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County by County Analysis of Current Projected Insurer Participation in Health Insurance Exchanges

Date

2017-06-13

Title

County by County Analysis of Current Projected Insurer Participation in Health Insurance Exchanges

Contact

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County by County Analysis of Current Projected Insurer Participation in Health Insurance Exchanges

The Centers for Medicare & Medicaid Services (CMS) is releasing a county-level map of 2018 projected Health Insurance Exchanges participation based on the known issuer participation public announcements through June 9, 2017. This map shows that insurance options on the Exchanges continue to disappear. Plan options are down from last year and, in some areas, Americans will have no coverage options on the Exchanges, based on the current data.

"This is yet another failing report card for the Exchanges. The American people have fewer insurance choices and in some counties no choice at all. CMS is working with state departments of insurance and issuers to find ways to provide relief and help restore access to healthcare plans, but our actions are by no means a long-term solution to the problems we're seeing with the Insurance Exchanges," said CMS Administrator Seema Verma.

The CMS map displays point in time data and is expected to fluctuate as issuers continue to make announcements on exiting or entering specific states and counties. It currently shows that nationwide 47 counties are projected to have no insurers, meaning that Americans in these counties could be without coverage on the Exchanges for 2018. It's also projected that as many as 1,200 counties - nearly 40% of counties nationwide – could have only one issuer in 2018. Currently, for 2018 at least 35,000 active Exchange participants live in the counties projected to be without coverage in 2018, and roughly 2.4 million Exchange participants are projected to have one issuer.[1] It's expected that the number of consumers with no coverage choices will rise.

CMS continues to work with state departments of insurance and issuers to address bare counties, exploring all options available under current law to provide Americans with access to coverage.

Qualified Health Plan submissions for the Federally-facilitated Exchanges will be accepted by states and CMS through June 21, 2017.

The Department of Health and Human Services (HHS) is committed to doing everything permitted under current law to provide patients with immediate relief from damage the Exchanges has done to the individual and small group health insurance markets. HHS actions are intended to stabilize the markets, increase choices, and lower costs. You can learn more by visiting hhs.gov/relief.

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[1] Data as of January 31, 2017.

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County by County Analysis of Current Projected Insurer Participation in Health Insurance Exchanges

. All State Exchange data is self−reported from the exchanges to CMS (CA, CO, CT, DC, ID, MA, MD, MN, NY, RI, VT, WA).
. The following eight states carrier count is rolled up to a state rather than county level (CA, CO, ID, MA, MD, MN, NY, WA).
. All data reflected on this map is point in time as of 6/9/2017 and is expected to fluctuate.
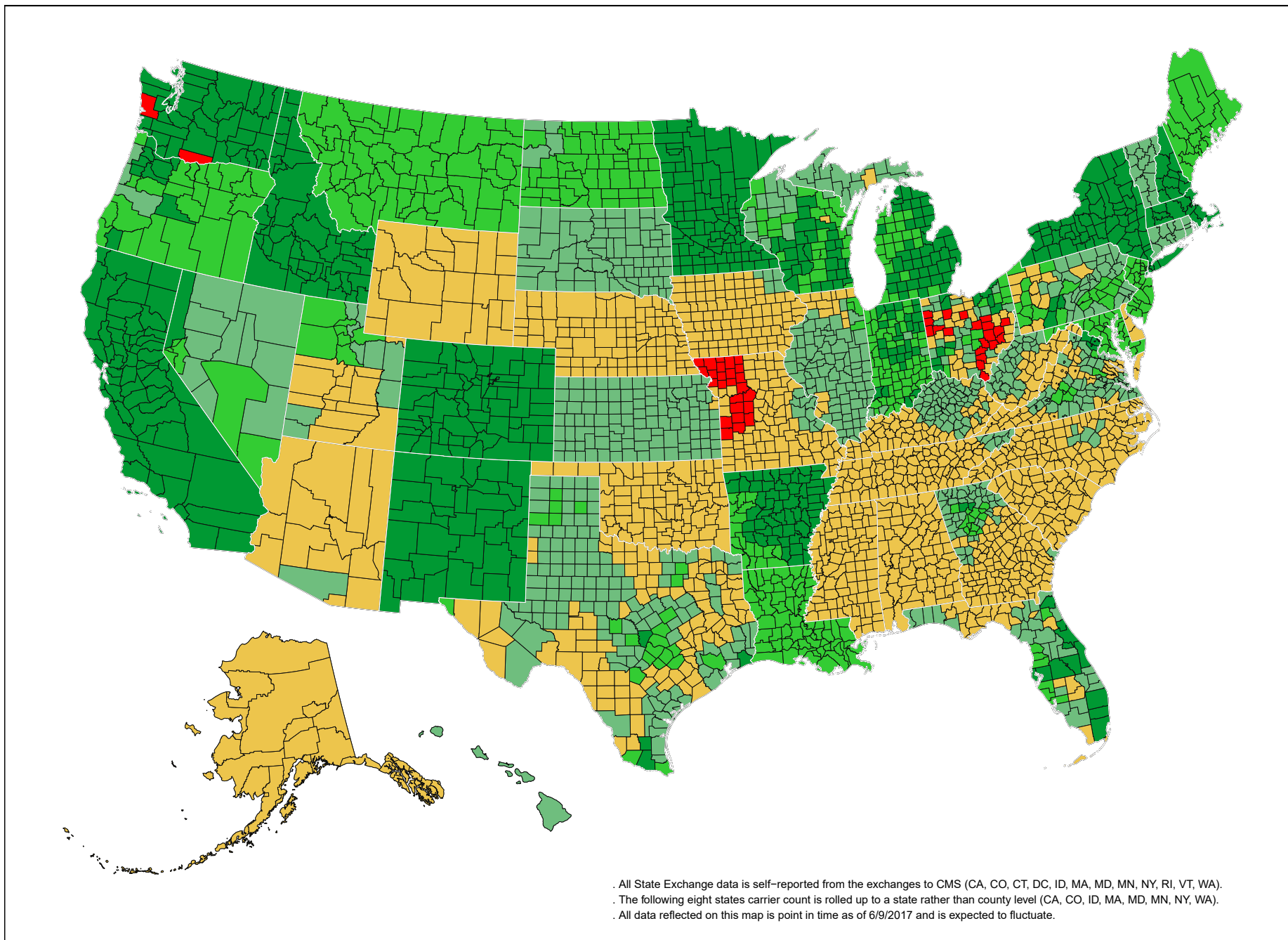
Exchange Carrier Number   ■ 0 Carriers (47 Counties)   ■ 1 Carrier   ■ 2 Carriers   ■ 3 Carriers   ■ > 3 Carriers

CMS

CENTERS FOR MEDICARE & MEDICAID SERVICES

June 12, 2017

The Health Insurance Exchanges Trends Report:

High Premiums and Disruptions in Coverage Lead to Decreased Enrollment in the Health Insurance Exchanges

This brief presents an analysis of consumers who canceled or terminated Health Insurance Exchange coverage in 2017. Specifically, it examines enrollment as it relates to affordability, financial assistance and plan choice. The analysis shows that lack of affordability, increased premiums and insurance coverage disruptions are factors that determine whether consumers will purchase and maintain health coverage on the Health Insurance Exchanges (Exchanges).

Key Highlights

High costs and lack of affordability are the most common factors that lead consumers to cancel coverage.
- Consumers with higher premiums were more likely to terminate or cancel coverage.
- Consumers listed lack of affordability as one of the most common reasons for not paying for the first month's coverage.
- Disruptions in coverage options lead to fewer consumers retaining their coverage.
- Consumers without financial assistance were more likely to terminate or cancel coverage.

I.   BACKGROUND

Consumers have seen individual market insurance premiums rise significantly since 2013.[1] When comparing the average premiums found in 2013 Medical Loss Ratio (MLR) data and 2017 CMS Multidimensional Information and Data Analytics System (MIDAS) data, the average premiums in the 39 states using HealthCare.gov in 2017 increased from $232 in 2013 to $476 in 2017, a 105 percent increase.[2] See figure 1. Of those 39 states, 62 percent had 2017 average exchange premiums at least double their 2013 average premium.[3]

Figure 1. Increase in Individual Market Monthly Premiums in Healthcare.gov States[4]

2013 (MLR)	2017 (Healthcare.gov)	Raw Increase	Percent Increase
$232	$476	$244	105%

II.   HIGH COSTS AND LACK OF AFFORDABILITY ARE THE MOST COMMON FACTORS LEADING CONSUMERS TO CANCEL HEALTH COVERAGE

A.   *Financial Assistance and Premiums*

Based on 2017 enrollment data, consumers who enrolled through HealthCare.gov and canceled or terminated[5] coverage were less likely to have financial assistance[6] than those who have maintained coverage through April 25, 2017, or gained coverage through a special enrollment period. Enrollment data also show that consumers who canceled or terminated coverage had higher premiums than those who maintained coverage since the end of the 2017 open enrollment period (OEP) or gained coverage through a special enrollment period.[7] On average, consumers who chose to end their coverage (1.5 million) paid

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[1] Individual Market Premium Changes: 2013 – 2017. ASPE Data Point. June 2017.
https://aspe.hhs.gov/system/files/pdf/256751/IndividualMarketPremiumChanges.pdf.
[2] Ibid.
[3] Ibid.
[4] Ibid. MLR data represent the entire individual market – including on- and off-Exchange plans, as well as Affordable Care Act (ACA)-compliant and non-ACA-compliant plans. HealthCare.gov calculations are based on enrollee plan selections during the annual Open Enrollment Periods from 2014 to 2017. These data do not take into account premium tax credits.

[5] Individuals who select a plan may not always effectuate their enrollment, or pay their first month's premium. These individuals are considered to have canceled their plans, or have had their plans canceled by the insurers. If an individual effectuates their enrollment, by paying the first month's premium, but ends their coverage after that first month, they are considered to have terminated their plan.
[6] Consumers without Advanced Premium Tax Credits (APTC) at the end of OE4 were 2.4 times more likely to cancel or terminate their coverage than those with APTC between the close of OE4 (1/31/2017) and 4/25/2017 (31.9% vs. 13.1%, respectively). MIDAS data April, 25th, 2017. Consumers without cost sharing reductions at the end of OE4 were 1.7 times more likely cancel or terminate their coverage compared to those with cost-sharing reductions (CSR) between the close of OE4 (1/31/2017) and 4/25/2017 (20.9% vs. 12.7%, respectively). MIDAS data as of April 25, 2017.
[7] Consumers who left the Exchanges (1.5 million) between the close of OE4 (1/31/2017) and 4/25/2017 have higher average net premiums. On average, consumers who canceled or terminated coverage between 1/31/2017 and 4/25/2017 paid $209 a month in net premiums compared to $153 a month for all consumers who had an active plan selection at the end of OE4 (9.2 million). MIDAS data as of April 25, 2017.

$209 a month compared to $150 a month for all consumers (8.1 million) who had an active plan selection as of April 25, 2017.[8] See figure 2.

Figure 2. Average Sticker Price, Net Premium, and Subsidy Compared to End of Open Enrollment Baseline
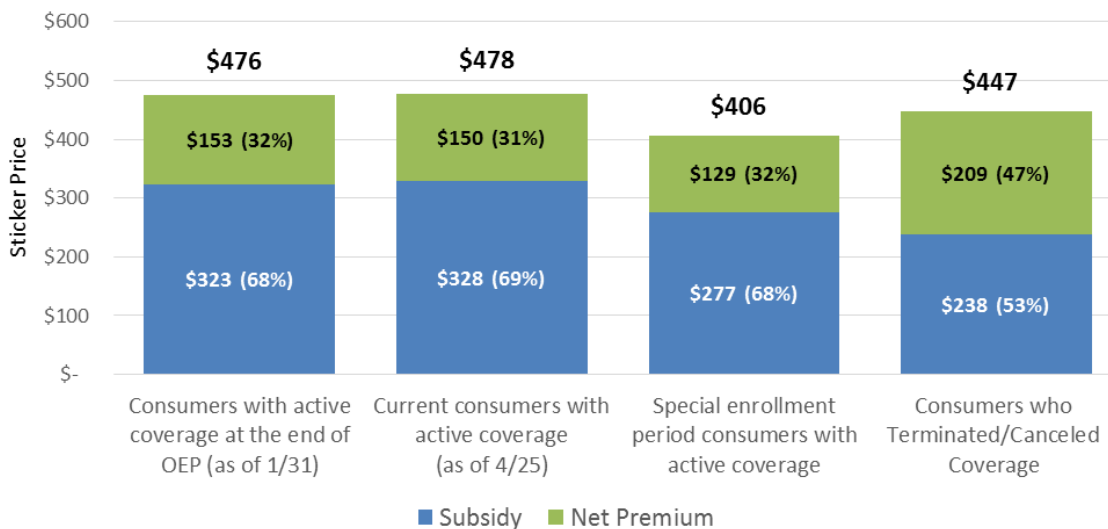
B. Consumer Exit Survey Data

Since August 2016, CMS has collected online survey data from consumers who left the Exchanges. Participation in the survey is voluntary. Consumers who are signed up to receive emails are invited to take the survey within 30 days of leaving the Exchanges. The sample is weighted by the consumer exit category to the population of individuals who left the Exchanges. From August 2016 to April 2017, a total of 18,212 individuals who responded had terminated or canceled coverage; of those, 14,332 initially paid for their plan and then stopped paying premiums and 3,880 selected a plan but never paid their first premium.

Consumers who canceled coverage prior to paying their first premium indicated that high costs and lack of affordability were the most common factors for canceling their coverage, or not paying the first month's premium. Nearly 60 percent of consumers who terminated coverage after paying premiums for at least one month indicated that they obtained employer sponsored coverage. The exit survey data show:

- Approximately 46 percent of consumers who canceled their coverage prior to paying first month's premium cited cost as the reason for cancellation
  - 20 percent of those who canceled their coverage due to cost cited premium increases (for example over the previous year or their previous plan) as the reason
  - 17 percent cited ineligibility for financial assistance
- 49 percent of consumers who terminated their plans after paying for at least one month's premium said they gained other coverage elsewhere:
 - Approximately 58 percent of those indicated that they obtained employer sponsored coverage

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[8] Ibid.

- o 22 percent of those indicated that they had become eligible for Medicare as the reason for terminating their coverage
- 27 percent of consumers who terminated coverage cited cost or affordability as the reason for terminating coverage.
-

III.   ISSUER EXITS CAN LEAD TO FEWER CONSUMERS RETAINING THEIR COVERAGE

The enrollment data also show that a higher proportion of individuals who experienced an issuer leaving the Exchanges choose not to maintain coverage. Figure 3 shows that individuals who still had their 2016 issuer available (5.02 million) were more likely to purchase and maintain coverage (77 percent) than individuals who did not have plans offered by their 2016 issuer (1.95 million, 70 percent). In total, 75 percent of the consumers who had coverage in 2016 (6.96 million), chose to select a plan, pay for, and maintain their coverage.[9]

Figure 3: Retention Rates Among Consumers with Coverage at the end of 2016
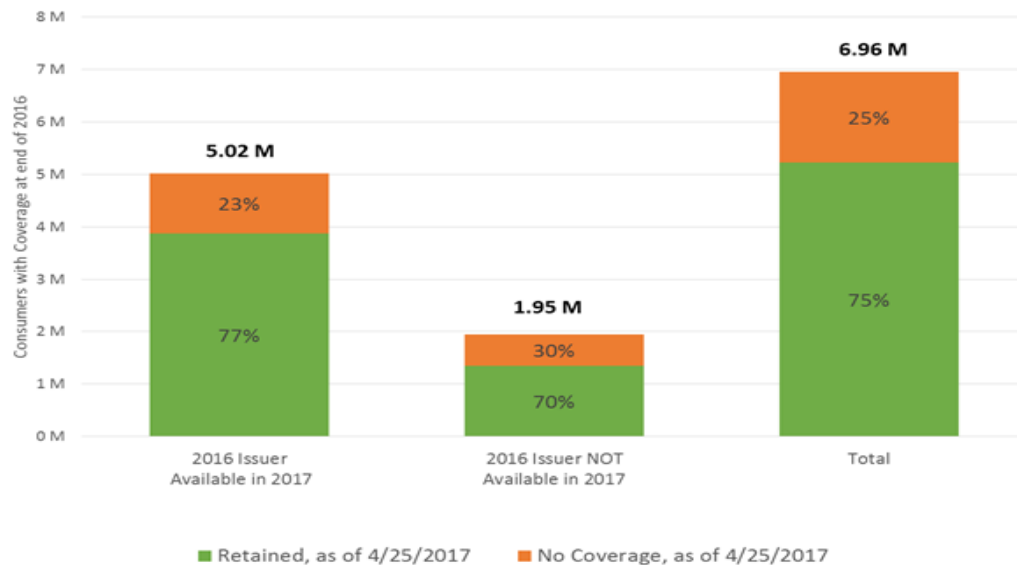
Note: Numbers above columns may not add to the total column due to rounding.

IV.   CONCLUSION

In conclusion, higher premiums and ineligibility for financial assistance combined with limited health plan choices caused some consumers to cancel or terminate coverage. However, other consumers including those with and without financial assistance, left the Exchanges for other reasons, including obtaining a job with an offer of employer sponsored insurance. The report shows that individuals who are personally responsible for more of their premium and have higher out-of-pocket costs, are most affected by premium increases. In addition, consumers whose insurance carriers choose to cancel plan options or

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[9] MIDAS Data, April 25, 2017

no longer offer coverage in the Exchanges are also less likely to select, purchase, and maintain their health coverage.

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Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, 2016

by Robin A. Cohen, Ph.D., Emily P. Zammitti, M.P.H., and Michael E. Martinez, M.P.H., M.H.S.A
Division of Health Interview Statistics, National Center for Health Statistics

What's new?

- This report provides health insurance estimates for 45 selected states using 2016 National Health Interview Survey data.

Highlights

- In 2016, 28.6 million (9.0%) persons of all ages were uninsured at the time of interview—20.0 million fewer persons than in 2010 and no change from 2015.

- In 2016, among adults aged 18–64, 12.4% were uninsured at the time of interview, 20.0% had public coverage, and 69.2% had private health insurance coverage. In 2016, among children aged 0–17 years, 5.1% were uninsured, 43.0% had public coverage, and 53.8% had private coverage.

- Among adults aged 18–64, 69.2% (136.4 million) were covered by private health insurance plans at the time of interview in 2016. This includes 4.7% (9.4 million) covered by private health insurance plans obtained through the Health Insurance Marketplace or state-based exchanges.

- The percentage of persons under age 65 with private insurance enrolled in a high-deductible health plan (HDHP) increased, from 36.7% in 2015 to 39.4% in 2016.

Introduction

This report from the National Center for Health Statistics (NCHS) presents selected estimates of health insurance coverage for the civilian noninstitutionalized U.S. population based on data from the 2016 National Health Interview Survey (NHIS), along with comparable estimates from previous calendar years. Estimates for 2016 are based on data for 97,459 persons.

Three estimates of lack of health insurance coverage are provided: (a) uninsured at the time of interview, (b) uninsured at least part of the year prior to interview (which includes persons uninsured for more than 1 year), and (c) uninsured for more than 1 year at the time of interview. Estimates of public and private coverage, coverage through exchanges, and enrollment in high-deductible health plans (HDHPs) and consumer-directed health plans (CDHPs) are also presented. Detailed appendix tables at the end of this report show estimates by selected demographics. Definitions are provided in the Technical Notes at the end of this report.

This report is updated quarterly and is part of the NHIS Early Release (ER) Program, which releases updated selected estimates that are available from the NHIS website at: https://www.cdc.gov/nchs/nhis.htm.

Estimates for each calendar quarter, by selected demographics, are also available as a separate set of tables through the ER Program. For more information about NHIS and the ER Program, see Technical Notes and Additional Early Release Program Products at the end of this report.

Figure 1. Percentage of adults aged 18–64 who were uninsured or had private or public coverage at the time of interview: United States, 1997–2016
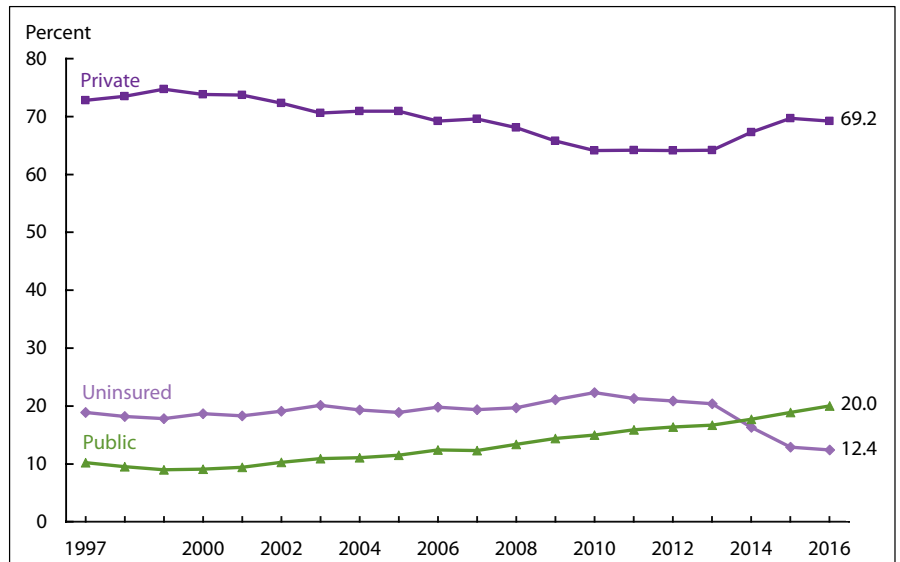
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 1997–2016, Family Core component.

Results

In 2016, the percentage of persons of all ages who were uninsured at the time of interview was 9.0% (28.6 million). There was no significant change from the 2015 uninsured rate of 9.1% (28.6 million). Twenty million fewer persons lacked health insurance coverage in 2016 compared with 2010 (48.6 million or 16.0%).

Long-term trends

In 2016, among adults aged 18–64, 12.4% were uninsured at the time of interview, 20.0% had public coverage, and 69.2% had private health insurance coverage (Figure 1). From 1997 through 2013, the percentage of adults aged 18–64 who were uninsured at the time of interview generally increased. More recently, the percentage of uninsured adults aged 18–64 decreased, from 20.4% in 2013 to 12.4% in 2016. During this 4-year period, corresponding increases were seen in both public and private coverage among adults aged 18–64.

In 2016, among children aged 0–17 years, 5.1% were uninsured, 43.0% had public coverage, and 53.8% had private coverage (Figure 2). The percentage of children who were uninsured generally decreased, from 13.9% in 1997 to 5.1% in 2016. From 1997 through 2012, the percentage of children with private coverage generally decreased, and the percentage of children with public coverage generally increased. However, more recently, the percentage of children with public or private coverage has leveled off. From 2011 through 2016, public coverage for children ranged between 41.0% and 43.0%. The percentage of children with private coverage remained stable from 2011 (53.3%) through 2016 (53.8%).

Short-term trends, by age

In 2016, adults aged 25–34 were almost twice as likely as adults aged 45–64 to lack health insurance coverage (16.5% compared with 8.9%) (Figure 3). The uninsured rates for adults aged 18–24 was 13.7% and was 14.4% for those aged 35–44.

The rate of uninsurance at the time of interview remained relatively stable from 2010 through 2013 for all age

Figure 2. Percentage of children aged 0–17 years who were uninsured or had private or public coverage at the time of interview: United States, 1997–2016
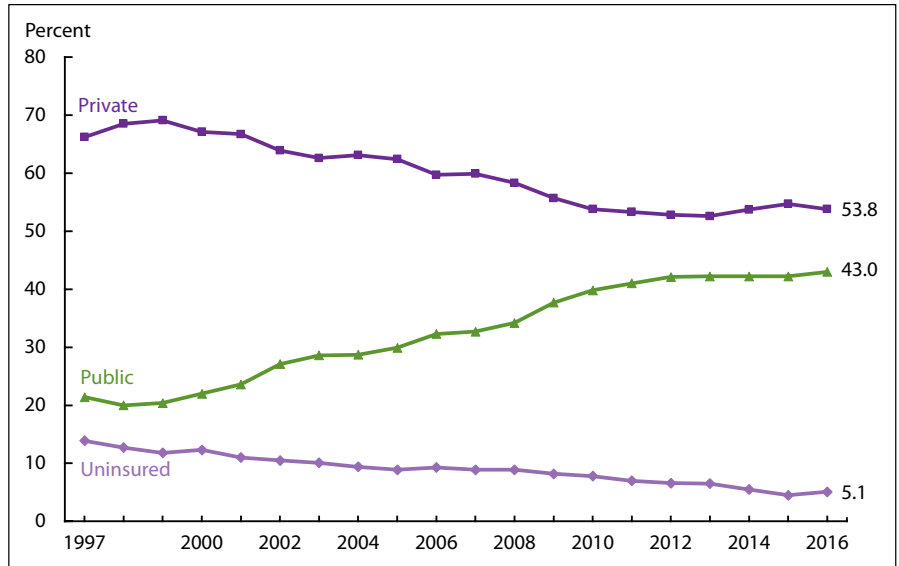
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 1997–2016, Family Core component.

Figure 3. Percentage of adults aged 18–64 who were uninsured at the time of interview, by age group: United States, 2010–2016
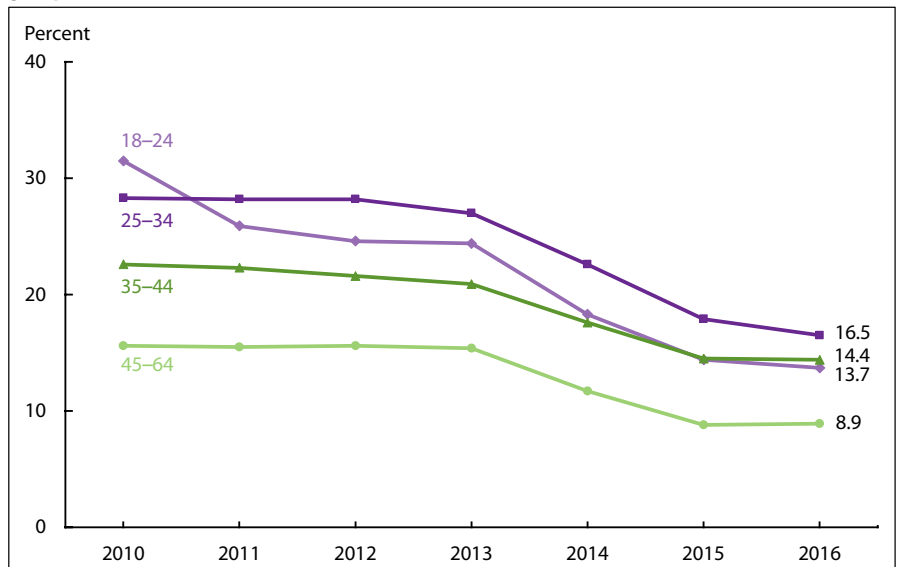
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

groups except adults aged 18–24 (Figure 3). Among adults aged 18–24, the percentage of those who were uninsured decreased, from 31.5% in 2010 to 25.9% in 2011, and then remained stable through 2013. For all age groups, the percentage who were uninsured decreased significantly from 2013 through 2016. The magnitude of the decreases ranged from –6.5 percentage points for adults aged 35–44 and those aged 45–64 to –10.7 percentage points for adults aged 18–24. For adults aged

18–24, 25–34, 35–44, and 45–64, the rates of uninsurance at the time of interview did not change significantly between 2015 and 2016.

Short-term trends, by poverty status

In 2016, among adults aged 18–64, 26.2% of those who were poor, 23.2% of those who were near poor, and 7.2% of those who were not poor lacked health insurance coverage at the time of interview (Figure 4). A decrease was noted in the percentage of uninsured adults from 2010 through 2016 among all three poverty status groups. However, the greatest decreases in the uninsured rate since 2013 were among adults who were poor or near poor. More recently, among adults who were poor, near poor, and not poor, there was no significant change in the percentage uninsured between 2015 and 2016.

In 2016, among children aged 0–17 years, 6.5% of those who were poor, 6.9% of those who were near poor, and 3.5% of those who were not poor lacked health insurance coverage at the time of interview (Figure 5). A general decrease in the percentage of uninsured children was observed among the poor, near poor, and not poor from 2010 through 2015. More recently, among children who were near poor and not poor, there was no significant change in the percentage uninsured between 2015 and 2016. Among poor children, the percentage who were uninsured increased from 4.4% in 2015 to 6.5% in 2016.

