

Altarum Institute Center for Sustainable Health Spending Health Sector Trend Report

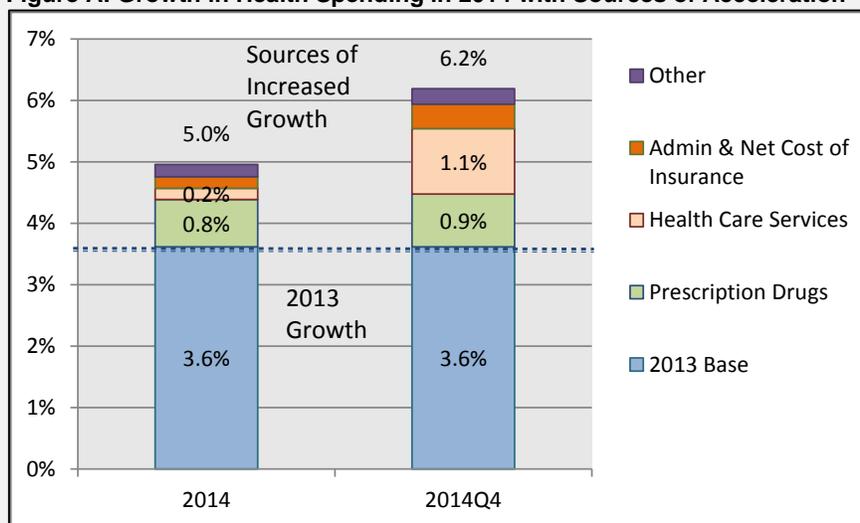
March 2015—Expanded Report Covering All of 2014

These monthly reports provide a summary of key trends in health care spending, prices, utilization, and employment. They build upon Altarum’s [Health Sector Economic IndicatorsSM \(HSEI\) briefs](#) and make direct use of the Census Bureau’s [Quarterly Services Survey \(QSS\)](#), the timeliest source of detailed, survey-based spending information for health care services, which account for more than 70% of national health spending. Since QSS data were released this month for the fourth quarter (Q4) of 2014, this is an expanded report providing first-time estimates for all of 2014. The next expanded report, covering Q1 2015, will come in June.

Health spending went up 5% in 2014 with slower growth at the start and 6.2% growth by Q4

- Health spending grew at a rate of 5.0% in 2014, compared to 3.6% in 2013. As shown in the first bar of Figure A, most of the higher growth (0.8 percentage points) is attributable to prescription drugs, which grew by 11% in 2014, compared to 2.5% in 2013. Hepatitis C drugs contributed 3–4 percentage points to this increased growth in prescription drug spending.
- The health spending growth rate accelerated during the year, beginning at 3.3% in Q1 and ending at 6.2% in Q4 (second bar in Figure A). The main driver of this pattern was health care services spending, which grew by 2.1% in Q1 and 5.4% in Q4, according to the QSS. The fast growth in health care services spending at the end of the year was offset by the slow growth at the start, resulting in an overall growth rate for health care services that in 2014, at 4.1%, was only slightly above that of 2013 (3.9%).

Figure A: Growth in Health Spending in 2014 with Sources of Acceleration



Source: Altarum Center for Sustainable Health Spending

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- An increase in health spending growth for 2014 [was expected](#) because of expanded coverage under the Patient Protection and Affordable Care Act (ACA).
- It seems likely that growth in the first half of 2015 will continue at around 6%, but Altarum expects a gradual decline over the rest of the year due to lower growth in prescription drug spending (spending for hepatitis C should level off) and less additional expanded coverage.

