baltimore, MD: Centers for Medicare and Medicaid Services, 2009).

⁵ Board of Trustees, *2014 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medicare Insurance Trust Funds* (Washington, D.C.: Centers for Medicare & Medicaid Services, 28 July 2014).

The Congressional Budget Office also recently extended its projection of the HI Trust Fund's solvency to roughly 2030.⁶

This issue brief provides additional analyses of recent trends in per enrollee spending in the traditional Medicare program. Specifically, we examine spending trends for detailed service categories and for geographic areas. Key findings include:

- The average annual per enrollee spending growth rate for the Medicare program for 2009-2012 was 2.3 percent – *this number represents a decline of 4.0 percentage points from the 2000-2008 average annual rate of 6.3 percent*. In other words, this growth rate is about one-third as high as it was previously. Moreover, the estimated per enrollee expenditure growth rate for Medicare in 2013 is only 0.1 percent. The aggregate estimated Medicare expenditure growth rate for 2013 is 3 percent, reflecting an annual rise in the number of new beneficiaries of approximately 3 percent.⁷
- Medicare spending between 2009 and 2012 for beneficiaries in the traditional program (i.e., not including those enrolled in MA) was approximately \$116.4 billion *lower* than what it would have been if the average growth rate for 2000-2008 had continued through 2012.
- The slowdown in the rate of growth in health spending has important implications for both beneficiaries and taxpayers. Current law establishes the standard Part B premium at the level of approximately 25 percent of average expenditures for beneficiaries who are age 65 and over (the rate varies for those enrolling after their initial enrollment period ends, those with higher incomes, and those subject to the hold-harmless provision).⁸ Hence, slow growth in program spending on Part B services in recent years has contributed to a lower premium growth, benefitting beneficiaries. Slow growth in expenditures on pharmaceuticals also leads to lower Part D premiums, which are set by private plans, in part, according to those costs. Furthermore, lower utilization rates benefit beneficiaries by lowering their payments for cost sharing and potentially reflect better quality care with less duplication of services.
- These lower rates of spending growth are projected to continue into future years with important implications for the solvency of the HI Trust Fund: The 2014 Medicare Trustees report and the CBO estimate that the Trust Fund will be depleted in 2030, four years later than projected by the Trustees last year.
- The slowdown in Medicare spending growth that occurred between the periods of 2000-2008 and 2009-2012 was widespread across service categories. In most service categories, the slowdown in expenditure growth was primarily attributable to reductions in utilization.
- Regional patterns of spending for home health services and durable medical equipment suggest that Medicare's payment policy changes, program integrity efforts, and competitive bidding policies played a role in the slowdown.

⁶ *The 2014 Long-Term Budget Outlook* (Washington, D.C.: Congressional Budget Office, July 2014); *The 2013 Long-Term Budget Outlook* (Washington, D.C.: Congressional Budget Office, September 2013).

⁷ CMS Office of the Actuary estimated per capita spending growth for calendar year 2013.

⁸ Board of Trustees.

- Reductions in spending growth for acute inpatient and post-acute care services accounted for half of the overall slowdown in spending growth. Post-acute care accounted for a disproportionately large proportion of the overall reduction in spending growth relative to its share of overall spending.
- Slowdowns in drug and imaging utilization suggest that a shift to generics, as well as slower development and utilization of medical technology was a factor.
- The ongoing shift from inpatient to outpatient settings for surgical care, as well as, the shifting age distribution of the Medicare population toward younger new entrants has had implications for spending growth in both the inpatient and post-acute care settings.

I. National Health Spending

There is considerable uncertainty regarding the relative contribution of various factors to the slowdown in national healthcare spending. Factors likely to have affected spending growth in recent years include:

- Slower growth in the demand for health care services due to the recession and modest recovery
- Changes in care delivery related to pre-Affordable Care Act (ACA) and ACA related payment changes and value-based purchasing efforts
- The recent high rates of generic penetration in the prescription drug market accompanied by lower rates of use of new health care technology; and
- Changes in the benefit design of employer sponsored insurance.