Figure 4. Percentage of adults aged 18–64 who were uninsured at the time of interview, by poverty status: United States, 2010–2016
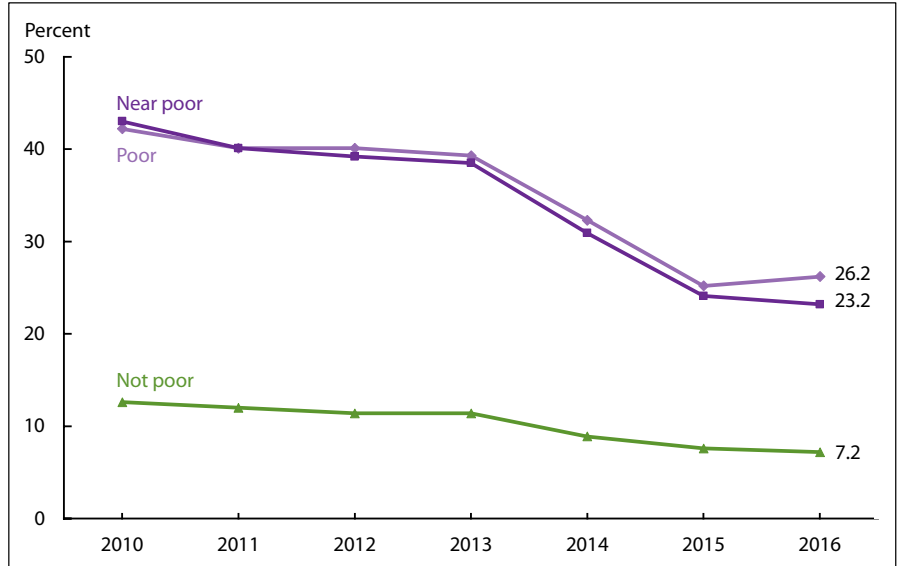
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Figure 5. Percentage of children aged 0–17 years who were uninsured at the time of interview, by poverty status: United States, 2010–2016
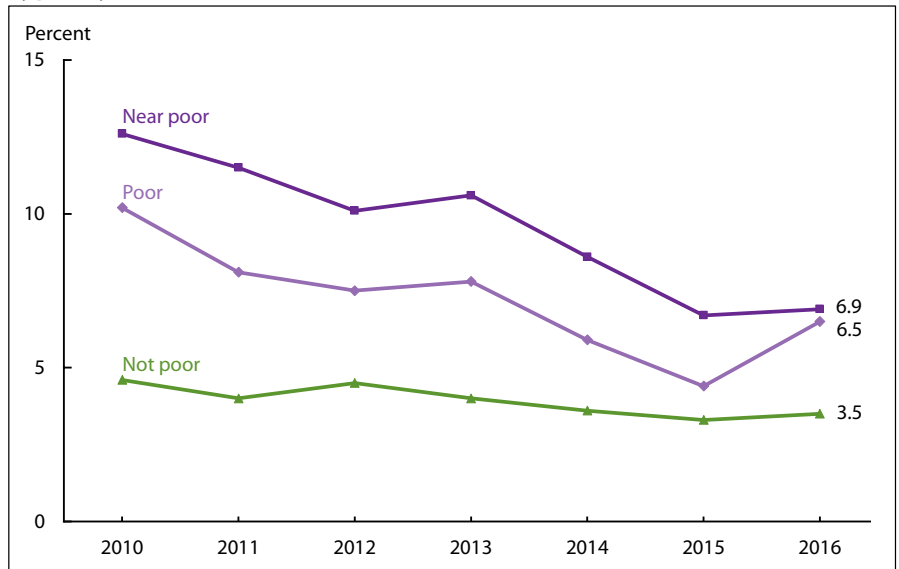
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Short-term trends, by race and ethnicity

In 2016, 25.0% of Hispanic, 15.0% of non-Hispanic black, 8.6% of non-Hispanic white, and 7.5% of non-Hispanic Asian adults aged 18–64 lacked health insurance coverage at the time of interview (Figure 6). Significant decreases in the percentage of uninsured adults were observed between 2013 and 2016 for Hispanic, non-Hispanic black, non-Hispanic white, and non-Hispanic Asian adults. Hispanic adults had the greatest percentage point decrease in the uninsured rate between 2013 (40.6%) and 2016 (25.0%). For all groups shown in Figure 6, the rates of uninsurance at the time of interview did not significantly change between 2015 and 2016.

Periods of noncoverage

Among adults aged 18–64, the percentage of those who were uninsured at the time of interview decreased, from 22.3% (42.5 million) in 2010 to 12.4% (24.5 million) in 2016 (Figure 7). The percentage of adults who were uninsured for at least part of the past year decreased, from 26.7% (51.0 million) in 2010 to 17.0% (33.4 million) in 2016. The percentage of adults who were uninsured for more than 1 year decreased, from 16.8% (32.0 million) in 2010 to 7.6% (14.9 million) in 2016.

More recently, the observed changes in the percentage of adults aged 18–64 who were uninsured at the time of interview between 2015 and 2016 was not significant. However, the decreases in the percentage of adults who were uninsured for more than a year between 2015 (9.1%) and 2016 (7.6%) and for at least part of the year between 2015 (18.1%) and 2016 (17.0%) were significant.

Figure 6. Percentage of adults aged 18–64 who were uninsured at the time of interview, by race and ethnicity: United States, 2010–2016
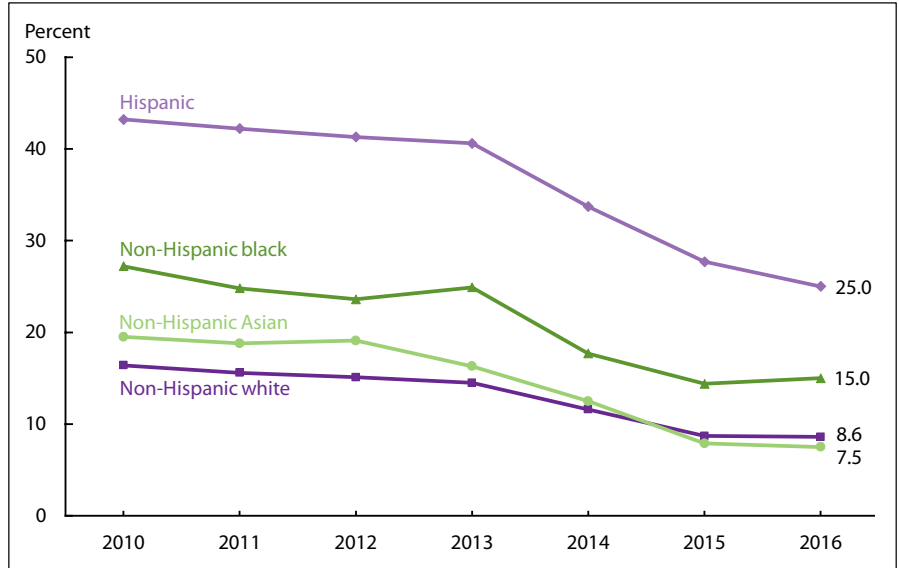
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Figure 7. Percentage of adults aged 18–64 without health insurance, by three measures of uninsurance: United States, 2010–2016
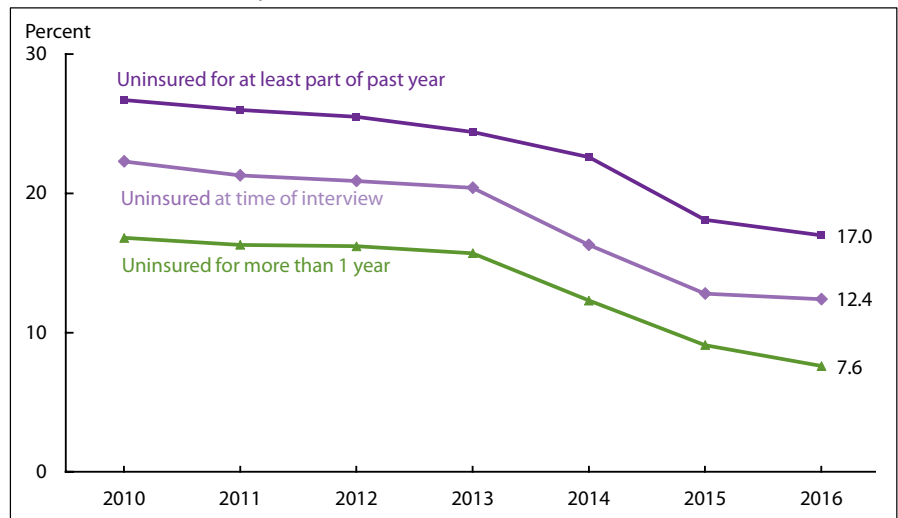
NOTES: In 2016, answer categories for those who were currently uninsured concerning the length of noncoverage were modified. Therefore, 2016 estimates of "uninsured for at least part of the past year" and "uninsured for more than 1 year" may not be completely comparable with previous years. For more information on this change, see Technical Notes. Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Private exchange coverage

Among persons under age 65, 65.0% (175.9 million) were covered by private health insurance plans at the time of interview in 2016. This includes 4.1% (11.2 million) covered by private plans obtained through the Health Insurance Marketplace or state-based exchanges. There was a significant increase in the percentage of persons under age 65 who were enrolled in exchange plans, from 3.4% (9.1 million) in the fourth quarter of 2015 to 4.3% (11.6 million) in the fourth quarter of 2016 (Figure 8).

Among adults aged 18–64, 69.2% (136.4 million) were covered by private health insurance plans at the time of interview in 2016. This includes 4.7% (9.4 million) covered by private health insurance plans obtained through the Health Insurance Marketplace or state-based exchanges. The percentage of adults aged 18–64 covered by exchange plans increased from the fourth quarter of 2015 (3.9% or 7.8 million) to the fourth quarter of 2016 (4.8% or 9.4 million) (Figure 8). The percentage of persons aged 18–64 who were enrolled in exchange plans has remained relatively stable from the first quarter of 2016 (4.7% or 9.2 million) through the fourth quarter of 2016 (4.8% or 9.4 million) (Figure 8).

Among children aged 0–17 years, 53.8% (39.6 million) were covered by private health insurance at the time of interview in 2016. This includes 2.5% (1.8 million) covered by plans obtained through the Health Insurance Marketplace or state-based exchanges. The percentage of children enrolled in exchange plans increased from 1.9% (1.4 million) in the fourth quarter of 2015 to 3.0% (2.2 million) in the fourth quarter of 2016 (Figure 8). However, the observed increase in the percentage of children who were enrolled in exchange plans from the first quarter of 2016 (2.2% or 1.6 million) to the fourth quarter of 2016 (3.0% or 2.2 million) was not significant.

Figure 8. Percentage of persons under age 65 with private health insurance obtained through the Health Insurance Marketplace or state-based exchanges, by age group and quarter: United States, January 2014–December 2016
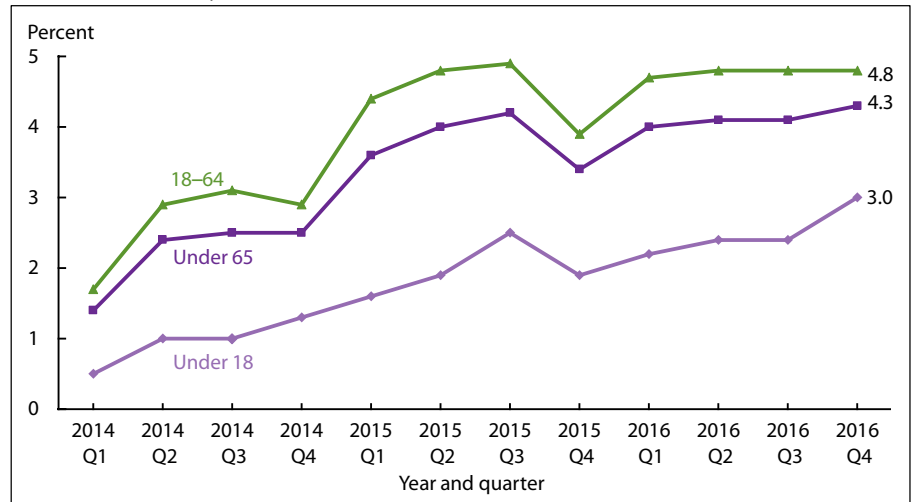
NOTES: Includes persons who had purchased a private health insurance plan through the Health Insurance Marketplace or state-based exchanges that were established as part of the Affordable Care Act of 2010 (P.L. 111–148, P.L. 111–152). 2014 is the first year that all states had exchange-based coverage. All persons who have exchange-based coverage are considered to have private health insurance. Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2014–2016, Family Core component.

Figure 9. Percentage of adults aged 18–64 who were uninsured or had private or public coverage at the time of interview, by year and state Medicaid expansion status: United States, 2013–2016
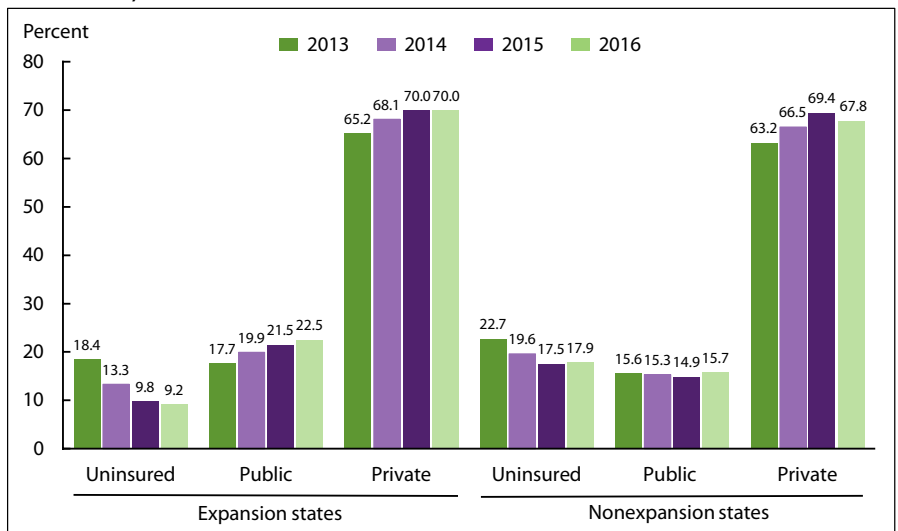
NOTES: For 2013 and 2014, there were 26 Medicaid expansion states. For 2015, there were 29 Medicaid expansion states. For 2016, there were 32 Medicaid expansion states. Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2013–2016, Family Core component.

Health insurance coverage, by state Medicaid expansion status

Under provisions of the Affordable Care Act (ACA) of 2010, states have the option to expand Medicaid coverage to those with low income. In 2016, adults aged 18–64 residing in Medicaid expansion states were less likely to be uninsured than those residing in nonexpansion states (Figure 9). In Medicaid expansion states, the percentage of uninsured adults decreased, from 18.4% in 2013 to 9.2% in 2016. In nonexpansion states, the percentage of uninsured adults decreased, from 22.7% in 2013 to 17.9% in 2016. In both Medicaid expansion states and nonexpansion states, the percentage of adults aged 18–64 who were uninsured or had private or public coverage did not change significantly between 2015 and 2016.

Health insurance coverage, by state Health Insurance Marketplace type

Under provisions of ACA, each state has the option to set up and operate its own Health Insurance Marketplace, rely on a Federally Facilitated Marketplace operated solely by the federal government, or have a hybrid partnership Marketplace that is operated by the federal government but where the state runs certain functions and makes key decisions. In 2016, adults aged 18–64 in states with a Federally Facilitated Marketplace were more likely to be uninsured than those in states with a state-based Marketplace or states with a partnership Marketplace (Figure 10).

Among adults aged 18–64, decreases were seen in the uninsured rates between 2013 and 2016 in states with a state-based Marketplace, a partnership Marketplace, and a Federally Facilitated Marketplace. For all three state Health Insurance Marketplace types, the rates of uninsurance and private coverage at the time of interview among adults aged 18–64 did not change significantly between 2015 and 2016 (Figure 10).

Estimates of enrollment in HDHPs and CDHPs

In 2016, 39.4% of persons under age 65 with private health insurance were enrolled in an HDHP, including 15.5% who were enrolled in a CDHP (an HDHP with a health savings account [HSA]) and 23.9% who were enrolled in an HDHP without an HSA (Figure 11) (see Technical Notes for definitions of HDHP, CDHP, and HSA). Among those with private insurance, enrollment in HDHPs has generally increased since 2010. The percentage who were enrolled in an HDHP increased more than 14 percentage points, from 25.3% in 2010 to 39.4% in 2016. More recently, the percentage who were enrolled in an HDHP increased, from 36.7% in 2015 to 39.4% in 2016. The percentage who were enrolled in a CDHP doubled, from 7.7% in 2010 to 15.5% in 2016. More recently, the percentage who were enrolled in a CDHP increased, from 13.3% in 2015 to 15.5% in 2016.

Figure 10. Percentage of adults aged 18–64 who were uninsured or had private coverage at the time of interview, by year and state Health Insurance Marketplace type: United States, 2013–2016
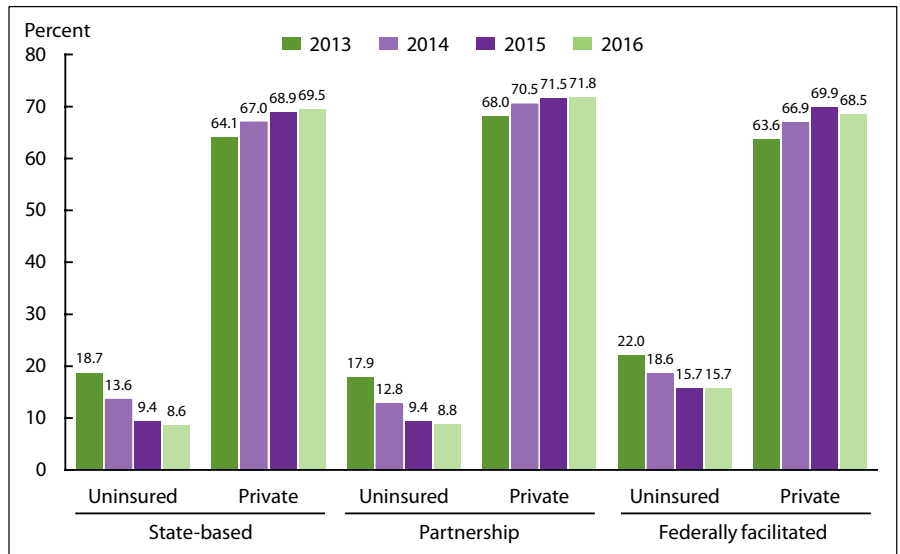
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2013–2016, Family Core component.

Figure 11. Percentage of persons under age 65 enrolled in a high-deductible health plan without a health savings account or in a consumer-directed health plan, among those with private health insurance coverage: United States, 2010–2016
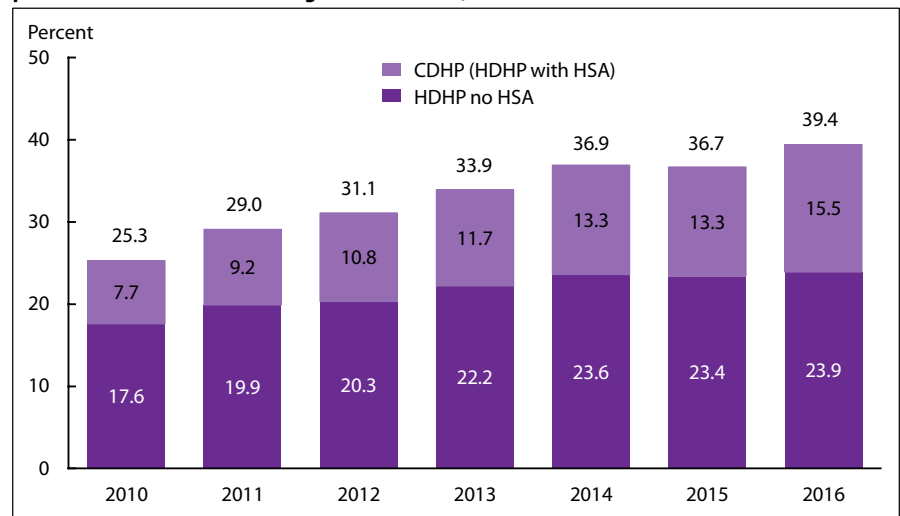
NOTES: CDHP is consumer-directed health plan, which is a high-deductible health plan (HDHP) with a health savings account (HSA). HDHP no HSA is a high-deductible health plan without an HSA. The individual components of HDHPs may not add up to the total due to rounding. Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Health insurance coverage in selected states

State-specific health insurance estimates for persons aged 18–64 in 2016 are presented for 45 states (Figure 12). Among these 45 states presented for 2016, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maryland, Massachusetts, Michigan, Minnesota, New York, Ohio, Pennsylvania, Rhode Island, Washington, and Wisconsin had significantly lower percentages of uninsured adults than the national average (12.4%). Florida, Georgia, Idaho, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, and Texas had significantly higher percentages of uninsured adults than the national average. Among the 45 states presented in this report, only California had a significant decrease in the percentage of adults aged 18–64 who were uninsured between 2015 (11.1%) and 2016 (9.5%).

Figure 12. Uninsured at the time of interview—Comparisons of states and national percentages for adults aged 18–64: United States, 2016
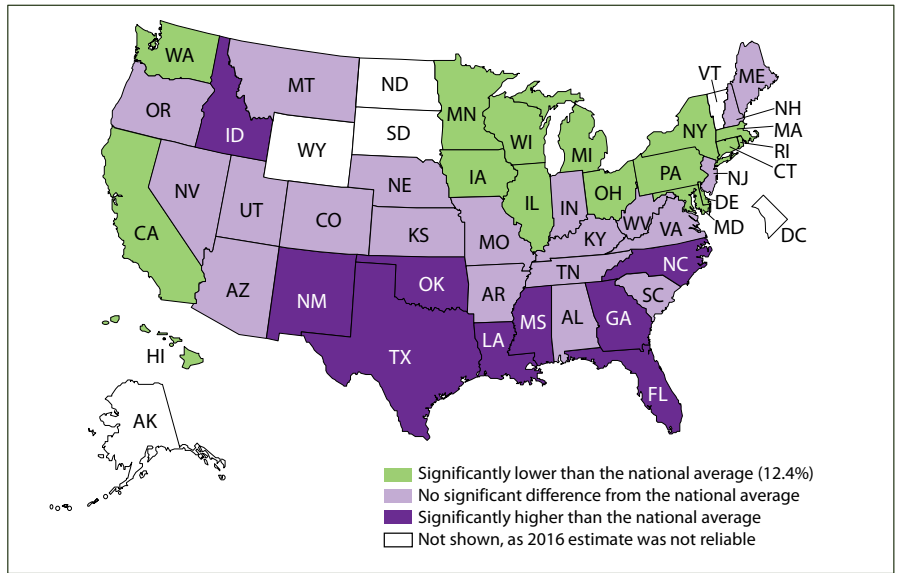
NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.
SOURCE: NCHS, National Health Interview Survey, 2016, Family Core component.

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Technical Notes

The National Center for Health Statistics (NCHS) is releasing selected estimates of health insurance coverage for the civilian noninstitutionalized U.S. population based on data from the 2016 National Health Interview Survey (NHIS), along with comparable estimates from previous calendar years.

To reflect different policy-relevant perspectives, three measures of lack of health insurance coverage are provided: (a) uninsured at the time of interview, (b) uninsured for at least part of the year prior to interview (which also includes persons uninsured for more than 1 year), and (c) uninsured for more than 1 year at the time of interview. The three time frames are defined as:

- *Uninsured at the time of interview* provides an estimate of persons who, at the given time, may have experienced barriers to obtaining needed health care.

- *Uninsured for at least part of the past year* provides an annual caseload of persons who may experience barriers to obtaining needed health care. This measure includes persons who have insurance at the time of interview but who had a period of noncoverage in the year prior to interview, as well as those who are currently uninsured and who may have been uninsured for a long period of time.

- *Uninsured for more than 1 year* provides an estimate of those with a persistent lack of coverage who may be at high risk of not obtaining preventive services or care for illness and injury.

These three measures are not mutually exclusive, and a given individual may be counted in more than one of the measures. Estimates of enrollment in public and private coverage are also provided.

Persons who were uninsured at the time of interview were asked the following question (HILAST): *Not including Single Service Plans, about how long has it been since [you/Alias] last had health care coverage?* In 2016, the answer categories for the HILAST questions were modified to align NHIS responses to

those of other national federal surveys. Therefore, 2016 estimates of "uninsured for at least part of the past year" and "uninsured for more than 1 year" may not be completely comparable to previous years. Prior to 2016, the answer categories for the HILAST question were: 6 months or less; More than 6 months, but not more than 1 year ago; More than 1 year, but not more than 3 years ago; More than 3 years; and Never. Beginning in 2016, the answer categories for the HILAST question are: 6 months or less; More than 6 months, but less than 1 year; 1 year; More than 1 year, but less than 3 years; 3 years or more; and Never.

This report also includes estimates for three types of consumer-directed private health care. Consumer-directed health care may enable individuals to have more control over when and how they access care, what types of care they use, and how much they spend on health care services. National attention to consumer-directed health care increased following enactment of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (P.L. 108–173), which established tax-advantaged health savings accounts (HSAs) (1). In 2007, three questions were added to the health insurance section of NHIS to monitor enrollment in consumer-directed health care among persons with private health insurance. Estimates are provided for enrollment in high-deductible health plans (HDHPs), plans with high deductibles coupled with HSAs (i.e., consumer-directed health plans or CDHPs), and being in a family with a flexible spending account (FSA) for medical expenses not otherwise covered. For a more complete description of consumer-directed health care, see "Definitions of selected terms."

The 2016 health insurance estimates are being released prior to final data editing and final weighting to provide access to the most recent information from NHIS. Differences between estimates calculated using preliminary data files and final data files are typically less than 0.1 percentage point. However, preliminary estimates of persons without health insurance coverage are generally 0.1–0.3 percentage points lower than the final estimates due

to the editing procedures used for the final data files.

Estimates for 2016 are stratified by age group, sex, race and ethnicity, poverty status, marital status, employment status, region, and educational attainment.

Data source

NHIS is a multistage probability sample survey of the civilian noninstitutionalized population of the United States and is the source of data for this report. The survey is conducted continuously throughout the year by NCHS through an agreement with the U.S. Census Bureau.

NHIS is a comprehensive health survey that can be used to relate health insurance coverage to health outcomes and health care utilization. It has a low item nonresponse rate (about 1%) for the health insurance questions. Because NHIS is conducted throughout the year—yielding a nationally representative sample each month—data can be analyzed monthly or quarterly to monitor health insurance coverage trends.

A new sample design was implemented with the 2016 NHIS. Sample areas were reselected to take into account changes in the distribution of the U.S. population since 2006, when the previous sample design was first implemented. Commercial address lists were used as the main source of addresses, rather than field listing; and the oversampling procedures for black, Hispanic, and Asian persons that were a feature of the previous sample design were not implemented in 2016. Some of the differences between estimates for 2016 and estimates for earlier years may be attributable to the new sample design. Visit the NCHS website at https://www.cdc.gov/nchs/nhis.htm for more information on the design, content, and use of NHIS.

The data for this report are derived from the Family Core component of the 1997–2016 NHIS, which collects information on all family members in each household. Data analyses for the 2016 NHIS were based on 97,459 persons in the Family Core.

Data on health insurance status were edited using a system of logic

checks. Information from follow-up questions, such as plan name(s), were used to reassign insurance status and type of coverage to avoid misclassification. The analyses excluded persons with unknown health insurance status (about 1% of respondents each year).

Data points for all figures can be found in the detailed appendix tables at the end of this report, appendix tables from previous reports, and quarterly tables available separately through the Early Release (ER) program.

Estimation procedures

NCHS creates survey weights for each calendar quarter of the NHIS sample. The NHIS data weighting procedure is described in more detail at: https://www.cdc.gov/nchs/data/series/sr _02/sr02_165.pdf. Estimates were calculated using NHIS survey weights, which are calibrated to census totals for sex, age, and race and ethnicity of the U.S. civilian noninstitutionalized population. Weights for 2010 and 2011 were derived from 2000 census-based population estimates. Beginning with 2012 NHIS data, weights were derived from 2010 census-based population estimates.

Point estimates and estimates of their variances were calculated using SUDAAN software (RTI International, Research Triangle Park, N.C.) to account for the complex sample design of NHIS, taking into account stratum and primary sampling unit (PSU) identifiers. The Taylor series linearization method was chosen for variance estimation.

Trends in coverage were generally assessed using Joinpoint regression (2), which characterizes trends as joined linear segments. A Joinpoint is the year where two segments with different slopes meet. Joinpoint software uses statistical criteria to determine the fewest number of segments necessary to characterize a trend and the year(s) when segments begin and end. Trends from 2010 through 2016 were also evaluated using logistic regression analysis.

State-specific health insurance estimates are presented for 45 states for persons of all ages, persons under age 65, and adults aged 18–64. State-specific estimates are presented for 36 states for children aged 0–17 years. Estimates are not presented for all 50 states and the District of Columbia due to considerations of sample size and precision. States with fewer than 1,000 interviews for persons of all ages are excluded. In addition, estimates for children in states that did not have at least 300 children with completed interviews are not presented.

For the 10 states with the largest populations (California, Florida, Georgia, Illinois, Michigan, New York, North Carolina, Ohio, Pennsylvania, and Texas), standard errors (SEs) were calculated using SUDAAN. Because of small sample size and limitations of the NHIS design, similarly estimated SEs for other states could be statistically unstable or negatively biased. Consequently, for states other than the largest 10 states, an estimated design effect was used to calculate SEs. For this report, the design effect, *deff*, of a percentage is the ratio of the sampling variance of the percentage (taking into account the complex NHIS sample design) to the sampling variance of the percentage from a simple random sample (SRS) based on the same observed number of persons.