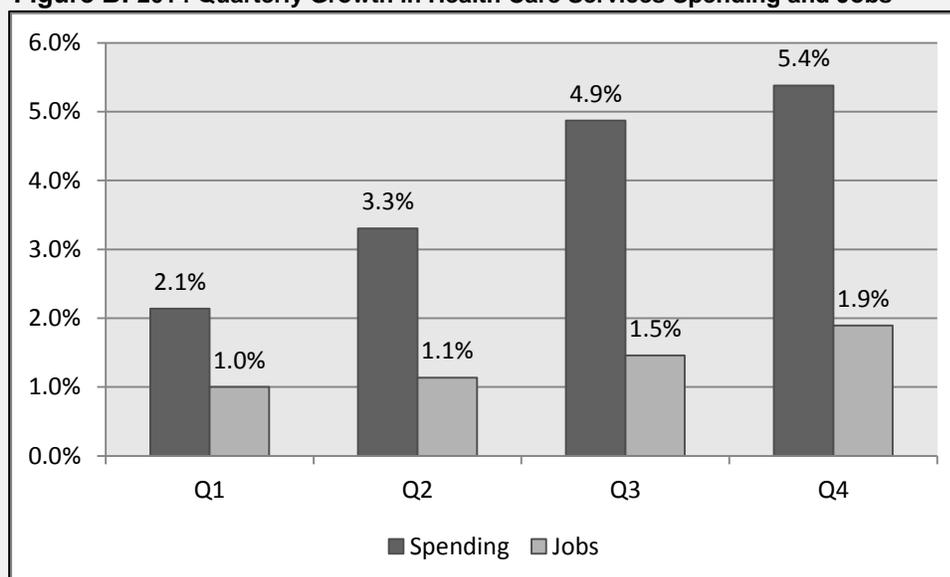
Prices for health care services grew by only 1.3% in 2014, down from 1.5% in 2013

- Hospital price growth was 1.5% in 2014, down from 2.2% in 2013.
- Physician prices barely increased for the second straight year (0.5% in 2014 and 0.1% in 2013).

Health job growth in hospitals and ambulatory care settings remains strong entering 2015

- Health services job growth accelerated throughout 2014 and continued at a strong rate into 2015, fueled by an upturn in hospital hiring after job losses in 2013 and by continued gains in ambulatory care settings. Growth in both jobs and spending accelerated throughout the year, as shown in Figure B.

Figure B: 2014 Quarterly Growth in Health Care Services Spending and Jobs



Source: Altarum Center for Sustainable Health Spending

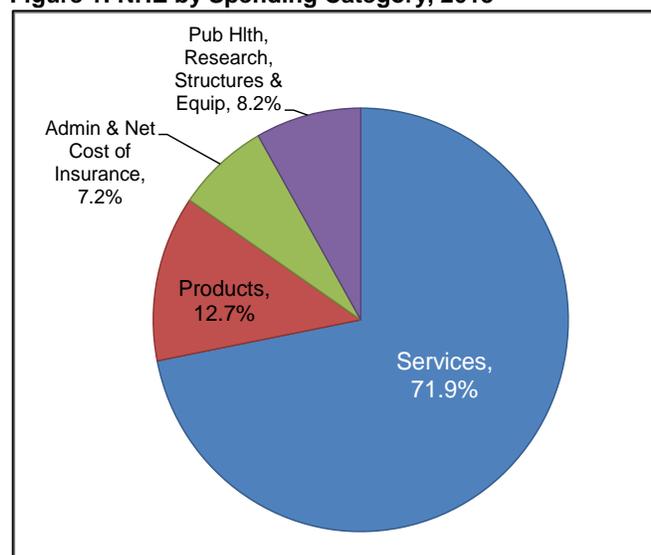
- Since 2005, the cumulative growth in health care services utilization has exceeded the growth in health care services jobs by about 4%. Most of this apparent increase in productivity has occurred in the past 3 years.

