

## Altarum Institute Center for Sustainable Health Spending Health Sector Trend Report

*September 2015—Expanded Report Covering Second Quarter of 2015*

*These monthly reports provide a summary of key trends in health care spending, prices, utilization, and employment. They build on Altarum Institute's [Health Sector Economic Indicators<sup>SM</sup> briefs \(HSEI\)](#) and make direct use of the U.S. 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. As QSS data were released on September 9 for the second quarter (Q2) of 2015, this is an expanded report providing first-time estimates for Q2 2015. The next expanded report, covering Q3 2015, will be produced in December. The boxed sections on pages 1 and 2 present highlights, and the remainder of the report describes current trends in health spending, prices, and jobs in greater detail.*

### **Health spending went up 6.6% in Q2 2015.**

- September QSS data, combined with the most recent HSEI results, show health spending increased 6.6% in Q2 2015 compared to Q2 2014. This is similar to the growth rate for Q1, and thus we estimate a 6.6% annual growth rate for the first half of 2015.
- At 6.6%, growth in the first half of 2015 is up sharply from the 5.5% growth in 2014 and the roughly 4% growth experienced from 2009 through 2013. It is also well above the 5.3% rate [projected](#) for full year 2015 by the Centers for Medicare & Medicaid Services (CMS).
- Prescription drug spending grew 9.7% in Q2 2015 year over year, down from 11% in Q1 and 12.6% in 2014. This growth rate [is likely to fall further during the final two quarters of 2015](#), due in part to a leveling off in spending on hepatitis C drugs, but the rate for the full year seems almost certain to exceed the CMS forecast of 7.6% growth for 2015. Without significant revisions to Q1 or Q2 figures, the growth in drug spending would need to average less than 5% over the second half of the year to achieve an overall rate of 7.6%.

### **Health price growth remained very low at 1.1% in Q2, with the services component growing at a paltry 0.5%, but the latest data for August show an uptick.**

- The slow growth in health care prices is continuing, thus price growth has not contributed to the acceleration in health spending. This implies that the acceleration in spending is driven primarily by increased health care utilization, although the reduction in uncompensated care, as more people have gained insurance coverage, is also a contributor.
- Prices for physician services in Q2 are actually 1.2% lower than they were in Q2 of last year, caused by the discontinuation of enhanced Medicaid payments to primary care physicians.
- For August 2015, the Health Care Price Index, at 1.2%, is the highest since April 2015.
  - Hospital price growth, while still very low at 1.0%, is the highest since September 2014.
  - Prescription drug price growth, moderating since a historic high of 6.4% in December 2014, rose for the first time in August at 4.7%, up from 4.4% in July.

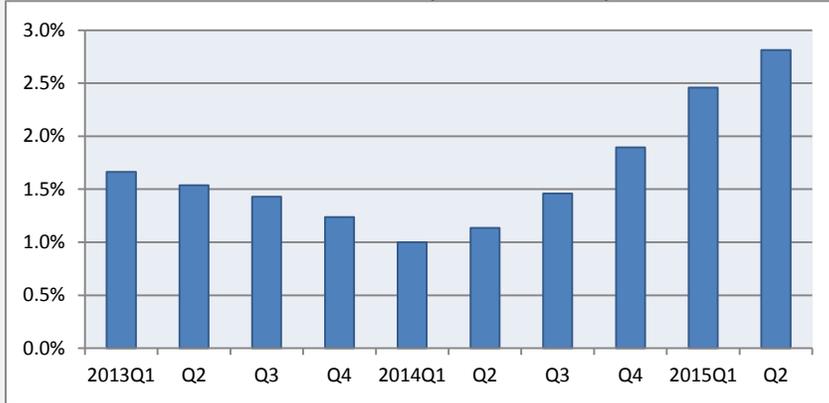
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**Health care job growth has been accelerating from late 2014 through 2015.**

- The acceleration in health jobs has been most pronounced starting in Q4 2014 and has continued through the first two quarters of 2015. Preliminary Bureau of Labor Statistics (BLS) data through August 2015 as reported in the most recent [HSEI Labor Brief](#) show a continuation of this trend.