Therefore, for each health insurance measure and domain, SEs for smaller states were calculated by multiplying the SRS SE by *A*, where *A* is the average value of the square root of *deff* over the 10 most populous states. Values of *A* ranged from 1.53 for children aged 0–17 who were uninsured to 2.52 for persons under 65 with private coverage.

Unless otherwise noted, all estimates shown meet the NCHS standard of having less than or equal to 30% relative standard error (RSE). Unless otherwise noted, differences between percentages or rates were evaluated using two-sided significance tests at the 0.05 level. All differences discussed are significant unless otherwise noted. Lack of comment regarding the difference between any two estimates does not necessarily mean that the difference was tested and found to be not significant.

Definitions of selected terms

Private health insurance coverage—Includes persons who had any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care.

Public health plan coverage—Includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plans, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

Uninsured—A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, CHIP, state-sponsored or other government-sponsored health plan, or military plan at the time of interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

Directly purchased coverage—Private insurance that was originally obtained through direct purchase or other means not related to employment.

Employment-based coverage—Private insurance that was originally obtained through a present or former employer, union, or professional association.

Exchange-based coverage—A private health insurance plan purchased through the Health Insurance Marketplace or state-based exchanges that were established as part of the Affordable Care Act (ACA) of 2010 (P.L. 111–148, P.L. 111–152). In response to ACA, several questions were added to NHIS to capture health care plans obtained through exchange-based coverage.

In general, if a family member is reported to have coverage through the exchange, that report is considered accurate unless there is other information (e.g., plan name or information about premiums) that clearly contradicts that report. Similarly, if a family member is not reported to have coverage through the exchange, that

report is considered accurate unless other information clearly contradicts that report. For a more complete discussion of the procedures used in classifying exchange-based coverage, see https://www.cdc.gov/nchs/nhis/insurance.htm.

Based on these classification procedures, an average of 4.1% (standard error [SE] 0.13) of persons under age 65, 4.7% (SE 0.15) of adults aged 18–64, 2.5% (SE 0.17) of children under age 18 years, and 3.2% (SE 0.16) of adults aged 19–25 had exchange-based private health insurance coverage in 2016. This equates to 11.2 million persons under age 65, 9.4 million adults aged 18–64, 1.8 million children, and 1.0 million adults aged 19–25. If these procedures had not been used and reports of coverage through the exchanges (or lack thereof) had been taken at face value, the estimates would have been higher. For example, an average of 5.2% (14.1 million) of persons under age 65 would have been reported to have obtained their coverage through exchanges in 2016.

High-deductible health plan (HDHP)—For persons with private health insurance, a question was asked regarding the annual deductible of each private health insurance plan. HDHP was defined in 2015 and 2016 as a private health plan with an annual deductible of at least $1,300 for self-only coverage or $2,600 for family coverage. The deductible is adjusted annually for inflation. For 2013 and 2014, the annual deductible was $1,250 for self-only coverage and $2,500 for family coverage. For 2010 through 2012, the annual deductible was $1,200 for self-only coverage and $2,400 for family coverage.

Consumer-directed health plan (CDHP)—An HDHP with a special account to pay for medical expenses. Unspent funds are carried over to subsequent years. For plans considered to be HDHPs, a follow-up question was asked regarding these special accounts. A person is considered to have a CDHP if there is a "yes" response to the following question: *With this plan, is there a special account or fund that can be used to pay for medical expenses? The accounts are sometimes referred to as Health Savings Accounts (HSAs), Health Reimbursement Accounts (HRAs), Personal Care accounts,*

Personal Medical funds, or Choice funds, and are different from Flexible Spending Accounts.

Health savings account (HSA)— A tax-advantaged account or fund that can be used to pay medical expenses. It must be coupled with an HDHP. The funds contributed to the account are not subject to federal income tax at the time of deposit. Unlike FSAs, HSA funds roll over and accumulate year to year if not spent. HSAs are owned by the individual. Funds may be used to pay qualified medical expenses at any time without federal tax liability. HSAs may also be referred to as Health Reimbursement Accounts (HRAs), Personal Care Accounts, Personal Medical funds, or Choice funds. The term "HSA" in this report includes accounts that use these alternative names.

Flexible spending account (FSA) for medical expenses—Persons are considered to be in a family with an FSA if there is a "yes" response to the following question: *[Do you/Does anyone in your family] have a Flexible Spending Account for health expenses? These accounts are offered by some employers to allow employees to set aside pretax dollars of their own money for their use throughout the year to reimburse themselves for their out-of-pocket expenses for health care. With this type of account, any money remaining in the account at the end of the year, following a short grace period, is lost to the employee.*

The measures of HDHP enrollment, CDHP enrollment, and being in a family with an FSA for medical expenses are not mutually exclusive; a person may be counted in more than one measure.

Medicaid expansion status— Under provisions of ACA, states have the option to expand Medicaid eligibility to cover adults who have income up to and including 138% of the federal poverty level. There is no deadline for states to choose to implement the Medicaid expansion, and they may do so at any time. As of October 31, 2013, 26 states and the District of Columbia were moving forward with Medicaid expansion. As of January 1, 2016, 32 states and the District of Columbia were moving forward with Medicaid expansion.

Health Insurance Marketplace— A resource where individuals, families,

and small businesses can learn about their health coverage options; compare health insurance plans based on cost, benefits, and other important features; choose a plan; and enroll in coverage. The Marketplace also provides information on programs that help people with low-to-moderate income and resources pay for coverage. There are three types of Health Insurance Marketplaces: (a) a state-based Marketplace set up and operated solely by the state; (b) a hybrid partnership Marketplace in which the state runs certain functions, makes key decisions, and may tailor the Marketplace to local needs and market conditions, but which is operated by the federal government; and (c) the Federally Facilitated Marketplace operated solely by the federal government.

Education—Categories are based on the years of school completed or highest degree obtained for persons aged 18 and over.

Employment—Employment status is assessed at the time of interview and is obtained for persons aged 18 and over. In this report, it is presented only for persons aged 18–64.

Hispanic or Latino origin and race—Hispanic or Latino origin and race are two separate and distinct categories. Persons of Hispanic or Latino origin may be of any race or combination of races. Hispanic or Latino origin includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or Spanish origin. Race is based on the family respondent's description of his or her own racial background, as well as the racial background of other family members. More than one race may be reported for a person. For conciseness, the text, tables, and figures in this report use shorter versions of the 1997 Office of Management and Budget terms for race and Hispanic or Latino origin. For example, the category "Not Hispanic or Latino, black or African American, single race" is referred to as "non-Hispanic black, single race" in the text, tables, and figures. Estimates for non-Hispanic persons of races other than white only, black only, and Asian only, or of multiple races, are combined into the "Other races and multiple races" category.

Poverty status—Poverty categories are based on the ratio of the

family's income in the previous calendar year to the appropriate poverty threshold (given the family's size and number of children), as defined by the U.S. Census Bureau for that year (3–11). Persons categorized as "Poor" have a ratio less than 1.0 (i.e., their family income is below the poverty threshold); "Near-poor" persons have incomes of 100% to less than 200% of the poverty threshold; and "Not-poor" persons have incomes that are 200% of the poverty threshold or greater. The remaining group of respondents is coded as "Unknown" with respect to poverty status. The percentage of respondents with unknown poverty status (19.1% in 1997, 28.9% in 2005, 12.2% in 2010, 11.5% in 2011, 11.4% in 2012, 10.2% in 2013, 8.8% in 2014, 8.8% in 2015, and 7.8% in 2016) is disaggregated by age and insurance status in Tables IV, V, and VI.

For more information on unknown income and unknown poverty status, see the NHIS Survey Description documents for 1997–2015 (available from: https://www.cdc.gov/nchs/nhis/quest _data_related_1997_forward.htm).

NCHS imputes income for approximately 30% of NHIS records. The imputed income files are released a few months after the annual release of NHIS microdata and are not available for the ER updates. Therefore, ER health insurance estimates stratified by poverty status are based on reported income only and may differ from similar estimates produced later (e.g., in *Health, United States* [12]) that are based on both reported and imputed income.

Region—In the geographic classification of the U.S. population, states are grouped into the following four regions used by the U.S. Census Bureau:

Region	States included
Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont
Midwest	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
South	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
West	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

Expanded regions—Based on a subdivision of the four regions into nine divisions. For this report, the nine Census divisions were modified by moving Delaware, the District of Columbia, and Maryland into the Middle Atlantic division. This approach was used previously by Holahan et al. (13).

Additional Early Release Program Products

Two additional periodical reports are published through the NHIS ER Program. *Early Release of Selected Estimates Based on Data From the National Health Interview Survey* (14) is published quarterly and provides estimates of 15 selected measures of health, including insurance coverage. Other measures of health include estimates of having a usual place to go for medical care, obtaining needed medical care, influenza vaccination, pneumococcal vaccination, obesity, leisure-time physical activity, current smoking, alcohol consumption, HIV testing, general health status, personal care needs, serious psychological distress, diagnosed diabetes, and asthma episodes and current asthma.

Wireless Substitution: Early Release of Estimates From the National Health Interview Survey (15) is published semiannually and provides selected estimates of telephone coverage in the United States.

Other ER reports and tabulations on special topics are released on an as-needed basis; see https://www.cdc.gov/nchs/nhis/releases. htm.

In addition to these reports, preliminary microdata files containing selected NHIS variables are produced as part of the ER Program. For each data collection year (January through December), these variables are made available four times approximately 5–6 months following the completion of data collection. NHIS data users can analyze these files through the NCHS Research Data Centers (https://www.cdc.gov/rdc/) without having to wait for the final annual NHIS microdata files to be released.

New measures and products may be added as work continues and in response to changing data needs. Feedback on these releases is welcome (nhislist@cdc.gov).

Announcements about ERs, other new data releases, and publications, as well as corrections related to NHIS, will be sent to members of the HISUSERS electronic mailing list. To join, visit the CDC website at: https://www.cdc.gov/ nchs/products/nchs_listservs.htm, click on the "National Health Interview Survey (NHIS) researchers" button, and follow the directions on the page.

Suggested Citation

Cohen RA, Zammitti EP, Martinez ME. Health insurance coverage: Early release of estimates from the National Health Interview Survey, 2016. National Center for Health Statistics. May 2017. Available from: https://www.cdc.gov/nchs/nhis/ releases.htm.

Table I. Percentages (and standard errors) of persons who lacked health insurance coverage at the time of interview, for at least part of the past year, and for more than 1 year, by age group and selected years: United States, 1997–2016

Age group and year	Uninsured[1] at time of interview	Uninsured[1] for at least part of the past year[2]	Uninsured[1] for more than 1 year[2]
All ages			
1997	15.4 (0.21)	19.5 (0.24)	10.4 (0.18)
2005	14.2 (0.21)	17.6 (0.23)	10.0 (0.18)
2010	16.0 (0.27)	19.8 (0.29)	11.7 (0.22)
2011	15.1 (0.25)	19.2 (0.29)	11.2 (0.21)
2012	14.7 (0.23)	18.6 (0.27)	11.1 (0.22)
2013	14.4 (0.26)	17.8 (0.27)	10.7 (0.23)
2014	11.5 (0.23)	16.5 (0.25)	8.4 (0.19)
2015	9.1 (0.19)	13.2 (0.23)	6.2 (0.15)
2016	9.0 (0.27)	12.5 (0.29)	5.2 (0.23)
Under 65 years			
1997	17.4 (0.24)	21.9 (0.28)	11.8 (0.21)
2005	16.0 (0.24)	19.9 (0.26)	11.3 (0.21)
2010	18.2 (0.30)	22.5 (0.33)	13.3 (0.24)
2011	17.3 (0.29)	21.8 (0.33)	12.7 (0.25)
2012	16.9 (0.27)	21.3 (0.31)	12.7 (0.24)
2013	16.6 (0.30)	20.4 (0.32)	12.4 (0.27)
2014	13.3 (0.26)	19.0 (0.29)	9.7 (0.22)
2015	10.5 (0.22)	15.3 (0.27)	7.2 (0.17)
2016	10.4 (0.31)	14.5 (0.33)	6.1 (0.26)
0–17 years			
1997	13.9 (0.36)	18.1 (0.41)	8.4 (0.29)
2005	8.9 (0.29)	12.6 (0.33)	5.3 (0.24)
2010	7.8 (0.32)	11.6 (0.37)	4.5 (0.23)
2011	7.0 (0.27)	10.9 (0.36)	3.7 (0.19)
2012	6.6 (0.27)	10.4 (0.35)	3.7 (0.19)
2013	6.5 (0.26)	10.0 (0.33)	3.6 (0.20)
2014	5.5 (0.27)	9.4 (0.40)	3.0 (0.19)
2015	4.5 (0.24)	7.7 (0.32)	2.3 (0.16)
2016	5.1 (0.31)	8.0 (0.31)	2.2 (0.22)
18–64 years			
1997	18.9 (0.23)	23.6 (0.26)	13.3 (0.21)
2005	18.9 (0.26)	22.8 (0.28)	13.8 (0.23)
2010	22.3 (0.35)	26.7 (0.37)	16.8 (0.30)
2011	21.3 (0.34)	26.0 (0.37)	16.3 (0.31)
2012	20.9 (0.31)	25.5 (0.34)	16.2 (0.29)
2013	20.4 (0.37)	24.4 (0.38)	15.7 (0.34)
2014	16.3 (0.31)	22.6 (0.34)	12.3 (0.27)
2015	12.8 (0.27)	18.1 (0.33)	9.1 (0.22)
2016	12.4 (0.36)	17.0 (0.38)	7.6 (0.31)
19–25 years			
1997	31.4 (0.63)	39.2 (0.67)	20.8 (0.51)
2005	31.2 (0.65)	37.9 (0.68)	21.6 (0.54)
2010	33.9 (0.73)	41.7 (0.78)	24.1 (0.61)
2011	27.9 (0.71)	36.1 (0.77)	20.1 (0.61)
2012	26.4 (0.72)	33.0 (0.72)	19.6 (0.62)
2013	26.5 (0.71)	31.3 (0.79)	19.8 (0.61)
2014	20.0 (0.65)	26.9 (0.73)	14.2 (0.56)
2015	15.8 (0.58)	22.2 (0.68)	10.2 (0.43)
2016	14.7 (0.71)	20.1 (0.78)	7.7 (0.61)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]In references to "part of the past year" and "more than 1 year," 1 year is defined as the 12 months prior to interview. In 2016, answer categories concerning the length of noncoverage were modified for those who were currently uninsured. Therefore, 2016 estimates of "uninsured for at least part of the past year" and "uninsured for more than 1 year" may not be completely comparable to previous years. For more information on this change, see Technical Notes.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table II. Numbers (in millions) of persons who lacked health insurance coverage at the time of interview, for at least part of the past year, and for more than 1 year, by age group and selected years: United States, 1997–2016

Age group and year	Uninsured[1] at time of interview	Uninsured[1] for at least part of the past year[2]	Uninsured[1] for more than 1 year[2]
All ages			
1997	41.0	51.9	27.7
2005	41.2	51.3	29.2
2010	48.6	60.3	35.7
2011	46.3	58.7	34.2
2012	45.5	57.5	34.1
2013	44.8	55.4	33.4
2014	36.0	51.6	26.3
2015	28.6	41.7	19.6
2016	28.6	39.9	16.7
Under 65 years			
1997	40.7	51.4	27.6
2005	41.0	50.9	29.0
2010	48.2	59.6	35.4
2011	45.9	58.0	33.9
2012	45.2	56.8	33.9
2013	44.3	54.7	33.1
2014	35.7	50.8	26.1
2015	28.4	41.1	19.4
2016	28.2	39.3	16.5
0–17 years			
1997	9.9	12.9	6.0
2005	6.5	9.3	3.9
2010	5.8	8.7	3.4
2011	5.2	8.1	2.7
2012	4.9	7.7	2.7
2013	4.8	7.3	2.6
2014	4.0	6.9	2.2
2015	3.3	5.7	1.7
2016	3.8	5.9	1.6
18–64 years			
1997	30.8	38.5	21.7
2005	34.5	41.7	25.2
2010	42.5	51.0	32.0
2011	40.7	49.9	31.2
2012	40.3	49.2	31.2
2013	39.6	47.4	30.5
2014	31.7	44.0	23.9
2015	25.1	35.5	17.8
2016	24.5	33.4	14.9
19–25 years			
1997	7.7	9.7	5.1
2005	8.8	10.7	6.1
2010	10.0	12.3	7.1
2011	8.4	10.8	6.0
2012	7.9	9.9	5.9
2013	8.0	9.5	6.0
2014	6.0	8.1	4.3
2015	4.8	6.7	3.1
2016	4.4	6.0	2.3

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]In references to "part of the past year" and "more than 1 year," 1 year is defined as the 12 months prior to interview. In 2016, answer categories concerning the length of noncoverage were modified for those who were currently uninsured. Therefore, 2016 estimates of "uninsured for at least part of the past year" and "uninsured for more than 1 year" may not be completely comparable to previous years. For more information on this change, see Technical Notes.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table III. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and selected years: United States, 1997–2016

Age group and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
All ages			
1997	15.4 (0.21)	23.3 (0.27)	70.7 (0.32)
2005	14.2 (0.21)	26.4 (0.30)	67.3 (0.37)
2010	16.0 (0.27)	31.4 (0.39)	60.2 (0.48)
2011	15.1 (0.25)	32.4 (0.37)	60.1 (0.48)
2012	14.7 (0.23)	33.4 (0.35)	59.6 (0.43)
2013	14.4 (0.26)	33.8 (0.36)	59.5 (0.49)
2014	11.5 (0.23)	34.6 (0.37)	61.8 (0.45)
2015	9.1 (0.19)	35.6 (0.42)	63.2 (0.46)
2016	9.0 (0.27)	36.8 (0.36)	62.5 (0.44)
Under 65 years			
1997	17.4 (0.24)	13.6 (0.25)	70.8 (0.35)
2005	16.0 (0.24)	16.8 (0.29)	68.4 (0.39)
2010	18.2 (0.30)	22.0 (0.38)	61.2 (0.50)
2011	17.3 (0.29)	23.0 (0.37)	61.2 (0.51)
2012	16.9 (0.27)	23.5 (0.37)	61.0 (0.47)
2013	16.6 (0.30)	23.8 (0.35)	61.0 (0.52)
2014	13.3 (0.26)	24.5 (0.36)	63.6 (0.46)
2015	10.5 (0.22)	25.3 (0.43)	65.6 (0.50)
2016	10.4 (0.31)	26.3 (0.41)	65.0 (0.48)
0–17 years			
1997	13.9 (0.36)	21.4 (0.48)	66.2 (0.57)
2005	8.9 (0.29)	29.9 (0.56)	62.4 (0.60)
2010	7.8 (0.32)	39.8 (0.73)	53.8 (0.75)
2011	7.0 (0.27)	41.0 (0.74)	53.3 (0.76)
2012	6.6 (0.27)	42.1 (0.72)	52.8 (0.73)
2013	6.5 (0.26)	42.2 (0.70)	52.6 (0.76)
2014	5.5 (0.27)	42.2 (0.65)	53.7 (0.68)
2015	4.5 (0.24)	42.2 (0.79)	54.7 (0.78)
2016	5.1 (0.31)	43.0 (0.65)	53.8 (0.71)
18–64 years			
1997	18.9 (0.23)	10.2 (0.20)	72.8 (0.30)
2005	18.9 (0.26)	11.5 (0.22)	70.9 (0.36)
2010	22.3 (0.35)	15.0 (0.30)	64.1 (0.46)
2011	21.3 (0.34)	15.9 (0.29)	64.2 (0.45)
2012	20.9 (0.31)	16.4 (0.29)	64.1 (0.42)
2013	20.4 (0.37)	16.7 (0.30)	64.2 (0.47)
2014	16.3 (0.31)	17.7 (0.32)	67.3 (0.43)
2015	12.8 (0.27)	18.9 (0.36)	69.7 (0.43)
2016	12.4 (0.36)	20.0 (0.38)	69.2 (0.41)
19–25 years			
1997	31.4 (0.63)	11.2 (0.46)	58.4 (0.71)
2005	31.2 (0.65)	12.9 (0.51)	56.5 (0.79)
2010	33.9 (0.73)	15.7 (0.55)	51.0 (0.84)
2011	27.9 (0.71)	16.8 (0.60)	56.2 (0.85)
2012	26.4 (0.72)	17.5 (0.59)	57.2 (0.85)
2013	26.5 (0.71)	16.1 (0.54)	58.1 (0.84)
2014	20.0 (0.65)	19.1 (0.64)	61.9 (0.88)
2015	15.8 (0.58)	19.5 (0.68)	65.7 (0.81)
2016	14.7 (0.71)	21.9 (0.79)	64.7 (0.88)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table IV. Percentages (and standard errors) of persons under age 65 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by poverty status and selected years: United States, 1997–2016

Poverty status[1] and year	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
Poor (< 100% FPL)			
1997	32.7 (0.80)	46.1 (1.01)	22.9 (0.93)
2005	28.4 (0.78)	50.6 (0.98)	22.1 (0.89)
2010	29.5 (0.83)	56.0 (0.98)	15.5 (0.70)
2011	28.2 (0.66)	56.2 (0.82)	16.6 (0.77)
2012	28.3 (0.65)	57.1 (0.83)	16.1 (0.83)
2013	27.3 (0.68)	59.0 (0.81)	14.7 (0.72)
2014	22.3 (0.66)	62.1 (0.80)	16.6 (0.69)
2015	17.2 (0.63)	65.6 (0.87)	18.5 (0.78)
2016	18.7 (0.94)	66.8 (1.01)	16.2 (0.71)
Near poor (≥ 100% and < 200% FPL)			
1997	30.4 (0.70)	18.2 (0.56)	53.5 (0.80)
2005	28.6 (0.63)	30.0 (0.72)	43.2 (0.89)
2010	32.3 (0.69)	36.2 (0.63)	33.2 (0.77)
2011	30.4 (0.58)	37.7 (0.73)	33.5 (0.75)
2012	29.5 (0.56)	37.1 (0.66)	35.2 (0.75)
2013	29.3 (0.70)	39.1 (0.77)	33.4 (0.79)
2014	23.5 (0.60)	41.1 (0.74)	37.3 (0.81)
2015	18.2 (0.51)	45.1 (0.77)	39.1 (0.77)
2016	17.6 (0.63)	49.2 (0.89)	35.4 (0.85)
Not poor (≥ 200% FPL)			
1997	8.9 (0.22)	5.3 (0.19)	87.6 (0.27)
2005	9.1 (0.22)	7.4 (0.22)	84.7 (0.30)
2010	10.7 (0.24)	9.7 (0.28)	81.0 (0.36)
2011	10.1 (0.25)	9.9 (0.26)	81.4 (0.36)
2012	9.8 (0.23)	10.3 (0.33)	81.3 (0.39)
2013	9.6 (0.24)	10.5 (0.29)	81.2 (0.39)
2014	7.6 (0.20)	9.9 (0.28)	83.7 (0.36)
2015	6.6 (0.19)	10.6 (0.31)	84.1 (0.38)
2016	6.4 (0.23)	11.2 (0.21)	83.9 (0.32)
Unknown			
1997	21.6 (0.59)	13.2 (0.49)	66.7 (0.71)
2005	18.5 (0.48)	16.4 (0.48)	66.2 (0.68)
2010	22.7 (0.95)	21.0 (0.69)	57.3 (1.08)
2011	21.0 (0.64)	26.2 (0.95)	53.9 (1.09)
2012	20.4 (0.73)	28.8 (0.89)	52.1 (1.00)
2013	20.5 (0.76)	24.2 (0.94)	56.8 (1.24)
2014	15.0 (0.80)	22.2 (0.91)	64.1 (1.24)
2015	11.9 (0.80)	24.4 (1.16)	64.9 (1.20)
2016	13.2 (1.01)	27.0 (1.04)	61.6 (1.26)

[1]FPL is federal poverty level, based on family income and family size, using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those with incomes below the poverty threshold; "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold; and "Not poor" persons have incomes of 200% of the poverty threshold or greater. For more information on the "Unknown" poverty status category, see Technical Notes. Estimates may differ from estimates that are based on both reported and imputed income.

[2]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[4]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table V. Percentages (and standard errors) of adults aged 18–64 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by poverty status and selected years: United States, 1997–2016

Poverty status[1] and year	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
Poor (< 100% FPL)			
1997	40.2 (0.88)	34.3 (0.93)	26.8 (1.09)
2005	38.5 (0.95)	35.6 (0.98)	26.8 (1.03)
2010	42.2 (0.99)	38.8 (0.97)	19.6 (0.89)
2011	40.1 (0.92)	39.6 (0.93)	21.2 (1.02)
2012	40.1 (0.90)	40.8 (0.94)	20.2 (1.09)
2013	39.3 (1.00)	42.4 (0.95)	19.0 (0.97)
2014	32.3 (0.93)	46.6 (0.95)	21.9 (0.92)
2015	25.2 (0.90)	51.7 (1.08)	24.3 (1.04)
2016	26.2 (1.31)	53.7 (1.29)	21.6 (0.92)
Near poor (≥ 100% and < 200% FPL)			
1997	34.9 (0.71)	14.6 (0.51)	52.6 (0.76)
2005	36.6 (0.73)	20.0 (0.61)	45.0 (0.85)
2010	43.0 (0.74)	23.7 (0.55)	34.7 (0.74)
2011	40.1 (0.72)	25.9 (0.69)	35.4 (0.75)
2012	39.2 (0.68)	25.2 (0.57)	37.2 (0.74)
2013	38.5 (0.84)	26.6 (0.78)	36.4 (0.78)
2014	30.9 (0.72)	29.6 (0.76)	41.2 (0.81)
2015	24.1 (0.62)	34.2 (0.80)	43.8 (0.79)
2016	23.2 (0.76)	38.5 (0.91)	40.3 (0.95)
Not poor (≥ 200% FPL)			
1997	9.9 (0.22)	5.0 (0.18)	87.1 (0.26)
2005	10.7 (0.24)	6.2 (0.20)	84.4 (0.29)
2010	12.6 (0.27)	8.1 (0.27)	80.8 (0.36)
2011	12.0 (0.28)	8.3 (0.23)	81.1 (0.35)
2012	11.4 (0.26)	8.7 (0.29)	81.3 (0.38)
2013	11.4 (0.27)	8.9 (0.26)	81.2 (0.37)
2014	8.9 (0.23)	8.5 (0.26)	83.9 (0.35)
2015	7.6 (0.22)	9.1 (0.27)	84.7 (0.33)
2016	7.2 (0.25)	9.6 (0.22)	84.6 (0.29)
Unknown			
1997	22.9 (0.58)	10.1 (0.41)	68.6 (0.65)
2005	21.2 (0.52)	11.3 (0.36)	68.7 (0.61)
2010	27.1 (1.10)	15.6 (0.63)	58.4 (1.11)
2011	25.6 (0.77)	17.6 (0.73)	58.1 (0.96)
2012	25.7 (0.88)	18.9 (0.76)	56.9 (0.92)
2013	24.3 (0.87)	17.6 (0.77)	59.5 (1.11)
2014	17.2 (0.88)	17.2 (0.81)	67.0 (1.20)
2015	13.8 (0.82)	19.6 (0.94)	67.7 (1.09)
2016	14.6 (0.90)	21.6 (0.91)	65.6 (1.03)

[1]FPL is federal poverty level, based on family income and family size, using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those with incomes below the poverty threshold; "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold; and "Not poor" persons have incomes of 200% of the poverty threshold or greater. For more information on the "Unknown" poverty status category, see Technical Notes. Estimates may differ from estimates that are based on both reported and imputed income.