How much of the slowdown in national health spending is due to the recession and its subsequent slow recovery has been a matter of considerable discussion. Recent studies applying different methods have found a substantial range in estimates.⁹ However, a CBO analysis suggests that, whatever role the recession may have played in driving trends in private health care spending, the recession appears to have played a small role in driving trends in Medicare spending. Their analysis estimated the effect of changes in wealth and income due to the recession on Medicare beneficiaries' use of health care services and found that the recession had little effect on demand for health care services by Medicare beneficiaries.¹⁰ As evidenced by Figure 1 above, the slowdown in per capita spending growth began prior to the recession, suggesting that other factors have been at play. In addition, the CBO and other analysts find that reductions in utilization rather than payment played a significant role suggesting that more fundamental changes in the health care delivery system may account for these trends.¹¹

⁹ *Assessing the Effects of the Economy on the Recent Slowdown in Health Spending* (Washington, D.C.: The Henry J. Kaiser Family Foundation, 22 April 2013) <<http://kff.org/health-costs/issue-brief/assessing-the-effects-of-the-economy-on-the-recent-slowdown-in-health-spending-2/>> [accessed 8 July 2013]; David M. Cutler and Nikhil R. Sahni, 'If Slow Rate Of Health Care Spending Growth Persists, Projections May Be Off By \$770 Billion', *Health Affairs*, 32 (2013), 841–50.

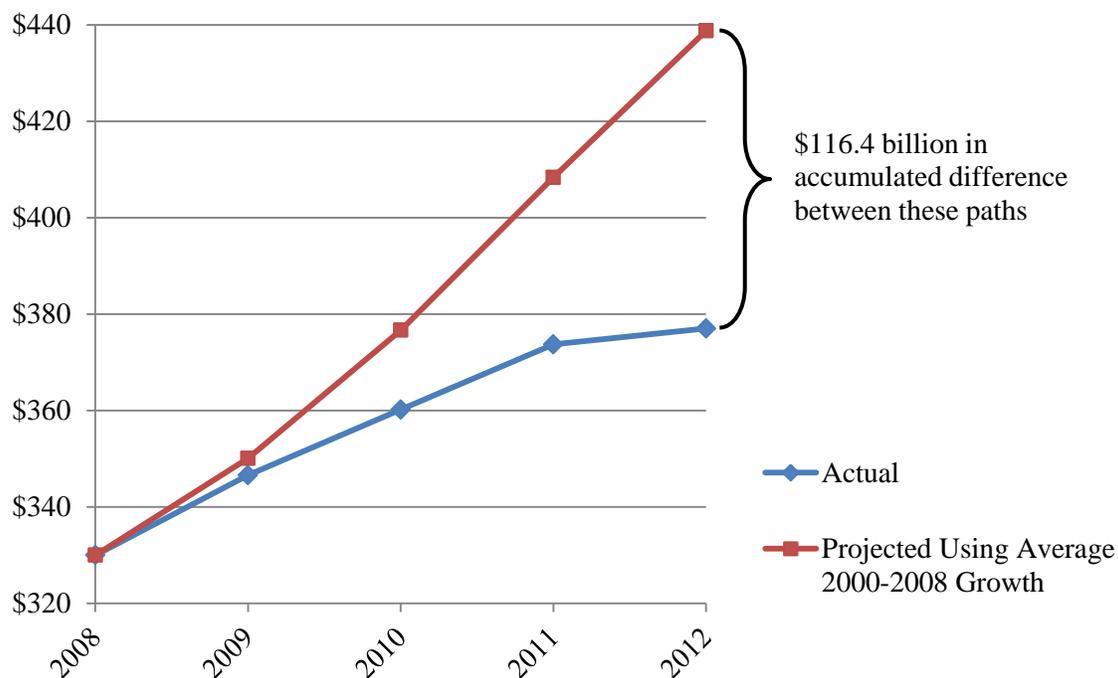
¹⁰ Michael Levine and Melinda Buntin, *Why Has Growth in Spending for Fee-for-Service Medicare Slowed?* (Washington, D.C.: Congressional Budget Office, August 2013).

¹¹ Cutler and Sahni.

II. Quantifying the Impact of the Slowdown in Medicare Spending Growth

Figure 2 displays per enrollee spending for beneficiaries in the traditional Medicare program. The figure includes spending on Part A and B services, as well as on prescription drugs (Part D) in 2009, 2010, 2011, and 2012 (the latest year of data available from the Master Beneficiary Summary File). The figure also displays an illustrative trend line showing what spending would have been if the growth rate during these years had been equal to the average growth rate of per enrollee spending for 2000-2008. Growth attributable to Part D spending was excluded for 2006 because spending growth for the years 2000-2008 would have appeared artificially high due to introduction of the Part D program. The difference between the trend lines implies a substantial reduction in accumulated spending of \$116.4 billion relative to what spending would have been if the average growth rate for 2000-2008 had continued through 2012.