Distribution of National Health Expenditures

The health spending data described in this report represent national health expenditures (NHE) as defined in the National Health Expenditure Accounts (NHEA) maintained by the Centers for Medicare & Medicaid Services (CMS). Data through 2013 are the most recent official CMS figures. Data for 2014 are from the Altarum Center for Sustainable Health Spending (CSHS) monthly HSEI, with the exception of spending on health care services, which is derived from the latest Census Bureau QSS.¹

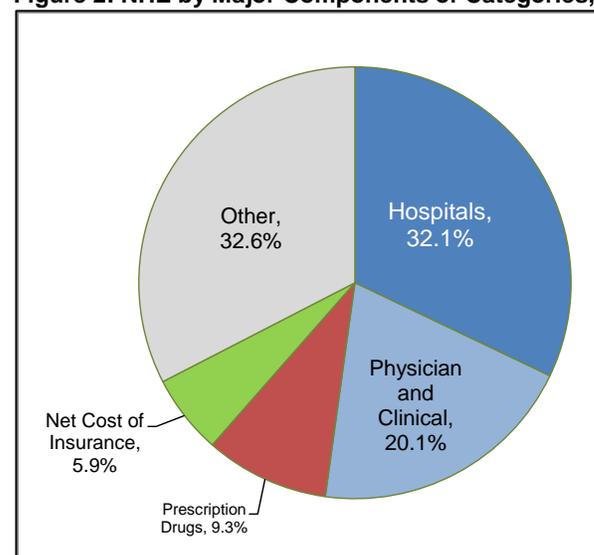
To gain an understanding of trends and growth in health spending, it is useful to have a picture of the major components of NHE and their relative proportions. Health care products and services accounted for about 85% of NHE in 2013, with services alone accounting for about 72% (Figure 1). Administrative and net costs of insurance made up about 7% of NHE. Public health, medical research, and investments in structures and equipment made up the remaining 8%.

Figure 1: NHE by Spending Category, 2013



Source: CMS Office of the Actuary.

Figure 2: NHE by Major Components of Categories, 2013



Source: CMS Office of the Actuary.

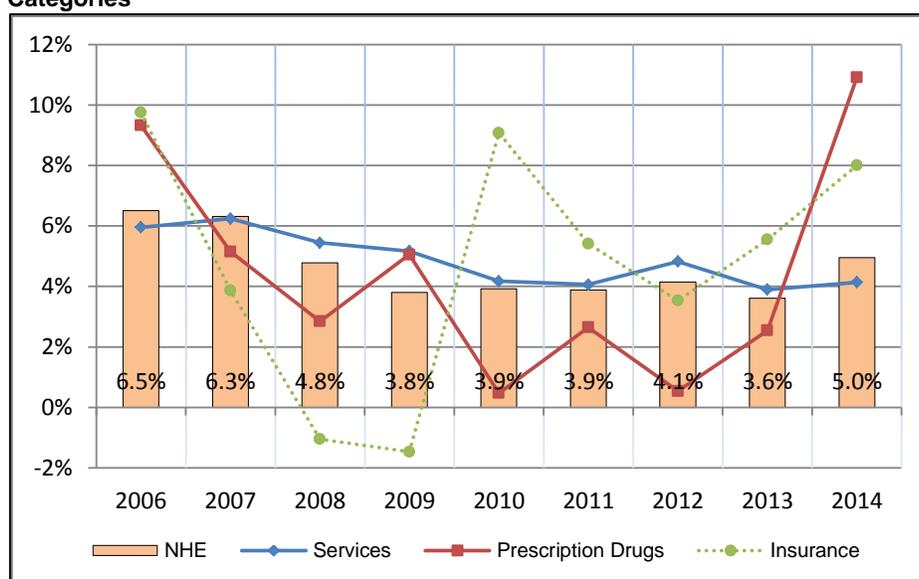
The largest components of health care services are hospitals and physicians, which account for more than half of NHE (Figure 2). Health care products are dominated by prescription drugs; the administrative and net cost of insurance category is likewise dominated by the net cost of insurance. Taken together, these four components—hospitals, physician and clinical services, prescription drugs, and the net cost of insurance—make up about two-thirds of NHE.