**Percent Growth in Health Care Jobs (Year-over-Year)**

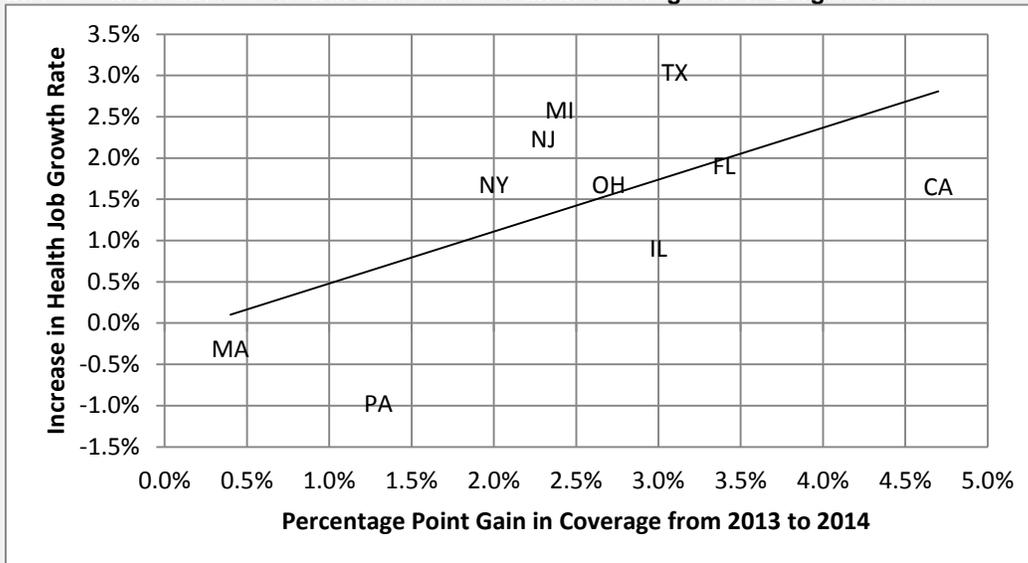


Source: Altarum analysis of BLS Current Employment Statistics data

**Increased coverage may explain much of the recent acceleration in health jobs.**

- Altarum looked at the 10 largest states and computed the increase in the annualized growth rate in health jobs from Q4 2014 through Q2 2015, compared to the rate for the same three quarters 1 year earlier.
- The chart below shows a positive relationship between coverage gains and health job acceleration, strongly influenced by Pennsylvania and Massachusetts. A more thorough analysis, involving all states with available data, is needed before drawing definitive conclusions.

**Increase in Health Job Growth Rate versus Gain in Coverage for 10 Largest States**



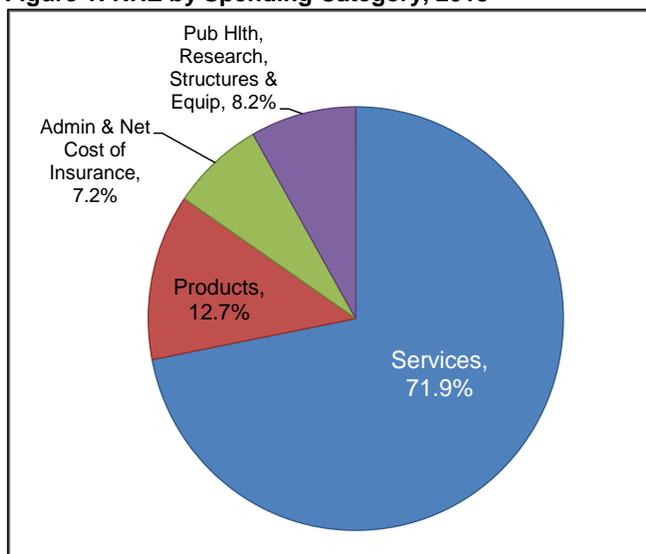
Source: Percentage point gain in coverage is from Current Population Reports, September 2015. Acceleration in health jobs uses BLS state-level Current Employment Survey data and measures the increase in the annualized growth rate in health jobs for Q4 2014 through Q2 2015 compared to the same quarters 12 months earlier. The trend line is a simple, unweighted least-squares regression.