Figure 2
Actual vs. Illustrative Growth in Personal Health Expenditures for the Traditional Medicare Program Using 2000-2008 Average Expenditure Growth (in billions)



Data Source: CMS Medicare Beneficiary Summary File

Notes: Projections include spending on Medicare Parts A, B, and D for traditional Medicare beneficiaries.

Growth rate for 2006, used to generate 2000-2008 projection only includes Parts A and B to avoid artificially high growth rate from introduction of the Part D program.

III. Medicare Spending Growth Trends by Service Category

In order to provide a more detailed analysis of the slowdown in Medicare spending, we examined trends in spending by service category and by geographic area. Table 1 compares the compounded average growth rate for the 2000-2008 period and more recent years (2009-2012), by service category. Definitions for each of the service categories used in this analysis are reported in the Appendix (see Table A.1). As with any time period comparisons, the beginning and end years chosen can affect the findings. The earliest year available for the Master Beneficiary Summary File (MBSF, summary data on spending and utilization for beneficiaries in the traditional Medicare program) is 1999, which was used to calculate growth in 2000. The first year of the recession (2008) was selected as the end point for the historical period. The latest year of available MBSF data is 2012. All service categories, with the exception of Anesthesia, experienced declines in their average growth in recent years.

While Table 1 indicates the service categories that experienced the largest reductions in spending growth, it does not identify those service categories that contributed the most to the overall slowdown in spending growth. That information is presented in Table 2, which displays each service category's contribution to the slowdown and its contribution to overall Medicare spending. Post acute services (SNF, home health, hospice), Part B drugs, and imaging procedures contributed the most to the slowdown relative to their share of spending. Although acute inpatient services accounted for 25 percent of the overall slowdown in spending growth, this contribution was smaller than its 32 percent share of overall spending.

Table 1
Change in Medicare Compound Average Spending Growth
between 2000-2008 and 2009-2012, by Service Category

Medicare Service Category	Compound Average Annual Growth		Change in Compound Average Annual Growth
	2000-2008	2009-2012	
Hospice	16.3%	4.7%	-11.6
Imaging	6.5%	-4.0%	-10.5
Part B Drugs	11.7%	1.9%	-9.8
DME	5.9%	-2.7%	-8.6
Part D	11.7%	3.8%	-8.0
SNF	9.6%	1.8%	-7.8
Home Health	7.7%	0.1%	-7.6
ASC	9.2%	2.9%	-6.3
Testing	7.2%	3.1%	-4.2
Other Part B	6.7%	2.7%	-4.0
Acute Inpatient	3.1%	-0.4%	-3.5
HOPD	9.3%	6.6%	-2.7
Other Inpatient	4.5%	2.1%	-2.4
Physician E&M	5.1%	3.0%	-2.1
Other Procedures	4.4%	2.3%	-2.1
Dialysis	2.4%	2.2%	-0.1
Anesthesia	2.9%	3.4%	0.5

Data Source: CMS Medicare Beneficiary Summary File

Table 2
Contribution to Slowdown in Medicare Spending Growth between
Historical Period (2000-2008) and Recent Years (2009-2012) vs.
Average Contribution to Overall Spending in 2008*

Service Category	Contribution to Slowdown [†]	Contribution to Spending
SNF	11.8%	7.1%
Part B Drugs	7.5%	3.3%
Hospice	6.7%	2.6%
Home Health	8.4%	5.0%
Imaging	5.3%	2.2%
DME	4.7%	2.4%
ASC	1.0%	<1.0%
Other Part B	1.5%	1.7%
Dialysis	<1.0%	<1.0%
Testing	2.1%	2.4%
Part D [‡]	11.3%	12.2%
Other Inpatient	2.3%	4.1%
Other Procedures	2.3%	4.9%
Physician E&M	3.7%	7.9%
HOPD	7.2%	11.8%
Acute Inpatient	24.1%	31.0%
Anesthesia [◆]	0%	0%

* The order of the categories is based on the ratio of contribution to the slowdown to share of spending. For example, skilled nursing facility (SNF) services has the highest ratio ($[1+0.118]/[1+0.071] = 1.043$).

† The contribution to the slowdown is calculated by multiplying the percentage point decrease in the average spending growth rate for each services category between 2000-2008 and 2009-2012 by each category's average contribution to overall spending in 2008.

‡ The growth rate for prescription drugs for 2000-2008 is based on the 2008 growth rate, since the Part D program was introduced in 2006 with enrollment ramping up through 2007.