¹ The QSS was used to estimate the growth in services spending, by component, between 2013 and 2014. These growth rates were applied to the corresponding CMS spending estimates for 2013 to form spending estimates for 2014. These were then combined with non-services HSEI spending estimates to produce total health spending for 2014. Note that the services spending estimates in the HSEI are based on the U.S. Bureau of Economic Analysis monthly income and spending release, which also incorporates the QSS, but with a lag and a slightly different methodology.

Growth in NHE with Selected Components

Figure 3 shows the annual growth rate in NHE from 2006 through 2014. During 2006 and 2007, the years immediately preceding the recession, the growth rate exceeded 6%. In 2009, the last year of the recession, it dropped below 4% and remained close to 4% until 2014, when it increased to 5.0%.² The chart also displays the growth rates for health care services, prescription drugs, and the cost of insurance, which together account for about 87% of NHE. While health care services constitute by far the largest component, the volatility of spending on prescription drugs and of the cost of insurance gives these two smaller components a significant impact on NHE growth rates in certain years.³

Figure 3: Annual Growth in National Health Expenditures, Overall and by Selected Categories



Source: Data for 2006–2012 are from the NHEA, while data for 2013 are from the CMS 10-year projection. Estimates for the first three quarters of 2014 are from the CSHS HSEIs.

likely due to expanded coverage, most of it appears to be attributable to fewer patent expirations and the introduction of the hepatitis C drug Sovaldi. The spike in the cost of insurance is based on CMS projections and reflects the impact of expanded coverage.⁴

The main puzzle in the 2014 annual estimates is the lack of uptick in the growth rate of spending on health care services. An examination of the spending by quarter shows that there was fast growth in health care services

The estimate for 2014 is particularly interesting, since it seems to confirm the expected uptick in NHE due to expanded coverage under the ACA. However, a look at the individual components shows only a small uptick in the growth rate in spending on health care services in 2014. Instead, the jump in the NHE growth rate is due to spikes in the growth rates for spending on prescription drugs and in the cost of insurance.

While some of the spike in prescription drugs spending is

² Price inflation for the U.S. economy, as measured by the gross domestic product deflator, averaged 3.1% for 2005–2007 and 1.5% for 2009–2013, a drop of 1.6 percentage points. Thus, about 60% of the roughly 2.6-percentage-point decline in the health spending growth rate from pre-recession to post-recession can be attributed to lower overall price inflation. See Charles Roehrig's [Health Affairs blog](#) for a more detailed analysis of the post-recession spending slowdown.

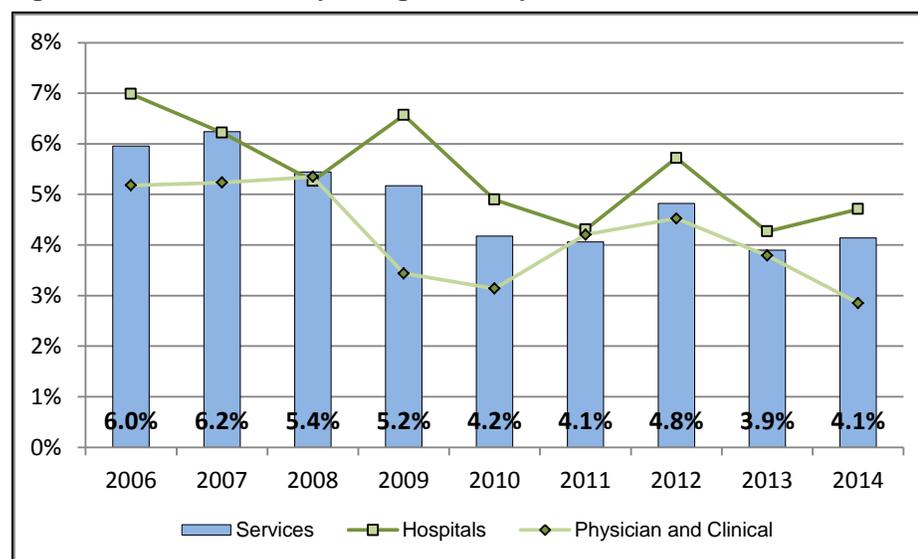
³ As a rough rule of thumb, the impact of a particular component on changes in the overall NHE growth rate from one year to the next is the product of the change in the growth rate of that component and its share of total NHE. For example, the growth rate in spending on prescription drugs increased by about 8.1 percentage points between 2013 and 2014. Since spending on prescription drugs represents 9.3% of NHE, the jump in the growth rate added about 0.75 percentage points to NHE growth in 2014 (0.081×0.093).

