HCCI HEALTH CARE COST INSTITUTE

Issue Brief #7

February 2014

Key Findings from *Children's Health Spending: 2009-2012*

This issue brief summarizes the main findings of the Health Care Cost Institute's (HCCI's) *Children's Health Spending: 2009-2012.* For this brief and the report, "children" refers to individuals ages 0 through 18 covered by employer-sponsored health insurance. For 2012, HCCI found that spending per child was $2,437 across all age groups, but spending varied by age group. HCCI also found that between 2009 and 2012, spending per child rose by an average 5.5 percent per year. In 2012, families paid about $427 per child out of pocket on health care, or about 17.5 percent of the total per capita spending. Out-of-pocket spending rose by 6.6 percent per year during the study period.

2012 KEY STATISTICS FOR ESI CHILDREN

$2,437 was spent per child

$2,572 was spent per boy

$2,296 was spent per girl

$427 was spent per child out-of-pocket

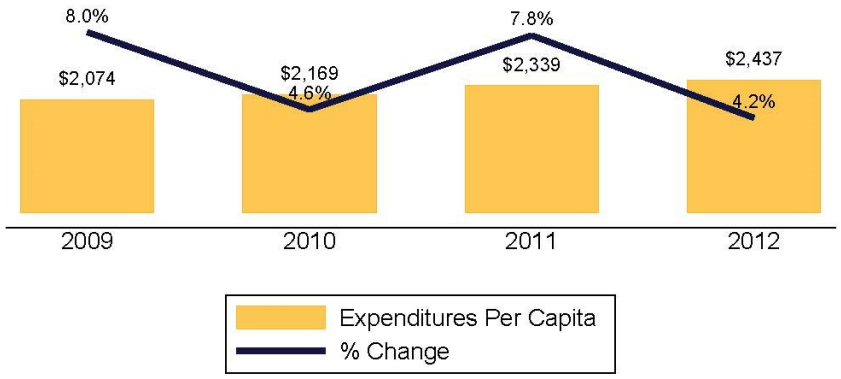
8.6% increase in use of generic prescriptions

15.6% decline in use of brand prescriptions

This issue brief summarizes HCCI's *Children's Health Spending: 2009-2012*.[1] In that report, HCCI analyzed fee-for-service claims for about 10.5 million children per year covered by employer-sponsored health insurance (ESI) between 2009 and 2012.[2] HCCI data did not include Medicaid, uninsured, or Children's Health Insurance Program (CHIP) data. All findings were weighted to be nationally representative. In 2012, approximately 43 million children ages 18 and younger were covered by ESI, representing about 25 percent of the total ESI population.[1]

For this issue brief, HCCI summarized spending per capita, out-of-pocket spending, and the drivers of health care costs for ESI children, with particular attention to health care service trends for each age group.

Figure 1
ESI Expenditures Per Capita on Children, Ages 0-18: 2009-2012



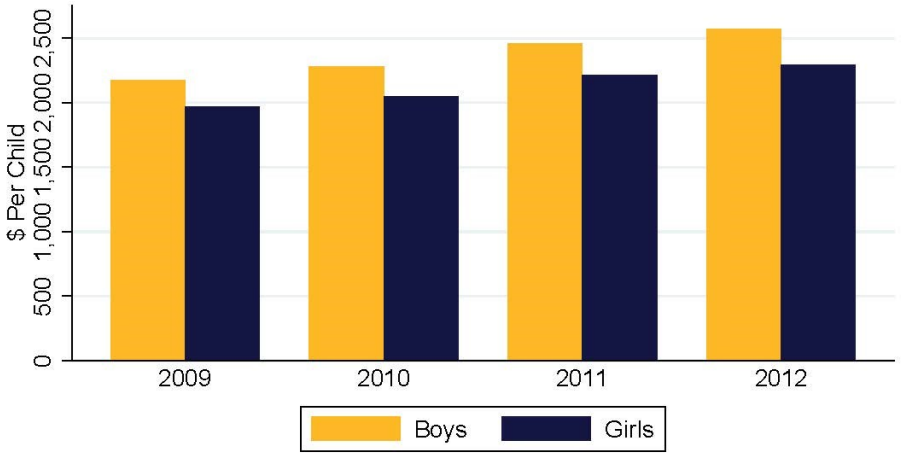
Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Children's expenditures grew by an average of 5.5 percent per year

Between 2009 and 2012, health care expenditures per child increased by $363 to $2,437 (Figure 1 and Report Table 1). During this period, spending on children rose by 5.5 percent per year.