[2]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[4]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table VI. Percentages (and standard errors) of children aged 0–17 years who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by poverty status and selected years: United States, 1997–2016

Poverty status[1] and year	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
Poor (< 100% FPL)			
1997	22.4 (0.99)	62.1 (1.31)	17.5 (1.09)
2005	13.0 (0.92)	73.3 (1.32)	15.0 (1.10)
2010	10.2 (0.96)	82.0 (1.22)	9.2 (0.70)
2011	8.1 (0.62)	84.4 (0.87)	8.9 (0.72)
2012	7.5 (0.58)	85.9 (0.80)	8.8 (0.78)
2013	7.8 (0.62)	86.1 (0.88)	7.7 (0.69)
2014	5.9 (0.52)	87.3 (0.72)	8.0 (0.62)
2015	4.4 (0.47)	87.9 (0.86)	9.1 (0.81)
2016	6.5 (0.70)	88.0 (0.97)	7.4 (0.71)
Near poor (≥ 100% and < 200% FPL)			
1997	22.8 (0.96)	24.3 (0.93)	55.0 (1.15)
2005	14.7 (0.79)	47.3 (1.21)	40.0 (1.31)
2010	12.6 (0.73)	59.2 (1.16)	30.5 (1.18)
2011	11.5 (0.69)	60.8 (1.17)	29.9 (1.07)
2012	10.1 (0.70)	61.0 (1.30)	31.1 (1.18)
2013	10.6 (0.72)	64.4 (1.16)	27.3 (1.17)
2014	8.6 (0.65)	64.3 (1.23)	29.4 (1.19)
2015	6.7 (0.59)	66.4 (1.17)	29.8 (1.14)
2016	6.9 (0.62)	69.9 (1.11)	26.0 (1.01)
Not poor (≥ 200% FPL)			
1997	6.1 (0.33)	6.3 (0.32)	88.9 (0.43)
2005	4.6 (0.30)	10.7 (0.47)	85.6 (0.52)
2010	4.6 (0.29)	14.9 (0.57)	81.4 (0.61)
2011	4.0 (0.27)	15.0 (0.55)	82.1 (0.58)
2012	4.5 (0.31)	15.2 (0.62)	81.3 (0.64)
2013	4.0 (0.28)	15.6 (0.62)	81.2 (0.65)
2014	3.6 (0.28)	14.4 (0.56)	83.1 (0.58)
2015	3.3 (0.26)	15.5 (0.69)	82.1 (0.74)
2016	3.5 (0.27)	16.5 (0.52)	81.5 (0.58)
Unknown			
1997	18.3 (0.90)	21.4 (0.97)	61.7 (1.18)
2005	11.0 (0.66)	30.8 (1.05)	59.3 (1.16)
2010	8.8 (0.89)	38.1 (1.71)	53.7 (1.74)
2011	10.4 (0.76)	45.9 (1.70)	44.5 (1.66)
2012	8.2 (0.77)	51.8 (1.50)	41.2 (1.49)
2013	9.2 (1.00)	43.7 (2.16)	48.6 (2.20)
2014	8.0 (1.41)	37.9 (2.01)	54.8 (2.05)
2015	6.3 (1.36)	37.9 (2.33)	56.6 (2.24)
2016	8.9 (2.13)	43.6 (2.36)	49.3 (2.86)

[1]FPL is federal poverty level, based on family income and family size, using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those with incomes below the poverty threshold; "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold; and "Not poor" persons have incomes of 200% of the poverty threshold or greater. For more information on the "Unknown" poverty status category, see Technical Notes. Estimates may differ from estimates that are based on both reported and imputed income.

[2]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[4]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 1997, 2005, and 2010–2016, Family Core component.

Table VII. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and sex: United States, 2016

Age group and sex	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Age group (years)			
All ages	9.0 (0.27)	36.8 (0.36)	62.5 (0.44)
Under age 65	10.4 (0.31)	26.3 (0.41)	65.0 (0.48)
0–17	5.1 (0.31)	43.0 (0.65)	53.8 (0.71)
18–64	12.4 (0.36)	20.0 (0.38)	69.2 (0.41)
18–24	13.7 (0.58)	23.4 (0.76)	64.1 (0.82)
25–34	16.5 (0.50)	19.8 (0.59)	64.6 (0.59)
35–44	14.4 (0.56)	16.6 (0.57)	69.9 (0.64)
45–64	8.9 (0.32)	20.4 (0.43)	73.0 (0.45)
65 and over	0.8 (0.10)	95.9 (0.22)	48.3 (0.91)
19–25	14.7 (0.71)	21.9 (0.79)	64.7 (0.88)
Sex			
Male			
All ages	10.2 (0.30)	34.4 (0.37)	63.0 (0.41)
Under age 65	11.8 (0.34)	24.6 (0.40)	65.4 (0.46)
0–17	5.0 (0.31)	42.9 (0.67)	54.1 (0.76)
18–64	14.4 (0.42)	17.4 (0.38)	69.8 (0.41)
18–24	16.1 (0.70)	18.6 (0.76)	66.5 (0.92)
25–34	20.0 (0.59)	15.1 (0.64)	65.8 (0.66)
35–44	16.9 (0.75)	13.9 (0.64)	70.0 (0.83)
45–64	9.7 (0.43)	19.7 (0.52)	72.9 (0.51)
65 and over	0.7 (0.12)	95.3 (0.33)	48.7 (0.94)
19–25	17.3 (0.77)	16.4 (0.77)	67.6 (0.94)
Female			
All ages	7.7 (0.28)	39.1 (0.43)	61.9 (0.52)
Under age 65	9.1 (0.33)	27.9 (0.49)	64.6 (0.55)
0–17	5.3 (0.40)	43.0 (0.77)	53.6 (0.86)
18–64	10.5 (0.36)	22.5 (0.45)	68.6 (0.48)
18–24	11.3 (0.80)	28.1 (1.04)	61.8 (1.18)
25–34	13.2 (0.57)	24.4 (0.83)	63.4 (0.86)
35–44	12.1 (0.54)	19.2 (0.68)	69.8 (0.80)
45–64	8.1 (0.30)	21.1 (0.49)	73.1 (0.52)
65 and over	0.8 (0.13)	96.4 (0.21)	48.0 (1.00)
19–25	12.1 (0.92)	27.4 (1.08)	61.9 (1.28)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2016, Family Core component.

Table VIII. Percentages (and standard errors) of persons under age 65 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by race and ethnicity and year: United States, 2010–2016

Race and ethnicity and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Hispanic or Latino			
2010	31.9 (0.72)	32.0 (0.78)	36.6 (0.81)
2011	31.1 (0.68)	33.6 (0.74)	36.1 (0.82)
2012	30.4 (0.71)	34.0 (0.71)	36.4 (0.74)
2013	30.3 (0.66)	33.4 (0.62)	37.0 (0.76)
2014	25.2 (0.59)	34.6 (0.78)	41.2 (0.89)
2015	20.8 (0.56)	36.2 (0.84)	43.8 (0.81)
2016	19.3 (0.93)	37.1 (1.02)	44.9 (1.02)
Non-Hispanic white, single race			
2010	13.7 (0.30)	16.4 (0.42)	71.4 (0.57)
2011	13.0 (0.32)	17.1 (0.39)	71.4 (0.55)
2012	12.7 (0.28)	17.3 (0.39)	71.5 (0.51)
2013	12.1 (0.29)	17.9 (0.38)	71.6 (0.53)
2014	9.8 (0.25)	18.1 (0.41)	73.6 (0.50)
2015	7.4 (0.21)	18.9 (0.48)	75.4 (0.54)
2016	7.5 (0.24)	19.8 (0.40)	74.5 (0.42)
Non-Hispanic black, single race			
2010	20.8 (0.63)	36.3 (0.79)	44.6 (0.84)
2011	19.0 (0.51)	36.9 (0.83)	45.6 (0.85)
2012	17.9 (0.50)	38.2 (0.77)	45.4 (0.79)
2013	18.9 (0.51)	37.5 (0.92)	44.9 (1.01)
2014	13.5 (0.49)	40.3 (0.76)	47.7 (0.86)
2015	11.2 (0.48)	39.2 (1.01)	51.3 (1.02)
2016	11.7 (0.55)	40.0 (1.18)	50.1 (1.04)
Non-Hispanic Asian, single race			
2010	16.8 (0.76)	14.9 (0.98)	69.1 (1.17)
2011	16.0 (0.89)	17.6 (1.14)	67.0 (1.40)
2012	16.4 (0.93)	16.6 (0.85)	67.5 (1.24)
2013	13.8 (0.81)	17.5 (1.00)	69.4 (1.27)
2014	10.6 (0.61)	16.7 (0.86)	73.4 (1.01)
2015	6.7 (0.51)	18.0 (1.34)	75.9 (1.44)
2016	6.3 (0.60)	18.9 (1.26)	75.3 (1.18)
Non-Hispanic, other races and multiple races			
2010	22.4 (4.83)	30.3 (2.14)	48.7 (3.83)
2011	19.1 (1.78)	32.5 (1.60)	50.6 (1.89)
2012	16.4 (1.33)	35.8 (1.77)	50.8 (2.16)
2013	16.0 (1.17)	35.9 (1.75)	50.1 (1.97)
2014	12.8 (1.30)	36.2 (1.69)	52.7 (2.01)
2015	11.1 (1.00)	37.0 (1.86)	53.7 (1.99)
2016	12.6 (0.97)	37.3 (1.87)	52.7 (2.04)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table IX. Percentages (and standard errors) of adults aged 18–64 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by race and ethnicity and year: United States, 2010–2016

Race and ethnicity and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Hispanic or Latino			
2010	43.2 (0.91)	16.3 (0.64)	41.1 (0.85)
2011	42.2 (0.89)	18.1 (0.63)	40.3 (0.82)
2012	41.3 (0.89)	19.0 (0.64)	40.4 (0.73)
2013	40.6 (0.88)	18.0 (0.62)	42.1 (0.70)
2014	33.7 (0.76)	20.6 (0.73)	46.4 (0.86)
2015	27.7 (0.72)	23.0 (0.84)	50.0 (0.85)
2016	25.0 (1.20)	24.9 (1.15)	51.4 (1.08)
Non-Hispanic white, single race			
2010	16.4 (0.35)	12.8 (0.34)	72.2 (0.52)
2011	15.6 (0.35)	13.4 (0.31)	72.5 (0.48)
2012	15.1 (0.31)	13.7 (0.33)	72.7 (0.46)
2013	14.5 (0.34)	14.4 (0.32)	72.7 (0.49)
2014	11.6 (0.29)	14.6 (0.36)	75.3 (0.47)
2015	8.7 (0.25)	15.7 (0.42)	77.3 (0.47)
2016	8.6 (0.25)	16.6 (0.34)	76.6 (0.38)
Non-Hispanic black, single race			
2010	27.2 (0.75)	25.3 (0.70)	49.3 (0.81)
2011	24.8 (0.65)	26.2 (0.75)	50.5 (0.79)
2012	23.6 (0.61)	27.0 (0.68)	50.8 (0.75)
2013	24.9 (0.62)	26.6 (0.80)	50.0 (0.91)
2014	17.7 (0.60)	30.5 (0.73)	53.4 (0.84)
2015	14.4 (0.57)	29.7 (0.84)	57.8 (0.90)
2016	15.0 (0.62)	29.9 (1.06)	56.7 (0.95)
Non-Hispanic Asian, single race			
2010	19.5 (0.92)	11.2 (0.72)	70.2 (1.05)
2011	18.8 (0.96)	13.6 (0.87)	68.0 (1.27)
2012	19.1 (0.92)	13.2 (0.83)	68.2 (1.15)
2013	16.3 (0.88)	14.1 (0.91)	70.4 (1.28)
2014	12.5 (0.65)	13.7 (0.84)	74.5 (1.01)
2015	7.9 (0.58)	15.5 (1.16)	77.2 (1.27)
2016	7.5 (0.67)	16.2 (1.19)	76.8 (1.07)
Non-Hispanic, other races and multiple races			
2010	32.8 (5.76)	20.6 (1.94)	48.5 (4.77)
2011	27.1 (2.01)	23.6 (1.53)	52.1 (2.17)
2012	24.9 (1.78)	26.1 (1.62)	52.0 (2.24)
2013	23.8 (1.66)	26.8 (1.84)	51.6 (2.26)
2014	19.5 (1.65)	25.2 (1.51)	56.9 (2.06)
2015	16.1 (1.42)	29.0 (1.76)	56.9 (1.88)
2016	17.6 (1.29)	28.9 (1.64)	55.5 (2.13)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table X. Percentages (and standard errors) of adults aged 18–64 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by selected demographic characteristics: United States, 2016

Selected characteristic	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Race and ethnicity			
Hispanic or Latino	25.0 (1.20)	24.9 (1.15)	51.4 (1.08)
Non-Hispanic:			
White, single race	8.6 (0.25)	16.6 (0.34)	76.6 (0.38)
Black, single race	15.0 (0.62)	29.9 (1.06)	56.7 (0.95)
Asian, single race	7.5 (0.67)	16.2 (1.19)	76.8 (1.07)
Other races and multiple races	17.6 (1.29)	28.9 (1.64)	55.5 (2.13)
Region			
Northeast	7.7 (0.62)	21.6 (0.71)	72.7 (1.04)
Midwest	9.5 (0.36)	18.5 (0.60)	73.6 (0.73)
South	17.8 (0.70)	17.5 (0.55)	66.1 (0.79)
West	10.5 (0.36)	23.8 (0.85)	67.2 (0.81)
Education			
Less than high school	29.1 (1.07)	37.1 (0.99)	35.2 (0.98)
High school diploma or GED[4]	16.6 (0.47)	25.8 (0.53)	59.4 (0.56)
More than high school	7.5 (0.27)	14.4 (0.35)	79.6 (0.35)
Employment status			
Employed	11.4 (0.35)	11.6 (0.29)	77.9 (0.37)
Unemployed	32.3 (1.41)	38.1 (1.35)	30.3 (1.17)
Not in workforce	11.6 (0.51)	44.4 (0.71)	47.9 (0.65)
Poverty status[5]			
< 100% FPL	26.2 (1.31)	53.7 (1.29)	21.6 (0.92)
≥ 100% and ≤ 138% FPL	24.6 (1.19)	44.8 (1.50)	32.6 (1.43)
> 138% and ≤ 250% FPL	19.9 (0.59)	28.0 (0.62)	54.0 (0.65)
> 250% and ≤ 400% FPL	10.1 (0.50)	13.4 (0.44)	78.2 (0.61)
> 400% FPL	4.0 (0.21)	5.9 (0.25)	91.4 (0.25)
Unknown	13.2 (0.85)	18.7 (0.78)	69.7 (0.99)
Marital status			
Married	9.4 (0.37)	14.0 (0.37)	78.3 (0.43)
Widowed	13.2 (1.43)	37.1 (1.78)	53.2 (1.99)
Divorced or separated	14.8 (0.69)	30.5 (0.91)	56.8 (1.07)
Living with partner	19.5 (0.72)	26.1 (1.15)	55.5 (1.10)
Never married	15.0 (0.45)	25.2 (0.56)	61.0 (0.59)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

[4]GED is General Educational Development high school equivalency diploma.

[5]FPL is federal poverty level, based on family income and family size, using the U.S. Census Bureau's poverty thresholds. The percentage of respondents with "Unknown" poverty status for this five-level categorization is 8.9%. This value is greater than the corresponding value for the three-level poverty categorization of poor, near poor, and not poor, because of greater uncertainty when assigning individuals to more detailed poverty groups. For more information on poverty status, see Technical Notes. Estimates may differ from estimates that are based on both reported and imputed income.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2016, Family Core component.

Table XI. Percentages (and standard errors) of persons under age 65 with private health insurance coverage who were enrolled in a high-deductible health plan, in a high-deductible health plan without a health savings account, and in a consumer-directed health plan, and who were in a family with a flexible spending account for medical expenses, by year: United States, 2010–2016

Year	Enrolled in high-deductible health plan (HDHP)[1]	Enrolled in HDHP without health savings account (HSA)[2]	Enrolled in consumer-directed health plan (CDHP)[3]	In family with flexible spending account (FSA) for medical expenses
2010	25.3 (0.54)	17.6 (0.46)	7.7 (0.33)	20.4 (0.50)
2011	29.0 (0.54)	19.9 (0.41)	9.2 (0.35)	21.4 (0.53)
2012	31.1 (0.57)	20.3 (0.42)	10.8 (0.34)	21.6 (0.45)
2013	33.9 (0.68)	22.2 (0.48)	11.7 (0.43)	21.6 (0.48)
2014	36.9 (0.77)	23.6 (0.52)	13.3 (0.47)	21.2 (0.49)
2015	36.7 (0.68)	23.4 (0.50)	13.3 (0.42)	21.7 (0.51)
2016	39.4 (0.65)	23.9 (0.49)	15.5 (0.51)	22.1 (0.40)

[1]HDHP was defined in 2016 as a health plan with an annual deductible of at least $1,300 for self-only coverage and $2,600 for family coverage. The deductible is adjusted annually for inflation. Deductibles for previous years are included in the Technical Notes.

[2]HSA is a tax-advantaged account or fund that can be used to pay for medical expenses. It must be coupled with an HDHP.

[3]CDHP is an HDHP coupled with an HSA.

NOTES: The measures of HDHP enrollment, CDHP enrollment, and being in a family with an FSA for medical expenses are not mutually exclusive. Therefore, a person may be counted in more than one measure. The individual components of HDHPs may not add up to the total due to rounding. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table XII. Percentages (and standard errors) of persons under age 65 with private health insurance coverage who were enrolled in a high-deductible health plan, by year and source of coverage: United States, 2010–2016

Year	Employment based[1]	Directly purchased[2]
2010	23.3 (0.54)	48.0 (1.48)
2011	26.9 (0.53)	52.4 (1.49)
2012	29.2 (0.60)	54.7 (1.61)
2013	32.0 (0.67)	56.4 (1.50)
2014	36.2 (0.73)	54.1 (1.43)
2015	36.6 (0.72)	50.9 (1.50)
2016	39.6 (0.69)	51.9 (1.38)

[1]Private insurance that was originally obtained through a present or former employer or union, or through a professional association.

[2]Private insurance that was originally obtained through direct purchase or other means not related to employment.

NOTES: For persons under age 65, approximately 8% of private health plans were directly purchased from 2010 through 2013. In 2014 through 2016, approximately 10% of private plans were directly purchased. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table XIII. Percentages (and standard errors) of persons under age 65 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group, state Medicaid expansion status, and year: United States, 2010–2016

Age group, state Medicaid expansion status, and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Under 65 years			
Medicaid expansion states[4]			
2010	16.4 (0.42)	21.8 (0.54)	63.1 (0.70)
2011	15.3 (0.35)	23.1 (0.56)	62.9 (0.72)
2012	15.0 (0.34)	23.1 (0.50)	63.3 (0.63)
2013	14.9 (0.40)	24.1 (0.48)	62.3 (0.68)
2014	10.9 (0.29)	25.6 (0.49)	64.9 (0.59)
2015	8.2 (0.23)	26.7 (0.57)	66.4 (0.64)
2016	7.8 (0.24)	27.7 (0.53)	66.3 (0.60)
Non-Medicaid expansion states[5]			
2010	20.3 (0.48)	22.1 (0.51)	59.0 (0.76)
2011	19.6 (0.50)	22.7 (0.50)	59.1 (0.78)
2012	19.2 (0.45)	24.0 (0.55)	58.3 (0.75)
2013	18.4 (0.48)	23.4 (0.51)	59.6 (0.80)
2014	16.0 (0.44)	23.2 (0.52)	62.1 (0.76)
2015	14.0 (0.41)	23.2 (0.58)	64.4 (0.78)
2016	14.7 (0.56)	23.9 (0.58)	62.8 (0.84)
0–17 years			
Medicaid expansion states[4]			
2010	6.7 (0.46)	38.2 (1.05)	56.5 (1.06)
2011	5.9 (0.33)	40.2 (1.11)	55.4 (1.09)
2012	5.3 (0.32)	40.4 (1.00)	55.9 (1.07)
2013	5.6 (0.33)	41.3 (0.86)	54.5 (0.95)
2014	4.3 (0.33)	41.0 (0.84)	56.2 (0.88)
2015	3.8 (0.28)	41.1 (0.99)	56.7 (1.00)
2016	4.1 (0.33)	42.0 (0.92)	56.1 (0.97)
Non-Medicaid expansion states[5]			
2010	9.0 (0.47)	41.7 (0.99)	50.7 (1.08)
2011	8.3 (0.46)	42.0 (1.02)	50.9 (1.11)
2012	8.0 (0.46)	43.9 (1.11)	49.4 (1.07)
2013	7.5 (0.40)	43.1 (1.12)	50.5 (1.23)
2014	6.7 (0.43)	43.5 (1.06)	51.0 (1.11)
2015	5.5 (0.42)	43.7 (1.27)	52.0 (1.26)
2016	6.7 (0.52)	44.4 (1.02)	50.3 (1.20)
18–64 years			
Medicaid expansion states[4]			
2010	20.1 (0.47)	15.5 (0.40)	65.6 (0.62)
2011	18.9 (0.41)	16.6 (0.41)	65.8 (0.61)
2012	18.5 (0.39)	16.7 (0.38)	66.0 (0.53)
2013	18.4 (0.49)	17.7 (0.44)	65.2 (0.65)
2014	13.3 (0.34)	19.9 (0.46)	68.1 (0.56)
2015	9.8 (0.28)	21.5 (0.49)	70.0 (0.56)
2016	9.2 (0.25)	22.5 (0.41)	70.0 (0.49)
Non-Medicaid expansion states[5]			
2010	24.8 (0.58)	14.4 (0.45)	62.2 (0.70)
2011	24.1 (0.60)	15.1 (0.42)	62.3 (0.71)
2012	23.7 (0.54)	16.1 (0.44)	61.8 (0.69)
2013	22.7 (0.59)	15.6 (0.41)	63.2 (0.69)
2014	19.6 (0.54)	15.3 (0.41)	66.5 (0.69)
2015	17.5 (0.52)	14.9 (0.44)	69.4 (0.67)
2016	17.9 (0.69)	15.7 (0.50)	67.8 (0.78)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes

plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

[4]For 2010 through 2014, states moving forward with Medicaid expansion included: AZ, AR, CA, CO, CT, DE, DC, HI, IL, IA, KY, MD, MA, MI, MN, NV, NJ, NM, NY, ND, OH, OR, RI, VT, WA, and WV (as of October 31, 2013). Beginning with 2015, three additional states were included as expansion states: IN, NH, and PA. Beginning with 2016, three additional states were included as expansion states: AK, LA, and MT.

[5]For 2010 through 2014, states not moving forward with Medicaid expansion included: AL, AK, FL, GA, ID, IN, KS, LA, ME, MS, MO, MT, NE, NH, NC, OK, PA, SC, SD, TN, TX, UT, VA, WI, and WY (as of October 31, 2013). Beginning with 2015, three states have been removed from this grouping: IN, NH, and PA. Beginning with 2016, three additional states have been removed from this grouping: AK, LA, and MT.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table XIV. Percentages (and standard errors) of persons under age 65 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group, state Health Insurance Marketplace type, and year: United States, 2010–2016

Age group, state Health Insurance Marketplace type, and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
Under 65 years			
State-based Marketplace states[4]			
2010	16.3 (0.46)	21.6 (0.66)	63.2 (0.80)
2011	15.9 (0.46)	23.6 (0.70)	61.8 (0.88)
2012	15.2 (0.43)	24.2 (0.66)	61.8 (0.83)
2013	15.2 (0.48)	25.0 (0.56)	61.0 (0.83)
2014	11.1 (0.38)	26.4 (0.63)	63.7 (0.78)
2015	7.7 (0.30)	28.1 (0.80)	65.4 (0.92)
2016	7.3 (0.27)	28.4 (0.70)	65.9 (0.72)
Partnership Marketplace states[5]			
2010	14.7 (0.87)	22.5 (1.15)	64.8 (1.73)
2011	14.3 (0.71)	22.7 (1.28)	64.5 (1.72)
2012	14.1 (0.70)	20.8 (1.12)	66.7 (1.53)
2013	14.2 (0.83)	21.8 (1.07)	65.6 (1.42)
2014	10.2 (0.57)	24.4 (1.06)	67.2 (1.28)
2015	8.0 (0.59)	26.1 (1.20)	67.7 (1.42)
2016	7.0 (0.48)	26.3 (1.27)	68.8 (1.66)
Federally Facilitated Marketplace states[6]			
2010	20.1 (0.48)	22.1 (0.50)	59.1 (0.70)
2011	18.8 (0.45)	22.6 (0.47)	60.0 (0.71)
2012	18.6 (0.41)	23.6 (0.50)	59.3 (0.67)
2013	17.9 (0.44)	23.3 (0.49)	60.2 (0.74)
2014	15.3 (0.40)	23.3 (0.50)	62.8 (0.69)
2015	12.8 (0.33)	23.4 (0.54)	65.3 (0.66)
2016	13.1 (0.45)	24.8 (0.51)	63.6 (0.69)
0–17 years			
State-based Marketplace states[4]			
2010	6.7 (0.50)	38.0 (1.32)	56.4 (1.31)
2011	6.4 (0.47)	40.9 (1.43)	54.2 (1.39)
2012	5.4 (0.43)	42.2 (1.37)	53.9 (1.46)
2013	5.7 (0.37)	42.8 (1.05)	52.6 (1.18)
2014	4.2 (0.40)	42.0 (1.11)	54.9 (1.13)
2015	3.1 (0.34)	42.4 (1.32)	55.8 (1.41)
2016	3.6 (0.38)	42.7 (1.19)	55.8 (1.26)
Partnership Marketplace states[5]			
2010	4.1 (0.78)	40.7 (2.21)	57.9 (2.31)
2011	4.2 (0.53)	39.6 (2.44)	58.0 (2.39)
2012	3.6 (0.69)	38.5 (2.20)	59.9 (2.26)
2013	4.2 (0.53)	38.4 (1.95)	59.2 (2.08)
2014	3.2 (0.51)	40.8 (1.88)	58.4 (1.99)
2015	4.3 (0.73)	40.3 (2.53)	57.5 (2.34)
2016	2.0 (0.40)	40.4 (2.54)	60.5 (2.49)
Federally Facilitated Marketplace states[6]			
2010	9.2 (0.48)	40.7 (0.91)	51.3 (0.97)
2011	8.0 (0.40)	41.4 (0.93)	51.8 (1.01)
2012	7.9 (0.41)	42.7 (1.00)	50.8 (0.98)
2013	7.5 (0.39)	42.6 (1.02)	51.3 (1.11)
2014	6.6 (0.41)	42.6 (0.94)	52.0 (1.00)
2015	5.3 (0.35)	42.4 (1.06)	53.6 (1.04)
2016	6.6 (0.45)	43.6 (0.87)	51.5 (0.97)

See footnotes at end of table.

Table XIV. Percentages (and standard errors) of persons under age 65 who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age, state Health Insurance Marketplace type, and year: United States, 2010–2016—Continued

Age group, state Health Insurance Marketplace type, and year	Uninsured[1] at time of interview	Public health plan coverage[2]	Private health insurance coverage[3]
18–64 years			
State-based Marketplace states[4]			
2010	19.9 (0.52)	15.3 (0.48)	65.9 (0.68)
2011	19.5 (0.53)	17.1 (0.52)	64.7 (0.75)
2012	18.8 (0.50)	17.7 (0.49)	64.7 (0.69)
2013	18.7 (0.60)	18.4 (0.52)	64.1 (0.80)
2014	13.6 (0.45)	20.6 (0.57)	67.0 (0.75)
2015	9.4 (0.37)	22.9 (0.69)	68.9 (0.81)
2016	8.6 (0.30)	23.4 (0.58)	69.5 (0.58)
Partnership Marketplace states[5]			
2010	18.9 (1.12)	15.3 (0.90)	67.6 (1.59)
2011	18.4 (0.92)	15.9 (0.87)	67.1 (1.52)
2012	18.1 (0.85)	13.9 (0.79)	69.3 (1.36)
2013	17.9 (0.98)	15.7 (0.91)	68.0 (1.29)
2014	12.8 (0.68)	18.2 (0.98)	70.5 (1.22)
2015	9.4 (0.74)	20.8 (0.95)	71.5 (1.26)
2016	8.8 (0.59)	21.3 (0.88)	71.8 (1.41)
Federally Facilitated Marketplace states[6]			
2010	24.5 (0.56)	14.7 (0.43)	62.2 (0.66)
2011	23.0 (0.54)	15.1 (0.39)	63.3 (0.64)
2012	22.8 (0.48)	16.1 (0.41)	62.7 (0.61)
2013	22.0 (0.54)	15.9 (0.41)	63.6 (0.64)
2014	18.6 (0.49)	15.8 (0.41)	66.9 (0.63)
2015	15.7 (0.42)	16.0 (0.43)	69.9 (0.57)
2016	15.7 (0.54)	17.4 (0.46)	68.5 (0.63)

[1]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[2]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[3]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

[4]State-based Marketplace states: CA, CO, CT, DC, HI, ID, KY, MD, MA, MN, NV, NM, NY, OR, RI, VT, and WA (as of October 31, 2013).

[5]Partnership Marketplace states: AR, DE, IL, IA, MI, NH, and WV (as of October 31, 2013).

[6]Federally Facilitated Marketplace states: AL, AK, AZ, FL, GA, IN, KS, LA, ME, MS, MO, MT, NE, NJ, NC, ND, OH, OK, PA, SC, SD, TN, TX, UT, VA, WI, and WY (as of October 31, 2013).

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2010–2016, Family Core component.