⁴ In the estimates shown here, we have reduced the CMS estimate from 11% to 8% because this increase is related to expanded coverage, and expanded coverage effects did not kick in until the second part of the year.

spending at the end of the year, but it was offset by the slow growth at the start, resulting in an overall growth rate that was only slightly above that of 2013. We estimate the Q4 growth rate in NHE at 6.2% (see 2014Q4 bar in Figure B).

Figure 4 compares the growth rate in health care services spending to the growth rates of its two largest components: hospitals and physicians. The growth rate in hospital spending shows an uptick between 2013 and 2014, while there is a steep decline in the growth rate for spending on physician services.

Figure 4: Health Services Spending and Component Growth



Source: Data for 2006–2012 are from the NHEA, while data from 2013 are from the CMS 10-year projection. Estimates for 2014 are from the CSHS HSEIs and the March 2015 QSS.

The Role of Health Care Prices in Spending Growth

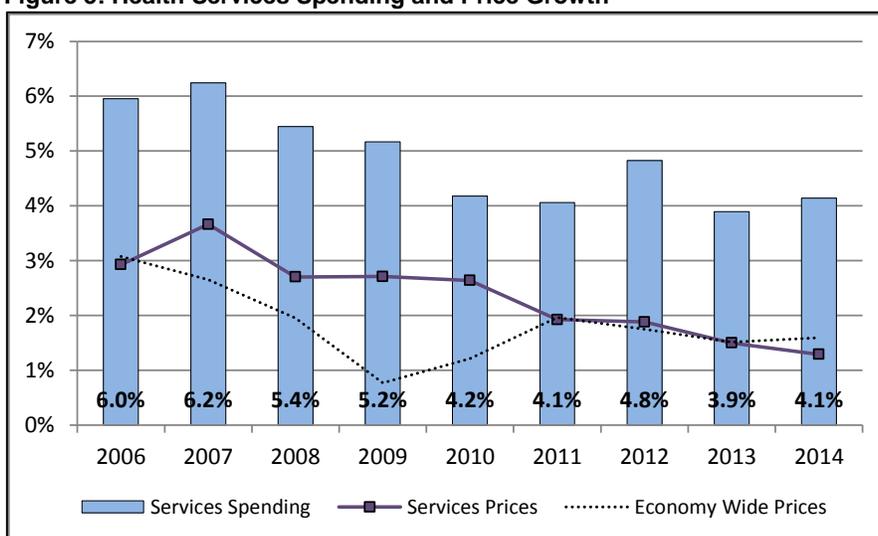
Total spending on health care can be represented by the familiar economic formula of $P \times Q$, where P represents the price paid for the product or service and Q represents the quantity purchased.⁵ The percentage growth in $P \times Q$ is well-approximated by the percentage growth in P plus the percentage growth in Q .⁶ This means that the difference between the growth rates in spending and prices is an indicator of the growth rate in the quantity of care consumed or, using the more familiar health care term, in utilization of care.

⁵ It is well known that in health care, the price charged often bears little resemblance to the price actually paid. The Bureau of Labor Statistics (BLS) price indexes we use are based upon “transaction” prices (the agreed-upon payment) rather than charges.