Health care spending on boys was higher than on girls in all years of the study (Figure 2 and Report Table 1). Spending on boys rose by 5.8 percent per year, compared with 5.2 percent per year on girls.

Figure 2
Annual Expenditures Per Capita by Gender, Ages 0-18: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Out-of-pocket spending rose by an average of 6.6 percent per year

Between 2009 and 2012, slightly more than 17 percent of health care spending per child was paid out of pocket (Figure 3 and Appendix Table A1). During this period, out-of-pocket spending per child rose from $352 to $427, averaging 6.6 percent growth per year, but the growth rate slowed over time.

As with overall per capita expenditures, out-of-pocket spending on boys ($440 in 2012) was higher than on girls ($414 in 2012; Appendix Table A1). Out-of-pocket spending grew fastest for boys in all years except 2012, due to the mix of services used.

Common health care service trends by age group

HCCI analyzed spending for four different groups of children: infants and toddlers (ages 0-3), younger children (ages 4-8), pre-teens (ages 9-13), and teens (ages 14-18). For all years, all age groups, and most services, rising prices contributed more to spending growth than did changes in utilization.

KEY DEFINTIONS

Spending per capita — An estimate of total expenditures paid for children divided by the population of insured children.

Out-of-pocket expenditure per capita — Out-of-pocket expenditure per capita is calculated by dividing total out-of-pocket expenditures by the insured population. These payments include any copayments, coinsurance payments, and deductibles and are made directly to a health care provider on behalf of the child. Any health care payments made out-of-pocket for which a claim was not filed (such as over-the-counter medicines), are not included in this metric.

Payer expenditure per capita — Payer expenditures are dollars paid by the insurer directly to a health care provider on behalf of the insured. This excludes any rebates, discounts, incentive payments, or administrative costs that are not captured by the claims system.

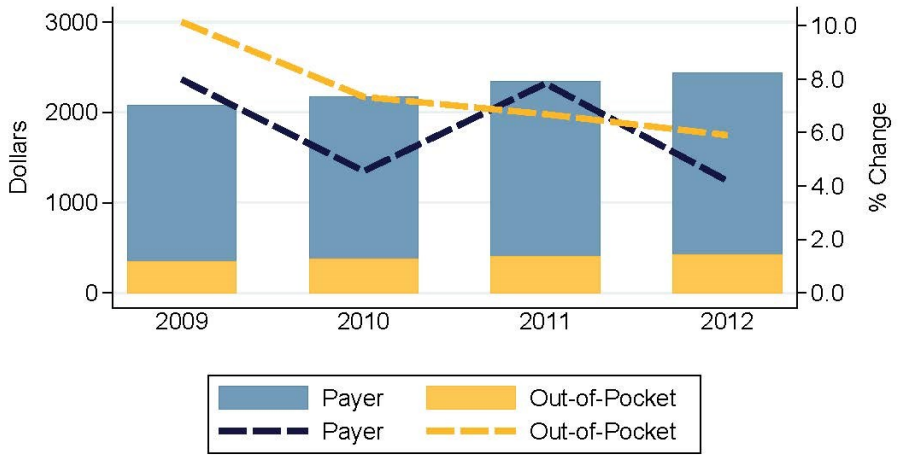
Medical service categories — There are three medical service categories: inpatient facility, outpatient facility, and professional procedures.[4]

Prescription categories — HCCI analyzed prescription drug and device claims from pharmacies. The prescription service category is further classified by brand and generic drug subservice categories.

For the three youngest groups (ages 0-13), spending was higher on boys than girls in each year of the study (Report Tables 3, 5, and 6). In contrast, spending per teen girl was higher than spending per teen boy in each year studied (Report Table 7). This was due to higher teen girl spending on medical services (Appendix Table A25). However, spending on teen boys for prescriptions was higher than prescription spending on teen girls.