## 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 CMS. Data through 2013 are the most recent official estimates by CMS. Data for 2014 are from the Altarum monthly HSEI, which was recently benchmarked to the CMS “projection” for 2014. The first two quarters of 2015 are from the HSEI, with the exception of spending on health care services in Q2, which is derived from the September QSS.<sup>1</sup>

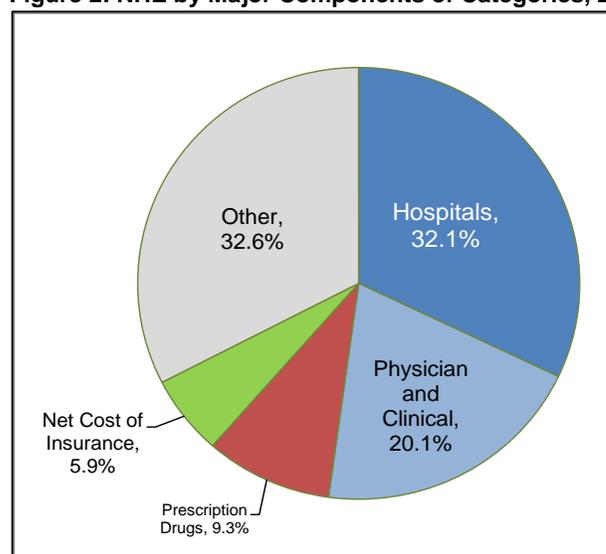
To gain an understanding of trends and growth in health spending, it is useful to have a picture of the major components of NHE and their relative proportions. Altarum presents this information as background by using the most recent official CMS data (2013). Figure 1 breaks down NHE into the major spending categories. Health care products (goods) and services accounted for about 85% of NHE in 2013, with services alone accounting for almost 72%. 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.

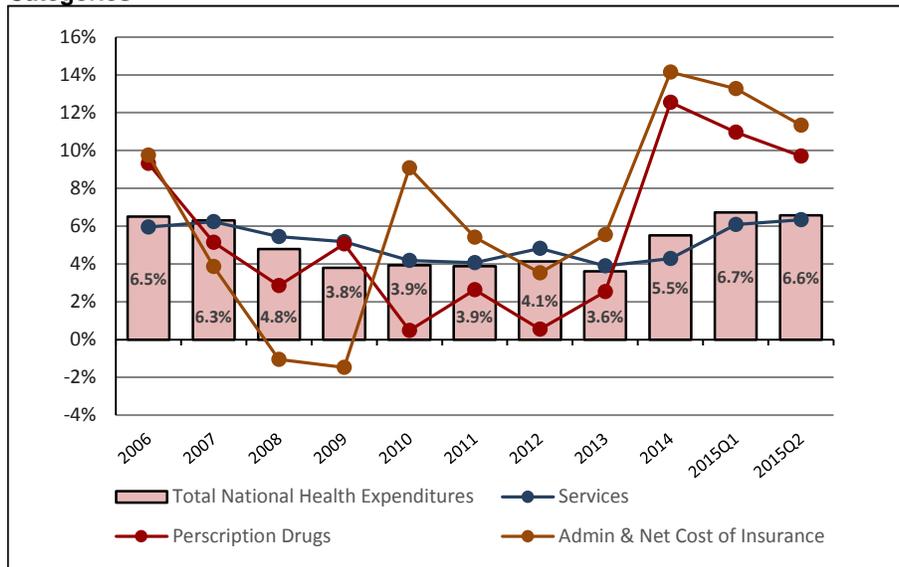
Figure 2 presents another way to divide NHE, identifying the largest components of the major spending categories. The largest components of health care services are hospitals and physicians, which together account for more than half (52.1%) of NHE. Health care products are dominated by prescription drugs (9.3% of the 12.7%), and the net cost of insurance, at 5.9%, accounts for most of the administrative and net costs of insurance category (7.2%). 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 (67.4%).

<sup>1</sup> For Q2, the September QSS was used to estimate year-over-year growth rates in spending on services by component. Growth rates for components not covered by QSS are from the September HSEI.

## Growth in NHE with Selected Components

Figure 3 shows the annual growth rate in NHE from 2006 through Q2 2015. 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 5.5%.<sup>2</sup> 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 disproportionate impact on NHE growth rates in some years.<sup>3</sup>

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



Source: Data for 2006–2013 are from the NHEA, while estimates for 2014 and the first two quarters of 2015 are computed from September QSS and HSEI data.

