



2014 Health Care Cost and Utilization Report

October 2015

www.healthcostinstitute.org

Letter from the Executive Director

The Health Care Cost Institute (HCCI) is pleased to release the *2014 Health Care Cost and Utilization Report*. The report covers the health care cost and utilization trends for Americans younger than age 65 and covered by employer-sponsored insurance (ESI) for the years 2010 through 2014, and it is the first look at the 2014 data. In 2014, the insurance exchanges opened with varying participation and enrollment by state. Although impacts of the Affordable Care Act may have occurred in 2014 on the ESI trends discussed in this report, none of those were explicitly investigated here. The impact of the ACA on the health care trends of the ESI population is an important topic for future study.

Health care spending per capita for this population grew 3.4% in 2014. Similarly, over the 2010–2014 period, per capita spending growth was relatively steady and grew between 3.0% and 4.0% in each year; growing an average annual 3.4%. Contributing to this steady spending growth were increasing average prices for health care services and declining utilization of services. Continuing a trend beginning in 2012, the ESI population's utilization of services continued to decline. This decline occurred across genders, age groups, and categories of health care services. This report details these trends, and we hope that you find the report informative.

Throughout the last year, HCCI has continued its efforts to better inform stakeholders, policy makers, and the public about the U.S. health care system. The most important of these efforts are detailed below, and more information on all of HCCI's initiatives can be found on the HCCI Website (www.healthcostinstitute.org). Initiatives include the following:

- **Guroo:** In February 2015, HCCI released the first version of [Guroo](#), a free Web-based portal to provide [health care price and quality](#) information to the public. The goal of Guroo is to give consumers information on the costs and quality of health care so they can make more informed choices about how they spend their health care dollars. HCCI is making continuous enhancements to the Website and anticipates releases throughout the upcoming year.
- **Data enclave:** HCCI, in partnership with and hosted by the NORC at the University of Chicago, developed a secure [data enclave](#) to host the de-identified, HIPAA-compliant HCCI data. HCCI is pleased to welcome many research teams to the data enclave, including teams from public and private universities, government agencies, and actuarial associations. These research teams are engaged in non-commercial, [academic research](#) covering many diverse health care topics.
- **Grant-funded research:** In late 2014, HCCI, in partnership with the National Academy for State Health Policy and with funding from the Laura and John Arnold Foundation, granted [six research teams](#) at universities across the country the use of the HCCI data to explore various questions around state reforms of health care policies. The research products from these teams will be publicly released in early 2016.
- **Chartbook:** During the fall of 2015, HCCI will release a Chartbook using the HCCI and Guroo data. The Chartbook includes a series of graphs and maps comparing the average price of health care services in each state to the national average price for the same services.

In addition to these activities, HCCI continues to be a source of public reporting on spending and utilization trends of the ESI population younger than age 65. Along with this annual report, HCCI recently produced the [Children's Health Spending: 2010–2013](#) report and an [issue brief](#) on health care spending trends for individuals identified with diagnosed with diabetes.

Our continued work would not have been possible without ongoing support from our stakeholders and partners. We look forward to another year of an expanding agenda of activities in 2016.

David Newman
Executive Director, HCCI

Executive Summary

The Health Care Cost Institute (HCCI) is pleased to present the fifth in a series of annual reports detailing the health care cost and utilization trends for the national population younger than age 65 and covered by employer-sponsored insurance (ESI). This report, the *2014 Health Care Cost and Utilization Report*, covers the period 2010 to 2014, with the bulk of the analysis focused on the 2014 data. Previous reports can be found on the HCCI Website. As with previous reports, this report details trends in per capita spending, out-of-pocket spending per capita, utilization of services per 1,000 individuals, and the average price per service. These trends were broken down by various demographic groups including U.S. Census regions, age, gender, and age/gender groupings. Additionally, we studied trends for two broad types of services: medical (inpatient admissions, outpatient facility, and professional services) and prescription (brand and generic).¹

In 2014, per capita health care spending for the national ESI population grew 3.4%. Overall, this increase in spending was largely driven by increased prices, which were not offset by declining service utilization. These trends, increased average prices and lower utilization of services, were observed across categories of services, genders, and age groups.

Growth in per capita spending steady during the study period

National per capita spending grew 3.4% to \$4,967 in 2014, an increase of \$163 (Table 1). Per capita spending for the study population has been growing since 2010 at relatively simi-

lar rates. Between 2010 and 2014, spending grew at an average annual rate of 3.4%. The largest spending growth of 4.0% was observed in 2011, whereas the lowest growth (3.0%) occurred in 2013 (Appendix Table A1).

Growth in spending per capita was relatively similar across age groups. The slowest growth rate (2.4%) was for intermediate adults (ages 26–44), the same rate as in the previous year (Table 1). Per capita spending growth rates were between 3.4% and 3.9% for the other age groups. The fastest growth rates (3.9%) occurred for young adults (ages 19–25) and pre-Medicare adults (ages 55–64).

In 2014, per capita spending growth for men was higher than for women: 3.9% as compared to 3.0% (Table 1). In contrast, spending for women in that year was higher than for men. The spending difference between men and women narrowed slightly, with a difference of \$1,085 in 2014 as compared to \$1,090 in 2013.

As was observed in the previous year, the fastest spending growth rate occurred in the Northeast (5.0%), while the slowest growth rate was in the West (2.4%; Table 1). These two regions also had the highest and lowest spending per capita of the four regions: \$5,232 and \$4,599, respectively.

Spending on each service category increased in 2014

Spending on the medical subservice categories (inpatient admissions, outpatient visits, outpatient-other services, and professional services) in-

BY THE NUMBERS: 2014

3.4%

Increase in health care spending per capita

16.3%

Share of total health care spending paid by out-of-pocket by individuals, the lowest share since 2011

2.2%

Increase in out-of-pocket health care spending per capita

3.2% & 3.3%

Increases in utilization and average price for generic prescriptions

-15.6% & 28.1%

Changes in utilization and average price for brand prescriptions

\$780

Dollar increase in average price of an inpatient admission

creased between 1.7% and 4.7% (Table 1). (See *Key definitions* for more information about these categories.) Generally, per capita spending grew more slowly in 2014 than in the previous year. The fastest spending growth rate was for outpatient visits, whereas the slowest was for inpatient admissions. The largest dollar increase spent per capita was on outpatient visits (\$39), whereas the smallest dollar increase was on outpatient-other services (\$15). Only for outpatient visits did spending grow more rapidly in 2014 than in the previous year: 4.7% as compared to 4.5%.

Spending grew at faster rates for prescriptions (6.5% for generic and 8.2% for brand) than for any of the medical subservice categories (Table 1). The 8.2% growth rate observed for brand prescriptions was the fastest rate observed in any of the previous 4 years. For generic prescriptions, a 6.5% growth represents the second fastest growth rate observed since 2010, as spending grew 13.4% in 2012. The larger spending growth for prescriptions, as compared to the other service categories, largely contributed to the stable rate of overall spending growth observed in 2014.

Out-of-pocket spending grew more slowly for 2014 compared to previous years

Overall, out-of-pocket spending by the national ESI population younger than age 65 grew 2.2%, or \$17 over the previous year (Table 2). Per capita out-of-pocket spending reached \$810 in 2014 and represented 16.3% of total per capita health care spending. This was a similar, and only slightly smaller, share of the total spending than that in 2012 (16.4% of total spending) or in 2013 (16.5% of total spending). Spending out of pocket on inpatient admissions and on brand

and generic prescriptions decreased (a total of \$14 per capita), whereas spending on outpatient and professional services increased (a total of \$31 per capita).

As in previous year, average prices increased while utilization declined

The average price paid per service increased in 2014 for every subservice category. The smallest average price increase was for professional services (3.1%), an increase of \$3 per service (Table 3). The largest average price increase was for inpatient admissions (4.4%), an increase of \$780 per admission.

Generic prescriptions was the only subservice category that saw an increase in utilization in 2014. Utilization increased by 3.1%, or 7,395 filled days per 1,000 individuals (Table 3). For the other subservice categories during this period, utilization declined. The largest decline in utilization was for brand prescriptions (-15.6%) followed by inpatient admissions (-2.7%).

Notable trends

ER visits continued to decline for children (ages 0–18): For the second consecutive year for girls and the third consecutive year for boys, the number of visits to emergency rooms (ERs) declined. In 2014, the number of ER visits dropped by 3 visits per 1,000 boys and by 1 visit per 1,000 girls (Appendix Table A37). In contrast, ER visits by the other age/gender groups increased in 2014, after a decline in utilization in 2013.

Increase in spending on brand prescriptions: Spending on brand prescriptions increased by \$45 per capita in 2014 (Table 1). This was the largest spending increase on brand pre-

scriptions during the study period (Appendix Table A1). At the same time, utilization of brand prescriptions fell by 15.6%, a decline of 7,224 filled days of brand prescriptions per 1,000 individuals (Table 3).

Of the spending increase, \$29.60 was attributable to three hepatitis C virus (HCV) antivirals (Appendix Table A49). Correspondingly, utilization of this subclass increased from .2 filled days per 1,000 individuals in 2013 to 30 in 2014.

Decline in out-of-pocket spending for pre-Medicare women: In 2014, out-of-pocket spending by pre-Medicare adult women declined by \$11 per woman (-0.8%; Appendix Table A31). This was the only age/gender group whose out-of-pocket spending declined during that period. While out-of-pocket spending by these women increased by \$30 per woman on outpatient and professional services, this growth was offset by a \$41 decline in spending on inpatient admissions and prescriptions. The largest decline in out-of-pocket spending was on brand prescriptions, which declined by \$27.

HCCI AGE GROUPS

Children

Ages 0 through 18.

Young Adults

Ages 19 through 25.

Intermediate Adults

Ages 26 through 44.

Middle-Age Adults

Ages 45 through 54.

Pre-Medicare Adults

Ages 55 through 64.

KEY DEFINITIONS

What is per capita spending?

Per capita spending in this report is the estimate of total expenditures on medical and pharmacy claims divided by the employer-sponsored insured (ESI) population.

What are medical services and their subservice and detailed categories?

Three medical service categories are identified: inpatient facility, outpatient facility, and professional procedures. These service categories are divided into subservice categories and further classified into “detailed service” categories.

- **Acute inpatient admissions:** This subservice category consists of the five detailed service categories: medical, surgical, labor and delivery (LD), newborn, and mental health and substance use (MHSU) admissions. It excludes hospice, skilled nursing facility, and ungroupable admissions (see *Data and Methods*).
- **Outpatient visits:** This subservice category consists of three detailed service categories: ER visits, outpatient surgery, and observation visits.
- **Outpatient-other services:** This subservice category consists of four detailed categories that make up the outpatient-other services category: ancillary services, miscellaneous services, laboratory and pathology services (lab/path), and radiology services.
- **Professional services:** This subservice category consists of 11 detailed service categories: administered drugs (including chemotherapy drugs); the administration of drugs; anesthesia; office visits to primary care providers (PCPs); office visits to specialists; miscellaneous services; pathology and laboratory (path/lab) services; preventive visits to PCPs; preventive visits to specialists; radiology services; and surgery services.