There were also several common utilization trends. In 2010, emergency room (ER) visits and office visits to primary care providers declined for all children (Appendix Tables A6, A8, A10, and A13). Additionally, all age groups experienced a decline in generic prescription use in 2010, with utilization rebounding in 2011.

Figure 3
Payer and Out-of-Pocket ESI Expenditures Per Capita on Children, Ages 0-18: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Differences in health care service trends by age group

Spending trends varied by age group (Figure 4). As well, certain health care services were more commonly used by some age groups than by others.

Between 2009 and 2012, spending on infants and toddlers ("babies") rose 5.9 percent per year (Figure 5 and Report Table 3). At $4,446 per baby in 2012, spending on these children was the highest of any children's age group

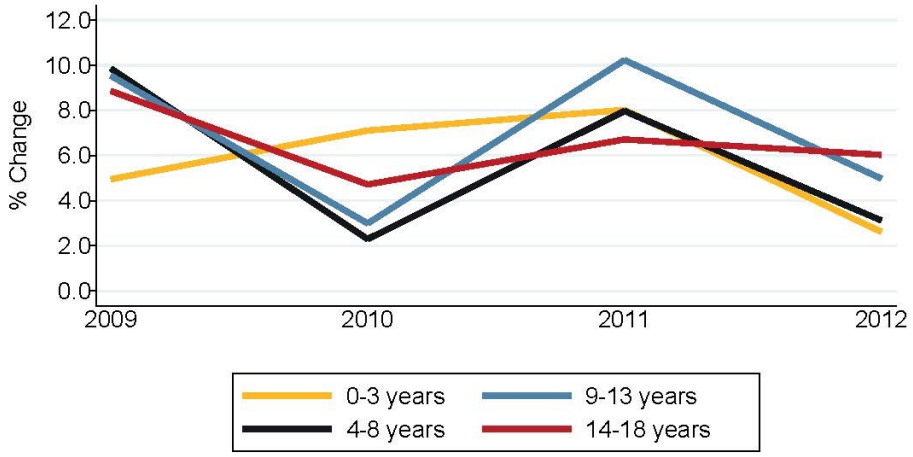
PRESCRIPTION USE ON THE RISE FOR OLDER CHILDREN

In 2012, there were 74.1 filled days of prescription drugs or devices per child covered by ESI (Appendix Table A3). About 26.3 percent of the filled days were for brand prescriptions, and the remaining 73.7 percent of filled days were for generic prescriptions. During the study period, prescription use per 1,000 children rose by 0.9 percent per year. Children's use of generic prescriptions increased (5.7% per year), even as brand use fell (-8.5% per year).

The use of prescriptions increased as children aged. In 2012, infants and toddlers used 50.5 filled days per child whereas younger children used 55.3 filled days per child (Appendix Tables A4 and A7). Until age 9, the most commonly prescribed generic therapeutic drug class was anti-infective agents (Appendix Tables A5 and A8). Pre-teens used 70.0 filled days per child, whereas teenagers used 108.6 filled days per child (Appendix Tables A9 and A11). For pre-teens and teens, the most commonly prescribed generic therapeutic drug class was central nervous system agents (Appendix Table A10 and A12).

During the study period, increasing prescription use and faster rates of growth for older children offset the declines observed for younger children and infants and toddlers during the study period. Between 2009 and 2012, use of prescriptions by infants and toddlers fell by 2.4 percent (Appendix Table A4). Younger children also had a 0.8 percent per year decline in prescription use (Appendix Table A7), and this decline occurred for both younger boys and girls (data not shown). In contrast, prescription use rose by 1.6 percent per year for pre-teens and 2.4 percent per year for teenagers (Appendix Tables A9 and A11).

Figure 4
Annual Percentage Changes in Expenditures Per Capita by Age Group: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

examined. This spending was largely driven by visits to doctors' offices and inpatient care for sick newborns (Table A5).