The figure for 2014 is particularly interesting, since it seems to confirm the expected uptick in NHE due to expanded coverage under the Patient Protection and Affordable Care Act (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 spending on prescription drugs is likely due to expanded coverage, most of it appears to be attributable to fewer patent expirations, the introduction of the hepatitis C drugs Sovaldi and Harvoni, and price growth for generics. The spike in the cost of insurance is based on what was projected by CMS and reflects the impact of expanded coverage and the growth of Medicaid managed care.<sup>4</sup> The main puzzle in the 2014 estimates is limited uptick in the growth rate of

<sup>2</sup> 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 pre- and post-recession can be attributed to lower overall price inflation. See Charles Roehrig's [Health Affairs blog](#) for a more detailed breakdown of the post-recession spending slowdown. The recession began in December 2007 and ended in June 2009.

<sup>3</sup> 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 in spending on prescription drugs increased by about 8.4 percentage points between 2013 and 2014. Since spending on prescription drugs represents 9.3% of NHE, the jump in the growth rate added about 0.8 percentage points to NHE growth in 2014 ( $0.084 \times 0.093 = 0.0078$ ) through Q3.

<sup>4</sup> The 14% growth in the cost of insurance for 2014, the current CMS "forecast," reflects higher administrative costs under Medicaid managed care, the predominant mechanism for expanded Medicaid coverage. The official CMS estimates will be released in December. It will be interesting to see whether this high rate of growth is confirmed.

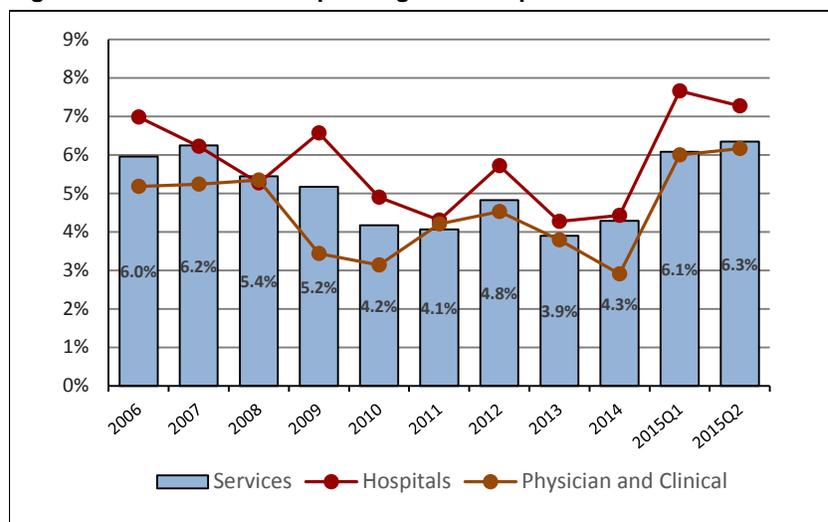
spending on health care services. However, a look at the individual quarters shows that there was fast growth in health care services spending at the end of the year, but it was offset by the slow growth at the start, resulting in an overall growth rate that was only slightly above that of 2013.

Altarum estimates that NHE growth jumped from 5.1% in Q4 2014 to 6.7% in Q1 2015, declining slightly to 6.6% in Q2. This reflects higher growth rates for spending on services in 2015, as reported in QSS. The growth rates for spending on prescription drugs and cost of insurance are actually a bit lower in these two quarters than in 2014.

Figure 4 compares the growth rate in health care services spending to the growth rates of its two largest components: hospitals and physicians.

Both components contributed to the jump in spending on services in 2015, with hospitals continuing to outpace physician offices in terms of spending growth. Altarum's analysis of large, for-profit hospital earnings reports for Q2 2015 confirms this pattern.

**Figure 4: Health Services Spending and Component Growth**



Source: Data for 2006–2013 are from the NHEA, while estimates for 2014 and the first two quarters of 2015 are computed from September QSS and HSEI data.

In October, the HSEI spending estimates for April, May, and June 2015 will be updated with the latest revisions from the Bureau of Economic Analysis (BEA) that reflect BEA incorporation of the September QSS data. Since BEA uses moving averages for some components, a somewhat different methodology for estimating growth rates from the QSS than used in this trend report, the October HSEI results for Q2 2015 may differ slightly from what is presented here.