◆ The average growth rate for anesthesia increased between 2000-2008 and 2009-2012

Data Source: CMS Medicare Beneficiary Summary File

IV. Contributions of Price and Utilization

The previous sections focus on the service categories that contributed the most to the slowdown in per beneficiary spending growth between 2000-2008 and 2009-2012. For further examination of these trends, we estimated the contributions of price and utilization to the slowdown within each service category. Definitions for each of the utilization measures used in this analysis can be found in the Appendix (see Table A.2). It is important to note that this is a different analysis from evaluating the contribution of changes in price and utilization to spending growth. For instance, a service category's spending growth could have been primarily due to growth in utilization over time with prices remaining largely unchanged, however; utilization could also be contributing to a reduction in the service category's growth rate if the rate of growth in utilization is decelerating over time. The methodology used to calculate the percentages in this table is provided at the end of the Appendix (see Exhibit A.1).

Table 3 displays the results of this analysis. The results suggest that with the exception of Other Inpatient, Other Part B, and Dialysis, the contribution of each service category to the slowdown in expenditure growth was attributable mostly to reductions in utilization over this period, although prices have played a meaningful role, particularly for some categories of spending. It is important to note that our measure of price growth includes both changes in payment rates and case mix. Hence, while payment rates for a particular service category may have been reduced other factors affecting case mix may have increased overall price growth. For instance, a shift in care for lower acuity patients from the inpatient to outpatient settings leaves a higher average case mix behind in the inpatient setting.¹²

V. Summary of Service Category Findings

While these findings are not definitive, they offer suggestive information about the factors that may have affected recent Medicare spending trends. As noted below, in many cases, multiple factors may have contributed to trends for individual service categories.

Drugs and Imaging: This has taken the form of patent expirations for existing blockbuster drugs and accompanying increased generic uptake, and fewer blockbuster drugs being introduced into the market in recent years.¹³ It is also possible that the anticipation or actual implementation of payment and delivery models that hold providers accountable for costs has resulted in more cost effective use of medical technology. Medicare spending on imaging may have also been influenced by nationwide factors leading to less use of imaging services, including coverage trends in the private sector that had spillover effects in physician practice behavior related to treating Medicare patients.¹⁴ The decline in

¹² It is also important to note that we selected measures of utilization that were available in the MBSF file, meaning that we do not have a measure for every aspect of utilization. For instance, in the case of dialysis, Medicare began to implement a prospective payment system beginning in 2011. After implementation, there may have been reductions in utilization occurring within each bundled event.

¹³ Katie Thomas, 'Use of Generics Produces an Unusual Drop in Drug Spending', *The New York Times*, 18 March 2013, section Business Day <<http://www.nytimes.com/2013/03/19/business/use-of-generics-produces-an-unusual-drop-in-drug-spending.html>> [accessed 15 November 2013].

¹⁴ David W. Lee and Frank Levy, 'The Sharp Slowdown In Growth Of Medical Imaging: An Early Analysis Suggests Combination Of Policies Was The Cause', *Health Affairs*, 31 (2012), 1876-84 <<http://dx.doi.org/10.1377/hlthaff.2011.1034>>.

imaging rates may in part be due to a provision in the Deficit Reduction Act that capped payment rates for imaging studies conducted at freestanding imaging centers and physician offices at the hospital outpatient rate.

Table 3
Percentage of Reduction in Medicare Spending Growth between 2000-2008 and 2009-2012
Attributable to Price and Utilization, by Service Category

Service Category	Percent Attributable to:	
	Price *	Utilization
Part D [†]	---	---
HOPD	0%	100%
Acute Inpatient	0%	100%
Other Inpatient	88%	12%
SNF	21%	79%
Hospice	10%	90%
Home Health [‡]	---	---
DME	37%	63%
Part B Drug	19%	81%
Physician E&M	0%	100%
Other Part B	100%	0%
Anesthesia [◆]	---	---
Dialysis	100%	0%
Testing	27%	73%
Other Procedures	0%	100%
Imaging	22%	78%
ASC	0%	100%

* Includes both changes in fee schedule amounts and case mix.

† The percentages for Part D drugs are not calculated, since Part D was introduced in 2006 with a ramp up in enrollment (and therefore utilization) in 2007 making it difficult to identify non-enrollment-related utilization growth trends.

‡ The percentages for home health are not calculated, since the Summary File does not include episodes of care, which serves as the basis for payment.

◆ The contribution of price and utilization for anesthesia services is not calculated, since the service category experienced an increase in its growth rate during this period.