Table XV. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and expanded region: United States, 2016

Age group and expanded region[1]	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
All ages			
All regions	9.0 (0.27)	36.8 (0.36)	62.5 (0.44)
New England	4.0 (0.50)	39.0 (1.56)	67.3 (1.01)
Middle Atlantic	6.2 (0.55)	37.1 (0.57)	66.1 (0.99)
East North Central	6.5 (0.31)	36.9 (0.89)	67.2 (1.06)
West North Central	7.4 (0.63)	30.8 (1.17)	71.5 (1.28)
South Atlantic	11.9 (0.38)	36.4 (0.98)	59.2 (0.82)
East South Central	9.2 (0.81)	41.6 (1.08)	57.9 (1.89)
West South Central	17.0 (1.29)	33.8 (0.77)	55.0 (1.28)
Mountain	9.7 (0.52)	37.2 (1.55)	60.1 (1.21)
Pacific	7.0 (0.29)	39.0 (1.09)	60.6 (1.18)
Under 65 years			
All regions	10.4 (0.31)	26.3 (0.41)	65.0 (0.48)
New England	4.7 (0.58)	27.3 (1.85)	70.6 (1.02)
Middle Atlantic	7.2 (0.65)	26.0 (0.87)	68.6 (1.29)
East North Central	7.6 (0.38)	25.6 (0.88)	68.7 (1.11)
West North Central	8.7 (0.70)	18.9 (1.24)	74.3 (1.35)
South Atlantic	14.0 (0.46)	24.7 (1.06)	62.5 (0.93)
East South Central	10.7 (0.94)	31.9 (1.67)	59.7 (1.90)
West South Central	19.3 (1.39)	24.5 (0.66)	57.4 (1.27)
Mountain	11.0 (0.58)	27.9 (1.45)	62.7 (1.37)
Pacific	8.0 (0.38)	29.9 (1.31)	63.6 (1.29)
0–17 years			
All regions	5.1 (0.31)	43.0 (0.65)	53.8 (0.71)
New England	1.3 (0.37)	41.6 (3.38)	61.0 (3.24)
Middle Atlantic	5.1 (0.88)	39.5 (1.79)	57.5 (1.83)
East North Central	3.3 (0.54)	38.2 (1.45)	60.9 (1.90)
West North Central	4.9 (0.80)	33.1 (2.77)	64.4 (2.40)
South Atlantic	5.3 (0.79)	46.4 (1.58)	49.2 (1.62)
East South Central	3.0 (0.65)	52.0 (2.56)	47.4 (2.58)
West South Central	9.6 (1.08)	48.6 (1.04)	43.3 (1.24)
Mountain	6.2 (0.95)	41.9 (1.38)	53.6 (1.43)
Pacific	4.2 (0.60)	44.8 (2.03)	52.9 (2.06)
18–64 years			
All regions	12.4 (0.36)	20.0 (0.38)	69.2 (0.41)
New England	5.9 (0.69)	22.6 (1.70)	73.7 (0.90)
Middle Atlantic	8.0 (0.69)	21.2 (0.58)	72.6 (1.16)
East North Central	9.2 (0.39)	20.9 (0.75)	71.6 (0.87)
West North Central	10.1 (0.82)	13.4 (0.91)	78.1 (1.24)
South Atlantic	17.2 (0.66)	16.8 (0.92)	67.4 (0.79)
East South Central	13.6 (1.18)	24.4 (1.34)	64.3 (1.71)
West South Central	23.3 (1.58)	14.4 (0.75)	63.3 (1.43)
Mountain	13.0 (0.56)	22.0 (1.46)	66.6 (1.29)
Pacific	9.4 (0.38)	24.5 (1.05)	67.4 (1.02)

[1]The New England region includes CT, ME, MA, NH, RI, and VT. The Middle Atlantic region includes: DE, DC, MD, NJ, NY, and PA. The East North Central region includes: IL, IN, MI, OH, and WI. The West North Central region includes: IA, KS, MN, MO, NE, ND, and SD. The South Atlantic region includes: FL, GA, NC, SC, VA, and WV. The East South Central region includes: AL, KY, MS, and TN. The West South Central region includes: AR, LA, OK, and TX. The Mountain region includes: AZ, CO, ID, MT, NV, NM, UT, and WY. The Pacific region includes: AK, CA, HI, OR, and WA.

[2]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[4]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2016, Family Core component.

Table XVI. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and selected states: United States, 2016

Age group and selected states[1]	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
All ages			
All states[5]	9.0 (0.27)	36.8 (0.36)	62.5 (0.44)
Alabama	10.0 (1.46)	35.5 (2.43)	61.2 (3.18)
Arizona	11.0 (1.43)	41.5 (2.36)	54.8 (3.07)
Arkansas	7.1 (1.28)	43.3 (2.59)	58.9 (3.31)
California	7.1 (0.27)	39.5 (1.39)	58.7 (1.44)
Colorado	7.7 (1.17)	39.7 (2.25)	59.4 (2.91)
Connecticut	3.9 (0.92)	41.6 (2.44)	62.2 (3.09)
Delaware	3.6 (0.95)	45.3 (2.67)	67.1 (3.24)
Florida	13.8 (0.58)	38.4 (1.38)	55.0 (1.45)
Georgia	12.9 (1.24)	31.8 (2.01)	60.2 (2.70)
Hawaii	2.7 (0.69)	41.6 (2.21)	66.8 (2.72)
Idaho	11.2 (1.39)	35.3 (2.20)	61.4 (2.88)
Illinois	5.7 (0.87)	34.9 (2.17)	70.5 (2.03)
Indiana	7.8 (1.14)	34.1 (2.10)	67.2 (2.68)
Iowa	3.7 (0.84)	37.0 (2.26)	68.5 (2.80)
Kansas	7.9 (1.29)	33.0 (2.35)	69.4 (2.96)
Kentucky	6.8 (1.25)	46.0 (2.59)	57.2 (3.31)
Louisiana	13.1 (1.70)	40.8 (2.59)	52.3 (3.39)
Maine	7.7 (1.47)	42.0 (2.84)	60.3 (3.63)
Maryland	5.6 (1.13)	35.8 (2.45)	69.0 (3.04)
Massachusetts	*2.6 (0.80)	41.2 (2.56)	68.4 (3.11)
Michigan	6.7 (0.71)	38.4 (2.84)	66.4 (2.71)
Minnesota	5.0 (0.90)	24.4 (1.87)	79.7 (2.25)
Mississippi	12.3 (1.62)	43.4 (2.55)	51.8 (3.31)
Missouri	9.4 (1.47)	32.9 (2.48)	67.7 (3.17)
Montana	9.3 (1.48)	44.7 (2.65)	55.7 (3.41)
Nebraska	10.2 (1.35)	27.1 (2.08)	72.6 (2.68)
Nevada	11.0 (1.36)	34.6 (2.17)	60.0 (2.87)
New Hampshire	7.2 (1.37)	33.6 (2.62)	72.7 (3.18)
New Jersey	7.2 (1.07)	37.1 (2.08)	64.4 (2.66)
New Mexico	11.3 (1.55)	51.6 (2.55)	43.9 (3.26)
New York	5.4 (0.49)	37.2 (0.42)	65.8 (0.82)
North Carolina	11.4 (1.07)	34.3 (2.34)	61.5 (2.92)
Ohio	6.3 (0.79)	40.2 (1.38)	63.7 (1.72)
Oklahoma	16.5 (1.71)	37.3 (2.33)	52.9 (3.09)
Oregon	8.3 (1.22)	36.4 (2.21)	64.4 (2.83)
Pennsylvania	7.2 (1.23)	37.1 (1.43)	66.0 (2.06)
Rhode Island	4.2 (0.91)	27.1 (2.10)	77.9 (2.53)
South Carolina	10.0 (1.42)	40.8 (2.43)	59.8 (3.11)
Tennessee	8.9 (1.32)	42.1 (2.39)	58.6 (3.07)
Texas	18.7 (1.65)	31.2 (0.59)	55.4 (2.16)
Utah	7.1 (1.04)	17.8 (1.61)	80.7 (2.14)
Virginia	9.3 (1.14)	35.7 (1.96)	64.1 (2.53)
Washington	5.7 (1.02)	38.6 (2.22)	66.5 (2.77)
West Virginia	6.2 (1.16)	46.8 (2.50)	58.1 (3.19)
Wisconsin	6.5 (1.05)	35.8 (2.12)	68.9 (2.63)

See footnotes at end of table.

Table XVI. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and selected states: United States, 2016 —*Continued*

Age group and selected states[1]	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
Under 65 years			
All states[5]	10.4 (0.31)	26.3 (0.41)	65.0 (0.48)
Alabama	11.6 (1.69)	25.7 (2.47)	64.5 (3.50)
Arizona	12.9 (1.69)	30.4 (2.50)	58.3 (3.47)
Arkansas	8.3 (1.52)	32.4 (2.78)	61.5 (3.74)
California	8.1 (0.37)	30.9 (1.58)	62.1 (1.61)
Colorado	8.6 (1.32)	32.4 (2.37)	61.1 (3.20)
Connecticut	4.6 (1.10)	30.2 (2.60)	65.8 (3.47)
Delaware	4.4 (1.19)	32.5 (2.90)	66.1 (3.80)
Florida	16.8 (0.68)	24.8 (1.46)	59.4 (1.60)
Georgia	14.8 (1.37)	21.5 (1.98)	64.6 (3.06)
Hawaii	3.2 (0.84)	28.7 (2.33)	69.7 (3.06)
Idaho	12.9 (1.59)	25.3 (2.22)	64.2 (3.17)
Illinois	6.7 (0.97)	23.3 (1.51)	71.8 (2.30)
Indiana	9.1 (1.33)	23.7 (2.11)	68.7 (2.98)
Iowa	4.4 (1.01)	25.4 (2.30)	71.5 (3.09)
Kansas	9.2 (1.50)	22.6 (2.33)	70.1 (3.30)
Kentucky	8.0 (1.48)	36.1 (2.82)	57.6 (3.75)
Louisiana	15.5 (2.01)	30.2 (2.74)	55.7 (3.83)
Maine	9.6 (1.83)	27.5 (2.99)	65.4 (4.13)
Maryland	6.3 (1.31)	25.0 (2.52)	69.9 (3.47)
Massachusetts	3.2 (0.96)	30.3 (2.72)	70.7 (3.48)
Michigan	7.8 (0.83)	27.6 (2.67)	67.2 (3.13)
Minnesota	5.7 (1.04)	13.5 (1.65)	82.3 (2.39)
Mississippi	14.4 (1.89)	33.5 (2.73)	53.9 (3.74)
Missouri	11.2 (1.76)	19.5 (2.38)	71.8 (3.50)
Montana	11.4 (1.82)	31.7 (2.86)	58.9 (3.91)
Nebraska	12.0 (1.58)	14.8 (1.86)	74.7 (2.95)
Nevada	12.4 (1.54)	26.6 (2.22)	63.1 (3.14)
New Hampshire	8.7 (1.70)	18.3 (2.50)	75.7 (3.58)
New Jersey	8.3 (1.22)	27.9 (2.14)	66.1 (2.93)
New Mexico	13.3 (1.82)	43.0 (2.84)	45.3 (3.70)
New York	6.3 (0.61)	25.9 (0.57)	69.6 (0.94)
North Carolina	13.0 (1.28)	24.1 (2.50)	64.4 (3.21)
Ohio	7.5 (0.93)	28.3 (1.59)	66.1 (1.71)
Oklahoma	19.2 (1.98)	26.9 (2.40)	55.8 (3.48)
Oregon	9.7 (1.41)	26.8 (2.27)	65.6 (3.16)
Pennsylvania	8.6 (1.44)	25.0 (1.50)	68.4 (2.53)
Rhode Island	4.8 (1.06)	15.3 (1.91)	82.6 (2.60)
South Carolina	12.1 (1.71)	28.8 (2.56)	61.4 (3.56)
Tennessee	10.5 (1.55)	32.6 (2.55)	60.2 (3.44)
Texas	20.9 (1.81)	22.6 (0.67)	57.4 (2.24)
Utah	7.9 (1.14)	9.5 (1.34)	83.0 (2.22)
Virginia	10.9 (1.33)	25.1 (1.99)	65.4 (2.83)
Washington	6.8 (1.21)	27.3 (2.31)	68.9 (3.10)
West Virginia	7.6 (1.43)	34.9 (2.77)	60.0 (3.68)
Wisconsin	7.8 (1.24)	23.9 (2.13)	69.7 (2.97)

See footnotes at end of table.

Table XVI. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and selected states: United States, 2016 —Continued

Age group and selected states[1]	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
0–17 years			
All states[5]	5.1 (0.31)	43.0 (0.65)	53.8 (0.71)
Alabama	*2.8 (1.38)	47.4 (4.38)	52.1 (5.00)
Arizona	12.6 (2.56)	40.8 (3.98)	47.2 (4.61)
California	4.3 (0.56)	46.5 (2.23)	50.7 (2.36)
Colorado	*2.4 (1.11)	49.4 (3.81)	51.0 (4.35)
Connecticut	*	45.2 (4.38)	54.7 (5.01)
Florida	7.5 (1.02)	48.0 (2.30)	45.1 (2.19)
Georgia	5.8 (1.58)	44.8 (3.17)	50.2 (4.06)
Hawaii	*	43.3 (3.77)	56.7 (4.30)
Idaho	5.2 (1.53)	45.9 (3.59)	50.8 (4.11)
Illinois	*1.1 (0.54)	36.6 (3.49)	64.4 (3.50)
Indiana	*3.7 (1.36)	38.5 (3.65)	59.5 (4.20)
Iowa	*	45.8 (4.00)	55.2 (4.56)
Kansas	*3.7 (1.46)	41.4 (3.99)	58.0 (4.57)
Kentucky	*3.6 (1.62)	49.7 (4.55)	47.5 (5.19)
Michigan	3.4 (1.01)	36.5 (3.96)	63.2 (3.77)
Minnesota	*2.7 (1.22)	18.4 (3.07)	80.3 (3.59)
Mississippi	*4.1 (1.60)	60.1 (4.16)	37.5 (4.69)
Missouri	*6.5 (2.13)	34.7 (4.30)	61.5 (5.02)
Nebraska	8.9 (2.09)	27.8 (3.44)	66.0 (4.15)
Nevada	6.3 (1.83)	44.8 (3.92)	52.5 (4.50)
New Jersey	*4.1 (1.35)	45.2 (3.53)	53.3 (4.04)
New Mexico	*4.6 (1.73)	65.1 (4.11)	31.9 (4.59)
New York	*3.7 (1.26)	36.2 (1.47)	62.2 (1.99)
North Carolina	4.1 (0.95)	45.9 (4.40)	51.1 (4.19)
Ohio	*3.7 (1.12)	40.6 (3.67)	58.4 (4.35)
Oklahoma	9.9 (2.20)	51.0 (3.85)	41.2 (4.33)
Oregon	*5.5 (1.79)	34.5 (3.92)	62.0 (4.57)
Pennsylvania	7.9 (2.01)	38.7 (2.50)	55.8 (3.45)
Rhode Island	*	19.4 (3.41)	82.8 (3.72)
South Carolina	*5.2 (1.78)	47.8 (4.22)	48.9 (4.82)
Tennessee	*	53.1 (4.32)	48.4 (4.94)
Texas	10.9 (1.39)	46.0 (1.17)	44.1 (2.08)
Utah	*3.8 (1.15)	14.9 (2.25)	81.3 (2.81)
Virginia	*2.6 (1.12)	43.5 (3.65)	54.4 (4.19)
Washington	*	42.7 (4.32)	60.0 (4.88)
Wisconsin	5.9 (1.74)	38.9 (3.76)	57.5 (4.35)

See footnotes at end of table.

Table XVI. Percentages (and standard errors) of persons who lacked health insurance coverage, had public health plan coverage, and had private health insurance coverage at the time of interview, by age group and selected states: United States, 2016 —Continued

Age group and selected states[1]	Uninsured[2] at time of interview	Public health plan coverage[3]	Private health insurance coverage[4]
18–64 years			
All states[5]	12.4 (0.36)	20.0 (0.38)	69.2 (0.41)
Alabama	15.0 (2.03)	17.6 (2.04)	69.2 (3.23)
Arizona	13.0 (1.87)	25.9 (2.30)	63.0 (3.31)
Arkansas	11.0 (1.86)	23.0 (2.36)	67.2 (3.44)
California	9.5 (0.37)	25.2 (1.28)	66.4 (1.30)
Colorado	11.1 (1.62)	25.6 (2.13)	65.0 (3.04)
Connecticut	6.0 (1.34)	24.8 (2.32)	69.8 (3.21)
Delaware	5.4 (1.39)	27.2 (2.59)	69.3 (3.50)
Florida	20.0 (0.88)	16.7 (0.97)	64.4 (1.34)
Georgia	18.5 (1.57)	11.7 (1.96)	70.6 (3.04)
Hawaii	3.6 (0.99)	22.6 (2.09)	75.2 (2.81)
Idaho	16.7 (2.00)	14.9 (1.81)	70.9 (3.00)
Illinois	8.6 (1.30)	18.8 (1.02)	74.3 (2.08)
Indiana	11.3 (1.60)	17.6 (1.82)	72.4 (2.78)
Iowa	5.8 (1.26)	17.1 (1.91)	78.2 (2.73)
Kansas	11.7 (1.84)	14.1 (1.89)	75.6 (3.04)
Kentucky	9.6 (1.73)	31.1 (2.58)	61.3 (3.54)
Louisiana	19.0 (2.32)	19.8 (2.23)	62.3 (3.53)
Maine	11.4 (2.10)	22.2 (2.60)	68.5 (3.79)
Maryland	6.8 (1.45)	20.1 (2.18)	74.4 (3.09)
Massachusetts	4.0 (1.13)	25.8 (2.41)	73.5 (3.17)
Michigan	9.5 (0.94)	24.3 (2.44)	68.6 (3.03)
Minnesota	6.7 (1.19)	11.9 (1.46)	82.9 (2.21)
Mississippi	18.8 (2.33)	22.0 (2.34)	60.9 (3.58)
Missouri	13.0 (2.06)	13.4 (1.97)	75.9 (3.22)
Montana	13.6 (2.10)	23.4 (2.45)	65.3 (3.60)
Nebraska	13.3 (1.84)	9.0 (1.46)	78.5 (2.73)
Nevada	14.5 (1.78)	20.1 (1.91)	66.8 (2.92)
New Hampshire	10.0 (1.87)	15.1 (2.11)	78.0 (3.18)
New Jersey	9.9 (1.46)	21.0 (1.88)	71.1 (2.73)
New Mexico	16.9 (2.19)	34.0 (2.62)	50.8 (3.61)
New York	7.2 (0.69)	22.7 (0.47)	71.9 (0.88)
North Carolina	16.2 (1.82)	16.1 (2.08)	69.3 (3.08)
Ohio	8.9 (1.02)	23.6 (1.22)	69.0 (1.26)
Oklahoma	23.6 (2.40)	15.3 (1.92)	62.8 (3.36)
Oregon	11.1 (1.60)	24.2 (2.06)	66.9 (2.95)
Pennsylvania	8.9 (1.42)	19.4 (1.37)	73.6 (2.38)
Rhode Island	6.1 (1.25)	14.0 (1.71)	82.5 (2.45)
South Carolina	15.0 (2.06)	20.6 (2.21)	66.7 (3.35)
Tennessee	13.3 (1.83)	25.5 (2.22)	64.2 (3.19)
Texas	25.3 (2.12)	12.5 (0.70)	63.2 (2.41)
Utah	10.0 (1.46)	6.6 (1.14)	83.9 (2.20)
Virginia	13.7 (1.57)	18.9 (1.69)	69.1 (2.60)
Washington	8.3 (1.39)	22.6 (2.00)	71.6 (2.81)
West Virginia	9.5 (1.65)	28.9 (2.40)	63.5 (3.33)
Wisconsin	8.5 (1.40)	18.1 (1.83)	74.4 (2.70)

* Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) greater than 30% and less than or equal to 50% and should be used with caution. Data not shown have an RSE greater than 50% or could not be shown due to considerations of sample size.

[1]Estimates are presented for fewer than 50 states and the District of Columbia due to considerations of sample size and precision.

[2]A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care.

[3]Includes Medicaid, CHIP, state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories.

[4]Includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, or purchased through local or community programs. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.

[5]Includes all 50 states and the District of Columbia.

NOTE: Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2016, Family Core component.

Table XVII. Change in percentages (and standard errors) of adults aged 18–64 who lacked health insurance coverage at the time of interview, by selected states: United States, 2013–2016

State	2013	2014	2015	2016	Difference between 2013 and 2016 (percentage points)	Difference between 2015 and 2016 (percentage points)
All states[1]	20.4 (0.29)	16.3 (0.26)	12.8 (0.27)	12.4 (0.36)	†−8.0	−0.4
Alabama	17.3 (2.14)	14.8 (2.05)	14.3 (2.27)	15.0 (2.03)	−2.3	0.7
Alaska	*	24.6 (1.69)	21.0 (2.61)	*	…	…
Arizona	23.4 (1.26)	19.5 (1.01)	13.8 (1.92)	13.0 (1.87)	†−10.4	−0.8
Arkansas	27.5 (2.40)	15.6 (2.50)	15.7 (2.38)	11.0 (1.86)	†−16.5	−4.7
California	23.7 (0.73)	16.7 (0.67)	11.1 (0.67)	9.5 (0.37)	†−14.2	†−1.6
Colorado	18.3 (1.59)	13.3 (1.43)	8.5 (1.54)	11.1 (1.62)	†−7.2	2.6
Connecticut	13.2 (2.44)	10.0 (2.55)	7.6 (1.60)	6.0 (1.34)	†−7.2	−1.6
Delaware	13.8 (2.56)	*6.0 (2.23)	8.3 (1.65)	5.4 (1.39)	†−8.4	−2.9
District of Columbia	*4.7 (1.80)	*	4.5 (1.26)	*	…	…
Florida	29.1 (1.21)	23.0 (1.34)	18.7 (1.18)	20.0 (0.88)	†−9.1	1.3
Georgia	27.2 (2.10)	20.2 (2.21)	15.9 (2.24)	18.5 (1.57)	†−8.7	2.6
Hawaii	*	*	6.1 (1.55)	3.6 (0.99)	…	−2.5
Idaho	24.3 (2.92)	21.9 (1.81)	18.2 (2.36)	16.7 (2.00)	†−7.6	−1.5
Illinois	17.8 (1.16)	15.0 (1.26)	9.9 (1.49)	8.6 (1.30)	†−9.2	−1.3
Indiana	19.0 (2.29)	18.3 (2.09)	14.8 (1.97)	11.3 (1.60)	†−7.7	−3.5
Iowa	11.3 (1.91)	8.4 (1.51)	7.1 (1.42)	5.8 (1.26)	†−5.5	−1.3
Kansas	19.5 (2.60)	13.9 (1.87)	13.0 (1.85)	11.7 (1.84)	†−7.8	−1.3
Kentucky	24.1 (2.19)	15.6 (2.00)	8.4 (1.48)	9.6 (1.73)	†−14.5	1.2
Louisiana	19.8 (2.33)	18.9 (2.16)	15.5 (2.17)	19.0 (2.32)	−0.8	3.5
Maine	15.9 (1.84)	16.9 (0.95)	13.3 (1.96)	11.4 (2.10)	−4.5	−1.9
Maryland	16.4 (2.21)	12.3 (2.13)	9.3 (1.72)	6.8 (1.45)	†−9.6	−2.5
Massachusetts	*6.0 (2.12)	*3.8 (1.84)	*3.0 (0.99)	4.0 (1.13)	−2.0	1.0
Michigan	15.8 (1.38)	11.6 (1.30)	8.4 (0.96)	9.5 (0.94)	†−6.3	1.1
Minnesota	9.7 (1.72)	8.0 (1.52)	6.4 (1.38)	6.7 (1.19)	−3.0	0.3
Mississippi	24.2 (1.74)	22.4 (1.57)	16.2 (2.31)	18.8 (2.33)	−5.4	2.6
Missouri	20.1 (2.03)	16.9 (1.97)	13.9 (2.18)	13.0 (2.06)	†−7.1	−0.9
Montana	*	18.0 (1.81)	16.7 (2.34)	13.6 (2.10)	…	−3.1
Nebraska	18.5 (2.87)	16.9 (2.14)	16.1 (2.22)	13.3 (1.84)	−5.2	−2.8
Nevada	29.3 (2.32)	20.4 (1.86)	15.1 (1.96)	14.5 (1.78)	†−14.8	−0.6
New Hampshire	16.1 (2.27)	11.6 (2.07)	8.3 (1.63)	10.0 (1.87)	†−6.1	1.7
New Jersey	17.5 (1.90)	12.9 (1.44)	10.2 (1.45)	9.9 (1.46)	†−7.6	−0.3
New Mexico	*	18.7 (2.36)	15.7 (2.11)	16.9 (2.19)	…	1.2
New York	13.6 (0.87)	12.9 (0.90)	7.0 (0.73)	7.2 (0.69)	†−6.4	0.2
North Carolina	25.6 (1.80)	22.5 (1.84)	19.5 (1.84)	16.2 (1.82)	†−9.4	−3.3
North Dakota	*	9.3 (1.92)	9.7 (1.79)	*	…	…
Ohio	16.3 (1.09)	10.9 (0.91)	9.3 (0.82)	8.9 (1.02)	†−7.4	−0.4
Oklahoma	28.3 (2.26)	26.6 (1.78)	21.5 (2.42)	23.6 (2.40)	−4.7	2.1
Oregon	20.4 (2.35)	13.3 (2.00)	11.7 (1.91)	11.1 (1.60)	†−9.3	−0.6
Pennsylvania	16.4 (1.43)	11.9 (1.20)	10.9 (1.00)	8.9 (1.42)	†−7.5	−2.0
Rhode Island	13.1 (2.23)	9.0 (1.75)	6.3 (1.40)	6.1 (1.25)	†−7.0	−0.2
South Carolina	23.2 (2.15)	21.0 (2.03)	19.7 (2.53)	15.0 (2.06)	†−8.2	−4.7
South Dakota	*	13.4 (1.32)	11.9 (2.00)	*	…	…
Tennessee	16.2 (2.26)	14.8 (2.10)	13.7 (1.97)	13.3 (1.83)	−2.9	−0.4
Texas	28.4 (1.32)	25.7 (1.03)	22.5 (1.09)	25.3 (2.12)	−3.1	2.8
Utah	20.7 (2.04)	16.2 (1.78)	13.2 (1.71)	10.0 (1.46)	†−10.7	−3.2
Vermont	*	9.1 (1.24)	*4.2 (1.34)	*	…	…
Virginia	16.0 (1.72)	15.2 (1.66)	12.4 (1.64)	13.7 (1.57)	−2.3	1.3
Washington	23.4 (1.77)	13.3 (1.77)	11.1 (1.65)	8.3 (1.39)	†−15.1	−2.8
West Virginia	28.8 (2.17)	12.2 (2.05)	8.9 (1.65)	9.5 (1.65)	†−19.3	0.6
Wisconsin	11.1 (2.06)	8.7 (1.91)	6.0 (1.52)	8.5 (1.40)	−2.6	2.5
Wyoming	*	15.2 (1.63)	17.5 (2.27)	*	…	…

† Significant difference between years (*p < 0.05*).

* Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) greater than 30% and less than or equal to 50% and should be used with caution. Data not shown have an RSE greater than 50% or could not be shown due to considerations of sample size.

… Category not applicable.

[1]Includes all 50 states and the District of Columbia.

NOTES: A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care. These health insurance estimates are being released prior to final data editing and final weighting to provide access to the most recent information from the National Health Interview Survey. The resulting estimates for persons without health insurance are generally 0.1–0.3 percentage points lower than those based on the editing procedures used for the final data files. Occasionally, due to decisions made for the final data editing and weighting, estimates based on preliminary editing procedures may differ by more than 0.3 percentage points from estimates based on final files. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2013–2016, Family Core component.