What are prescription service, subservice, and detailed service categories and subclasses?

HCCI analyzes prescription drug and device claims from pharmacies. The prescription service category is divided into brand and generic drug subservice categories and is further classified into detailed service categories, and further into subclasses.

- **Brand and generic prescriptions:** These detailed service categories for brand and generic prescriptions are based on the AHFS classification system. The prescription detailed service categories are: anti-infective agents; cardiovascular drugs; central nervous system (CNS) agents; eye, ear, nose, throat (EENT) preparations; gastrointestinal drugs; hormones and synthetic substitutes (hormones); all other therapeutic classes (other); respiratory drugs; and skin and mucous membrane (skin) agents.

Spending Per Capita for the ESI Population

This report analyzes trends in annual spending per capita for individuals covered by employer-sponsored insurance (ESI) and younger than age 65. Per capita spending trends were examined for the ESI population nationally; for population sub-groups (by U.S. Census region, gender, age group, and age/gender group); and across broad and detailed service categories (see *Key definitions* and *HCCI age groups*). This section describes the per capita spending trends for the ESI population for the study period (2010–2014), with specific focus on 2014.

Per capita spending increased; spending growth remained steady

In 2014, health care spending per capita was \$4,967 for the national ESI population (Figure 1 and Table 1). This was an increase of \$163 over the

previous year. In 2014, spending grew 3.4%. This rate of growth was similar to that of the prior year (3.0%), and the other years studied (2010–2014; Appendix Table A1).

Health care spending per capita increased with age. Spending was lowest for the youngest age group (children, ages 0–18) and highest for the oldest age group (pre-Medicare adults, ages 55–64): \$2,660 and \$9,466, respectively, in 2014 (Table 1). The difference between the highest and lowest (oldest and youngest) spending groups increased every year studied: from \$6,281 in 2010 to \$6,806 in 2014.

In 2012, the percentage changes in per capita spending growth for each of the five age groups varied widely (Figure 2). For 2011, growth ranged from a high of 7.9% (for children and

KEY FINDINGS: 2014

Growth rate remained steady

Growth in per capita spending was 3.4%, a similar rate to 2012 (3.4%) and 2013 (3.0%)

\$4,967

Spending per capita for the national ESI population

\$6,806

Difference in per capita spending between children and pre-Medicare adults

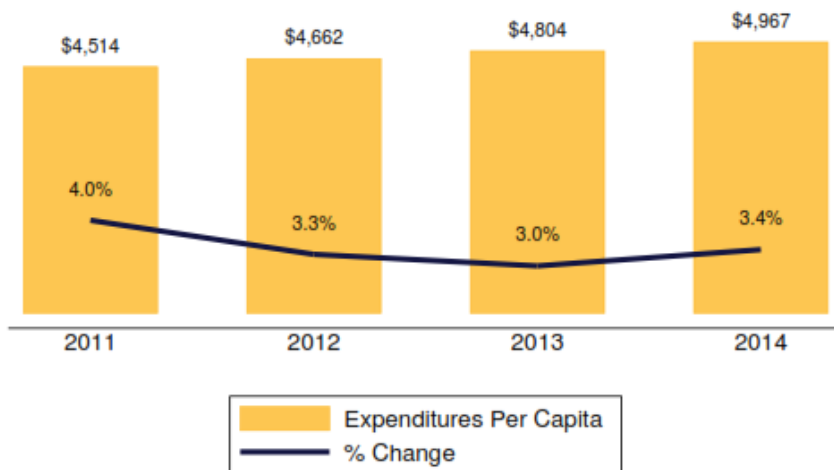
\$45

Increase in per capita spending on brand prescriptions

15.3%

Increase in per capita spending on brand prescriptions for pre-Medicare adult men

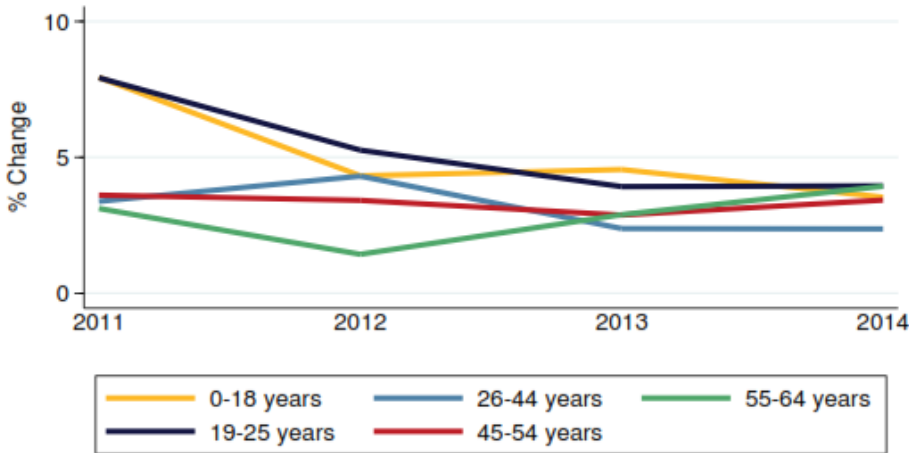
Figure 1
Per Capita Spending for Insureds, Younger than Age 65: 2011–2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than age 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

young adults, ages 19–25) to 3.1% (for pre-Medicare adults). After 2012, growth rates appeared to converge, and were similar across the age groups. In 2014, the highest spending growth, 3.9%, was for young adults and pre-Medicare adults, whereas the lowest growth of 2.4%, was for intermediate adults (ages 26–44).

Figure 2
Annual Percentage Changes in Spending Per Capita, by Age Group: 2011-2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2012 adjusted using actuarial completion.

\$68, and \$55, respectively (Appendix Tables A16 and A17). For the other adult age/gender groups, the increase in spending on brand prescriptions was influenced largely by increases in spending on the “other” classes category (Appendix Tables A8-A15).

Spending on outpatient visits increased by \$39 in 2014 (Table 1). The bulk of this increase was on ER visits, which increased \$26 to \$304 per capita (Appendix Table A8). Spending on outpatient surgery visits also increased, by \$12 to \$526 per capita and remained the detailed service category with the highest per capita spending (Appendix Table A18).

At the same time, spending on professional services increased by \$30 per capita (Table 1), and two-thirds of that increase was due to increased spending on administered drugs and miscellaneous services (\$10 per capita each; Appendix Table A18). While spending on professional services as a whole increased, spending on three of the detailed categories declined slightly: office visits to primary care physicians (-\$2 per capita), radiology

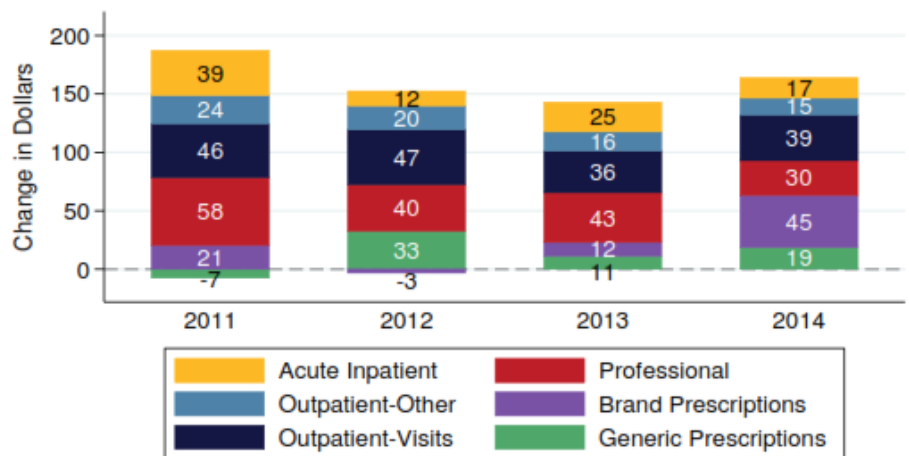
Spending on all subservice categories increased

Spending on all the subservice categories increased in 2013 and 2014. For 2013, the largest dollar increase was for professional services (\$42), whereas the smallest was for generic and brand prescriptions (\$11 each; Figure 3 and Table 1). For 2014, the largest spending increase was on brand prescriptions — a \$45 increase — more than four times larger than the increase of the previous year. This was the largest increase in spending on brand prescriptions during the study period. By comparison, in 2012, spending on brand prescriptions declined by \$3.

This increase in spending on brand prescriptions occurred across the study population for every age group (Appendix Table A4), gender (Appendix Table A5), and age/gender group (Appendix Table A6). The increase was largest for pre-Medicare adult men, whose spending on brand prescriptions increased by \$190 (15.3%) to \$1,427 per capita

(Appendix Table A6 and Appendix Table A7). Though every age group saw an increase in brand prescription spending, the increase in spending for men was larger than that for women. For pre-Medicare adult men and women and middle-age adult men, this increase was largely due to increases in spending on brand anti-infective agents: increases of \$153,

Figure 3
Difference From the Previous Year in Spending Per Capita, by Subservice Category: 2011-2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

(-\$3 per capita), and surgery services (-\$2 per capita).

The spending increases on acute admissions and outpatient-other services were comparatively small: \$16 and \$15 per capita, respectively (Table 1). The largest spending increase in the admissions category was on surgical admissions (a \$9 increase), whereas for outpatient-other services, the largest increase was for miscellaneous services (an \$8 increase; Appendix Table A13). Notably, though spending on acute admissions increased only modestly, it remained a high spending category overall, reaching \$988 per capita in 2014 (Table 1).

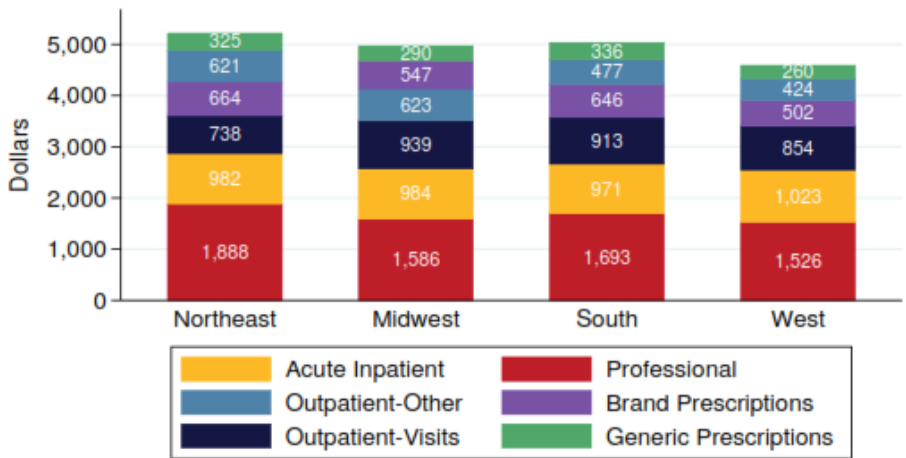
Regional spending continued to vary

For the second consecutive year, the Northeast had the highest per capita spending and the fastest growth rate, while the West had the lowest spending level and slowest growth rate (Table 1). The South continued to have the second-highest per capita spending, followed by the Midwest.