## 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.<sup>5</sup> The percentage growth in  $P \times Q$  is well-approximated by the percentage growth in  $P$  plus the percentage growth in  $Q$ .<sup>6</sup> 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 term, health care utilization.

<sup>5</sup> It is well known that in health care, the price charged often bears little resemblance to the price actually paid, thanks to negotiated contracts that supersede list prices (charges). To address this problem, the BLS price indexes that we use are based on “transaction” prices (the agreed-upon payment) rather than charges.

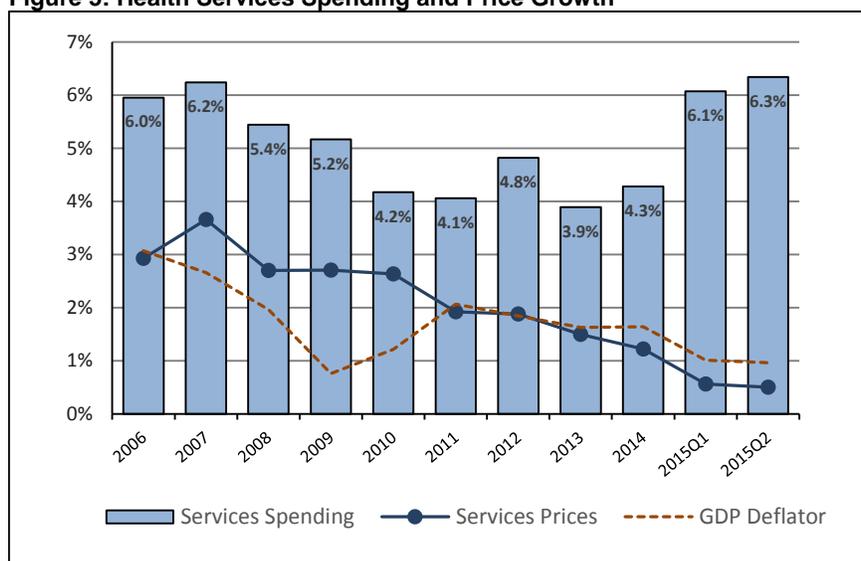
<sup>6</sup> To be precise, the growth in  $P \times Q$  is equal to the growth in  $P$  plus the growth in  $Q$  plus the product of the growth rates. When growth rates are small, the product is negligible and the approximation is quite accurate.

Figure 5 plots the growth rate in spending on health care services along with the growth in prices for those services.<sup>7</sup> 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 2.0% and 2.4%, 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 (1.3 percentage points) is due to slower price growth. The jump in services spending in the first two quarters of 2015 appears to be driven by utilization, as price growth actually drops below 1%.

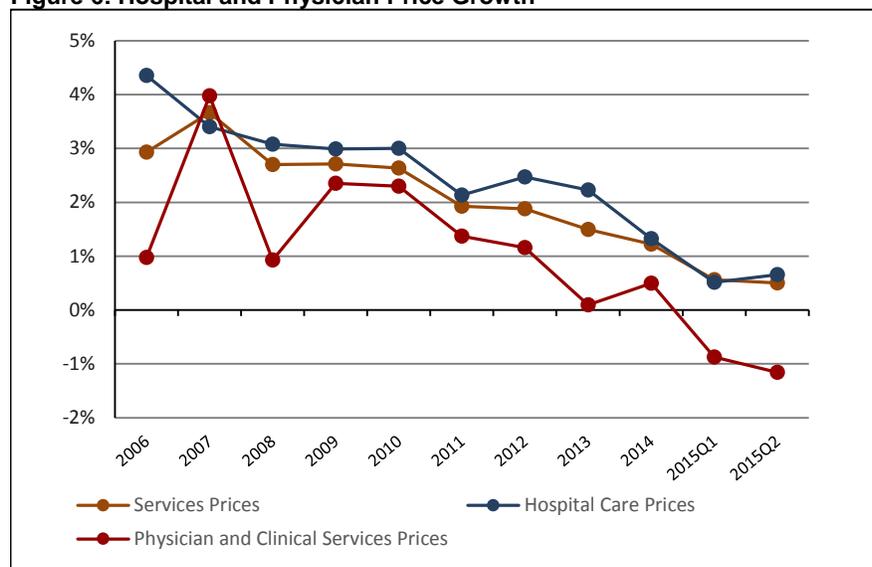
The growth in prices for health care services is determined primarily by prices for hospital and physician services, each plotted for recent years in Figure 6. Comparing 2006–2007 with 2009–2014, hospital price growth dropped from 3.9% to 2.6%; and for physician services, there was a decline from 2.5% 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. Price growth drops even further in the first two quarters of 2015, with physician prices actually falling and hospital prices rising less than 1%. The figures for August 2015 are -1.0% for physician services and 1.0% for hospitals.