Table XVIII. Change in percentages (and standard errors) of adults aged 18–64 who had public health plan coverage at the time of interview, by selected states: United States, 2013–2016

State	2013	2014	2015	2016	Difference between 2013 and 2016 (percentage points)	Difference between 2015 and 2016 (percentage points)
All states[1]	16.7 (0.25)	17.7 (0.29)	18.9 (0.36)	20.0 (0.38)	†3.3	†1.1
Alabama	18.6 (1.97)	20.7 (2.46)	19.0 (2.59)	17.6 (2.04)	−1.0	−1.4
Alaska	*	14.2 (2.05)	14.4 (2.28)	*	…	…
Arizona	18.9 (1.89)	22.4 (2.22)	26.0 (2.48)	25.9 (2.30)	†7.0	−0.1
Arkansas	17.8 (1.96)	17.7 (2.31)	18.4 (2.57)	23.0 (2.36)	5.2	4.6
California	16.6 (0.67)	20.4 (0.77)	24.6 (1.23)	25.2 (1.28)	†8.6	0.6
Colorado	14.7 (1.74)	12.3 (1.74)	17.3 (2.12)	25.6 (2.13)	†10.9	†8.3
Connecticut	19.6 (1.96)	20.5 (2.35)	19.6 (2.43)	24.8 (2.32)	5.2	5.2
Delaware	17.8 (2.15)	20.2 (2.35)	19.0 (2.37)	27.2 (2.59)	†9.4	†8.2
District of Columbia	22.3 (2.13)	27.1 (2.63)	20.1 (2.49)	*	…	…
Florida	17.0 (1.08)	16.9 (1.20)	16.7 (1.24)	16.7 (0.97)	−0.3	0.0
Georgia	15.0 (1.05)	16.5 (1.28)	13.9 (1.69)	11.7 (1.96)	−3.3	−2.2
Hawaii	*	22.0 (2.56)	20.3 (2.65)	22.6 (2.09)	…	2.3
Idaho	10.8 (1.83)	10.4 (1.71)	16.8 (2.32)	14.9 (1.81)	4.1	−1.9
Illinois	14.9 (1.10)	17.4 (1.49)	18.0 (1.14)	18.8 (1.02)	†3.9	0.8
Indiana	15.0 (1.76)	13.9 (1.84)	13.7 (1.93)	17.6 (1.82)	2.6	3.9
Iowa	14.1 (1.79)	13.1 (1.71)	12.2 (1.84)	17.1 (1.91)	3.0	4.9
Kansas	11.0 (1.66)	12.8 (1.71)	9.3 (1.62)	14.1 (1.89)	3.1	4.8
Kentucky	20.7 (2.03)	29.5 (2.35)	32.8 (2.55)	31.1 (2.58)	†10.4	−1.7
Louisiana	18.4 (1.95)	20.0 (2.14)	16.0 (2.23)	19.8 (2.23)	1.4	3.8
Maine	19.7 (2.27)	18.4 (2.11)	22.2 (2.44)	22.2 (2.60)	2.5	0.0
Maryland	17.2 (1.90)	18.7 (2.23)	20.8 (2.43)	20.1 (2.18)	2.9	−0.7
Massachusetts	25.5 (1.99)	23.7 (2.32)	22.4 (2.46)	25.8 (2.41)	0.3	3.4
Michigan	15.4 (1.13)	19.9 (1.82)	25.5 (1.86)	24.3 (2.44)	†8.9	−1.2
Minnesota	15.7 (1.81)	13.5 (1.86)	9.7 (1.69)	11.9 (1.46)	−3.8	2.2
Mississippi	20.8 (2.04)	17.0 (2.14)	19.7 (2.53)	22.0 (2.34)	1.2	2.3
Missouri	14.4 (1.77)	14.0 (1.94)	12.0 (2.07)	13.4 (1.97)	−1.0	1.4
Montana	*	19.9 (2.55)	19.7 (2.53)	23.4 (2.45)	…	3.7
Nebraska	11.9 (1.89)	10.4 (1.69)	8.2 (1.68)	9.0 (1.46)	−2.9	0.8
Nevada	13.1 (1.76)	15.0 (1.94)	21.8 (2.29)	20.1 (1.91)	†7.0	−1.7
New Hampshire	10.3 (1.72)	9.4 (1.63)	17.8 (2.30)	15.1 (2.11)	4.8	−2.7
New Jersey	12.5 (1.31)	11.9 (1.47)	13.2 (1.65)	21.0 (1.88)	†8.5	†7.8
New Mexico	*	27.6 (2.65)	34.5 (2.79)	34.0 (2.62)	…	−0.5
New York	24.6 (1.40)	25.1 (1.42)	24.6 (1.19)	22.7 (0.47)	−1.9	−1.9
North Carolina	14.5 (1.31)	16.9 (1.70)	17.5 (2.16)	16.1 (2.08)	1.6	−1.4
North Dakota	*	8.7 (1.61)	10.1 (1.85)	*	…	…
Ohio	18.8 (1.72)	21.3 (1.52)	23.8 (2.00)	23.6 (1.22)	†4.8	−0.2
Oklahoma	17.6 (1.95)	19.2 (2.09)	14.4 (2.10)	15.3 (1.92)	−2.3	0.9
Oregon	13.0 (1.69)	21.3 (2.28)	23.1 (2.54)	24.2 (2.06)	†11.2	1.1
Pennsylvania	14.1 (0.96)	13.8 (1.45)	17.8 (1.22)	19.4 (1.37)	†5.3	1.6
Rhode Island	21.6 (2.28)	18.3 (2.13)	18.4 (2.27)	14.0 (1.71)	†−7.6	−4.4
South Carolina	23.5 (2.19)	22.9 (2.43)	20.8 (2.61)	20.6 (2.21)	−2.9	−0.2
South Dakota	*	11.9 (1.81)	15.6 (2.28)	*	…	…
Tennessee	21.1 (2.14)	20.5 (2.22)	21.2 (2.38)	25.5 (2.22)	4.4	4.3
Texas	12.9 (0.76)	11.7 (0.66)	10.4 (0.56)	12.5 (0.70)	−0.4	†2.1
Utah	8.8 (1.33)	10.5 (1.51)	8.8 (1.45)	6.6 (1.14)	−2.2	−2.2
Vermont	*	21.1 (2.64)	20.7 (2.75)	*	…	…
Virginia	17.5 (1.57)	15.6 (1.81)	17.2 (1.90)	18.9 (1.69)	1.4	1.7
Washington	13.5 (1.51)	16.7 (1.86)	21.8 (2.20)	22.6 (2.00)	†9.1	0.8
West Virginia	24.6 (2.19)	27.8 (2.47)	35.1 (2.81)	28.9 (2.40)	4.3	−6.2
Wisconsin	16.5 (1.88)	14.1 (2.04)	18.5 (2.51)	18.1 (1.83)	1.6	−0.4
Wyoming	*	10.0 (1.71)	16.1 (2.23)	*	…	…

† Significant difference between years ($p < 0.05$).

Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey, 2016

* Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) greater than 30% and less than or equal to 50% and should be used with caution. Data not shown have an RSE greater than 50% or could not be shown due to considerations of sample size.

… Category not applicable.

[1]Includes all 50 states and the District of Columbia.

NOTES: Public coverage includes Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, Medicare, and military plans. A small number of persons were covered by both public and private plans and were included in both categories. These health insurance estimates are being released prior to final data editing and final weighting to provide access to the most recent information from the National Health Interview Survey. Occasionally, due to decisions made for the final data editing and weighting, estimates based on preliminary editing procedures may differ by more than 0.3 percentage points from estimates based on final files. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2013–2016, Family Core component.

Table XIX. Change in percentages (and standard errors) of adults aged 18–64 who private health insurance coverage at the time of interview, by selected states: United States, 2013–2016

State	2013	2014	2015	2016	Difference between 2013 and 2016 (percentage points)	Difference between 2015 and 2016 (percentage points)
All states[1]	64.2 (0.38)	67.3 (0.37)	69.7 (0.44)	69.2 (0.41)	[†]5.0	−0.5
Alabama	67.1 (2.86)	68.3 (3.10)	69.8 (3.51)	69.2 (3.23)	2.1	−0.6
Alaska	*	63.3 (3.11)	67.5 (3.54)	*	…	…
Arizona	58.9 (2.85)	59.4 (2.87)	60.9 (3.21)	63.0 (3.31)	4.1	2.1
Arkansas	56.0 (3.06)	68.0 (3.10)	68.8 (3.58)	67.2 (3.44)	[†]11.2	−1.6
California	60.7 (0.99)	63.9 (1.10)	65.1 (1.40)	66.4 (1.30)	[†]5.7	1.3
Colorado	68.3 (2.75)	75.1 (2.52)	74.7 (2.84)	65.0 (3.04)	−3.3	[†]−9.7
Connecticut	67.6 (2.78)	70.3 (2.91)	73.9 (3.13)	69.8 (3.21)	2.2	−4.1
Delaware	70.3 (3.10)	74.8 (2.79)	75.0 (3.05)	69.3 (3.50)	−1.0	−5.7
District of Columbia	73.6 (2.72)	69.6 (2.99)	75.9 (3.09)	*	…	…
Florida	54.5 (1.53)	61.0 (1.32)	66.0 (1.57)	64.4 (1.34)	[†]9.9	−1.6
Georgia	58.6 (1.94)	64.3 (1.96)	71.5 (2.37)	70.6 (3.04)	[†]12.0	−0.9
Hawaii	*	76.2 (2.89)	74.2 (3.35)	75.2 (2.81)	…	1.0
Idaho	66.3 (3.35)	68.9 (2.84)	66.9 (3.39)	70.9 (3.00)	4.6	4.0
Illinois	68.8 (1.81)	69.2 (1.78)	73.3 (2.27)	74.3 (2.08)	[†]5.5	1.0
Indiana	68.0 (2.77)	68.8 (2.70)	72.3 (2.92)	72.4 (2.78)	4.4	0.1
Iowa	75.9 (2.65)	79.2 (2.26)	81.4 (2.54)	78.2 (2.73)	2.3	−3.2
Kansas	71.1 (2.90)	75.0 (2.43)	79.0 (2.64)	75.6 (3.04)	4.5	−3.4
Kentucky	57.7 (2.98)	56.6 (2.80)	60.8 (3.08)	61.3 (3.54)	3.6	0.5
Louisiana	63.9 (2.91)	62.1 (2.85)	70.0 (3.24)	62.3 (3.53)	−1.6	−7.7
Maine	65.4 (3.27)	66.1 (2.82)	64.6 (3.26)	68.5 (3.79)	3.1	3.9
Maryland	67.6 (2.83)	70.9 (2.85)	71.1 (3.15)	74.4 (3.09)	6.8	3.3
Massachusetts	69.4 (2.53)	73.8 (2.63)	75.5 (2.95)	73.5 (3.17)	4.1	−2.0
Michigan	70.5 (1.93)	69.8 (2.61)	68.4 (2.11)	68.6 (3.03)	−1.9	0.2
Minnesota	75.5 (2.58)	79.4 (2.42)	84.5 (2.40)	82.9 (2.21)	[†]7.4	−1.6
Mississippi	56.1 (3.00)	63.0 (3.02)	66.6 (3.49)	60.9 (3.58)	4.8	−5.7
Missouri	67.5 (2.84)	70.4 (2.80)	76.3 (3.16)	75.9 (3.22)	[†]8.4	−0.4
Montana	*	64.8 (3.35)	65.1 (3.53)	65.3 (3.60)	…	0.2
Nebraska	72.1 (3.15)	73.9 (2.67)	76.7 (3.00)	78.5 (2.73)	6.4	1.8
Nevada	58.2 (3.10)	66.4 (2.81)	65.1 (3.07)	66.8 (2.92)	[†]8.6	1.7
New Hampshire	74.3 (2.98)	80.5 (2.43)	75.7 (2.99)	78.0 (3.18)	3.7	2.3
New Jersey	71.3 (2.16)	76.3 (2.12)	78.2 (2.33)	71.1 (2.73)	−0.2	[†]−7.1
New Mexico	*	55.7 (3.22)	52.4 (3.41)	50.8 (3.61)	…	−1.6
New York	63.2 (1.61)	63.3 (1.72)	70.1 (1.57)	71.9 (0.88)	[†]8.7	1.8
North Carolina	60.7 (2.41)	62.5 (2.69)	64.8 (3.29)	69.3 (3.08)	[†]8.6	4.5
North Dakota	*	83.7 (2.31)	81.6 (2.76)	*	…	…
Ohio	66.0 (2.08)	69.6 (1.87)	67.9 (2.13)	69.0 (1.26)	3.0	1.1
Oklahoma	56.0 (3.06)	55.8 (2.88)	65.3 (3.31)	62.8 (3.36)	6.8	−2.5
Oregon	67.8 (2.82)	67.1 (2.87)	66.6 (3.30)	66.9 (2.95)	−0.9	0.3
Pennsylvania	71.3 (1.69)	75.6 (1.73)	73.2 (1.71)	73.6 (2.38)	2.3	0.4
Rhode Island	68.0 (3.11)	74.7 (2.63)	77.9 (2.83)	82.5 (2.45)	[†]14.5	4.6
South Carolina	54.5 (3.10)	57.7 (3.13)	63.3 (3.60)	66.7 (3.35)	[†]12.2	3.4
South Dakota	*	75.8 (2.63)	74.0 (3.20)	*	…	…
Tennessee	65.3 (3.01)	66.8 (2.84)	66.8 (3.19)	64.2 (3.19)	−1.1	−2.6
Texas	59.9 (1.52)	63.5 (1.19)	68.2 (1.16)	63.2 (2.41)	3.3	−5.0
Utah	71.7 (2.55)	75.0 (2.35)	78.5 (2.45)	83.9 (2.20)	[†]12.2	5.4
Vermont	*	70.0 (3.25)	75.9 (3.37)	*	…	…
Virginia	68.8 (2.31)	70.9 (2.49)	73.7 (2.58)	69.1 (2.60)	0.3	−4.6
Washington	64.8 (2.54)	71.2 (2.47)	69.1 (2.86)	71.6 (2.81)	6.8	2.5
West Virginia	49.3 (3.07)	62.7 (2.92)	59.3 (3.36)	63.5 (3.33)	[†]14.2	4.2
Wisconsin	73.8 (2.68)	78.4 (2.65)	78.5 (3.09)	74.4 (2.70)	0.6	−4.1
Wyoming	*	76.3 (2.66)	69.6 (3.23)	*	…	…

[†] Significant difference between years ($p < 0.05$).

* Estimates are considered unreliable. Data preceded by an asterisk have a relative standard error (RSE) greater than 30% and less than or equal to 50% and should be used with caution. Data not shown have an RSE greater than 50% or could not be shown due to considerations of sample size.

… Category not applicable.

[1]Includes all 50 states and the District of Columbia.

NOTES: Private coverage includes any comprehensive private insurance plan (including health maintenance and preferred provider organizations). These plans include those obtained through an employer, purchased directly, purchased through local or community programs, or purchased through the Health Insurance Marketplace or a state-based exchange. Private coverage excludes plans that pay for only one type of service, such as accidents or dental care. A small number of persons were covered by both public and private plans and were included in both categories.These health insurance estimates are being released prior to final data editing and final weighting to provide access to the most recent information from the National Health Interview Survey. Occasionally, due to decisions made for the final data editing and weighting, estimates based on preliminary editing procedures may differ by more than 0.3 percentage points from estimates based on final files. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

SOURCE: NCHS, National Health Interview Survey, 2013–2016, Family Core component.

Health Care is Local: Impact of Income and Geography on Premiums and Premium Support

Trish Riley and Christina Cousart

The American Health Care Act (AHCA) proposes a   change in how and to whom premium tax credits are dispersed, proposing a   rate adjusted only by age. The Affordable Care Act (ACA) bases its premium tax credit calculation on three factors: age, income and local cost of insurance premiums. While there has been extensive discussion of the impact of eliminating premium support based on consumers' income, there has been relatively little on what happens when credits are not adjusted based on where a consumer lives. By failing to account for local variation, a premium tax credit structure could lead to   increases in premiums and out-of-pocket costs paid by consumers while also potentially reducing plan availability for those who live in relatively high cost and rural areas of each state.

This issue brief provides an overview of the context and potential impact of changing the health insurance premium tax credit structure from one that factors for age, income, and local premium costs to one that considers only age. The brief underscores that, while cost variation is often framed as comparing costs between states, in reality costs vary widely within state borders leading to large differences in insurance premiums and out-of-pocket spending. An accompanying State Chart Book, leveraging data available from the Kaiser Family Foundation[1], further illustrates estimated variation in premiums, premium spending by consumers, and estimated tax credits organized by state and select counties. The analysis illustrates predicted differences between the ACA and AHCA's tax credit structures in 2020, showing stark examples of potential differences in consumer premium spending.

Map 1. Health Insurance Marketplace Second Lowest Cost Silver Plan, Monthly Premium by County, 2017 (Calculated for 40-year old individual, non-smoker)

Source: http://nashp.org/health-insurance-marketplace-second-lowest-cost-silver-plan-by-county-2017/
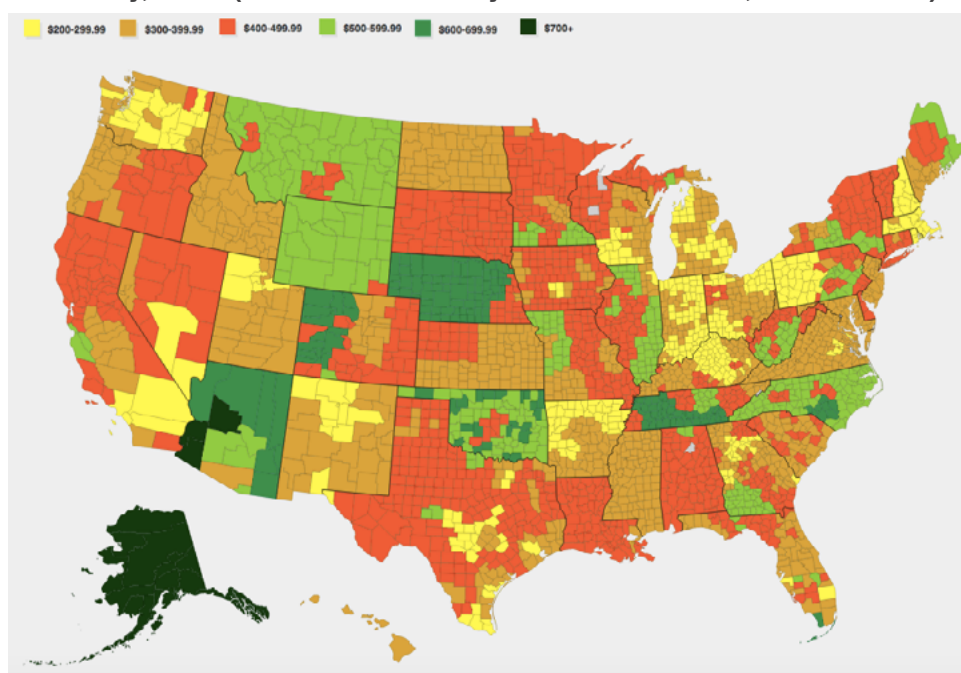
What is Geographic Rating?

Insurance rating allows insurers to adjust premiums to   differences in the costs of care that vary by region, and for different age groups and populations. Historically the most   "rating factor" has been health status or pre-existing conditions of insurance applicants. Under the ACA, however, a number of factors – such as prior health conditions – are not allowed to be used as a rating factor. In contrast, rating based on geography remains an allowable form of insurance rating.

The AHCA preserves regulation of geographic rating instituted under the Affordable Care Act which continues to provide states   to   the number and borders of their geographic rating areas. However, it eliminates any adjustment to the tax credits to offset higher health care costs in different rating areas. The AHCA also continues the current policy that states may opt to essentially negate geographic rating by   g only a single rating area.[2] The majority of states opted to implement rating areas that aligned with methods used prior to passage of the Affordable Care Act, mostly based around counties.[3] States have some discretion in the number of rating areas they apply. Seven states have a single rating area (DE, DC, HI, NH, NJ, RI, VT), while Florida has 67 (See Table 1).[4]

What Drives the Need for Geographic Rating?

Health care costs vary   by geography. Market realities prohibit the ability of insurers to remain competitive and sustainable in a regional-ly-based market without accounting for geographic factors.   , insurers must have some ca-pacity to respond to regional disparities in the un-derlying cost of health care generated by:

Table 1. Number of Rating Areas by State	
# of rating areas	States
1	DE, DC, HI, NH, NJ, RI, VT
2-5	AK, WY, ME, MD, MT, NV, ND, NE, NM, OK, SD, WA
6-10	AR, AZ, CO, CT, IA, ID, KS, KY, LA, MA, MN, MO, MS, NY, OR, TN, UT, PA,
11-15	WV, AL, VA, IL
16-20	GA, MI, NC, WI, IN, OH, CA
21+	TX (26), SC (46), FL (67)

- **Variation in the cost of services with-in and between regions.** Studies have documented wide variation in the cost of services, even when accounting for differ-ences in income, demography and health status within regions.[5,6] One likely driver is wide variation in the prices set for health care services (see map 2). [7, 8, 9, 10] Price variation – both within and between regions – is especially problematic for private insurance, which, in contrast to Medicare and Medicaid, has an array of health plans with differing market position negotiating with an array of providers. One study of employer-sponsored insurance found that the price of knee replacement surgery could range from $21,300 to $45,000 depend-ing the hospital used in New York City.[11] A comparison of pricing of procedures in California found that in the Bay Area, the negotiated rate paid by insurance plans for knee replacement surgery ranged from $47,600 to $74,700; while the difference in Los Angeles was from $26,200 to $43,800.[12] A Blue Cross Blue Shield Association study of non-Medicare members found that the cost of hip-replacements could range from $11,327 to $73,987 nationally.[13]

- **Lack of provider competition.** Lack of provider competition in some geographic areas gives available providers market power to set rates for services. A study by the National Bureau of Economic Research found that prices charged by hospitals in monopoly markets was 15.3 percent higher than in markets with four or more hospitals.[14]
- **Lack of health plan competition.** In areas with more potential enrollment and higher interest by health plans to participate, there is more competition among health plans who seek lower rates and gain market share. Moreover, more enrollees means that health plans can spread risk across a greater population base, leading to reduced premiums.[15]
- **Prevalence of rural communities.** Health care costs are often notably higher in rural communities which experience all or some combination of the factors described above, especially lack of market competition from health plans and providers and challenges associated with unique health concerns of populations in these areas.[16, 17, 18] Colorado, for example, has documented a nearly 36% differential in the annual cost of services for individuals in its "mountain communities" versus in the rating area including Boulder, its lowest-cost region[19]

Map 2. In-state variation of private insurance health insurance expenditures

PER-CAPITA COST

Below avg.   Average   Above avg.
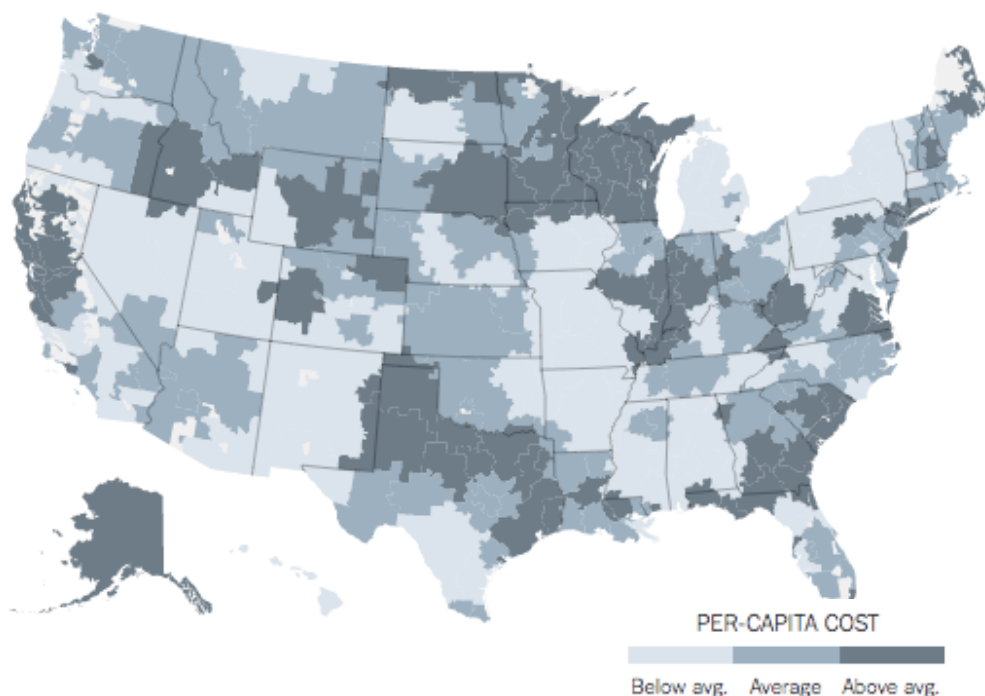
Map based on employer sponsored health plan data collected from UnitedHealthCare, Aetna, and Humana by the Health Care Cost Institute. Data are estimated represent about 14 percent of the U.S. population.

Source: Kevin Quealy and Margot Sanger-Katz. "The Experts Were Wrong About the Best Places for Better Care and Cheaper Health Care." The New York Times. Published December 15, 2015. Accessible here: **https://www.nytimes.com/interactive/2015/12/15/upshot/ the-best-places-for-better-cheaper-health-care-arent-what-experts-thought.html**

How does Geographic Rating Affect Premiums?

Geographic rating   differences in health care prices and thus allows large disparities in insurance premiums charged through the individual health insurance marketplaces. Effective geographic rating can provide incentives for insurers to enter markets where prices are higher and eligible populations more sparse, or bring greater competition into lower-cost, lower-risk regions of a state.

The gap between high- and low-cost regions is universal and exists in most states[21], as detailed in the State Focus summaries. While some states have very large differentials – such as the seven states in which the highest cost regions are more than two times the costs of the lowest cost regions (AZ, FL, GA, IL, MI, PA, and TX) – in other states the costs may vary as little as ten percent between lowest and highest-cost regions.) (See Map 1).

Health care is local and allowing health plans to develop regional pricing goes hand in hand with enabling them to develop products with networks tailored to regional markets. For example, health plans can offer products organized around local provider networks and targeted toward   consumer needs. Health plans that chose to have a regional focus also may promote local   by concentrating negotiations and work toward a   geographic area rather than expending resources to execute contracts statewide.

Mitigating the Effects of Geographic Disparities

Geographic rating allows health plans to charge consumers in high cost areas more than those in low cost areas. As a result, consumers receive disparate value from dollars spent toward health care, including insurance premiums. The ACA partially addressed this issue, by using the "second lowest Silver Plan" in the regions where eligible individuals live as a factor in determining the amount of premium tax credit received. In short, tax credits are adjusted to   areas with higher costs. The AHCA proposes a reduced and   credit based on age. While this sets a national standard, this strategy means consumers in high-cost regions will experience higher costs. As illustrated by the State Chart Book, stark extremes could exist in changes to consumer premium spending between the AHCA's tax credit methodology and that of the ACA. For example, a 27-year old making $30,000 a year living in Lancaster County, Pennsylvania could expect to pay $1,210 per year more for premiums under the AHCA as compared with the ACA, while a similar individual living in Allegheny County, Pennsylvania could expect to save $1,960 per year in premium expenses under the AHCA. A 60-year old making $30,000 could expected to spend $3,030 more in Allegheny County and $14,980 more in Lancaster County under the AHCA (See Chart 1).

Chart 1. Estimated Premium Cost to Consumer after Tax Credit under the ACA and AHCA in High and Low Cost Counties in Pennsylvania, 2020 (estimated for individual making $30,000 per year
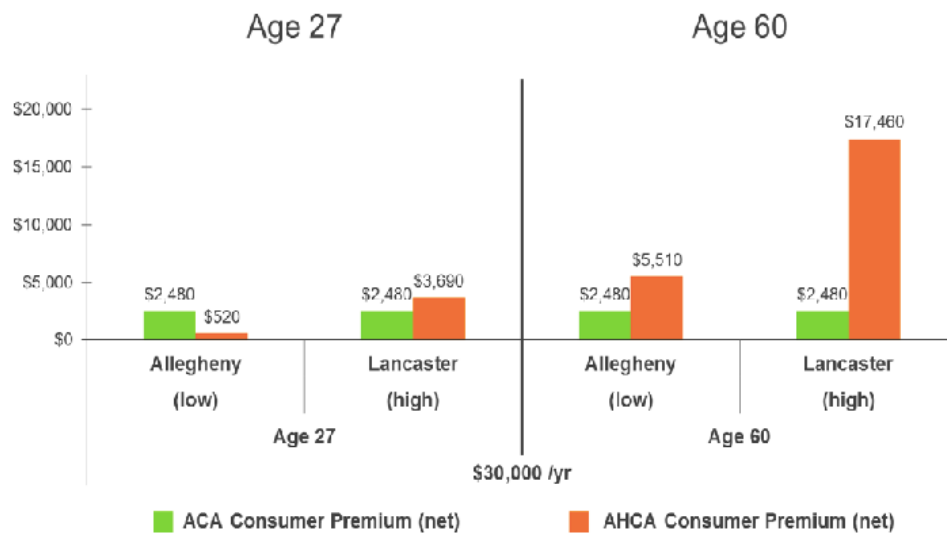
Conclusion

Differences in health care costs, and insurer and provider competition drive regional variation in insurance premiums across and within states. Current law, through the ACA, accounts for these regional differences. Policymakers should carefully assess the impact of these differences as a key factor in analyzing proposals to change the ACA tax credit structure. Premium tax credit structures that do not account for regional premium variation will mitigate how effectively tax credits are able to improve affordability of insurance, especially for those in high-cost regions.

Endnotes

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2. Rating areas may be set based on counties, three-digit zip-code, or Metropolitan Statistical of high-population density Seven states use the MSA method (TX, AL, VA, WY, ND, NM, OK), three use zip codes (AK, MA, NE), and one uses a combination method (CA).
3. New Jersey, for example, created a single rating area for its individual market pursuant to prevailing state law. Implementing the Affordable Care Act: State Approaches to Premium Rate Reforms in the Individual Health Insurance Market
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11. Quealy, K., Sanger-Katz, M., "The Experts Were Wrong about the Best Places for Better and Cheaper Health Care," accessed on June 7, 2017 https://www.nytimes.com/interactive/2015/12/15/upshot/the-best-places-for-better-cheaper-health-care-arent-what-experts-thought.html

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How ACA Repeal and Replace Proposals Could Affect Coverage and Premiums for Older Adults and Have Spillover Effects for Medicare

Tricia Neuman, Karen Pollitz, and Larry Levitt

Now that the House has passed its bill to repeal and replace the Affordable Care Act (ACA), Senate negotiators face a number of policy decisions that could be of particular interest to older adults who are not quite old enough for Medicare. Prior to the ACA, adults in their fifties and early 60s were arguably most at risk in the private health insurance market. They were more likely than younger adults to be diagnosed with certain conditions, like cancer and diabetes, for which insurers denied coverage. They were also more likely to face unaffordable premiums because insurers had broad latitude (in nearly all states) to set high premiums for older and sicker enrollees.