In 2014, the Northeast had large dollar increases in spending on all subservice categories as compared to the other regions. For example, spending increased \$61 per capita on brand prescriptions, \$56 on acute admissions, and \$45 on professional services (Appendix Table A19). In comparison, the South, with the second-highest per capita spending had a \$44 increase for brand prescriptions and just \$12 and \$24 increases, respectively on acute admissions and professional services.

In contrast to the other regions, spending levels and growth remained low in the West due to a small increase in spending on outpatient-other services (a \$5 increase) and a

Figure 4
Spending Per Capita, by Subservice Categories and Region: 2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

decline in per capita spending on acute admissions (-\$13). Interestingly, spending was higher on acute admissions in the West than in the other regions (Figure 4). The West also spent the fewest dollars (\$762) and the smallest share of its health care dollars on prescriptions (16.6%) as compared with the other regions.

In each of the regions, most of the spending was on professional services. In the Northeast, professional services made up a larger percentage of its total health care spending (36.2%) than anywhere else. While the Northeast generally had the highest spending on the subservice categories, it had the lowest spending on outpatient visits, \$201 per capita less than the highest-spending region (the Midwest).

Table 1: Annual Spending Per Capita (2012–2014)

	2012	2013	2014	Percent Change 2011 / 2012	Percent Change 2012 / 2013	Percent Change 2013 / 2014
Per Capita	\$4,662	\$4,804	\$4,967	3.3%	3.0%	3.4%
Per Capita by Region						
Northeast	\$4,782	\$4,983	\$5,232	4.0%	4.2%	5.0%
Midwest	\$4,655	\$4,809	\$4,983	3.2%	3.3%	3.6%
South	\$4,772	\$4,900	\$5,046	4.2%	2.7%	3.0%
West	\$4,394	\$4,489	\$4,599	1.3%	2.2%	2.4%
Per Capita by Age						
18 and Younger	\$2,458	\$2,570	\$2,660	4.3%	4.5%	3.5%
19-25	\$2,555	\$2,655	\$2,760	5.3%	3.9%	3.9%
26-44	\$4,115	\$4,213	\$4,312	4.3%	2.4%	2.4%
45-54	\$6,068	\$6,242	\$6,456	3.4%	2.9%	3.4%
55-64	\$8,852	\$9,108	\$9,466	1.4%	2.9%	3.9%
Per Capita by Gender						
Men	\$4,114	\$4,251	\$4,417	2.9%	3.3%	3.9%
Women	\$5,191	\$5,341	\$5,502	3.6%	2.9%	3.0%
Per Capita by Service Category						
Inpatient	\$959	\$983	\$999	1.2%	2.5%	1.7%
Acute Inpatient	\$945	\$971	\$988	1.3%	2.7%	1.8%
Outpatient	\$1,294	\$1,347	\$1,400	5.5%	4.0%	4.0%
Visits	\$797	\$832	\$871	6.3%	4.5%	4.7%
Other	\$498	\$514	\$529	4.3%	3.3%	2.8%
Professional Procedures	\$1,597	\$1,639	\$1,669	2.6%	2.7%	1.8%
Prescriptions	\$813	\$836	\$900	3.8%	2.8%	7.6%
Brands	\$537	\$548	\$593	-0.6%	2.2%	8.2%
Generics	\$276	\$287	\$306	13.4%	4.1%	6.5%

Source: HCCI, 2015.

Notes: All data weighted to reflect the national population ages 0-64 and covered by ESI. Data for 2013 and 2014 adjusted using actuarial completion. All per capita dollars from allowed amounts. All figures rounded.

Out-of-Pocket Spending Per Capita

This section describes the trends in out-of-pocket spending for the national ESI population during the study period (2010–2014). Out-of-pocket spending was defined as the dollars spent by individuals for health care services in the form of co-payments, coinsurance, and deductibles (see *Out-of-Pocket Spending Definitions*).

National out-of-pocket spending continued to increase

In 2014, the national ESI population spent \$810 per capita out of pocket, a \$17 increase over the previous year (Figure 5 and Table 2). The \$810 per capita represents 16.3% of the total health care spending per capita. This is a slightly smaller share of the total than in the prior two years: 16.5% in 2013 and 16.4% in 2012. Similarly, growth in out-of-pocket spending (2.2%) was lower in 2014 than in the other study years.

Continuing a trend first seen in 2012,

the West was the region with the lowest per capita out-of-pocket spending. For 2014, the West also had the smallest dollar increase in per capita out-of-pocket spending over the previous year of any region: just \$4 per capita (Table 2). This was the smallest increase for any region in any year during the study period (Appendix Table A2). The South continued to have the highest out-of-pocket spending, as was true throughout the study period. The gap between the lowest-spending region (the West) and the highest-spending region (the South) grew in every year studied, and reached \$169 per capita in 2014.

In every year between 2010 and 2014, out-of-pocket spending by women was higher than that by men. This difference grew every year, reaching \$237 in 2014 (Appendix Table A2). Over the previous 2 years, out-of-pocket spending for men had been increasing at faster rates than those for women. For example, in 2014,

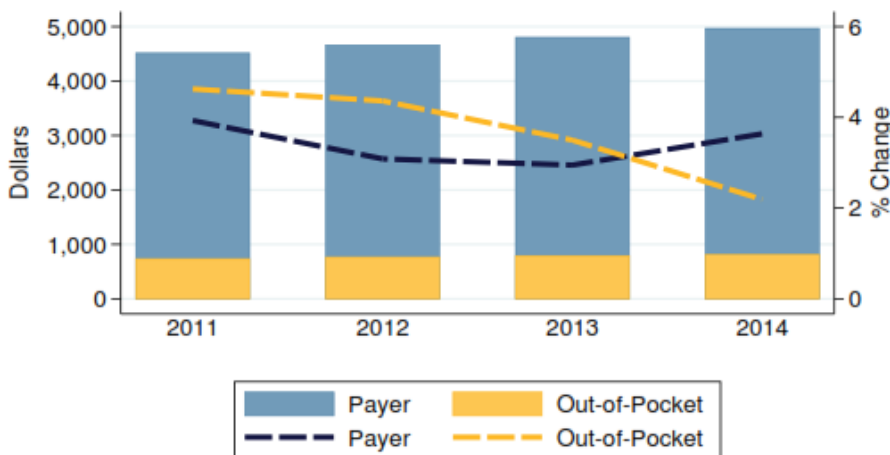
spending grew 2.1% for women and 2.3% for men. Even with the faster growth rates for men, the spending gap between the men and women continued to grow.

Largest increase in out-of-pocket spending for intermediate adults

Generally, out-of-pocket per capita spending increases with age. In 2014, the youngest age group had the lowest spending (\$472), whereas the oldest age group had the highest (\$1,300; Table 2). However, growth in spending varied across the age groups over the years studied. For 2014, the largest dollar increase in out-of-pocket spending was for intermediate adults (ages 26–44; \$27), whereas in 2013, the fastest growth rate was for children (ages 0–18; 4.9%) and the largest dollar increase was for pre-Medicare adults (ages 55–64; \$45).

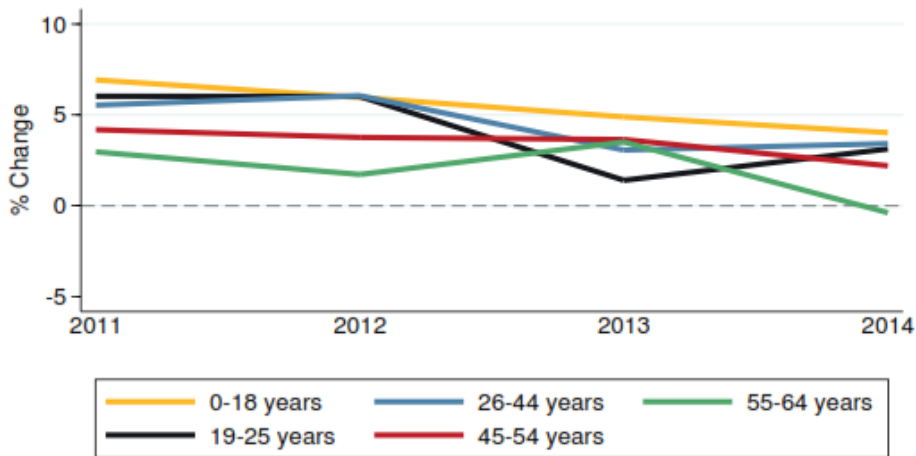
What had been consistent across the age groups is that out-of-pocket spending increased year over year; however, in 2014, out-of-pocket spending by one age group declined (Figure 6; see *Out-of-Pocket Spending Trends: 2013* for more information about trends by age/gender groups). In 2014, spending by pre-Medicare adults out of pocket dropped by \$5 per capita, a 0.4% decline. Interestingly, this 1-year decline in spending was experienced only by pre-Medicare women, not by pre-Medicare men. Spending out of pocket by pre-Medicare women dropped by \$11 per woman (see *Out-of-pocket spending by pre-Medicare women declined in 2014* for more information), while for men in this age group spending increased by \$1. Combined, this led to a net decline in out-of-pocket spending by the pre-Medicare adults.

Figure 5
Payer and Out-of-Pocket Spending Per Capita for Insureds Younger than Age 65: 2011–2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population.
Data from 2013 and 2014 adjusted using actuarial completion.

Figure 6
Annual Percentage Changes in Out-of-Pocket Spending Per Capita, by Age Group: 2011-2014



Source: HCCL, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Out-of-pocket spending on prescriptions and acute admissions declined

In 2014, out-of-pocket per capita spending for three of the four medical subservice categories increased. For

professional services, spending increased by \$15 per capita, reaching \$366 (Table 2). This was the largest increase in spending on a subservice category for that year. Spending out of pocket also rose for outpatient-

other services and visits: \$7 and \$10, respectively. The largest increase within those service categories was for ER visits, which increased by \$8 (14.9%; Appendix Table A20).