**Figure 5: Health Services Spending and Price Growth**



Source: Altarum Center for Sustainable Health Spending analysis.

**Figure 6: Hospital and Physician Price Growth**



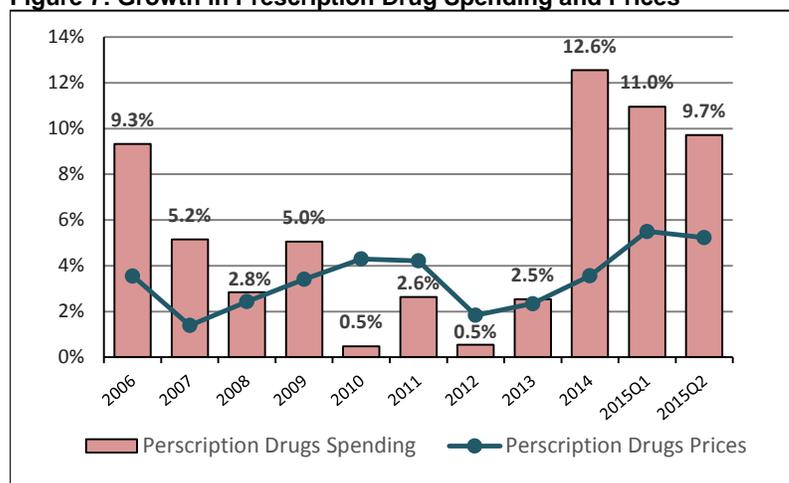
Source: Altarum Center for Sustainable Health Spending analysis.

<sup>7</sup> Price growth is based on a health services price index constructed from health care price index 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. Medicare Part D prescription drug coverage began in 2006, so the large rate of growth in prescription drug spending in that year is an outlier. After 2006, the rate of growth in drug spending ranged from 5% to less than 1% but was historically well-controlled until 2014, when the rate jumped to 12.6% driven primarily by new drugs. The high rate of spending growth in 2014 has slowed somewhat in the first half of 2015.

The pattern of growth in drug prices has been somewhat less volatile. However, there are important 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. Second, 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.<sup>8</sup>

**Figure 7: Growth in Prescription Drug Spending and Prices**

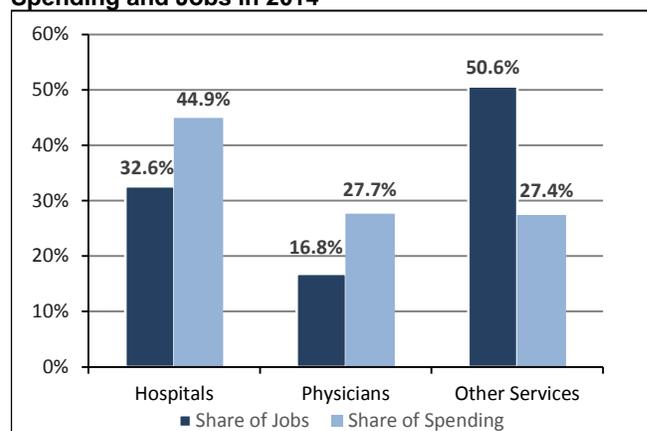


Source: Altarum Center for Sustainable Health Spending analysis.

## Health Care Services Jobs and Productivity

The health care services industry is a major employer, accounting for more than 15 million jobs, or nearly 10.7% of all U.S. jobs.<sup>9</sup> 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, including nursing homes, home health, dentists, and other ambulatory services, account for about half of all jobs but only 28% of spending. These figures are for 2014, but the proportions are nearly identical in 2015.

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



Source: Altarum Center for Sustainable Health Spending analysis.