The ACA included several provisions that aimed to address problems older adults faced in finding more affordable health insurance coverage, including guaranteed access to insurance, limits on age rating, and a prohibition on premium surcharges for people with pre-existing conditions.

The House-passed American Health Care Act (AHCA) would make a number of changes to current law that would result in a 5.1 million increase in the number of uninsured 50-64-year-olds in 2026, according to CBO's updated analysis **(Figure 1).**

These changes would disproportionately affect older adults with incomes below 200% of poverty. Adults age 50-64 with incomes below 200% of the poverty level would see the biggest loss of coverage under the AHCA – a 150% increase in the number of uninsured in 2026 relative to current law, compared to 90% for all

Figure 1

Over five million older adults are projected to lose health insurance by 2026 under the AHCA

Number of adults ages 50-64 without health insurance in 2026, in millions:

Current Law	American Health Care Act
4.9 million	10.0 million
2.5 — > 200% Poverty	3.9 — > 200% Poverty
2.4 — < 200% Poverty	6.1 — < 200% Poverty

SOURCE: Congressional Budget Office Cost Estimate, H.R. 1628, American Health Care Act of 2017, May 24, 2017.

adults. CBO projects the share of low-income older adults who are uninsured would rise from 12% under current law to 29% under the AHCA by 2026.
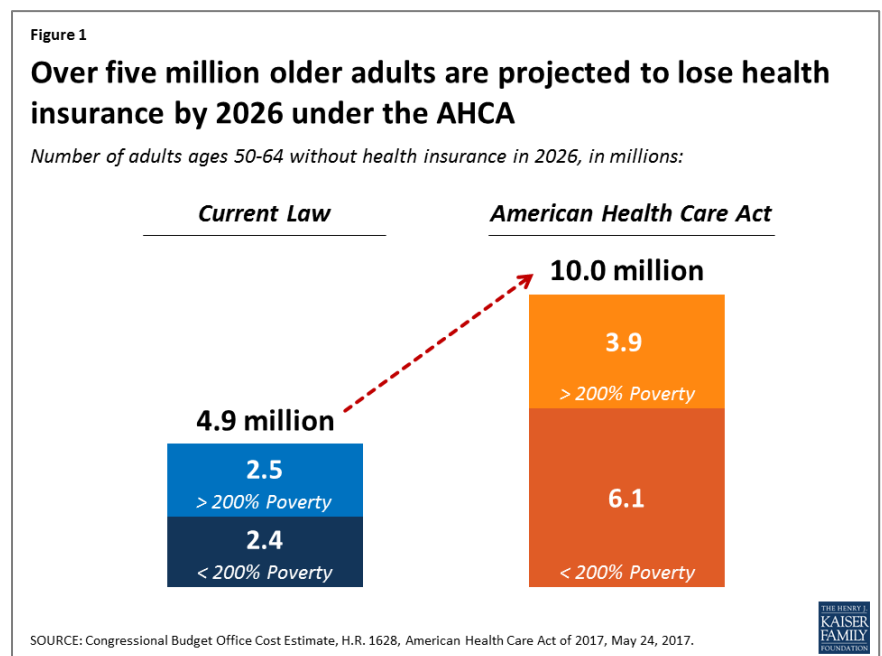
The increase in the number and share of uninsured older adults would be due to the following provisions in the AHCA:

1. *Age Bands*. The AHCA broadens the limits on age bands established under the ACA, a change that is likely to lead to higher premiums for older enrollees. The ACA prohibits insurers from charging older adults more than 3-times the premium amount for younger adults. The House bill would allow insurers to charge older adults five times more than younger adults, beginning in 2018. States would have flexibility to establish different age bands (broader or narrower).

2. *State Waivers*. The AHCA allows states to seek waivers that, if approved, would allow insurers to opt out of the ACA's community rating and benefit requirements. Insurers in these states could charge a higher premium to an applicant with a pre-existing condition who had a lapse in coverage of 63 days or more. Before the ACA, insurers in nearly all states could deny non-group coverage for people with pre-existing conditions or charge them higher premiums. These waivers would lower premiums for people who are healthy, but raise premiums and out-of-pocket costs for people who are sick.

Because many health problems and pre-existing conditions tend to increase with age, the opt-out could particularly affect older adults. For example, 47% of adults age 60-64 have a pre-existing condition that would have led to a denial of coverage pre-ACA, compared to 27% of non-elderly adults overall **(Figure 2)**.

Figure 2

Share of Adults with Pre-Existing Conditions Generally Increases with Age

SOURCE: Kaiser Family Foundation analysis of National Health Interview Survey, 2015. For list of pre-existing conditions, see Kaiser Family Foundation, "Pre-existing Conditions and Medical Underwriting in the Individual Insurance Market Prior to the ACA," December 2016, Methods Table 1, http://kff.org/health-reform/issue-brief/pre-existing-conditions-and-medical-underwriting-in-the-individual-insurance-market-prior-to-the-aca/.

3. *Tax Credits*. The AHCA changes the way that premium tax credits are calculated, providing lower premium subsidies for low-income adults, relative to the ACA – a change that would have a particularly pronounced effect for low-income older adults. The combination of higher premiums (due to wider age bands) and lower tax credits (especially for those with lower incomes) will result in higher out-of-pocket premiums for older adults.

CBO's updated analysis illustrates how these proposed changes to the non-group market result in substantially higher premiums for low-income older adults. According to CBO, a 64-year-old adult living on an income of $26,500 would, on average nationwide, pay a premium of $1,700 under current law in 2026, after receiving a tax credit of $13,600. Under the AHCA, the tax credit for that 64-year-old would fall to $4,900, resulting in an average out-of-pocket premium in states not seeking waivers of $16,100. That premium would also be for a plan, according to CBO's estimates, with a higher deductible than under current law.

Even in states that waive federal market regulations for benefits and community rating, the out-of-pocket premium for this low-income 64-year-old would rise to $13,600. The impact on higher income 64-year-olds relative to current law would be more modest, since AHCA tax credits do not phase out by income like the ACA.

The effects would vary geographically, since AHCA tax credits (unlike ACA credits) do not vary based on actual local premiums. For example, in Mecklenburg County, North Carolina (an area with particularly high premiums), a 60-year-old enrollee with income of $20,000 would pay $960 per year in premiums in 2020 for a mid-range plan under the ACA and would pay $19,060 for equivalent coverage under the AHCA. The increased premiums would be less pronounced in areas with lower premiums. But, given the effects of changes under the AHCA in allowed premium variation due to age, low and middle income older adults would see increases in premiums in almost all areas of the country (as shown here). Older adults with higher incomes would fare better, since they would receive premium tax credits under the AHCA but not the ACA.

4. *Medicaid.* Changes to Medicaid could also affect coverage and costs for low-income older adults, depending on how states respond to new financial arrangements in the AHCA. The AHCA would limit federal funds for states that have elected to expand coverage under Medicaid, repealing the ACA's higher federal match for these expansion states as of January 2020. This provision – along with a cap on the growth in federal Medicaid funding over time on a per capita basis – is expected to result in 14 million people losing Medicaid coverage by 2026, some of whom would no doubt be older adults. In 2013, about 6.5 million 50-64-year-olds relied on Medicaid for their health insurance coverage.[1]

The loss of coverage for adults in their 50s and early 60s could have ripple effects for Medicare, a possibility that has received little attention. If the AHCA results in a loss of health insurance for a meaningful number of people in their late 50s and early 60s, as CBO projects, there is good reason to believe that people who lose insurance will delay care, if they can, until they turn 65 and go on Medicare, and then use more services once on Medicare. This could cause Medicare to increase, and when Medicare spending rises, premiums and cost-sharing do too.

A 2007 study published in the *New England Journal of Medicine* that looked at previously uninsured Medicare beneficiaries helps explain this dynamic. It showed a direct relationship between lack of insurance (pre-65) to higher service use and spending (post-65). Previously uninsured adults were more likely than those with insurance to report a decline in health, and a decline in health (pre-65) was associated with 23.4% more doctor visits and 37% more hospitalizations after age 65. Depending on the number of people who lose coverage and how long they remain uninsured, the impact for Medicare may initially be modest, but could compound with time.

In addition, the AHCA would repeal the Medicare payroll tax imposed on high earners, a change that would accelerate the insolvency of the Medicare Hospital Insurance Trust Fund and put the financing of future Medicare benefits at greater risk for current and future generations of older adults – another factor to consider as this debate moves forward.

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Endnotes

[1] Kaiser Family Foundation analysis of MSIS data, 2013.

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State Flexibility to Address Health Insurance Challenges under the American Health Care Act, H.R. 1628

Gary Claxton, Karen Pollitz, and Larry Levitt

The American Health Care Act, as passed by the House, (HR 1628 or AHCA) would make significant changes to the insurance market provisions established by the Affordable Care Act (ACA) and to the financial assistance provided to people who purchase non-group coverage. The proposal would reduce the federal role in health coverage and devolve authority to states over key market rules and consumer protections affecting access and affordability, albeit with federal back-up provisions if states fail to take action. This brief outlines the provisions in the AHCA providing flexibility for states and addresses some of the issues and tradeoffs they could face.

The AHCA would dramatically reduce federal spending on health coverage between 2018 and 2026, lowering federal contributions to Medicaid by $834 billion and subsidies for non-group health insurance by an additional $290 billion.[1] The AHCA also would eliminate the tax penalty for people who do not have health insurance, replacing it with a premium surcharge (30% for up to one year) for non-group enrollees who have a gap of insurance of at least 63 days in the previous year. The tax penalty for employers that do not offer coverage to full-time workers also would be repealed. Overall, CBO estimates that the AHCA changes would result in an additional 23 million people being uninsured in 2026.[2]

To offset a portion of the federal spending reductions, the AHCA would create a federal fund called the Patient and State Stability Fund ("Fund.") The bill appropriates up to $123 billion between 2018 and 2026 that states could use for a number of designated purposes related to coverage and the costs of care, plus an additional $15 billion for a federal invisible risk sharing program that states would have the option to administer. States also would have flexibility to modify important insurance provisions: through waivers, they could extend rate variation due to age, modify the essential health benefits, or permit insurers to use an applicant's health as a rating factor for individuals applying for coverage if they have had a coverage gap in the year prior to their enrollment.

In the next sections, we describe the Fund and the waiver authority in the AHCA. After that, we discuss some of the issues and tradeoffs that states would need to address with the flexibility and funds provided.

Patient and State Stability Fund

The AHCA creates a new grant program that makes up to $123 billion available to states between 2018 and 2026. Of that, $100 billion ($15 billion for each of 2018 and 2019 and $10 billion each year from 2020 to 2026) would be available for a number of purposes described below, although in its estimate, CBO assumed that most of the funds would be used to reduce premiums or increase benefits in the non-group market.[3] An

additional $15 billion would be available in 2020 for maternity coverage and newborn care and prevention, treatment, or recovery support services for individuals with mental or substance use disorders. An additional $8 billion would be available between 2018 and 2023 to reduce premiums and other out-of-pocket costs for individuals paying higher premiums due to a waiver permitting insurers to use health status in setting premiums (discussed below).

Funds would be allocated among states through a formula that considers the total medical claims incurred by health insurers in the state, the number of uninsured in the state with incomes under poverty, and the number of health insurers serving, for 2018 and 2019, the state's exchange, and for 2020 to 2026, the state's insurance market.

States could apply for funding for any of the permitted purposes under an expedited process, with applications automatically approved unless the federal government denies the application within 60 days for cause. Starting in 2020, state matching funds would be required to draw down the allocated federal funds: states would be required to match 7% of the federal funds in 2020, phasing up to 50% in 2026.[4] No funds would be appropriated for years after 2026.

States could seek funds for one or more of the specified purposes:

- **Providing financial assistance to high-risk individuals not eligible for employer-based coverage who enroll in the individual market**. The bill language is vague, but this provision appears to permit states to use their allocation to set up a high-risk pool or other mechanisms to provide or subsidize coverage for individuals with preexisting conditions without access to employer-sponsored coverage. By covering high-cost people in a separate pool, their costs are removed from the premium calculations of non-group insurers, lowering the premiums for other enrollees in private insurance. The AHCA does not address how people with preexisting conditions might be encouraged or required to participate in separate high-risk pools in states without waivers, because people with preexisting conditions generally would have access to non-group coverage at a community rate during open and special enrollment periods. A high-risk pool could be an option in states with a waiver to use health as a rating factor, where the pool could provide coverage to people with preexisting conditions who are offered coverage at very high premiums due to their health.

- **Providing incentives to entities (e.g., insurers) to enter into arrangements with the state to stabilize premiums in the individual market**. This provision appears to permit states to use their allocation for a reinsurance program. Reinsurance programs lower premiums in a market because they reimburse health insurers for a portion of the claims for people with high-costs, reducing the premiums they need to collect from enrollees. A reinsurance program operated during the first three years of the ACA; the Congressional Budget Office estimated that the reinsurance program ($10 billion in 2014) reduced non-group premiums by about 10% in 2014.

- **Reducing the cost of providing non-group or small-group coverage in markets to individuals facing high costs due to high rates of utilization or low population density.** Premiums vary

significantly across and within states. This provision would allow states to use resources in higher cost or rural areas.

- **Promoting participation in the non-group and small-group markets and increasing options in these markets.** In the past, for example, state based marketplaces that devote resources to outreach and enrollment assistance have been able to help more applicants during open enrollment periods.

- **Promoting access to preventive, dental and vision care services and to maternity coverage, newborn care, and prevention, treatment and recovery support services for people with mental health or substance disorders.** This purpose was added to the bill as the House considered changes to the ACA essential health benefits standard. Fifteen billion dollars in Fund resources are dedicated for spending on maternity, newborn, mental health, and substance abuse services in the year 2020.

- **Providing direct payments to providers for services identified by the Administrator of the Centers for Medicare and Medicaid Services (CMS).** For example, states might use Fund resources to expand services provided by public hospitals, free clinics, and other safety net providers that offer treatment to residents who are uninsured or under-insured.

- **Providing cost-sharing assistance for people enrolled in health insurance in the state.** The AHCA would repeal current law cost sharing subsidies ($97 billion between 2020 and 2026), which pay insurers for the cost of providing reduced cost sharing to low-income marketplace enrollees. States could use their fund allocation to offset some of this reduction or assist others with private health insurance (such as those with employer-based coverage) who have high out-of-pocket costs.

These categories are quite broadly specified, providing states with discretion about what policies they may want to pursue and how to how to design programs to address different health care needs in their state. The options include ways to reduce premiums (through reinsurance, for example), to make direct payments to health care providers, or to help insurance enrollees with high out-of-pocket costs. States could pursue one or more of these approaches, although they are constrained by the amount of funds available and by their need to match the federal funds after 2020.

CBO estimated that $102 billion of the $123 billion provided to states would be claimed by states by 2026. CBO assumed that states would use most of their Fund allocations to reduce premiums or increase benefits in the non-group market; it assumed $14 billion of the available $15 billion available for maternity coverage, newborn care, and mental health and substance abuse care would be used for direct payments for services.[5]

Federal default program. In states without an approved application for monies from the Fund for a year, the bill would authorize the CMS administrator, in consultation with the insurance commissioner for the state, to operate a reinsurance program in the state for that year. The program would reimburse insurers 75% of the cost of claims between $50,000 and $350,000 for years 2018 and 2019; the CMS Administrator would adjust these parameters for 2020 through 2026. To receive funds through the default program, the state would be

required to match the federal funds, with matching rates starting at 10% in 2018 and increasing to 50% by 2024, remaining at 50% through 2026.

Invisible risk sharing program. The AHCA also would create a separate reinsurance program as part of the Fund, called the Federal Invisible Risk Sharing Program (FIRSP). The FIRSP is not a grant program, but would make payments to health insurers in every state to offset a portion of the claims for eligible individuals (e.g., enrollees with high claims or with specified conditions). The CMS Administrator would determine the parameters of the program and would administer the program, although states would be authorized to assume operation of the program beginning in 2020. The bill appropriates $15 billion to the FIRSP for 2018 through 2026. Additionally, at the end of each year, any unallocated monies in the Fund (which could occur if a state did not agree to match the federal funds) would be reallocated to FIRSP as well.

The AHCA does not specify how FIRSP would be coordinated with states that adopt a reinsurance program or for which the CMS Administrator is operating a federal default program. These issues could be addressed as the Administrator specifies the parameters of the FIRSP. CBO assumed that all of the $15 billion in FIRSP funding would be used over the period.[6]

State Waiver Options

The AHCA would permits states to seek waivers to federal minimum standards for non-group and small-group coverage to (1) modify the limit for age rating,[7] (2) modify the essential health benefit package, and (3) permit insurers to consider the health status of applicants for non-group coverage if they have had a coverage gap in the past year.

To obtain a waiver, state must show that the waiver would do one or more of the following: reduce average premiums, increase health insurance enrollment, stabilize the market for health insurance, stabilize premiums for people with preexisting conditions or increase choice of health plans. The waiver permitting health as a rating factor has an additional requirement, discussed below.

WAIVER TO PERMIT RATING BASED ON HEALTH

The AHCA generally would require non-group insurers to assess a premium surcharge of 30% to all applicants (regardless of their health) who have had a coverage gap of at least 63 consecutive days in the 12 months preceding enrollment. The surcharge would apply during an enforcement period (which ends at the end of a calendar year).

In lieu of the 30% premium surcharge, the bill also authorizes states to seek a waiver that would permit insurers to consider an applicant's health in determining premiums. Health status rating could apply for people with a coverage gap in the year preceding enrollment. States could seek a waiver for enrollments during special enrollment periods for 2018 and beyond, and for signups during open enrollment periods for 2019 and beyond. Insurers would not be permitted to deny coverage to an applicant based on their health, but the bill does not limit the additional amount that an applicant can be charged based on their health (the state could limit the amount of the health surcharge but is not required to do so). Similar to the rules regarding the 30%

surcharge, insurers would be able to apply the health status rating through December 31 of the plan year for which the individual enrolled.

To be eligible for a community-rating waiver, in addition to the general waiver requirements, the state must have in place a program that either provides financial assistance to high risk individuals (e.g., a high risk pool) or provide incentives to help stabilize premiums in the individual health insurance market (e.g., reinsurance payments to insurers) or it must participate in the FIRSP. Because the FIRSP would operate in all states, with no requirement for state matching funds, it would appear that all states would be eligible for the community-rating waiver without having to set up a separate high-risk pool or reinsurance program. The bill imposes no additional requirements for the state programs. The bill would provide $8 billion to the Fund over five years (2018 through 2022) for states with these waivers to help reduce the premiums out-of-pocket costs for people who have higher premiums due to waiver. State matching funds would seem to be required to draw down funds starting in 2020. CBO estimates that $6 billion of the $8 billion would be used.

Because there is no limit on the amounts by which insurers could vary premiums based on health, a premium surcharge for people with pre-existing conditions who have had gaps in coverage could provide a stronger incentive for people to maintain continuous coverage than the 30% surcharge that would otherwise apply. Before passage of the ACA, insurers declined applicants frequently, even when they could have charged a higher premium instead, suggesting that insurers would likely assess very high health premium surcharges for people with potentially costly preexisting conditions. While not an actual denial, very high surcharges would likely have in practice the same effect for many people subject to surcharges based on their health.

Under the bill, states with a waiver could also permit insurers to use health rating to charge healthy applicants with a coverage gap a lower than standard premium available to people with continuous coverage. Under this approach, healthy applicants would have an incentive to submit to health rating, even if they had continuous coverage. This could have a destabilizing effect on the market because healthy people could have an incentive to switch to new coverage at renewal, without submitting proof of continuous coverage, in hopes of finding a lower premium based on their good health, which would cause the standard rates generally available for people with continuous coverage to increase.

As a condition of receiving a community-rating waiver, the AHCA does not require that a state must assure access to non-group coverage or make an alternative source of coverage available to people subject to health rating if the rate they are offered is very high. For example, a state participating in the FIRSP is eligible for this waiver, and that program reimburses health insurers for people that become enrollees; a person offered a very high health status rate might never become covered. It is unclear how much authority the Secretary of Health and Human Services (HHS) would have to address this issue in the waiver process, given the expedited waiver approval provisions in the bill.

WAIVER TO MODIFY THE ESSENTIAL HEALTH BENEFITS PACKAGE

Under current law, insurance policies offered in the non-group and small-group markets must cover a fairly comprehensive list of defined essential health benefits: ambulatory patient services, emergency services, hospitalization, maternity and newborn care, mental health and substance use disorder services, including behavioral health treatment, prescription drugs, rehabilitative and habilitative services and devices, laboratory

services, preventive and wellness services and chronic disease management, and pediatric services, including oral and vision care. The essential health benefits are a minimum that must be offered; insurers may offer additional benefits as well.

In addition to the list of essential health benefit categories, a number of constraints and consumer protections apply to their definition by the Secretary of HHS, including:

- that the scope of the essential health benefits offered in these markets is equal to the scope of benefits provided under a typical employer plan;

- that coverage decisions, determination of reimbursement rates, establishment of incentive programs, and design benefits cannot be made in ways that discriminate against individuals because of their age, disability, or expected length of life;

- that essential health benefits take into account the needs of diverse segments of the population, including women, children, and people with disabilities;

- that essential health benefits not be subject to denial to individuals against their wishes on the basis of the individuals' age or expected length of life or of the individuals' present or predicted disability, degree of medical dependency, or quality of life;

- that emergency services provided by out-of-network providers would be provided without prior authorization or other limits on coverage, and would be subject to in-network cost sharing requirements;

Current law also prohibits insurers from applying annual or lifetime dollar limits to essential health benefits.

The AHCA would authorize states, for years 2020 and beyond, to seek a waiver to modify the essential health benefits that insurers would need to offer in the non-group and small group markets. States also could seek to modify the provisions relating to the scope of the benefits and to their definition. There are no limits or parameters in the AHCA regarding the changes a state could make to the essential health benefit list or its definitions, although several provisions of current law could limit their discretion. For example, the current prohibition on applying annual and lifetime maximum dollar limits to essential health benefits may prevent states from using dollar limits in defining the scope of benefits they include as essential health benefits, and the application of mental health parity rules to qualified health plans may prohibit a state that includes mental health or substance abuse services as an essential health benefit from applying limits to the scope of those benefits that are not applicable to other benefits.

The waiver authority gives states wide latitude in defining essential health benefits that would be required in non-group and small group coverage. A state could remove one or more benefits from the list, which would mean that insurers could offer plans without those benefits or could offer them as an option in some policies or with limits. Maternity benefits, for example, were often not included in non-group policies prior to the ACA. A state also could limit the scope of a benefit; for example, determine that only generic drugs were essential health benefits or limit the scope of hospitalization to 60 days per year. Insurers would then be required to offer at least the limited scope of the benefit, with the option to cover a broader scope of the benefit (in our

example, hospital coverage without no day limit) in some or all of their policies in the state. A state could also eliminate the standard, defining essential benefits to mean whatever insurers in a competitive market offer. As discussed below, however, adverse selection concerns would make it difficult for insurers to offer coverage that is much more comprehensive than the defined minimum at a reasonable premium.

WAIVER TO MODIFY THE LIMIT ON AGE RATING

The AHCA would generally amend current law to expand the permissible premium variation due to age from 3 to 1 to 5 to 1, or any other ratio a State might elect. States also would be authorized to seek a waiver, for years 2018 and beyond, to put in place a higher rate permissible ratio. There are no limits in the AHCA on the ratio that a state could permit insurers to use. The waiver authority here appears to be redundant, as the underlying bill would authorize states to elect different ratios without seeking a waiver.

Issues and Tradeoffs that States May Need to Resolve

The AHCA would reduce the federal role and resources in providing health insurance coverage, particularly for people who are lower and moderate income and are covered though the Medicaid coverage expansion or through the non-group market. States would assume an expanded role, both financially and in making key decisions about the access and scope of benefits available to these people.

States would undertake this role facing some significant challenges.

COMPETING DEMANDS FOR REDUCED FEDERAL FUNDING

The AHCA, by reducing the overall amount of federal premium tax credits, eliminating cost-sharing subsidies, and reducing federal contributions for the Medicaid expansion population and overall, would significantly reduce federal health care payments received by insurers, providers and people, leaving fewer people covered and more people with higher out-of-pocket costs. CBO estimates that, between 2018 and 2026, the AHCA would reduce federal Medicaid spending by $834 billion and federal spending on subsidies for non-group health insurance by $290 billion (Figure 1).[8] By 2026, 23 million fewer people would have health insurance. States would have access to grant money through the Fund to try to address some of the issues, but the resources available through the Fund would be far less than the spending reductions. CBO estimates that states would use $102 billion from the Fund, with an additional $15 billion being spent by the FIRSP.[9] States would be faced with a number of competing demands for the federal grant money, including lowering premiums, helping people with high cost sharing, and helping people and providers address access and financial issues resulting from the greater number of people without insurance.

Figure 1

Changes to Federal Contributions for Health Coverage, H.R. 1628

Cumulative Increase or Decrease (-) in Billions of Dollars, 2017-2026

SOURCE: Congressional Budget Office Cost Estimate of H.R. 1628, May 24, 2017
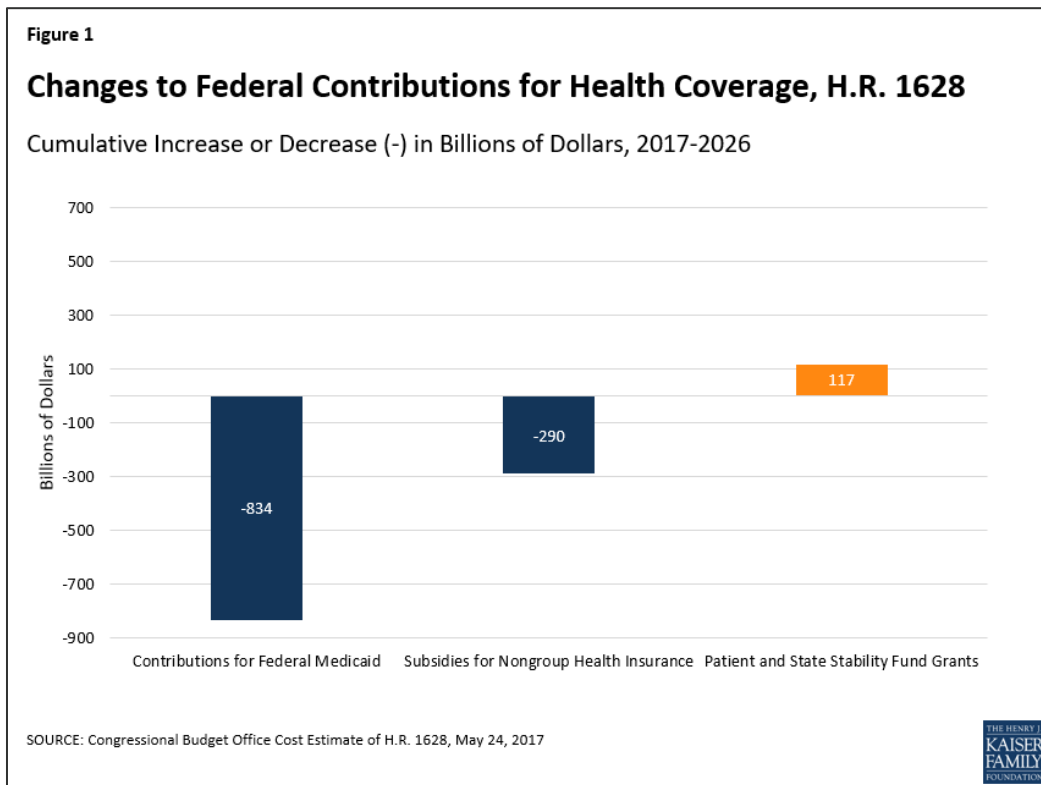
CHALLENGES IN REDUCING PREMIUMS AND MAINTAINING COVERAGE

A second challenge for states relates to the cost of non-group health insurance premiums. Proponents of the AHCA have identified lowering the cost of non-group health insurance as a significant goal of the proposed law, but the underlying federal portions of the bill do not really do that. In fact, replacing the individual requirement to have health coverage with the continuous coverage provision would initially increase premium rates as compared with current law.[10] A few provisions, including the elimination of the health insurance and the medical device taxes, the FIRSP, and the elimination of standard cost-sharing tiers would offset some of the increase from repealing the individual coverage requirement. The most significant tools to potentially lower premiums, however, would be under state discretion: using Fund dollars for reinsurance to offset premiums and seeking waivers to modify the essential health benefits and to permit the insurers to use health as a rate factor for applicants with a coverage gap. Each of these options, however, would involve significant policy and political tradeoffs.

Applying the grant dollars from the Fund could have a significant additional impact on premium rates, particularly because fewer people would likely be covered than under current law. CBO has assumed in its cost estimates of the AHCA that states would use most of their grants from the Fund to reduce non-group premiums or increase benefits.[11] Based on a previous CBO cost estimate for the AHCA, researchers at the Brookings Institution estimated that the AHCA increased average premiums by about four percent when age is held constant (see box below). This suggests that states would need to use most of their grant Funds to bring premiums back to current levels. As just discussed, however, applying all or a large percentage of the grant funds to reduce premiums would mean that other potential needs might remain unaddressed.