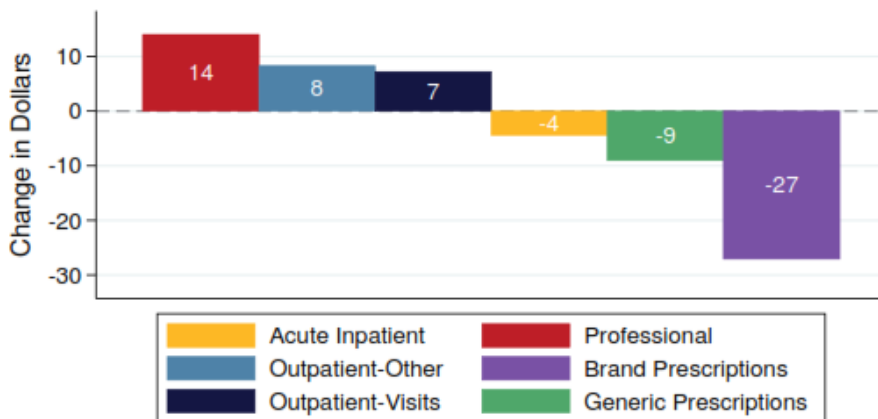
At the same time and for the first time in the study period, out-of-pocket spending on acute inpatient admissions declined by \$1 per capita (-1.0%). This decline was not consistent across the age/gender groups. For children and intermediate adult women, out-of-pocket spending on acute admissions increased slightly, by about \$1 per child and \$3 per woman (Appendix Table A21 and Appendix Table A22). For young adults (ages 19-25), this spending was steady in 2014. For the other age/gender groups, out-of-pocket spending on acute admissions was lower in 2014 than in the prior year.

The largest decline in 2014 in spending on acute admissions was for pre-Medicare adults, whose spending was \$5 per person lower (Appendix Table

OUT-OF-POCKET SPENDING BY PRE-MEDICARE WOMEN DECLINED IN 2014

For the first time for pre-Medicare women (ages 55-64), and only the second time for an age/gender group (by \$2 for young adult women in 2013), out-of-pocket spending declined in 2014 (Table 2). Spending out of pocket by pre-Medicare women fell by \$11.

Figure 7
Difference From the Previous Year in Out-of-Pocket Spending for Pre-Medicare Adult Women (Ages 55-64), by Subservice Categories: 2014



Source: HCCL, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Prior to 2014, spending on all medical subservice categories and generic prescriptions had increased every year (Appendix Table A21). In contrast, 2014 spending declined on brand prescriptions, generic prescriptions, and acute admissions (Figure 7). The largest decline was in spending on brand prescriptions: \$27 lower in 2014 than in the prior year. Of the brand prescription detailed categories, the largest decline was for brand CNS agents (\$10 per woman) followed by brand cardiovascular drugs (\$8 per woman).

A21). For both pre-Medicare men and women, this decline was due to lower spending on medical and surgical admissions. In contrast, for intermediate adult women, the increase in acute admissions spending was due to more spending out of pocket on labor and delivery (LD) admissions, which rose \$5 per woman.

Out-of-pocket per capita spending on brand prescriptions fell every year in the study period, from \$101 in 2010 to \$67 in 2014 (Table 2). This decline was consistent across the population, and was experienced by all age/gender groups. This was also consistent with falling utilization of brand prescriptions during this time period (see *Utilization of prescription services*).

In contrast to the general decline in spending out of pocket on brand prescriptions, out-of-pocket spending on

generic prescriptions increased between 2010 and 2012 (Table 2). However, over the 2 subsequent years, this spending had declined slightly. In 2013, the decline in spending on generic prescriptions was limited to the younger female age groups (girls, young adult women, and intermediate adult women; Appendix Table A21). (See *2013 Health Care Cost and Utilization Report* for more information about these trends.³) For 2014, the decline occurred for all the age/gender groups. The smallest decline in dollars was for children, young adult men, and intermediate adult men (\$2 per capita), whereas the largest was for pre-Medicare adults (\$9 per capita).

For pre-Medicare adults, the 2014 decline in out-of-pocket spending on generic prescriptions was largely due to lower spending on generic cardio-

vascular drugs (Appendix Table A31 and Appendix Table A32). Spending on these drugs declined by \$4 per man and by \$5 per woman. Lower spending on cardiovascular drugs for these age/gender groups was not unique to 2014, as this was also true in 2013.

What made 2014 different from prior years was lower spending on generic anti-infective agents, central nervous system (CNS) agents, respiratory agents, and the “other” classes category (see *Key Definitions* for more information on these classes of prescription drugs). Spending on these classes of drugs declined by \$11 for pre-Medicare women and by \$8 for pre-Medicare men.

OUT-OF-POCKET SPENDING DEFINITIONS

Out-of-pocket spending per capita: Out-of-pocket spending includes the patient’s share of payment for the provision of health care services and prescriptions covered by insurance; such spending includes any copayments, coinsurance payments, or deductible payments. If an insurance claim was not filed (e.g., for the purchase of over-the-counter medicines), the expenditures are not included in this metric. These payments also do not reflect any refunds, rebates, coupons, or discounts that individuals received after making the out-of-pocket payments. HCCI calculated out-of-pocket expenditures per capita by dividing total out-of-pocket spending by the total insured population.

Deductibles: A deductible, both individual and family deductibles, is the amount of incurred health care costs that an insured must pay out of pocket before the health plan reimbursement begins in a contract period. For example, for health care expenses of \$2,000 in a year, an insured with a \$1,000 deductible would pay the first \$1,000 out of pocket. After the deductible is satisfied, the insured and the health plan jointly pay for the remaining \$1,000 of expenses according to the insurance contract’s coinsurance and co-payment policies.

Coinsurance: Coinsurance is the portion of covered health care costs borne by an insured. After insureds meet their deductible requirements, they generally pay for a portion of the remaining health care expenses out of pocket. For example, they may pay according to a fixed percentage of the expense, such as 20%. The insurer (payer) pays the other 80%.

Co-payments: Co-payments are out-of-pocket expenses in which the insured pays a specified charge for a specified service. Typical co-payments are fixed fees for services such as physician office visits, prescriptions, and hospital admissions.

Payer spending per capita: Spending by payers are the dollars paid by the insurer directly to a health care provider on behalf of the insured. Any rebates, discounts, or incentive payments between insurers and providers not captured by the insureds’ claims data are not included in this metric. HCCI calculated payer spending per capita by dividing total payer expenditures by the total insured population.

Table 2: Out-of-Pocket Spending Per Capita (2012–2014)

	2012	2013	2014	Percent Change 2011 / 2012	Percent Change 2012 / 2013	Percent Change 2013 / 2014
Out-of-Pocket Per Capita	\$766	\$793	\$810	4.4%	3.5%	2.2%
Share of Expenditures	16.4%	16.5%	16.3%	N/A	N/A	N/A
Out-of-Pocket Per Capita by Region						
Northeast	\$700	\$732	\$771	4.5%	4.6%	5.3%
Midwest	\$793	\$815	\$839	4.9%	2.7%	3.0%
South	\$833	\$868	\$878	5.3%	4.2%	1.2%
West	\$691	\$705	\$709	2.0%	2.0%	0.5%
Out-of-Pocket Per Capita by Age						
18 and Younger	\$432	\$453	\$472	6.0%	4.9%	4.0%
19-25	\$505	\$512	\$528	6.0%	1.4%	3.1%
26-44	\$754	\$777	\$804	6.1%	3.1%	3.4%
45-54	\$962	\$997	\$1,019	3.8%	3.6%	2.2%
55-64	\$1,260	\$1,305	\$1,300	1.7%	3.5%	-0.4%
Out-of-Pocket Per Capita by Gender						
Men	\$649	\$675	\$690	4.0%	3.9%	2.3%
Women	\$879	\$907	\$927	4.7%	3.3%	2.1%
Out-of-Pocket Per Capita by Service Category						
Inpatient	\$47	\$51	\$51	2.7%	9.4%	-1.0%
Acute Inpatient	\$46	\$51	\$50	2.7%	9.8%	-1.0%
Outpatient	\$197	\$212	\$228	8.4%	7.8%	7.6%
Visits	\$117	\$127	\$137	8.7%	8.9%	7.7%
Other	\$80	\$85	\$92	8.0%	6.3%	7.4%
Professional Procedures	\$335	\$351	\$366	5.3%	4.8%	4.2%
Prescriptions	\$188	\$178	\$165	-0.7%	-4.9%	-7.4%
Brands	\$85	\$76	\$67	-12.0%	-10.3%	-11.7%
Generics	\$103	\$102	\$98	11.0%	-0.4%	-4.1%

Source: HCCI, 2015.

Notes: All data weighted to reflect the national population ages 0-64 and covered by ESI. Data for 2013 and 2014 adjusted using actuarial completion. All per capita dollars from allowed amounts. All figures rounded.

2014 TRENDS IN HEALTH CARE SPENDING BY PAYERS

Payer spending reflects the amounts that insurers paid to providers for health care services excluding the portion paid out of pocket by the insured (see *Out-of-pocket spending definitions*). In 2014, payer expenditures accounted for the bulk of total health care spending per capita (83.7%) for the ESI population, increasing by 3.6%, from \$4,011 to \$4,157 (Appendix Table A33). In each year between 2011 and 2013, payer spending per capita grew at rates slightly slower than those for out-of-pocket spending. However, in 2014, payer spending grew at a rate faster than that of out-of-pocket spending: 3.6% as compared to 2.2%.

In 2014, payer spending and spending growth rates varied across the four U.S. Census regions studied. Payer expenditures grew fastest in the Northeast (4.9%) and the Midwest (3.7%). For the fourth consecutive year, the Northeast had the highest per capita payer expenditures (\$4,460) while the West had the lowest (\$3,890).

Overall in 2014, payers had higher per capita spending for older adults as compared with the other age groups, as expenditures for pre-Medicare adults reached \$8,167 per capita. This increase was \$2,730 per capita more than the expenditures for the next oldest group (middle-age adults, \$5,437 per capita) and more than twice the amount spent on intermediate adults (\$3,509 per capita). The fastest payer growth rate was also for pre-Medicare adults (4.7% in 2104), whereas the slowest rate was for intermediate adults (2.1%)

Over the study period, there was little change for payers in the share of spending on each of the service categories. In 2014, the largest share of spending and the highest per capita spending were on professional services (31.3% and \$1,303, respectively) and acute inpatient admissions (22.6% and \$938, respectively). The smallest share of spending and lowest spending level per capita were on outpatient-other services (10.5% and \$437, respectively) and generic prescriptions (5.0% and \$208, respectively).

In 2014, as in the 2 prior years, payer spending on generic prescriptions accounted for the fastest growth rate of any subservice category (12.4% in 2014; 6.8% in 2013; 14.9% in 2012). The second-fastest growth in payer expenditures was for brand prescriptions (11.4%), which saw the largest dollar increase in payer spending (\$53 per capita).