⁶ More precisely, the growth in $P \times Q$ is equal to the growth in P plus the growth in Q plus the product of the growth rates. When growth rates are small, the product becomes negligible and the approximation is quite accurate.

Figure 5 plots the growth rate in spending on health care services with the growth in prices for those services.⁷ For the pre-recession years of 2006 and 2007, the growth rate for spending on services averaged 6.1%, with 3.3% attributable to prices and 2.8% to utilization. Post-recession, from 2009 to 2014, growth in spending on services averaged 4.4%, with prices and utilization accounting for 2.1% and 2.3%, respectively. Thus, the post-recession period is associated with a 1.7-percentage point reduction in the growth rate for spending on health care services. Most of this reduction (1.2 percentage points) is due to slower price growth, with the remainder (0.5 percentage points) due to slower growth in utilization of services.

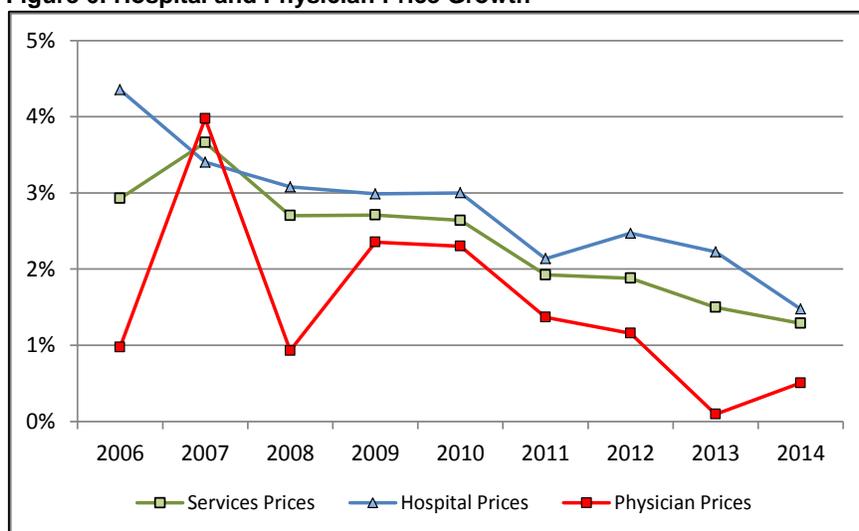
Figure 5: Health Services Spending and Price Growth



Source: Altarum Center for Sustainable Health Spending analysis.

The growth in prices for health care services is determined primarily by prices for hospital and physician services, each plotted for recent years in Figure 6. Comparing 2006–2007 with 2009–2014, hospital price growth dropped from 3.9% to 2.6%; for physician services, the decline was from 2.5% to 1.4%. Thus, both hospitals and physicians contributed to the slower price growth for health care services following the recession, with physician price growth running more than a percentage point below hospital price growth.

Figure 6: Hospital and Physician Price Growth



Source: Altarum Center for Sustainable Health Spending analysis.

⁷ Price growth is based on a health services price index using data obtained from CMS. Deflating by this measure gives an implicit measure of utilization.

Figure 7 plots rates of growth in spending and prices for prescription drugs. Because Medicare Part D prescription drug coverage began in 2006, the large rate of growth in prescription drug spending in that year is an outlier.