Data Source: CMS Medicare Beneficiary Summary File

Inpatient Hospital and Post-Acute: The trends in inpatient and post-acute care services may reflect a number of factors. The rate of hospital admissions per beneficiary decreased towards the end of the decade (data not shown in table). CBO found that the average annual rate of surgical discharges declined in the latter part of the 2000s after having grown slightly in earlier years.¹⁵ There has been an ongoing shift in the site of surgical care from inpatient to lower cost outpatient settings, such as Ambulatory Surgical Centers, reflecting innovations in medical procedures and payment incentives.¹⁶ This shift has also affected post-acute care, reducing the need to use skilled nursing facilities. Other types of discharges also declined. Part of this was due to the rising share of beneficiaries who are young and do not require as much inpatient hospital care. Finally, the rate of readmissions for beneficiaries 65 years old or greater began to decline in 2012. The Hospital Readmission Reduction Program was implemented in October of 2012, and a number of other programs have been implemented with a focus on improving care coordination and reducing readmissions. The readmission rate has declined significantly, leading to the avoidance of 150,000 readmissions in 2012 and 2013.¹⁷

Home Health: Trends in home health spending were likely directly affected by specific Medicare policy initiatives. Although strongly suggestive, these maps are only provided for illustrative purposes and are not intended to demonstrate fully causal connections. Maps 1 and 2 display the ratio of 2009-2012 to 2000-2008 Medicare per enrollee spending growth rates by hospital referral region for Home Health and DME spending. Map 1 (Home Health) shows the locations of Medicare Fraud Strike Force teams, which have been in existence since 2007. These teams are placed within, or adjacent to, key locations with historically high rates of Medicare fraud. As the map illustrates, these locations have witnessed some of the largest declines in Home Health spending growth in recent years as the Medicare program continues to reinforce its program integrity efforts. These teams represent one of a number of program integrity initiatives the Department has undertaken in recent years, which were further strengthened by the Affordable Care Act. Hence, although certain regions exhibiting large drops in spending growth on home health services such as Nevada, Utah, Oklahoma, and New Mexico do not have Fraud Strike Force teams, they have benefitted from implementation of other program integrity tools such as enhanced provider screening.

Durable Medical Equipment (DME): Trends in durable medical equipment (DME) spending were also directly affected by specific Medicare policy initiatives. The DME map shows the locations where the first round of competitive bidding for durable medical equipment took place, starting in 2011. Again, given the declines in DME spending growth seen in recent years in all but one of these locations, these data suggest that the competitive bidding program was successful in reducing prices and inappropriate utilization. Note that spending for these services was also affected by provisions of the Deficit Reduction Act of 2005 that reduced payment rates, and DME services were also a focus of Medicare Fraud Strike Force activities described above.

¹⁵ Levine and Buntin.

¹⁶ Elizabeth L. Munnich and Stephen T. Parente, 'Procedures Take Less Time At Ambulatory Surgery Centers, Keeping Costs Down And Ability To Meet Demand Up', *Health Affairs*, 33 (2014), 764–69 <<http://dx.doi.org/10.1377/hlthaff.2013.1281>>.

¹⁷ *New HHS Data Shows Major Strides Made in Patient Safety, Leading to Improved Care and Savings* (Baltimore, MD: Centers for Medicare & Medicaid Services, 7 May 2014) <<http://innovation.cms.gov/Files/reports/patient-safety-results.pdf>> [accessed 27 July 2014].