Drivers of Spending Growth

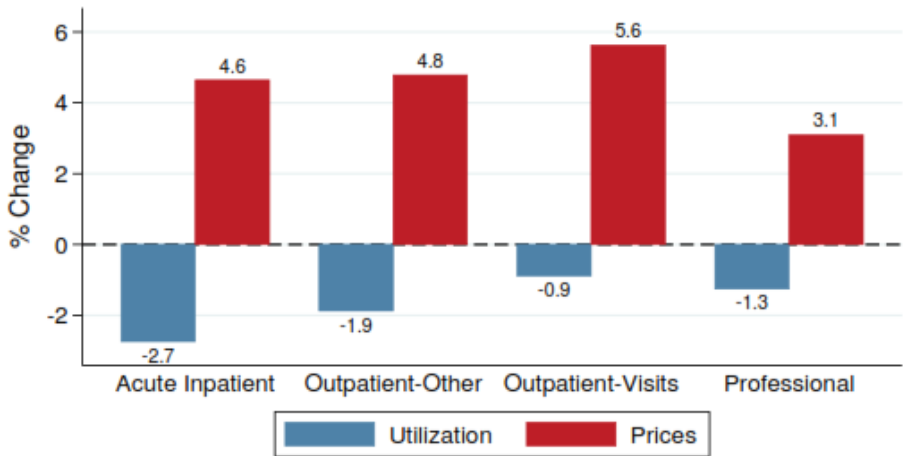
Health care cost growth is the result of changes in the number of services provided (“utilization”) and the prices paid for those services. HCCI measures utilization for medical subservice categories as the number of services used per 1,000 individuals, and, for prescription categories, the number of filled days of a prescription per 1,000 individuals. Price is measured in this report for medical subservice categories as the average price of a service in that category, whereas for prescription categories, it is measured as the average price of a filled day of a prescription. (For more information about the subservice categories, see *Key Definitions*.)

In the following sections of the report, HCCI analyzed how the different components of spending — price and utilization — affected health care trends for medical and prescription subservice categories. Building on trends from the 3 years prior to 2014, the average price of the service categories continued to grow while the utilization of services declined. In 2014, the average price paid for a service for each of the subservice categories was higher than in the prior year (Figures 8 and 9). At the same time, the utilization of services for each of the subservice categories declined.

The only exception to declining utilization was for generic prescriptions. Utilization of generic prescriptions rose by 3.2%, or 7,395 filled days per 1,000 individuals (Table 3). In combination, the higher spending that occurred in 2014 compared to 2013 was due to increases in average prices, which offset declines in utilization.

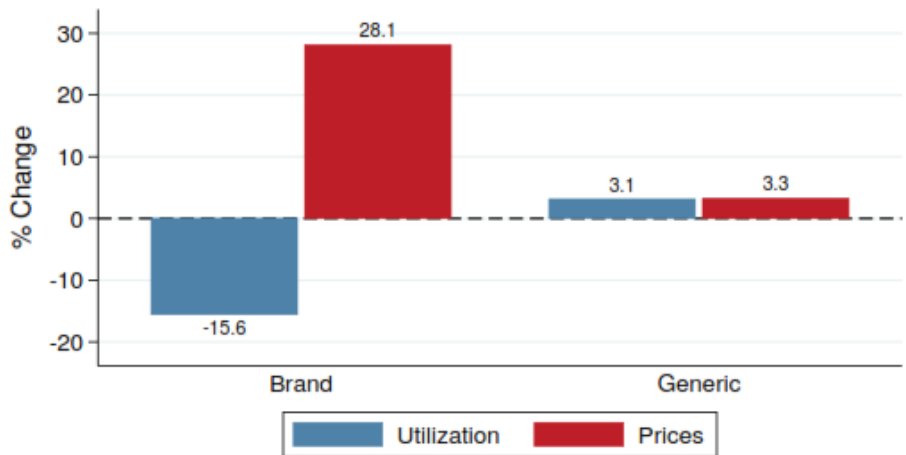
This trend mirrors the trend in 2013. The next two sections in this report describe the trends in service utilization for the medical subservice categories and for the prescription subservice categories.

Figure 8
Changes in Utilization and Prices of Medical Subservice Categories: 2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Figure 9
Changes in Utilization and Prices of Prescription Subservice Categories: 2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Utilization of Medical Services

As seen in Figure 8, utilization of all four of the medical subservice categories (acute inpatient admissions, outpatient visits, outpatient-other services, and professional services) declined in 2014. The largest decline in utilization (-2.7%) was for acute admissions, which fell by 1 admission per 1,000 individuals (Table 3). The smallest decline in utilization (-0.9%) was for outpatient visits, which fell by three visits per 1,000 individuals. Declines occurred across most of the medical detailed service categories (see *Key Definitions*). While a few detailed categories saw small increases in utilization, most saw small or moderate declines. This section describes the trends in utilization of services across the medical detailed service categories.

Acute inpatient admissions

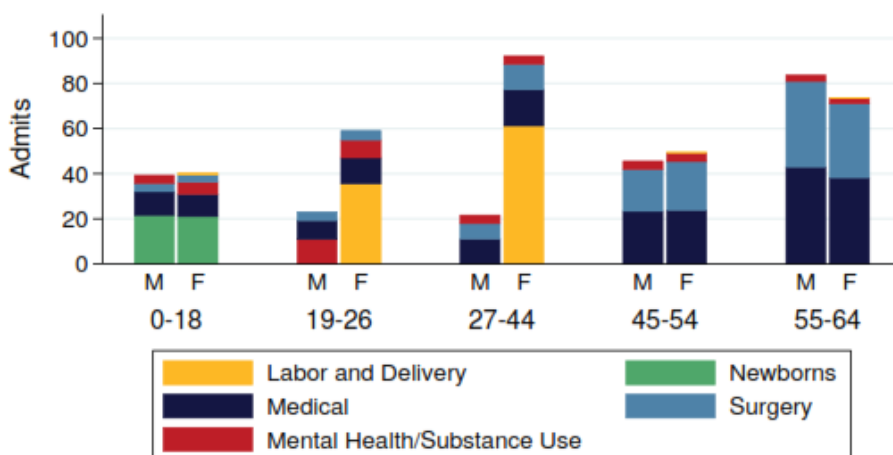
Between 2010 and 2014, the number of acute inpatient admissions per 1,000 individuals declined every year: 59 admissions per 1,000 individuals in 2010 and 53 in 2014 (Appendix Table A3). For most adult age groups — intermediate, middle-age, and pre-Medicare — the number of acute admissions declined each year during this period (Appendix Table A34 and Appendix Table A35). Girls (ages 0–18), however, accounted for a slight increase in the overall number of admissions: 39 acute admissions per 1,000 girls in 2010 and 40 in 2014.

Of the five acute inpatient detailed service categories, medical admissions and surgical admissions declined in utilization in every year of the study period (Appendix Table A36). Between 2010 and 2014, the number of medical admissions declined from 22 admissions per 1,000 individuals to 19. During that pe-

riod, there was an even larger decline for surgical admissions, which dropped from 18 admissions per 1,000 individuals to 13. At the same time, labor and delivery (LD) and mental health and

substance use (MHSU) admissions were steady throughout the time period, while newborn admissions increased by 1 admission per 1,000 individuals (2.7%) in 2014.

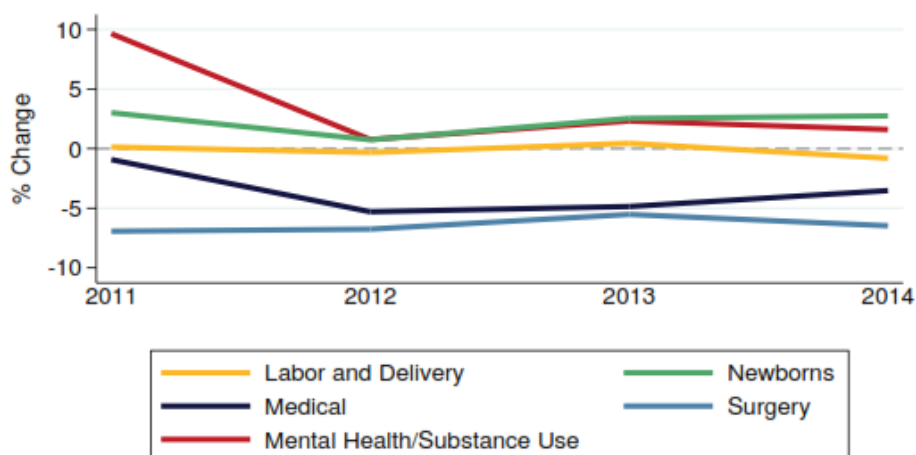
Figure 10
Number of Admissions per 1,000 Insureds by Acute Inpatient Detailed Service Categories, Gender, and Age Group: 2014



Source: HCCI, 2015.

Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

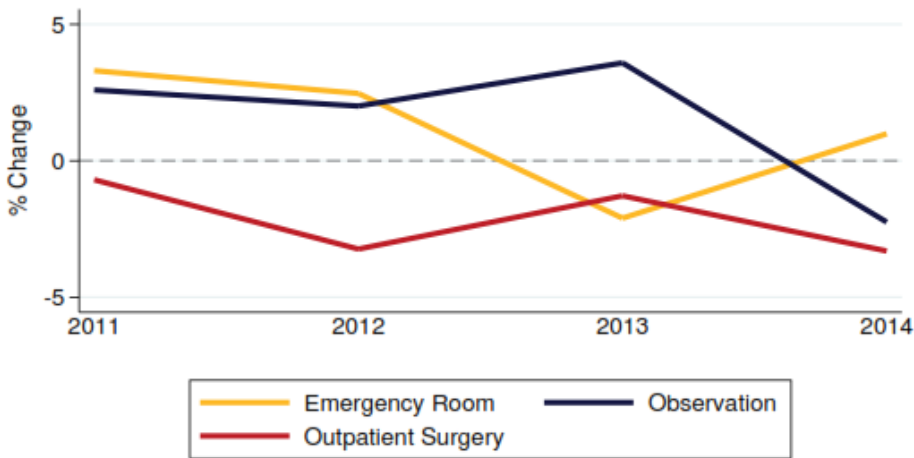
Figure 11
Annual Percentage Changes in Utilization per 1,000 Insureds by Acute Inpatient Detailed Service Categories: 2011-2014



Source: HCCI, 2015.

Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Figure 12
Annual Percentage Changes in Utilization per 1,000 Insureds
by Outpatient Visit Detailed Service Categories: 2011-2014



Source: HCCI, 2015.
 Notes: All data weighted to reflect the national, younger than 65 ESI population.
 Data from 2013 and 2014 adjusted using actuarial completion.

The number of admissions and trends in utilization for acute inpatient admissions were not consistent across age groups. As shown in Figure 10, the number and type of admissions varied by age and gender. In 2014, the most admissions were for intermediate adult women, and the majority of these admits were LD admissions (61 per 1,000 women; Appendix Table A41). In contrast, for children — both boys and girls — the most admissions were newborn admits: 22 per 1,000 boys and 21 per 1,000 girls (Appendix Table A37). For the two oldest adult age groups, most of the admissions were medical admissions followed by surgical admissions (Appendix Table A43-A46).