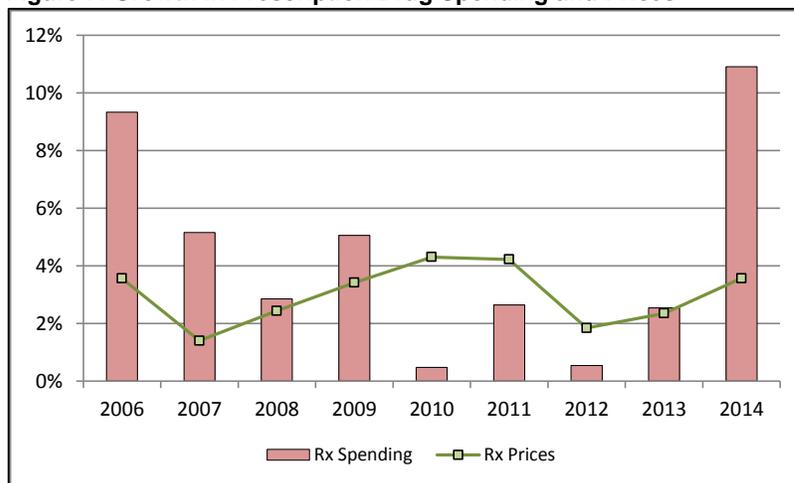
Using 2007 to represent the pre-recession period, the growth rate in prescription drug *spending* declined from 5.2% to 3.6% before and after the recession (through 2014). The growth rate in prescription drug *prices* actually increased after the recession, from 1.4% in 2007 to 3.3% in 2009–2014. Since spending growth declined while price growth increased during the post-recession period, it would appear that the growth in utilization of prescription drugs declined. It is important to be aware of various

potential issues with the BLS prescription drug price index used here. First, it does not capture the impact of rebates, so in periods when rebates are increasing as a share of spending, price growth will be overstated. Also, the introduction of an expensive new drug (such as Sovaldi) does not affect the price index in the year of introduction. Finally, when there is a major shift from brand names to generics (as occurred in 2012), the impact on the BLS index is delayed, because the market basket used to weight prices is not updated immediately.⁸

Health Care Services Jobs and Productivity

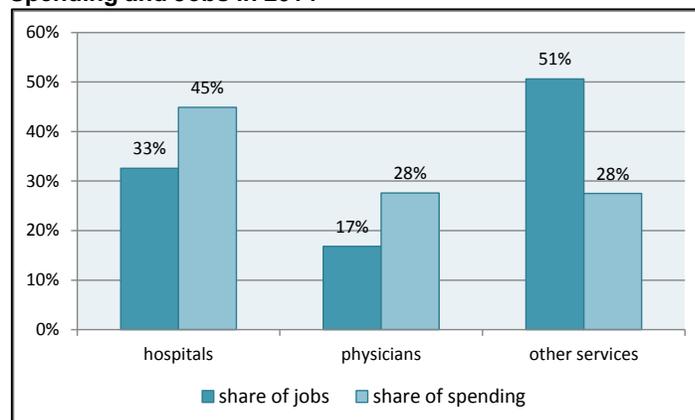
The health care services industry is a major employer, accounting for 14.9 million jobs in 2014 (10.6% of all U.S. jobs).⁹ Interestingly, the distribution of jobs across types of services is quite different from the distribution of spending on types of services (Figure 8). For example, while hospitals account for 45% of health services spending, their share of health services jobs is only 33%. Similarly, physicians account for 28% of spending but only 17% of jobs. The remaining services, which include nursing homes, home health, dentists, and other ambulatory services, account for about half of all jobs but only 28% of spending.

Figure 7: Growth in Prescription Drug Spending and Prices



Source: Altarum Center for Sustainable Health Spending analysis.

Figure 8: Comparison of Distribution of Health Services Spending and Jobs in 2014



Source: Altarum Center for Sustainable Health Spending analysis. Percentages may not sum to 100% due to rounding.