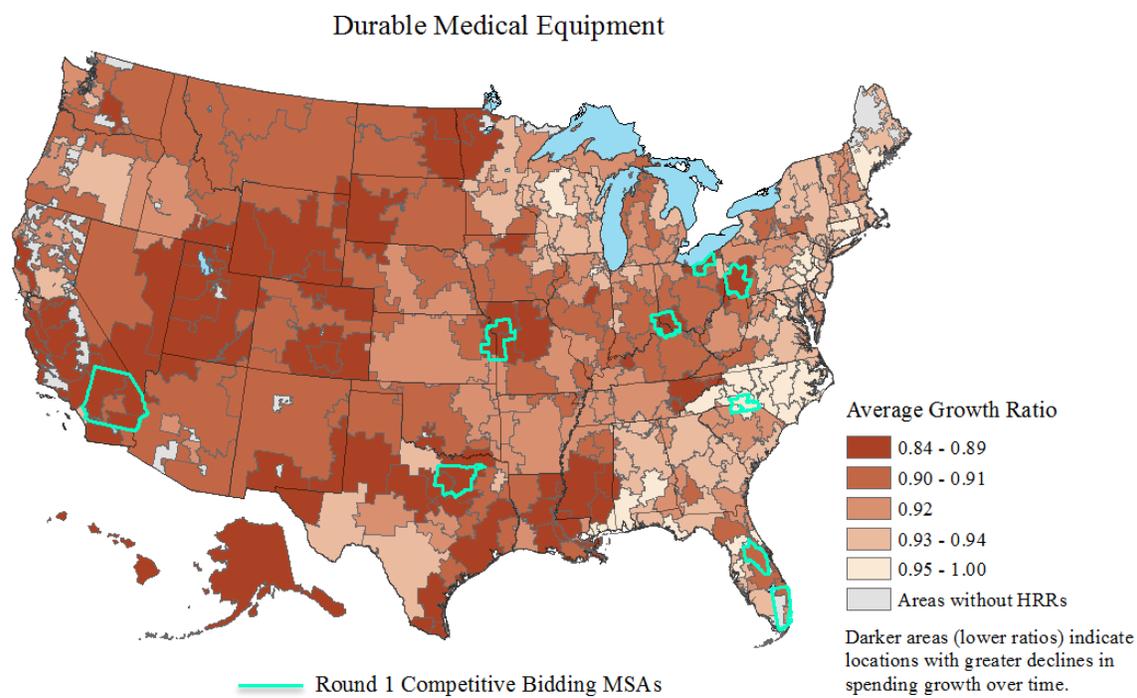
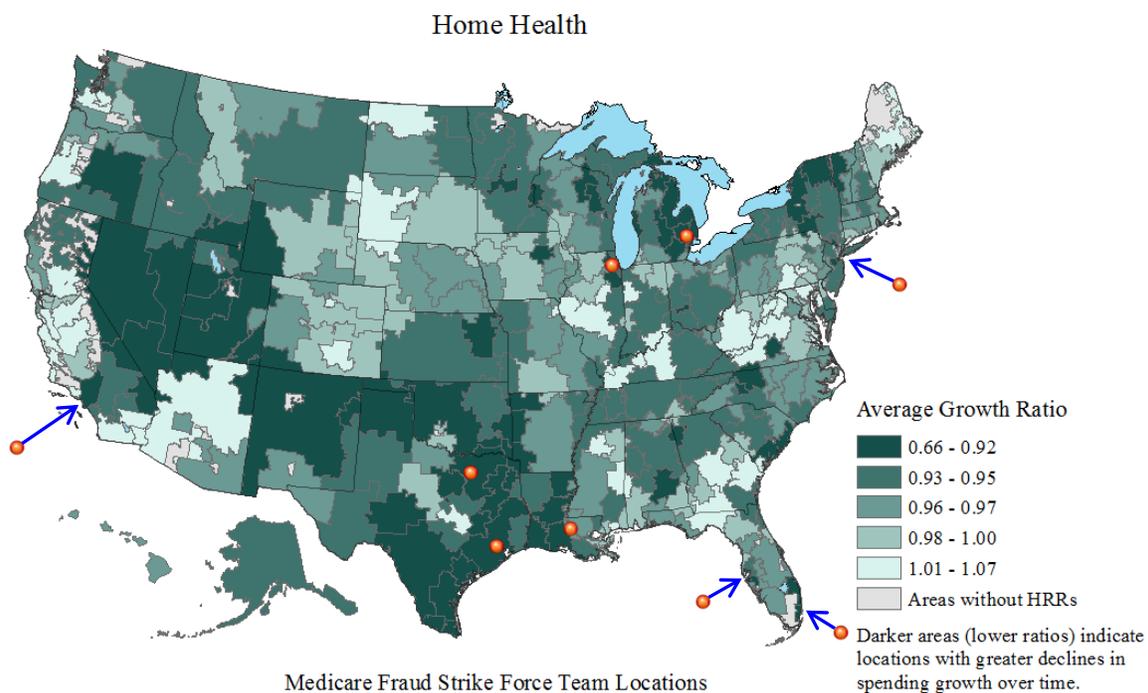
Hospice: A number of factors also likely affected hospice spending. There was substantial growth in this industry during the early 2000s attributable to both the number of beneficiaries choosing hospice for end of life care and the number of patients remaining in hospice care for more than 6 months. However, the percent of hospice episodes greater than 180 days, which increased from 6.5 percent in 1999 to 12.7 percent in 2009, has remained relatively constant from 2010-2012. The leveling of the trend toward long stays probably contributed to the slowdown in spending growth as well as other factors including the face-to-face encounter required by the ACA for extending hospice election.