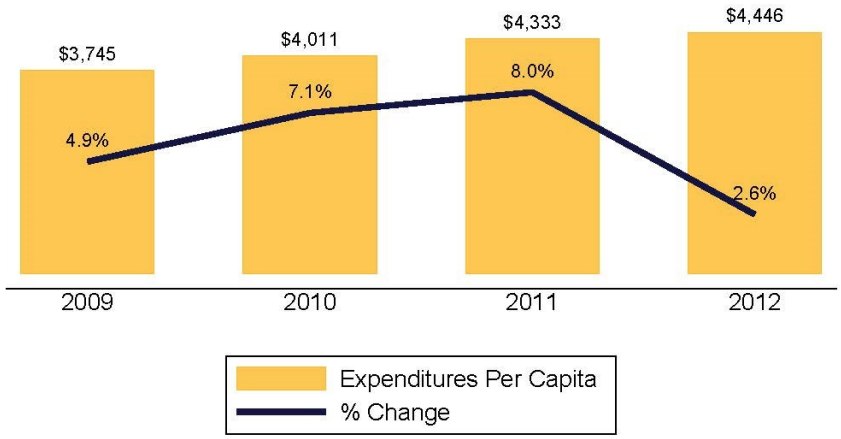
By comparison, in 2012, health spending per younger child was $1,653 and $1,776 per pre-teen (Figure 6 and Figure 7), and rose by 4.5 percent and 6.1 percent per year, respectively (2009-2012). Younger children and pre-teens had similar medical spending, utilization, and price trends in all years (Report Tables 5 and 6, and Appendix Tables A7 and A9). However, prescription use was somewhat different among these age groups. Between 2009 and 2012, the prescription use of younger children closely resembled that of infants and toddlers, declining by 0.8 percent per year. Prescription use by pre-teens rose 1.6 percent, and resembled prescription use by teens.

Between 2009 and 2012, spending on teens grew at 5.8 percent per year to $2,617 (Figure 8 and Report Table 7), with most of the increase driven by rising prices. Key trends for this age group included differences in health service use by gender, characterized by declining labor and delivery admissions and increased use of synthetic and hormone prescriptions by teen girls (Appendix Table A13). Additionally, teen utilization of mental health and substance use (MHSU) admissions and central nervous system (CNS) agents rose over time.

Conclusions

The spending and utilization trends presented here suggest that despite the recession and emerging economic recovery, children's health care spending growth remained robust between 2009 and 2012. This is not to say that children's health spending was not affected by the recession and recovery, as utilization of some health care services declined during this period. Rather, the findings suggest that families covered by ESI were generally

Figure 5
ESI Expenditures Per Capita on Children, Ages 0-3: 2009-2012

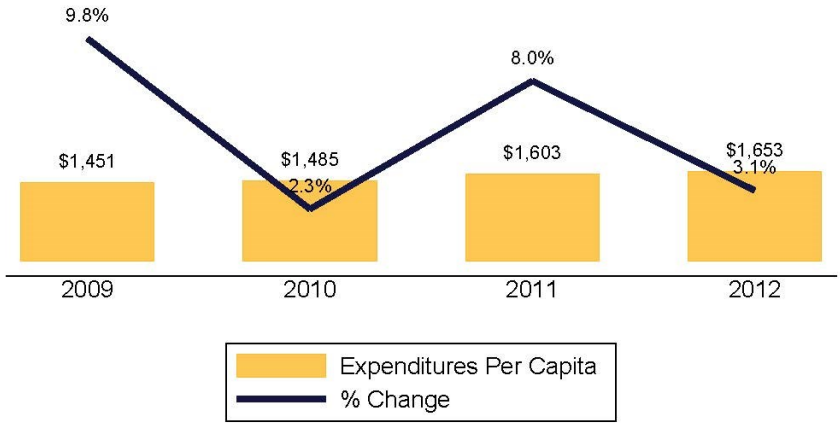


Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

willing to bear increasing health care prices and rising cost sharing to continue to provide their children with needed care.

Moreover, several emerging trends in children's health care warrant further study. These include higher spending on boys than girls until the teen years, the fluctuating use of office visits and visits to the ER, the rise in MHSU admissions, and increasing prescription drug use by children.