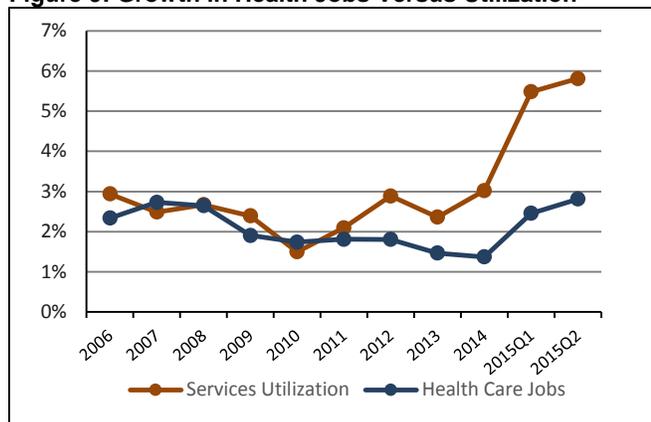
<sup>8</sup> The Rx price growth shown in Figure 7 is based on Table 23 from [CMS NHE Tables](#) through 2013 and the BLS prescription drug consumer price index (CPI) for 2014. CMS documentation cites the BLS CPI as a source for its prescription drug price index but has introduced adjustments to properly capture the timing of the 2012 “patent cliff.”

<sup>9</sup> 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 job totals do not include unincorporated self-employed individuals, and many physicians fit in this category. More broadly, there are differences in the mix of occupations and salaries and in the amount of nonlabor costs associated with different categories of services.<sup>10</sup> For example, the nonlabor share of hospital costs is about 48%, but for nursing homes, it is 38%.<sup>11</sup>

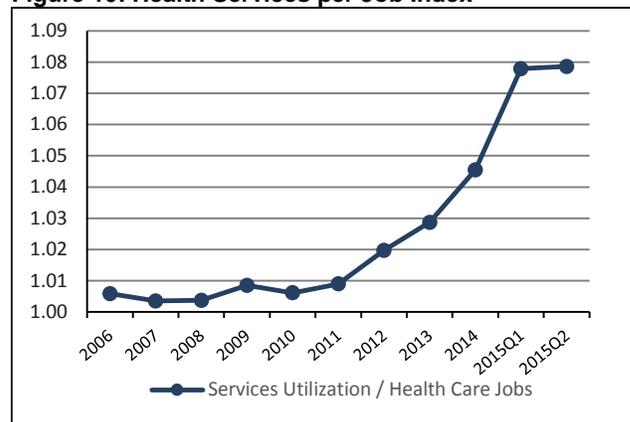
If the method of producing health care services remained constant over time, the rate of growth in health services jobs would be the same as the growth in the utilization of such services. As noted earlier, the rate of growth in services utilization can be approximated by subtracting the rate of growth in prices from the rate of growth in spending.<sup>12</sup> Figure 9 compares growth rates for jobs and utilization from 2006 through the second quarter of 2015. The growth rates are fairly similar until 2012, when utilization begins to grow slightly faster than jobs. This gap expands dramatically during the first half of 2015. The difference between the utilization and job growth is a rough measure of productivity, in the sense that it represents the percentage change in services produced per job. By this measure, productivity has increased since 2005, particularly beginning in 2012, with services per job up nearly 8% (Figure 10). Utilization growth in 2014 and 2015 may be somewhat overstated due to [reductions in uncompensated care](#), which causes spending to rise faster than  $P \times Q$ .

**Figure 9: Growth in Health Jobs Versus Utilization**



Source: Altarum Center for Sustainable Health Spending.

**Figure 10: Health Services per Job Index**



Source: Altarum Center for Sustainable Health Spending.

This report shows that the growth in health spending in 2014 and early 2015 has risen above the historically low levels seen from 2009 through 2013. Whether this marks a lasting end to 4% levels of growth in health spending or is only a temporary surge remains to be seen. In our view, much of the increase in the growth rate can be attributed to temporary factors such as expanded coverage (through ACA and increased employment) and the introduction of new drugs. CMS projects a health spending growth rate of 5.3% for 2015 (and for each year through 2018). With the 6.6% growth rate we report here for the first half of 2015, growth in the second half will need to fall to 4% to achieve a full year rate of 5.3%. This appears unlikely but will critically depend on resolution of these temporary growth drivers and the degree to which ACA and private-sector forces continue to exert cost containment pressure.

<sup>10</sup> By “nonlabor costs,” we mean costs not associated with employment.

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

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