VI. Spending Growth Trends in Medicare Advantage

Most of this issue brief has focused on the traditional Medicare program due to the availability of Medicare claims data to analyze service category level spending trends. Spending growth in the MA program has been affected by various factors in recent years including: enrollment growth; changes in provider network requirements for private fee-for-service plans under the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA); a transition to traditional Medicare-based payment rates to reduce overpayments to plans under the Affordable Care Act; quality bonus payments provided to MA plans; and increases in MA risk scores relative to the traditional Medicare program.¹⁸ As displayed in Figure 3, there has been greater variability in per enrollee spending growth for the MA program from year-to-year than in the traditional Medicare program. However, over time, the rate of growth in per enrollee MA program spending has also slowed in recent years. This slower growth in MA payments has been accompanied by continued increases in plan enrollment (up by more than 40% since passage of the ACA) and a nearly 10% decline in premiums paid by MA enrollees since passage.

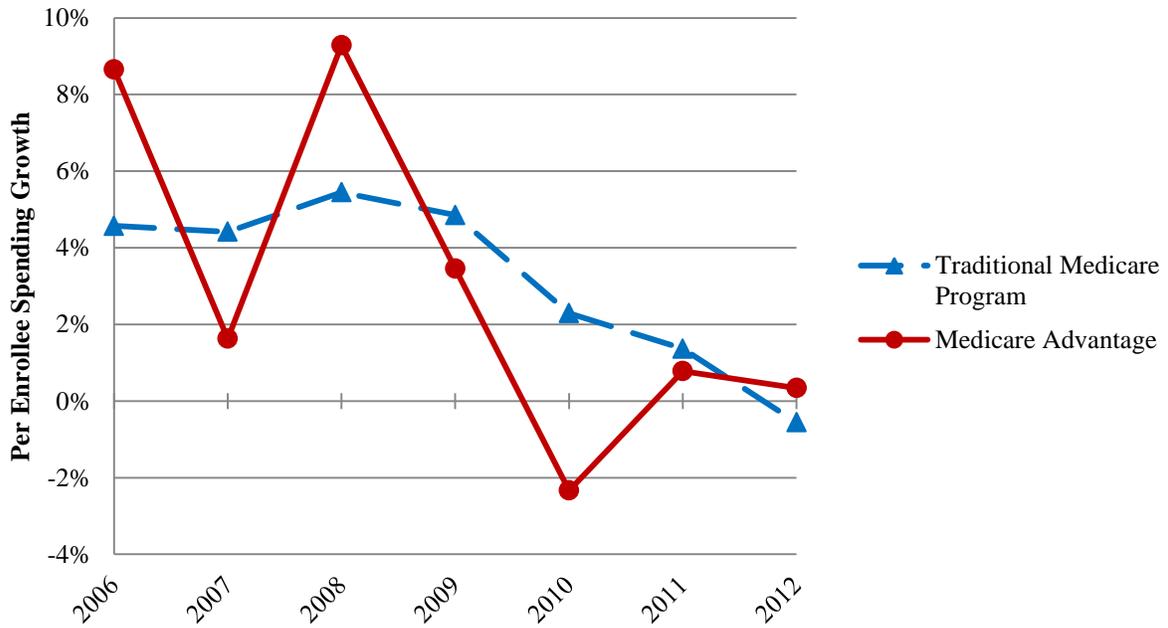
¹⁸ *The Medicare Advantage Program in 2014* (Washington, D.C.: The Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, 7 April 2014) <http://aspe.hhs.gov/health/reports/2014/medicareadvantage/ib_medicareadvantage.pdf> [accessed 17 July 2014]; Richard Kronick and W. Pete Welch, 'Measuring Coding Intensity in the Medicare Advantage Program', *Medicare & Medicaid Research Review*, 4 (2014), E1–E19.

Maps 1 and 2. Ratio of 2009-2012 to 2000-2008 Average Medicare per Enrollee Spending Growth Rate by Hospital Referral Region



Data Source for Spending Growth: CMS Medicare Beneficiary Summary File

Figure 3
Per Enrollee Spending Growth in Traditional Medicare and Medicare Advantage, 2006-2012



Data Sources: Data on traditional Medicare program spending from the CMS Master Beneficiary Summary File. Data on Medicare Advantage from the annual Trustees Reports.