Figure 6
ESI Expenditures Per Capita on Children, Ages 4-8: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Data and methods

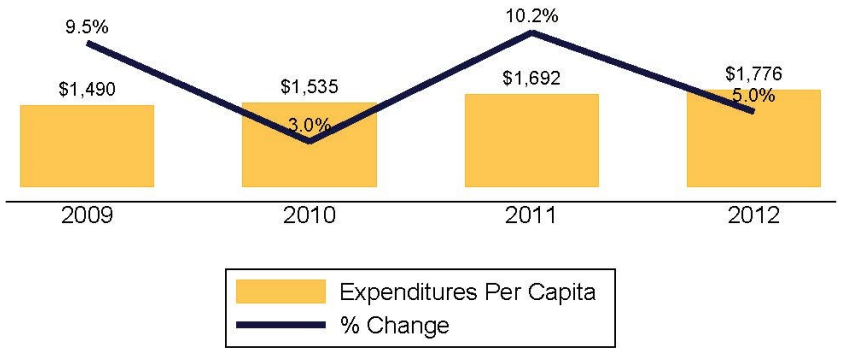
For *Children's Health Spending: 2009-2012* and this issue brief, HCCI used a subset of a standard analytic dataset that consisted of weighted and aggregated claims data for people younger than age 65 with ESI for calendar years 2007 to 2012.[3-5] The HCCI dataset was derived from claims for about 40 million insureds per year, of which 10.5 million were children.

All data used for our study were de-identified and compliant with the Health Insurance Portability and Accountability Act.

Claims for 2011 and 2012 were adjusted using actuarial completion to account for claims incurred but not adjudicated. HCCI used these weighted and adjusted claims to estimate per capita health expenditures, prices, utilization, unit prices, and service intensity for 2007 through 2012. HCCI did not correct dollars for inflation; thus, all reported expenditures and prices were nominal.

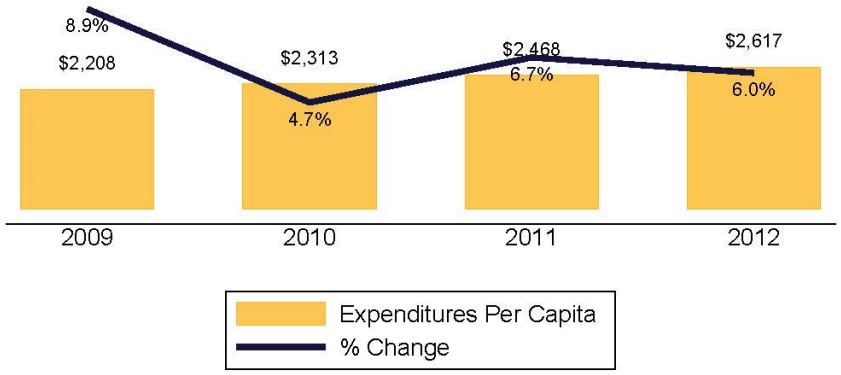
For a more detailed description of the methods and limitations of this study, please see *Children's Health Spending: 2009-2012* and the corresponding methodology.[3]

Figure 7
ESI Expenditures Per Capita on Children, Ages 9-13: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Figure 8
ESI Expenditures Per Capita on Children, Ages 14-18: 2009-2012



Source: HCCI, 2013.
Notes: All data weighted to reflect the national, ages 0-18 ESI population.
Data from 2011 and 2012 adjusted using acturial completion.

Authors' note

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Suggested citation

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Endnotes

1. Health Care Cost Institute. Children's Health Spending: 2009-2012. HCCI, Feb. 2014. Web.

2. United States Census Bureau. "Health Insurance Historical Tables - HIB Series." *Census.gov*. United States Census Bureau (U.S. Department of Commerce), Sept. 2013. Web. 10 Jan. 2014.

3. Health Care Cost Institute. 2012 Health Care Cost and Utilization Report Analytic Methodology v. 2.9. Health Care Cost Institute, Feb. 2014. Web.

4. Health Care Cost Institute, Inc. Aggregated ESI Cost and Utilization Dataset (2007-2012). Health Care Cost Institute, 2013. Digital file.

5. Health Care Cost Institute, Inc. Aggregated ESI Cost and Utilization CNS Dataset (2007-2012). Health Care Cost Institute, 2014. Digital file.

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