A steady number and slightly positive growth occurred in the number of newborn admits over the study period. The slight positive growth in the number of MHSU admits (Figure 11) were driven largely by girls, and young adult (ages 19–25) men and women (Appendix Tables A37-A40). Over the study period, MHSU admissions increased for each of these three groups. Over the same time period, the number of MHSU admissions for the other age/gender groups remained the same or fell slightly (Appendix Tables A41-46).

Outpatient visits

In 2014, there were 317 outpatient visits per 1,000 individuals for the national

ESI population, fewer than in the previous year (Table 3). Between 2012 and 2014, the number of visits per 1,000 people declined from 324 visits to 317. The decline in visits since 2012 occurred for nearly all age/gender groups. Of the age/gender groups who had fewer visits in 2014, the biggest drop in visits was for boys (–6 visits per 1,000 boys; Appendix Table A37), and girls and pre-Medicare adult women (–4 visits per 1,000 girls and women; Appendix Table A37 and Appendix Table A45). There was no change in the number of visits by young adult men and middle-age adult men in 2014 (Appendix Table A39 and Appendix Table A43).

This decline in the number of visits overall was due largely to a decline in outpatient surgical visits (Figure 12 and Appendix Table A36). The number of surgical visits dropped every year between 2010 and 2014, from 131 visits per 1,000 individuals to 120 visits. For the previous 2 years, this decline in the surgical outpatient visits was the largest influence on the falling number of total outpatient visits.

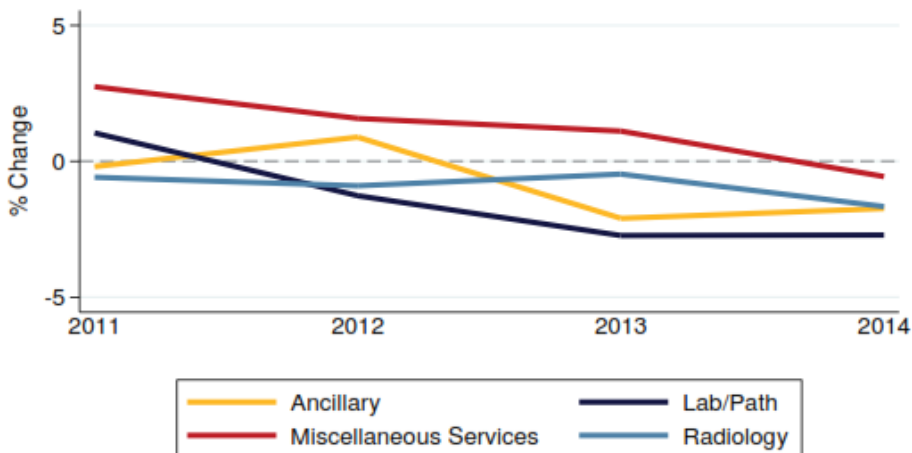
In contrast to surgical visits, the number of ER visits increased slightly between 2010 and 2012. For 2013, however, ER visits dropped (–4 visits per 1,000 individuals), contributing to the decline in the number of total outpatient visits (Appendix Table A36). For 2014, the number of ER visits was higher than in the previous year (a two-visit per 1,000

ER VISITS BY CHILDREN CONTINUED TO DECLINE IN 2014

In the previous *Health Care Cost and Utilization Report*, HCCI noted that the number of ER visits declined in 2013.³ However, for the adult age groups this reduction in the number of ER visits appeared to have been a 1-year dip in utilization, as ER visits by adults increased for 2014 (Appendix Tables A39-A46). In contrast, the number of ER visits by children continued to decline.

In 2013, the number of visits to the ER per 1,000 boys dropped by 8 visits (Appendix Table A37). In 2014, they dropped an additional 3 visits, to 181 visits. There was a similar decline in visits for girls. In 2013, ER visits declined by 6 visits per 1,000 girls. In 2014, the number of visits dropped by an additional 1 visit, to 172 visits. Interestingly, the per capita spending on ER visits for both boys and girls continued to increase. Between 2012 and 2014, spending rose by \$18 per boy and \$24 per girl (Appendix Table A8).

Figure 13
Annual Percentage Changes in Utilization per 1,000 Insureds by Outpatient-Other Detailed Service Categories: 2011-2014



Source: HCCI, 2015.
 Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

individuals increase; for more information about the trends in ER visits, see *ER visits by children continued to decline in 2014*.

Also in 2014, the decline in the total number of outpatient visits was influenced by a small drop in the number of observation visits. Observation visits dropped by one visit per 1,000 individuals in that year, from 21 visits per 1,000 in 2013 to 20 (Appendix Table A36).

Outpatient-other services

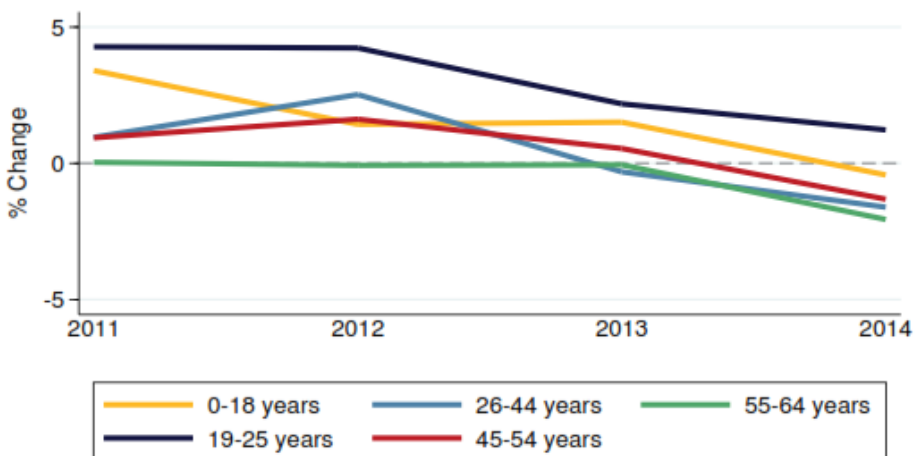
As with outpatient visits, utilization of outpatient-other services declined between 2012 and 2014, from 2,599 services per 1,000 individuals to 2,515 (Table 3). This decline occurred for nearly all age/gender groups. Only young adult men experienced an increase in service utilization throughout that period, as use rose from 890 services per 1,000 men in 2012 to 928 in 2014 (Appendix Table A39). At the same time, the largest decline in service utilization was for pre-Medicare adult women — by 255 services per 1,000 women — from 5,642 services in 2012 to 5,387 in 2014 (Appendix Table A45).

Prior to 2012, the utilization of outpatient-other services by the national ESI population had been increasing. As can be seen in Figure 13, use of miscellaneous services and laboratory and pathology (lab/path) outpatient-other services increased in 2011, and utilization of miscellaneous and ancillary services increased the next year (Appendix Table A36). However, the difference in the

total number of outpatient-other services was negative in every year between 2012 and 2014, even as utilization of some detailed categories of services increased in those years. For example, utilization of miscellaneous services increased in 2012 and 2013. Continuing the trend of fewer total services used, in 2014, utilization declined for all the detailed categories of outpatient-other services, with the largest decline in the utilization of lab/path services (a decline of 31 services per 1,000 individuals).

Of particular note was the outpatient-other service utilization by young adult men between 2012 and 2014 (Appendix Table A39). While utilization of these services by all other age/gender groups declined, it increased for young adult men. As with to the other age/gender groups, young adult men used fewer ancillary and radiology services over that time period; however, their utilization of lab/path and miscellaneous services increased per 1,000 men, from 338 services to 351 services, while miscellaneous service utilization increased from 309 services to 342 services.

Figure 14
Annual Percentage Changes in Utilization of Professional Services, by Age Group: 2011-2014



Source: HCCI, 2015.
 Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2012 adjusted using actuarial completion.

Professional Services

In 2014, the utilization of professional services by the national population declined. This was the first time between 2010 and 2014 that utilization of professional services declined (Appendix Table 3). Utilization dropped by 207 services per 1,000 individuals, to 16,232 services in 2014. This decline in utilization was generally consistent across the population. Only young adult men (as was true for outpatient-other service utilization) had increased utilization of professional services in 2014.

Between 2010 and 2013, the percentage change in the utilization of professional services was generally greater than zero for all age groups (Figure 14 and Appendix Table A34). The trend for 2014, however, was reversed, as utilization was lower than in previous years for most age groups. Only for young adults did utilization grow in 2014, and this was driven by young adult men (an increase of 289 services per 1,000 men), which offset the fall in professional services utilization by young adult women (-58 services per 1,000 women).

The overall decline in the utilization of professional services in 2014 was due to declines in nearly all detailed categories of professional services (Appendix Table A36). The largest declines were in the utilization of miscellaneous professional services (-82 services per 1,000 individuals) and office visits to primary care providers (PCPs; -64 services per 1,000). Only utilization of preventive visits to PCPs (7 visits per 1,000 individuals) and laboratory and pathology services (lab/path; 11 services per 1,000) increased in 2014.

In 2014, for young adult men, utilization of lab/path services increased by 330 services per 1,000 men (Appendix Table A39). Additionally, utilization of miscellaneous services, office visits to specialists, and preventive visits to both specialists and PCPs increased. The combination of increases in these four services led to a net increase in the utilization of professional services by young adult men, the only age/gender group to experience such an increase in total professional service use.

INPATIENT MAJOR DIAGNOSTIC CATEGORIES: 2014

HCCI assigned each inpatient facility claim a major diagnostic category (MDC). Major diagnostic categories are a classification system for grouping related inpatient hospital admissions.

As seen in Appendix Table A47, the five MDCs with the highest expenditure per capita remained constant for the third consecutive year. Pregnancy and childbirth hospital admissions had the highest spending per capita at \$197*, followed by musculoskeletal (\$167), circulatory (\$124), digestive (\$90), and nervous system (\$64) diagnostic categories.

All five MDCs saw an increase in the average price paid to providers. The increase in average prices combined with changes in utilization affected the MDCs' per capita spending totals. For example, in 2014, the change in the average price of a circulatory system admission rose by 10.7%, but a 9.9% decrease in the utilization of those services resulted in an overall spending decline. Similar was utilization of the digestive system MDC, which dropped 7.1% and offset the 6.8% increase in price. The musculoskeletal, pregnancy, and nervous system MDCs also experienced a decline in utilization, but the corresponding rise in the average prices was high enough to drive up these MDCs' spending per capita.

One MDC to note is infectious and parasitic disease admissions. Per capita spending increased by 15.5% to \$42 in 2014, a double-digit percentage increase that also occurred in 3 of the last 4 years. Additionally, utilization of these admissions increased by 10.3% in 2014, more than double the 5.1% increase in 2013, and the average price continued its upward trend with an increase of 4.7%. As a result, spending in 2014 was 1.5 times higher than that in 2010.

*Females only.