Appendices:

**Table A.1
Service Category Definitions**

Service Category	Definition
Acute Inpatient	Payments to acute care hospitals (including critical access hospitals) for inpatient services. With regards to the Medicare data, a limited number of hospitals (i.e., all-inclusive rate and no charge structure hospitals) combine bill under Part A for both technical and professional payments. However, most hospitals bill Part B separately for services provided by employed physicians.
Ambulatory Surgery Center (ASC)	Payments to ASCs.
Anesthesia	Payments for anesthesia services delivered in non-institutional settings, aside from ASCs.
Dialysis	Predominantly professional payments – for dialysis services. Treatments are generally captured under hospital outpatient.
Durable Medical Equipment (DME)	Payments for DME provided in non-institutional settings, aside from ASCs.
Home Health	Payments for home health services.
Hospice	Payments for hospice services.
Hospital Outpatient Department (HOPD)	Payments to hospitals for outpatient department services. With regards to the Medicare data, this category also includes payments to independently operated dialysis facilities, since they bill using the CMS UB-40 form.
Imaging	Payments for imaging services provided in non-institutional settings, aside from ASCs.
Part B Drugs	Payments for drugs provided in non-institutional settings, aside from ASCs.
Other Inpatient	Payments to long-term care hospitals, inpatient psychiatric facilities, inpatient rehabilitation facilities,

	and other types of specialty facilities such as children's hospitals and cancer centers for inpatient services.
Other Procedures	Payments for procedures other than anesthesia or dialysis provided in non-institutional settings, aside from ASCs.
Other Professional	Other professional payments for services that do not fall under one of the other carrier service categories (i.e., DME, Office-Based Drugs, Physician E&M, ASC, Anesthesia, Dialysis, Tests, Other Procedures, and Imaging). Example services included in the other professional category include ambulance, chiropractor, chemotherapy, vision, hearing, and speech services.
Physician Evaluation and Management (E&M)	Payments to physicians for evaluation and management services, aside from when such services are rendered in an ASC.
Part D	Payments for prescribed drugs. With regards to the Medicare data, this measure includes the amount paid by the plan and the low income cost sharing subsidy amount, if applicable.
Skilled Nursing Facility (SNF)	Payments for SNF services.
Testing	Payments for lab and other non-imaging testing services provided in non-institutional settings, aside from ASCs.

Table A.2
Service Category Utilization Measures

Service Category	Utilization Measure
Acute Inpatient	Count of unique acute hospital admissions. Transfers are combined with the original admission and do not add to the count of admissions.
Ambulatory Surgery Center (ASC)	Count of ambulatory surgery center procedures.
Anesthesia	Count of anesthesia services.
Dialysis	Count of dialysis services.
Durable Medical Equipment (DME)	Count of durable medical equipment.
Home Health	Not included in the analysis.
Hospice	Count of days in the hospice.
Hospital Outpatient Department (HOPD)	Count of unique hospital outpatient department revenue center dates (as a proxy for visits).
Imaging	Count of imaging services.
Part B Drugs	Count of drug administrations.
Other Inpatient	Count of unique admissions in long-term care hospitals, inpatient psychiatric facilities, inpatient rehabilitation facilities, and other types of specialty facilities such as children's hospitals and cancer centers for inpatient services.
Other Professional	Count of professional visits not included in one of the other carrier service categories (i.e., DME, Office-Based Drugs, Physician E&M, ASC, Anesthesia, Dialysis, Tests, Other Procedures, and Imaging).
Other Procedures	Count of procedures other than anesthesia or dialysis provided in non-institutional settings, aside from ASCs.
Physician Evaluation and Management (E&M)	Count of physician evaluation and management services.

Part D	Not included in the analysis.
Skilled Nursing Facility (SNF)	Count of days in the skilled nursing facility setting.
Testing	Count of tests.

Exhibit A.1
Methodology used to calculate percentages in Table 4

The percentages under the Price column are calculated by dividing the ratio of the average per capita spending growth rate for a service category for 2009-2012 over the 2000-2008 rate by the ratio of the average per capita utilization growth rate for a service category for 2009-2012 over the 2000-2008 rate (see Equation 1 below). This estimates the portion of a service category's spending growth slowdown that is attributable to price growth, which may include both changes in fee schedule amounts and case mix.

Equation 1.

$$\text{Contribution of Price} = \frac{(1 + \overline{SG}_{09-12}) / (1 + \overline{SG}_{00-08})}{(1 + \overline{UG}_{09-12}) / (1 + \overline{UG}_{00-08})}$$

where:

\overline{SG} = average spending growth

\overline{PG} = average price growth

\overline{UG} = average utilization growth

This equation is derived from Equation 2, which represents the relationship between spending, price, and quantity (utilization).

Equation 2.

$$\text{Spending} = \text{Price} \times \text{Quantity}$$