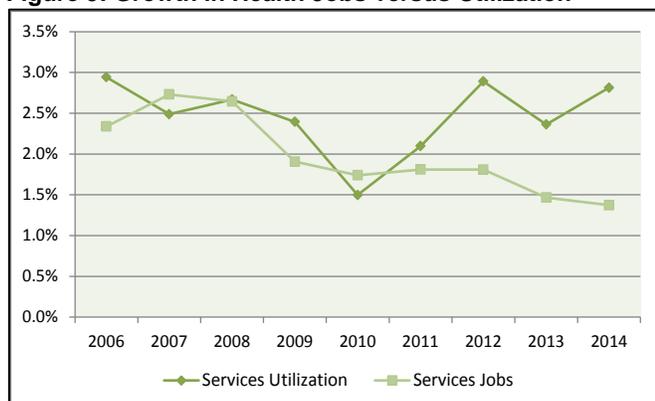
⁸ The Rx price growth shown in the chart is based on Table 23 from [CMS NHE Tables](#) through 2013 and the BLS prescription drug consumer price index (CPI) for 2014. CMS documentation cites the BLS CPI as a source for its prescription drug price index, but they adjusted the CPI to properly capture the timing of the 2012 patent cliff. We will expand on this in a future report.

⁹ Labor data used in this report are from the BLS Current Employment Statistics monthly survey.

There are various reasons for these large differences between the distribution of jobs and spending. In the case of physician services, a key factor is that the jobs totals do not include unincorporated self-employed individuals, and many physicians fit in this category. More broadly, there are differences in the wage mix of the labor and the amount of nonlabor costs associated with different categories of services.¹⁰ For example, the nonlabor share of hospital costs is about 48%; but for nursing homes, it is 38%.¹¹

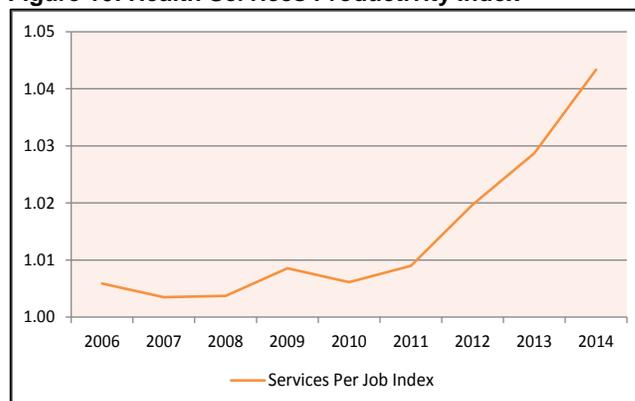
If the method of producing health care services remained constant over time, the rate of growth in health services jobs would be the same as the growth in the utilization of such services. As noted earlier, the rate of growth in services utilization can be approximated by subtracting the rate of growth in prices from the rate of growth in spending.¹² Figure 9 compares growth rates for annual average jobs and utilization from 2006 through 2014. The growth rates are fairly similar until 2012, when utilization begins to grow faster than jobs. The difference between the two is a measure of productivity in the sense that it represents the percentage change in services produced per job. Using this measure, productivity has increased since 2005, particularly beginning in 2012, with services per job about 4% (Figure 10). Utilization growth in 2014 may be overstated, since spending growth may not be totally explained by price and utilization due to [reductions in uncompensated care](#).

Figure 9: Growth in Health Jobs versus Utilization



Source: Altarum Center for Sustainable Health Spending

Figure 10: Health Services Productivity Index



Source: Altarum Center for Sustainable Health Spending.

While the average number of health jobs in each year is an appropriate measure to compare to the average utilization in the charts above, the annual averages do not reveal the movement in net job creation across 2013 and 2014. Almost twice as many jobs were added in 2014 as in 2013 (309,000 versus 160,000), but because most of the growth was late in the year (only 10% of the growth was in Q1, while 40% of the growth was in Q4), the average annual growth for 2014 did not rise above the rate for 2013. Preliminary data for January and February 2015 show that the higher pace of job growth seen at the end of 2014 has continued into 2015 in hospitals and ambulatory care settings, although it appears to have slowed in nursing and residential care.

¹⁰ By nonlabor costs, we mean costs not associated with employment.

¹¹ Turner, A., & Hughes-Cromwick, P. (2013, February). Connecting U.S. health expenditures with the health sector workforce. *Business Economics*, 48(1), 42–57.

¹² More precisely, the formula is spending growth minus price growth all divided by the sum of 1 and the price growth.