Table 3: Changes in Utilization and Prices by Service Category (2012–2014)

Desc	2012	2013	2014	Percent Change 2011 / 2012	Percent Change 2012 / 2013	Percent Change 2013 / 2014
Utilization per 1,000 insureds by Service Category						
Inpatient	58	56	54	-3.8%	-4.0%	-2.7%
Acute Inpatient	56	54	53	-3.8%	-2.8%	-2.7%
Outpatient	2,923	2,882	2,832	-0.2%	-1.4%	-1.8%
Visits	324	320	317	0.2%	-1.4%	-0.9%
Other	2,599	2,563	2,515	-0.2%	-1.4%	-1.9%
Professional Procedures	16,387	16,439	16,232	1.5%	0.3%	-1.3%
Prescriptions - Filled Days	279,904	281,317	281,515	0.6%	0.5%	0.1%
Brands	55,006	46,383	39,159	-20.8%	-15.7%	-15.6%
Generics	224,851	234,897	242,292	7.7%	4.5%	3.1%
Average Price Paid per Service by Service Category						
Inpatient	\$16,446	\$17,559	\$18,338	5.2%	6.8%	4.4%
Acute Inpatient	\$16,946	\$17,897	\$18,728	5.3%	5.6%	4.6%
Outpatient	\$443	\$467	\$494	5.7%	5.5%	5.8%
Visits	\$2,456	\$2,604	\$2,751	6.1%	6.0%	5.6%
Other	\$192	\$201	\$210	4.5%	4.7%	4.8%
Professional Procedures	\$97	\$100	\$103	1.0%	2.3%	3.1%
Prescriptions - Filled Days	\$3	\$3	\$3	3.2%	2.3%	7.6%
Brands	\$10	\$12	\$15	25.6%	21.2%	28.1%
Generics	\$1	\$1	\$1	5.3%	-0.4%	3.3%

Source: HCCL, 2015.

Notes: All data weighted to reflect the national population ages 0-64 and covered by ESI. Data for 2013 and 2014 adjusted using actuarial completion. All figures rounded.

Utilization of Prescriptions

Every year between 2010 and 2014, there was an increase (of less than 1% per year) in the total utilization of prescriptions (brand and generic), as measured in filled days per 1,000 individuals (Appendix Table A3). In 2014, utilization increased by 0.1% — an increase of 198 filled days per 1,000 (Table 3). However, this increase in prescription utilization was not consistent across the age/gender groups. Utilization declined for children, young adult men, and intermediate adults, of which the largest decline was by intermediate adult men (-2,996 filled days, -2.0%; Appendix Table A34 and Appendix Table A35). Utilization of prescriptions increased for the other age/gender groups. The largest year-to-year increases were driven by middle-age adult women (5,705 filled days), pre-Medicare adult men (5,052 filled days), and middle-age adult men (3,584 filled days).

While total prescription utilization increased in every year studied, trends in utilization varied by brand and generic prescriptions. Utilization of generic prescriptions increased every year, including an increase of 7,395 filled days per 1,000 in 2014 — the smallest year-to-year increase during the study period (Figure 15 and Appendix Table A3). Conversely, utilization of brand prescriptions declined every year during the study period. In 2014, filled days per 1,000 declined by 7,224, the smallest decline in recent years.

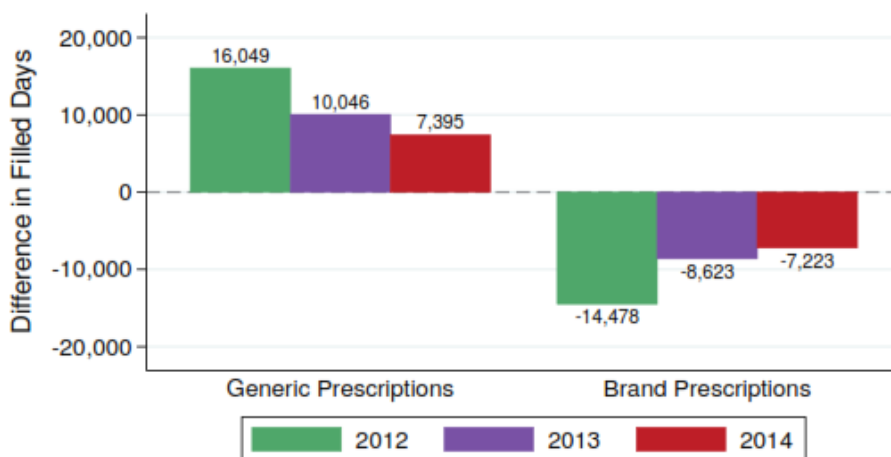
Brand prescriptions

The 15.6% decline in the utilization of brand prescriptions in 2014 continued a multi-year trend of such declines (Table 3). Interestingly, this was the smallest

decline during the study period. The largest decline in utilization occurred in 2012, a decline of 14,478 filled days per 1,000.

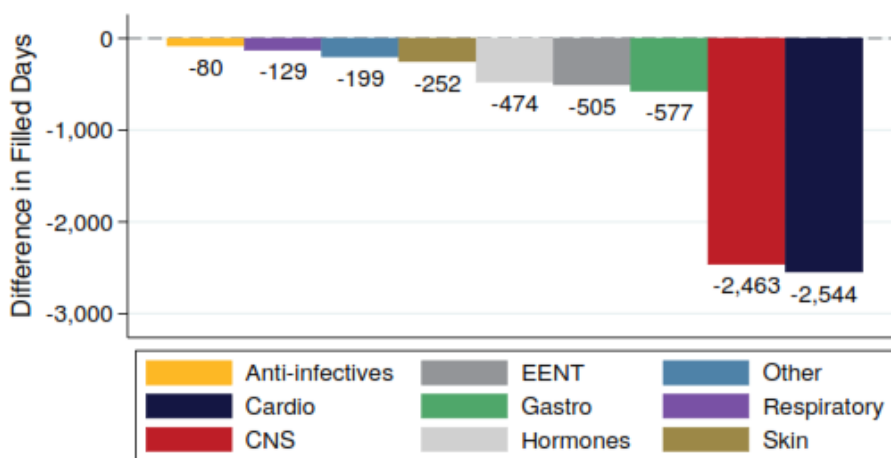
In 2014, utilization of all detailed categories of brand prescriptions declined (see *Key Definitions*; Appendix Table A36). This decline was larger for some

Figure 15
Difference From the Previous Year in Brand and Generic Prescription Filled Days per 1,000 Insureds: 2012-2014



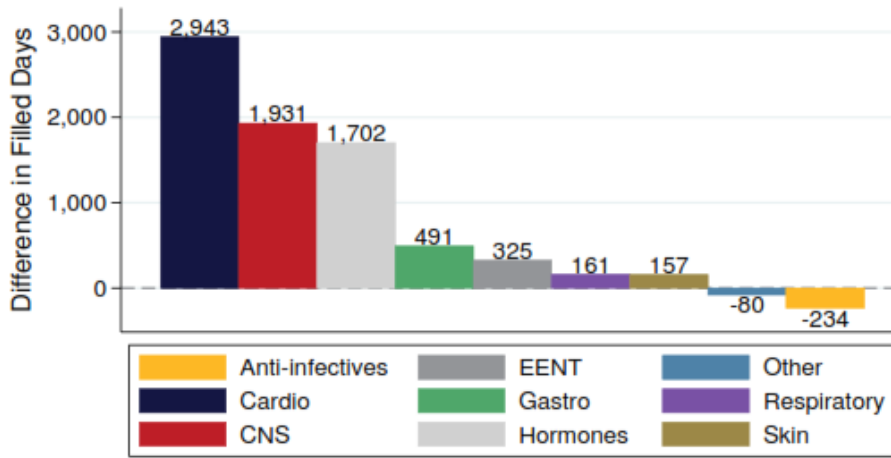
Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Figure 16
Difference From the Previous Year in Filled Days per 1,000 Insureds for Brand Prescription Detailed Categories: 2014



Source: HCCI, 2015.
Notes: All data weighted to reflect the national, younger than 65 ESI population. Data from 2013 and 2014 adjusted using actuarial completion.

Figure 17
Difference From the Previous Year in Filled Days per 1,000 Insureds for Generic Prescription Detailed Categories: 2014



Source: HCCL, 2015.
 Notes: All data weighted to reflect the national, younger than 65 ESI population.
 Data from 2013 and 2014 adjusted using actuarial completion.

detailed categories than for others. The largest declines were in cardiovascular drugs (-2,545 filled days per 1,000; -23.8%) and central nervous system (CNS) agents (-2,463 filled days; -28.2%). These categories accounted for the second- and third-highest utilization: 8,163 filled days and 6,267 filled days, respectively. Utilization of cardiovascular drugs was largely confined to the oldest age groups. The highest utilization of cardiovascular drugs in 2014 was by pre-Medicare adult men (37,940 filled days per 1,000) and women (21,903; Appendix Table A45). For adults, utilization of CNS agents (i.e., antidepressants, opiate agonists, and amphetamines) generally increased with age, and women had higher utilization than did men. However, boys also had comparatively high utilization of CNS agents (7,152 filled days per 1,000 in 2014; Appendix Table A37) as compared to the other age/gender groups.

The most utilized subservice category of brand prescriptions was hormones and synthetic substitutes (10,934 filled days per 1,000 in 2014; Appendix Table A36). Utilization of these

prescriptions by women was higher than by men, and generally tended to increase with age. The decline in utilization of the hormones category in 2014 (-474 filled days per 1,000) was relatively small as compared to the decline in the utilization of cardiovascular drugs and CNS agents (Figure 16).

Generic prescriptions

Utilization of generic prescriptions was higher than that of brand prescriptions in every year of the study period, and generic prescriptions represented an increasingly large share of total prescription utilization over the period. In 2010, generics made up 71.6% of total filled days; this share increased to 86.1% of total filled days in 2014 (Appendix Table A3). However, not every detailed category of generic prescriptions had increased utilization in 2014. Both the utilization of generic anti-infective agents declined, by 2.1% (-234 filled days per 1,000), and utilization of the “other” class of prescriptions declined by -0.2% (-80 filled days per 1,000; Appendix Table A36). These categories

had routinely had lower utilization compared to the other detailed categories of generic prescriptions.

The most highly utilized category of generic prescriptions in 2014 was CNS agents (65,514 filled days per 1,000), followed closely by cardiovascular drugs (64,319 filled days; Appendix Table A36). These were also the two categories with the largest increase in utilization in 2014 (Figure 17). For both of these categories, utilization increased with age; however, utilization by women in each age group of the CNS agents was higher, while utilization by men of the cardiovascular drugs was higher.

For boys, utilization of brand CNS agents made up a disproportionately large share of their total generic prescription use as compared to other male age groups. For example, as a share of boys’ total brand prescription utilization, brand CNS agents made up 45.9%, whereas utilization of generic CNS agents made up just 33.8% of their total generic prescription use (Appendix Table A37). In comparison, for pre-Medicare men, brand CNS agents made up 7.5% of their total brand prescription utilization, while the generic versions were 16.2% of their total generic prescription use (Appendix Table A45).

The third-highest utilized detailed category of generic prescriptions was that of hormones and synthetic substitutes (42,136 filled days per 1,000 in 2014; Appendix Table A36). As with CNS agents, utilization of hormones for women was higher than that for men. Utilization of the hormones category was dominated by young adult women (82,043 filled days per 1,000 in 2014; Appendix Table A39) and middle-age women (80,357 filled days per 1,000; Appendix Table A43). Though the hormones category had only the third highest

increase in utilization in 2014, it had the largest net increase in utilization (measured as the increase in generic use minus the decline in brand use): 1,228 filled days per 1,000 (Appendix Table A36).

The detailed category hormones and synthetic substitutes contains a multitude of drug subclasses. In 2014, the subclasses with the highest utilization by the study population were generic hormone contraceptives (13,045 filled days per 1,000), and generic thyroid agents (12,839 filled days per 1,000; Appendix Table A48). Both of these classes had increased use in 2014: 3.9% and 4.0%, respectively.

AVERAGE PRICE PER SERVICE INCREASED FOR ALL SUBSERVICE CATEGORIES IN 2014

In 2014, the average price per service increased for all the medical subservice categories (Table 3). Additionally, the price per filled day also increased for both brand and generic prescriptions (see *Drivers of spending growth*).

In every year of the study period (2010-2014), the average price per service increased for each of the medical subservice categories (Appendix Table A33). Price growth tended to be highest for outpatient visits, with average annual growth of 5.6%. During that period, the largest year-to-year dollar increase in the average price per service was for acute admissions, which grew an annual average of \$881. That category also had the largest dollar increase for 2014 (\$831), reaching an average price of \$18,728 per acute admission.

The smallest growth in average price per service was for professional services, which grew from \$94 in 2010 to \$103 in 2014. The trends in average price for outpatient-other services were similar to those for professional services. The average annual growth in price for outpatient-other services was 4.6%, and the price per service increased from \$176 per service to \$210 during the study period.

The average price per filled day of brand prescriptions increased every year of the study period. Brand prescriptions had growth rates faster than any in the other subservice categories, rising an annual average 23.3%. The average price of a brand prescription increased from \$7 per filled day in 2010 to \$15 in 2014.

While the average price increased in 2014, generic prescriptions were the only subservice category for which the average price declined in some years studied. Price declines occurred in 2011 and in 2013. Throughout the study period, changes in the price of generic prescriptions were relatively modest. In each year, the average price per filled day remained between \$1 and \$1.49.

Data & Methods

Data

HCCI's dataset contains several billion de-identified commercial health insurance claim lines for the years 2010 through 2014. Three major health insurers contributed data to HCCI for the purposes of producing a national, multi-payer, commercial health care claims database. These data include claims for individuals covered by group insurance through an employer (fully insured and administrative services only), individual insurance, and Medicare Advantage plans. The claims data include prices paid to providers by both insurers and insureds and details about the services used. Furthermore, HCCI's claims data are compliant with the Health Insurance Portability and Accountability Act (HIPAA).

For this report, HCCI performed analysis on a subset of data totaling approximately 5 billion claim lines for approximately 40 million insureds per year (2010–2014).⁴ This analytic subset consisted of all claims for insureds younger than age 65 and covered by ESI and represented about 27% of the national ESI population. It is one of the largest datasets on the privately insured ever assembled.

Methods

The analytic subset was weighted using U.S. Census Bureau age-gender-geographic-based estimates of the ESI population to make the analytic subset representative of the national ESI population younger than age 65. Claims in the analytic subset from 2013 and 2014 were actuarially completed to account for claims that had

been incurred but not adjudicated. Claims for years 2010 through 2012, though refreshed over time, were considered 100% adjudicated in 2014.

HCCI used the weighted, actuarially completed dataset to estimate per capita health expenditures, average prices, and utilization of services for 2010 through 2014. HCCI did not correct dollars for inflation; thus, all reported expenditures and prices were in nominal dollars.

HCCI analyzed four major categories of services, several subservice categories, and detailed service categories (see Key Definitions). Inpatient facility claims were from hospitals, skilled nursing facilities (SNFs), and hospices in which detail was sufficient to identify an overnight stay by an insured. Outpatient facility claims did not entail an overnight stay, and included observation and ER services. Both outpatient and inpatient claims consisted of only the facility charges associated with such claims. Professional procedures included claims billed by physicians and non-physicians according to the industry's standard procedure-coding practices. Prescription data reflected prescriptions filled at both retail and mail-order pharmacies.

For a more detailed description of HCCI's methodology and dataset, see the Analytic Methodology on HCCI's Website.¹

HCCI recognizes that the terms health care spending and health spending could be interpreted differently; however, they were used interchangeably

in this report.

Limitations

This report, like all research, had several limitations that affect the generalizability and interpretation of the findings. For this reason, HCCI considers the work a starting point for analysis and research on individuals covered by ESI rather than as a conclusive analysis of the ESI population's effect on health care in the United States.

First, our findings were estimates for the United States ESI population ages 0 through 64, based on a sample of approximately 27% of these insureds.

Second, the analysis and results were descriptive, and the findings were not causal and cannot be used to determine causal relationships.

Third, the effect of individual or population health status, such as existence of chronic conditions, was not specifically investigated or discussed in the report.

Changes in 20134

HCCI's analytic methodology underwent a number of changes to enhance reporting for the 2013 *Health Care Cost and Utilization Report*. See the methodology document available on HCCI's Website for details on these changes.⁷

Data changes.

HCCI's analytic methodology underwent a number of changes to enhance reporting for the 2014 Health Care Cost and Utilization Report. See the

methodology document available on HCCI's Website for a complete description of these changes.¹

Data changes. In the 2014 report, new data were provided for 2012 through 2014 from the data contributors, resulting in changes in the membership, expenditures, utilization, and prices in all years. This is an unavoidable consequence of updating and refining the dataset over time. As a result, the trends reported in the 2014 report are somewhat different from those in the 2013 report.

The data were adjusted to account for new and revised data for 2013. For the 2014 analytic dataset, 2010 through 2012 data were considered complete, and no actuarial adjustment was performed. The 2013 and 2014 claims were actuarially completed using the new data. The average intensity weights were changed to reflect updates to DRGs, RVUs, and APCs by CMS in 2014.

Weighting methodology was updated. The weighting methodology was updated to reflect changes in the definitions of micropolitan and metropolitan areas, and updates to the county to core-based statistical area (CBSA) mapping by the Office of Management and Budget (OMB). The data used to create the population weights were updated to reflect new estimates from the American Community Survey.

Professional procedure detailed category added. HCCI included a new detailed category "administration of drugs" in this year's report. This category includes the CPT and HCPCS codes that reflect procedures and health care professionals who administer drugs to individuals.

Suggested citation for 2014 report:

"2014 Health Care Cost and Utilization Report." Health Care Cost Institute, Inc., Oct. 2015. Web.

Endnotes

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2. McEvoy, Gerald K., ed. AHFS Drug Information. Bethesda, MD: American Society of Health-System Pharmacists, 2015. PEP-ID. Web.
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4. Health Care Cost Institute, Inc. Aggregated ESI Cost and Utilization Dataset (2010-2014). Health Care Cost Institute, 2015. Digital file.
5. The Editorial Board. "Costly Hepatitis C Drugs for Everyone?" *The New York Times*, Sep. 2, 2015. Web.
6. Hepatitis C Online. "Simeprevir (Olysio)". *University of Washington*, 2015. Web.

Trend to Note: Hepatitis C Drugs and the National ESI Population

Population

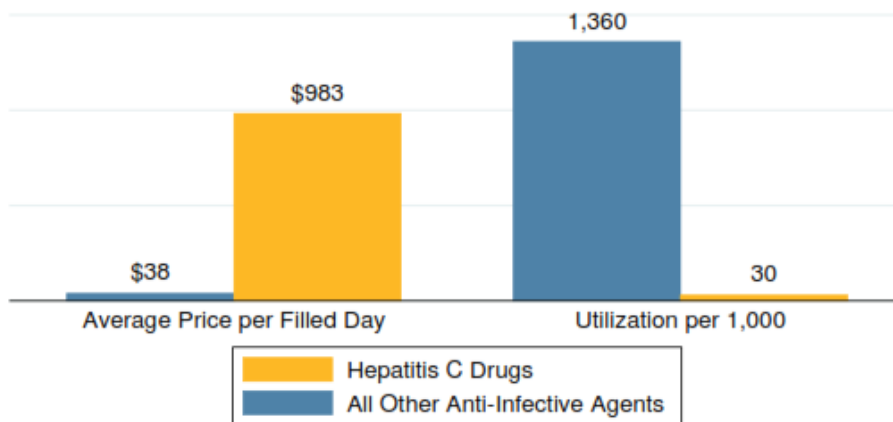
Between winter 2013 and fall 2014, three new breakthrough drugs were approved by the FDA for the treatment of the Hepatitis C virus (HCV). These drugs were: Olysio (FDA approval 11/22/13); Sovaldi (FDA approval 12/6/13); and Harvoni (FDA approval 10/10/14). While the drugs have been reported to have important benefits to individuals with HCV, discussions regarding cost have also been ongoing.⁵

In the American Hospital Formulary Service (AHFS) classification system used by HCCI, Olysio, Sovaldi, and Harvoni are all classified as brand anti-infective agents. In 2013, the per capita spending on Olysio and Sovaldi for the national ESI population was \$0.20 (Appendix Table A49). In comparison, the per capita spending on all other brand anti-infective agents was \$53.10. There was relatively low utilization of the Olysio and Sovaldi in 2013: 0.2 filled days per 1,000 individuals.

In 2014, both the per capita spending on and utilization of HCV drugs increased. In 2014, per capita spending on Olysio, Sovaldi, and Harvoni was \$29.60, compared to spending of \$52.10 on the other brand anti-infective agents. Utilization of these three HCV drugs combined increased to 30 filled days per 1,000 individuals.

In both 2013 and 2014, the average price per filled day of HCV drugs was relatively similar. The price per day actually declined slightly in 2014, from \$995.60 to \$983.30. In contrast, the average price per filled day for all other brand anti-infective agents was much lower than for HCV drugs and rose slightly during that period, from \$36.10 to \$38.30. Neither the price per day nor the per capita spending takes into account any coupons, discounts, or rebates that might be applied to the cost of the HCV drugs. Other research has found similar prices per day for these HCV drugs: around \$1,000 per day for Sovaldi, around \$1,055 per day for Harvoni, and \$790 per day for Olysio.^{5,6}

Figure 18
Average Price per Filled Day and Utilization per 1,000 Individuals of Hepatitis C Drugs* and All Other Anti-Infectives: 2014



Source: HCCI, 2015.
 Notes: All data weighted to reflect the national, younger than 65 ESI population.
 Data from 2013 and 2014 adjusted using actuarial completion.
 *Hepatitis C drugs are Harvoni, Olysio, and Sovaldi.



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