Measuring Premium Change

Determining how much premiums would change due to changes in law is complicated because a number of factors affect what people pay and who would actually buy coverage. There are a few ways to look at this. One is the change in the average premium; this is the change in the average amount that people are expected to pay under current law and under the change. This is a good measure of how overall costs will change, but not a very good measure of how a particular person might see their premium change. Because premiums vary by things, such as where people live and what age they are, the average can change just because the distribution of enrollees changes; for example, if more young people enroll, the average premium goes down, but the premium that a person at any given age sees might remain the same. Looking at changes for people in certain rating classes, such as by age, comes closer to looking at what particular people may see, although the changes still may vary by location or by health status if insurers can use them in rating. Premiums for a person of a particular age or health also could vary due to changes in benefits or to the cost sharing they face.

WAIVING ESSENTIAL BENEFITS COULD REDUCE PREMIUMS BUT ALSO LIMIT AVAILABILITY

The waiver options would also pose difficult decisions for states. For example, a state could lower premium rates by using an essential health benefits waiver to reduce the required benefits in non-group or small-group policies. The argument for this approach is that some people could choose policies that cost less because they cover less, and others who want additional benefits could pay more for policies that covered those benefits. There are several difficulties with this, however.

One is that most claims costs fall into the basic insurance categories that would be hard to exclude. A recent report from Milliman based on their commercial claims database, found that claims from hospital care, outpatient care including physician costs, and prescription drugs accounted for around 70% of claims costs; adding emergency care and laboratory services brings that to over 80%. Redefining essential health benefits to meaningfully lower premiums would require either placing meaningful limits on these categories (for example, only including generic drugs as an essential benefit) or eliminating whole other categories. Looking at some of the categories that were sometimes excluded prior to the ACA: maternity coverage accounts for 3.4% of claims, mental health and substance abuse accounts for 4.2% of claims and preventive benefits account for 5.6% of claims.[12] To obtain policies with lower premiums, people would need to choose policies with important limitations. CBO also notes that, should such categories be dropped from the definition of essential health benefits, non-group enrollees who need such care could see their out-of-pocket medical care spending increase by thousands of dollars in any given year.

A second difficulty is that this approach would lead to significant adverse selection against plans with benefits that were more comprehensive than the minimum required. Because market rules permit applicants to choose any policy at initial enrollment, and change their level of coverage annually at renewal, people who have or develop higher needs for a benefit that is not a defined essential health benefit can enroll or switch a plan that

covers it without any impediment. For example, if a state were to determine that prescription drugs were not an essential health benefit, people without current drug needs would be more likely to take policies that did not provide drug coverage while people with current needs would be more likely to take policies that did. This would increase premiums for policies covering prescriptions to relatively high levels, discouraging people without drug needs from purchasing them, which would lead to even higher premiums. While the risk adjustment program could offset some of the impacts of selection, developing a risk adjustment methodology where there is substantial benefit variation is difficult.[13] This dynamic would discourage insurers from offering coverage for important benefits not defined as essential health benefits, or if they were to offer it, they would do so at high premiums. People at average risk would likely not have reasonable options if they wanted to purchase coverage with significant benefits beyond those that were required for all policies. CBO also estimates that insurers generally would not want to sell policies that include benefits that were not required by state law.

The AHCA requires that $15 billion of the money in the Fund be used for maternity coverage, newborn care, and prevention, treatment and recovery support services for mental health and substance abuse disorders. States that chose not to include any of these services as essential health benefits could use these funds to make these services available, for example, by subsidizing optional coverage or providing direct services. The funds would only be available in 2020, although it might be possible for a state to use them over a longer period. The $15 billion was added to the Fund along with the authority to waive essential health benefits, which suggests that the sponsors may be anticipating that these services are at risk of not being defined as essential health benefits by states.

The second significant waiver option for states in the AHCA, allowing insurers to use health as a rating factor for applicants with a coverage gap within the previous year, would put states in the middle of one of the most contentious issues in this debate: how to provide access to coverage for people with preexisting health conditions. There are few specifics in the bill, but generally, as discussed above, a state could seek a waiver to allow insurers to use health in rating applicants with a coverage gap and to apply the health rate until the end of the calendar year (their enforcement period).

WAIVING COMMUNITY RATING VS. PROTECTING ACCESS FOR PEOPLE WHO ARE SICK

This provision has the potential to reduce non-group premiums overall because permitting health-based rates that exceed 30% penalty that otherwise would apply to applicants with a coverage gap rating would make it more expensive for them to buy non-group plans, either generating more premiums from them or, more likely, diverting them from enrolling in the non-group market. If the permitted health surcharges were sufficiently high, the effect would be very close to a denial. As noted above, the AHCA does not require states seeking this waiver to have any alternative method of access for people facing very high premiums based on their health. The state would at least have to participate in the FIRSP (and it appears that the program operates in all states), but that mechanism only assists insurers when high-risk or high-cost people enroll, and people assessed a very high premium might not have an opportunity to enroll.

States electing this waiver would have tools to protect access for people with coverage gaps and preexisting conditions. One option that has been mentioned by supporters would be to create a high-risk pool that could offer coverage to people facing a high health surcharge. The bill would permit states to use monies from the

Fund to support a high-risk pool, and the bill would appropriate an additional $8 billion for 2018 through 2023 that could be used to reduce premiums or other out-of-pocket costs for people assessed a higher premium because of the waiver to use health status as a factor. States could use their share of the $8 billion to reduce premiums for high-risk pool coverage as an alternative for people who could not afford the health status surcharge for non-group coverage, and could use their general allocation from the Fund to support the costs of the pool if the $8 billion were to be insufficient or when it ends in 2023.

For states, the tradeoff would be balancing providing reasonable access to people with coverage gaps and preexisting conditions against the goal of lowering premiums for others. A state could have the biggest impact on premiums for non-group coverage by permitting insurers to assess a health surcharge without limits and not providing an alternative means of access. This would result in many people with coverage gaps and preexisting conditions being priced out of the market, which would not only lower claims costs immediately, but would also prevent them from establishing continuous coverage and migrating to non-group plans at regular rates after their enforcement periods end. Possibly more likely is that states would take some steps to assist people subject to health rating from being effectively declined through high premiums. Options could include establishing a high-risk pool with premiums that are more affordable than the health adjusted premiums people would be assessed under the waiver, limiting the health surcharges that insurers could assess, or using a portion of their share of the $8 billion to reduce premium costs to a more affordable level. For states weighing these choices, as they improve access and affordability for people who would be subject to the health adjusted rates, they generally lessen the impact that the waiver would have on premiums overall.

Likely, the high-risk pool option would have the largest impact on non-group premiums of these options, because it would move the claims for some high-risk people outside of the non-group market, at least until the people established continuous coverage and moved to non-group plans with premiums not adjusted for their health. The bill does not establish any parameters for a high-risk pool, such as the premiums that could be charged, what the coverage and cost sharing would be, and whether there would be any limits on coverage. For example, it is not clear if a high-risk pool would need to offer essential health benefits, would be subject to provisions prohibiting dollar limits, or would be considered coverage for which people could receive a premium tax credit. States would need to establish parameters in all of these areas.

CBO estimated that about one-half of people live in states that would seek a waiver to modify the essential health benefits, use health as a rating factor, or both. About two-thirds of these people would live in states that would choose to make moderate changes to market regulations, which would result in a modest reduction in premiums. One-third of these people live in states that CBO assumed would choose to substantially modify the essential health benefits and allow health status rating in their non-group markets.[14] In these states, CBO estimated that people in good health would face significantly lower premiums while people less healthy people would be unable to purchase comprehensive coverage at premiums similar to current law and might not be able to purchase coverage at all.[15] Although the additional grant funds for states with waivers to use health status rating would lower premiums and out-of-pocket premiums, CBO found that the premium effects would be small because ". . . the funding would not be sufficient to substantially reduce the large increases in premiums for high-cost enrollees"[16] . CBO did not produce illustrative premiums for this scenario.

A third challenge for states is that the annual appropriations to the Fund do not grow over time and end entirely after 2026, even though the underlying health care needs continue to grow. For example, the cost of health care would continue to increase over the period, while the number of uninsured would also increase. Adding to the increasing cost burden, the federal premium tax credits would grow more slowly than premium over time, shifting more costs to enrollees and reducing their impact on affordability. The appropriations for the Fund also end in 2023 (for the $8 billion) and 2026 for the rest of the Fund. At the same time, the state matching requirements for money from the Fund grow over time, from 7% in 2020 to 50% in 2026. This means that states would need to invest an increasing amount of resources on policies and programs for which federal funds may end, perhaps abruptly, in the foreseeable future. Unless the federal government would agree to commit to appropriate funds several years in advance, states might be reluctant to make budget or program commits to programs that they may be unable to maintain without significant federal assistance.

Discussion

Overall, the AHCA would present states with a number of difficult problems and choices, and with limited resources with which to address them. The bill would reduce federal contributions for Medicaid and federal payments to subsidize non-group insurance by about $1 trillion dollars, while repealing the federal tax penalty for not having health insurance would increase non-group premiums significantly above current levels. These provisions would disproportionately affect the affordability of coverage and care for lower income and older people, and would cause millions of people to become uninsured.

States would be eligible for $123 billion in grant funds to help offset these impacts, but would face difficult tradeoffs. If states use most of their grant funds to reduce premiums, as CBO has assumed, there would not be funds left to address other needs, such as helping lower income and older people facing higher premium and out-of-pocket costs and health care providers who would be serving a growing number of uninsured people. States also would have the options of reducing covered benefits or allowing insurers to increase premiums for applicants with pre-existing conditions, each of which would lower premiums but would raise out-of-pocket costs for people with health problems.

State also would need to find an increasing amount of matching state funds to be eligible for the federal grant fund, and could face uncertainty if federal funds are not appropriated in advance. States choosing not to participate (by not providing matching funds) would be left without resources to address the higher premiums and affordability issues that would arise.

ENDNOTES

[1] Congressional Budget Office, cost estimate for the American Health Care Act as passed by the House of Representatives May 4, 2017 (May 24, 2017), ("CBO May 24, 2017 cost estimate"), https://www.cbo.gov/publication/52752.

[2] CBO May 24, 2017 cost estimate, p. 4.

[3] CBO May 24, 2017 cost estimate, p. 14.

[4] Required matching payments would be required for some states that want to participate in a partially state-funded reinsurance program that CMS would operate on their behalf.

[5] CBO May 24, 2017 cost estimate, pp. 13-14; Kaiser Family Foundation staff calculations.

[6] CBO May 24, 2017 cost estimate, pp. 14-15.

[7] State age rating waivers would not appear to be necessary, however, as Section 135 of AHCA establishes new age rating limits of "5 to 1 for adults...or such other ratio for adults...as the State may provide."

[8] CBO May 24, 2017 cost estimate.

[9] CBO May 224, 2017 cost estimate, pp 13-15.

[10] Congressional Budget Office, cost estimate for the American Health Care Act (March 13, 2017), http://www.cbo.gov/publication/52486.

[11] CBO May 24, 2017 cost estimate, p. 14.

[12] Percentages provided by authors.

[13] American Academy of Actuaries, "How Changes to Health Insurance Market Rules Would Affect Risk Adjustment," Issue Brief, May 2017, p. 6, https://socialsecuritygame.actuary.org/files/publications/Acad_RA_brief_051017.pdf.

[14] CBO May 24, 2017 cost estimate, p. 21.

[15] CBO May 24, 2017 cost estimate, p. 27.

[16] CBO May 24, 2017 cost estimate, p. 29.

Gaps in Coverage Among People With Pre-Existing Conditions

Larry Levitt, Anthony Damico, Gary Claxton, Cynthia Cox, and Karen Pollitz

The American Health Care Act (AHCA), which has passed the House of Representatives, contains a controversial provision that would allow states to waive community rating in the individual insurance market. In this brief we estimate the number of people with pre-existing conditions who might be affected by such a policy.

How the State Waiver Provision Works

Under the provision, insurers in states with community rating waivers could vary premiums by health status for enrollees who have had a gap in insurance of 63 or more consecutive days in the last year. The higher (or lower) premiums due to health status would apply for an entire plan year (or the remainder of the year in case of people signing up during a special enrollment period), at which point enrollees would be eligible for a community-rated premium unrelated to their health.

States waiving community rating would be required to set up a mechanism to subsidize the cost of high-risk enrollees, such as a high-risk pool, or participate in a reinsurance arrangement that makes payments directly to insurers. States are not required to set up an alternative source of coverage for people who face higher premiums based on their health.

The bill makes $100 billion available to all states for a variety of purposes, including high-risk pools, reinsurance programs, and cost-sharing subsidies. An additional $15 billion is made available for a federal invisible risk-sharing program, which would be similar to a reinsurance arrangement. Another $15 billion is earmarked for spending on maternal and newborn care, mental health, and substance abuse services for the year 2020. The AHCA also allocates $8 billion over five years to states that implement community rating waivers; these resources can be used to help reduce premiums or pay out-of-pocket medical expenses for people rated based on their health status.

Premiums [varied significantly](#) based on health status in the individual market before the Affordable Care Act (ACA) prohibited that practice beginning in 2014. Insurers in nearly all states were also permitted to decline coverage to people with pre-existing conditions seeking individual market insurance. We [estimate](#) that 27% of non-elderly adults have a condition that would have led to a decline in coverage in the pre-ACA market. While insurers would have to offer insurance to everyone under the AHCA, people with declinable pre-existing conditions would likely face very large premium surcharges under an AHCA waiver, since insurers were unwilling to cover them at any price before the ACA.

How Many People Might be Affected by Community Rating Waivers?

The effect of a community rating waiver would depend crucially on how many people with pre-existing conditions have gaps in insurance that would leave them vulnerable to higher premiums.

Using the most recent National Health Interview Survey (NHIS), we estimate that 27.4 million non-elderly adults nationally had a gap in coverage of at least several months in 2015. This includes 6.3 million people (or 23% of everyone with at least a several-month gap) who have a pre-existing condition that would have led to a denial of insurance in the pre-ACA individual market and would lead to a substantial premium surcharge under AHCA community rating waiver.[1]

Figure 1

People With Pre-existing Conditions among those with Gaps in Insurance Coverage, 2015

People with pre-existing conditions (6.3 million) — 23%

People without pre-existing conditions (21.1 million) — 77%

Total = 27.4 million with a gap of several months or more
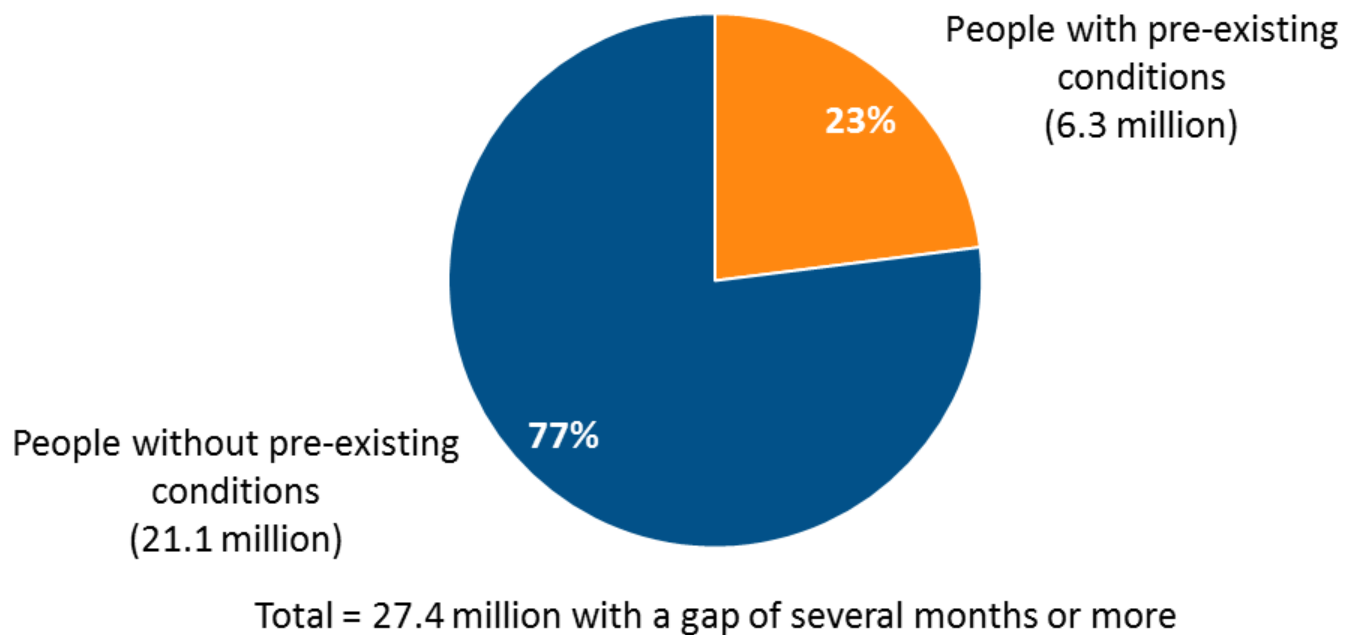
Source: Kaiser Family Foundation analysis of the National Health Interview Survey. "Pre-existing conditions" in the chart above are those conditions that likely would have left the individual uninsurable in the individual market before the Affordable Care Act. Under the American Health Care Act passed by the House, people with these conditions would not be denied coverage but could face higher individual market premiums if their state sought a community rating waiver.

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Among the 21.1 million people who experienced a gap in coverage and did not have a pre-existing condition that would have been considered declinable pre-ACA, some did have other pre-existing conditions (such as

asthma, depression, or hypertension) that would not have resulted in an automatic denial by individual market health insurers pre-ACA but that nonetheless could result in a premium surcharge.

In many cases, people uninsured for several months or more in a year have been without coverage for a long period of time. In other cases, people lose insurance and experience a gap as a result of loss of a job with health benefits or a decrease in income that makes coverage less affordable. Young people may have a gap in coverage as they turn 26 and are unable to stay on their parents' insurance policies. Medicaid beneficiaries can also have a gap if their incomes rise and they are no longer eligible for the program.

Through expanded Medicaid eligibility and refundable tax credits that subsidize premiums in insurance marketplaces, the ACA has substantially reduced coverage gaps. In 2013, before the major provisions of the ACA went into effect, 38.6 million people had a gap of several months, including 8.7 million with declinable pre-existing conditions.

Some people with a gap will ultimately regain coverage through an employer-based plan or Medicaid, and would not be subject to premium surcharges based on their health. However, anyone who has been uninsured for 63 days or more who tries to buy individual market insurance in a state with a community rating waiver would be subject to medical underwriting and potential premium surcharges based on their health.

Uncertainty Around the Estimate

There are a variety reasons why our estimates might understate or overstate number of people with pre-existing conditions who could be subject to premium surcharges under the AHCA.

People with health conditions would have a strong incentive under an AHCA waiver to maintain continuous coverage in order to avoid being charged premiums that could potentially price them out of the insurance market altogether. The question is how many would be able to do so, given the fact that the premium tax credits provided for in the AHCA would be 36% lower on average for marketplace enrollees than under the ACA and would grow more slowly over time. In 2013, before tax credits for individual insurance were available and the ACA's Medicaid expansion took effect, the number of people with pre-existing conditions who experienced a gap in coverage was 41% higher. Among people with individual market insurance in 2015, we estimate that 3.8 million adults (representing 25% of all adult enrollees) had a pre-existing condition that would have led to a decline before the ACA. These individuals would not be subject to premium surcharges under AHCA community rating waivers, so long as they maintain continuous coverage. Because individual market subsidies would be significantly reduced under the AHCA, these individuals could face added challenges remaining continuously covered.

About 49% of people with pre-existing conditions who had a gap in coverage in 2015 had incomes at or below 138% of the poverty level, and some of them could be eligible for Medicaid (depending on whether their state has expanded eligibility under the ACA and what eligibility rules are in states that have not expanded). They would not face any coverage restrictions associated with their health status in Medicaid. However, under the AHCA enhanced federal funding for expanding Medicaid would be repealed, and federal matching funds would be capped. The Congressional Budget Office projects that 14 million fewer people would be enrolled in Medicaid by 2026. So, while some people we identify as having a coverage gap would be eligible for Medicaid

under the AHCA, many more people currently enrolled in Medicaid would lose that coverage under the AHCA and be uninsured. They would be eligible for premium tax credits, but the AHCA's subsidies do not scale by income so individual market insurance would likely be unaffordable for people who are poor, including those with pre-existing conditions.

There is also significant uncertainty surrounding how many states would seek to waive community rating under the AHCA. Some states might do so to roll back what they consider to be excessive regulation of the insurance market initiated by the ACA and preserved under the AHCA. Other states might come under pressure to implement waivers from insurers who believe the market would be unstable, given that the AHCA repeals the ACA's individual mandate. What states decide to do may ultimately have the greatest effect on how many people with pre-existing conditions face potentially unaffordable insurance premiums.

> Larry Levitt, Gary Claxton, Cynthia Cox, and Karen Pollitz are with the Kaiser Family Foundation. Anthony Damico is an independent consultant to the Kaiser Family Foundation.

Methods

To calculate nationwide prevalence rates of declinable health conditions, we reviewed the survey responses of nonelderly adults for all question items shown in Methods Table 1 using the CDC's 2015 National Health Interview Survey (NHIS). Approximately 27% of 18-64 year olds, or 52 million nonelderly adults, reported having at least one of these declinable conditions in response to the 2015 survey. For more details on methods and a list of declinable conditions included in this analysis, see our earlier brief: Pre-existing Conditions and Medical Underwriting in the Individual Insurance Market Prior to the ACA.

The programming code, written using the statistical computing package R, is available upon request for people interested in replicating this approach for their own analysis.

Endnotes

[1] Note that coverage gaps identified in NHIS do not match up precisely to the 63-day threshold in the AHCA. People who were uninsured at the time they were surveyed were asked if they had been uninsured for at least the prior six months, a longer period than the AHCA threshold. People who were insured at the time of the survey were asked if they had experienced any gaps in coverage totaling at least three months during the past year. These coverage gaps identified in NHIS may not have been consecutive months, but that would typically be the case.

U.S. Health Reform—Monitoring and Impact

Premium Tax Credits Tied to Age Versus Income and Available Premiums: Differences by Age, Income, and Geography

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Robert Wood Johnson
Foundation

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INTRODUCTION

On May 4, 2017, House Republicans passed the American Health Care Act (AHCA) as a replacement for the Affordable Care Act (ACA). The bill would replace the income- and premium-related tax credits in the ACA with age-varying tax credits. The bill now moves to the Senate, where it is expected to be revised before formal consideration. While the bill's fate in the Senate is currently unclear, even a significantly revised version may include age-related tax credits because they are administratively simple and lack any possible work-disincentive effects of tax credits that phase out as income increases (although the AHCA's tax credits do phase out at relatively high incomes).

In this brief, we argue that age-related tax credits, as opposed to the ACA's tax credits that vary by income and the actual premiums faced, provide insufficient help to people with low incomes, people in high premium markets, and people as they near age 65.

Because age-related tax credits maintain political currency and are likely to be part of the Senate's adaptation of or alternative to the AHCA, we compare the value of tax credits under the ACA and the AHCA for individuals at three ages, four income groups, and 10 urban insurance markets. The ACA tax credits cover the difference between the second-lowest-cost premium for a silver plan and a percentage of income. Thus, people who are eligible for tax credits are protected against high-premium plans, whether premiums are high because

the person is older or because the person lives in a high-cost geographic area. The AHCA tax credits increase not with income but with age ($2,000 for people younger than age 30 and $4,000 for people ages 60 and older); at higher incomes, the tax credits are phased out. The differences between the two types of tax credits are illustrated in Table 1.

We examine premiums for people at ages 25, 45, and 64, and the impact of tax credits on an example family. We present findings for the following income levels: 150 percent, 250 percent, 350 percent, and 450 percent of the federal poverty level (FPL), levels equivalent to $17,820; $29,700; $41,580; and $53,460 for a single adult, respectively in 2017. We include the following cities: Cleveland, OH; Detroit, MI; Seattle, WA; Providence, RI; Los Angeles, CA; Birmingham, AL; Oklahoma City, OK; Tucson, AZ; Charleston, WV; and Charlotte, NC. The first five markets have relatively low premiums because they have a large number of competing insurers and/or because they have Medicaid insurers (managed-care insurers that only provided coverage for Medicaid beneficiaries before the ACA was implemented), provider-sponsored insurers, or Blue Cross HMO insurers operating in their markets. The last five markets have relatively high premiums, largely because they have considerably less competition (e.g., only one or two insurers).

Two recent analyses modeled the effects of the proposed tax credits. The Kaiser Family Foundation created a tool comparing tax credits under the ACA with those in the proposed AHCA

Table 1: Comparison of ACA and AHCA Tax Credits

ACA		AHCA	
Income as percent of federal poverty level	Maximum percentage of income enrollee pays towards premium	Age	Tax credit
100-133%	2.04%	Under 30	$2,000
133-150%	3.06-4.08%	30-39	$2,500
150-200%	4.08-6.43%	40-49	$3,000
200-250%	6.43-8.21%	50-59	$3,500
250-300%	8.21-9.69%	60+	$4,000
300-400%	9.69%		
Over 400%	No cap		

Note: The ACA's tax credits are linked to benchmark premiums each year, and we have ACA premium data for 2017 but not for future years. The AHCA delineates its new tax credits beginning in 2020. As a consequence, we compare 2017 ACA tax credits with the 2020 AHCA tax credits. This comparison has the effect of making the AHCA tax credits look larger relative to ACA tax credits than would actually be the case. An apples to apples comparison would require deflating the AHCA tax credit amounts by CPI + 1 percentage point for each year between 2017 and 2020.

at three different ages and various incomes.[1] Kaiser's results are similar to ours in that they show how the AHCA would redistribute tax credits along the income scale, with lower-income people receiving less financial assistance under the AHCA than under the ACA. *The New York Times* Upshot used Kaiser's data to illustrate the effects of a shift from the ACA to the AHCA for different geographic areas, but its analysis focused on the expected impacts for people who voted for Donald Trump in the 2016 presidential election.[2] The *Times* found that Trump supporters were the group most likely to receive less assistance under the AHCA, given their age and location. We focus on 10 cities to show that marketplace competition and associated premiums in large part determine whether people would be better off under the ACA or the AHCA. There is nothing in the AHCA that would increase insurance market competition.

DATA AND METHODS

We present premium tax credit data for three different ages (25, 45, and 64) and four income levels (150, 250, 350, and 450 percent of FPL) in 10 different cities (five low-cost and five high-cost). We present a similar analysis for an example family. We use the benchmark plan premium in each city and the corresponding ACA percent-of-income cap to calculate the value of the ACA advanced premium tax credit for a person of that age and income living in that city. The data were drawn from Healthcare.gov public use files and relevant state-based marketplace websites. We compare the value of the refundable age-related tax credit in the AHCA with the ACA credit; the former does not vary by geographic location or income (at the incomes studied here), but it does vary by age. We present the deductible and out-of-pocket maximum for each city's benchmark silver plan as well as deductibles and out-of-

pocket maximums under the three cost-sharing reduction plans (94 percent, 87 percent, and 73 percent actuarial value) associated with the benchmark. We show these to highlight the value of the ACA's cost-sharing reductions to consumers. The AHCA does not offer financial assistance to lower the cost of deductibles, co-payments, co-insurance, or out-of-pocket maximums, so Table 4 only includes cost-sharing information for the ACA. The ACA's tax credits are linked to benchmark premiums each year, and we have ACA premium data for 2017 but not for future years. The AHCA delineates its new tax credits beginning in 2020. As a consequence, we compare 2017 ACA tax credits with the 2020 AHCA tax credits. This comparison has the effect of making the AHCA tax credits look larger relative to ACA tax credits than would actually be the case. An apples to apples comparison would require deflating the AHCA tax credit

amounts by CPI + 1 percentage point for each year between 2017 and 2020.

This analysis is a simple comparison of the sizes of tax credits that different people would receive. It does not take into account differences in the types of insurance that may be available under each policy (e.g., benefits, actuarial values), differences in unsubsidized premiums for people of different ages, potential differences in access to care for people of various health statuses, or any other rating factors that may be permitted in some states (e.g., health status). Thus, we cannot conclude that a person receiving a larger tax credit at a particular age or income under a particular option is better off than they would be under the alternative.

RESULTS

Premium Tax Credits: ACA versus AHCA

Our results show that younger people typically would receive larger premium tax credits under the AHCA, and older adults (64-year-olds in our analysis) typically would receive larger premium tax credits under the ACA. Lower-income people tend to be eligible for larger tax credits under the ACA, and higher-income people tend to receive larger tax credits under the AHCA. People in more competitive markets with low premiums generally receive larger tax credits under the AHCA, and people in less competitive markets with high premiums generally receive larger tax credits under the ACA. However, each case has a number of exceptions. We organize our results by age and show how tax credits under the two plans differ for people at three ages, four income levels, and ten geographic areas. The numbers in the tables are shaded to illustrate which premium tax credit approach, ACA or AHCA, offers larger premium tax credits to each person. The higher premium tax credit is shaded blue.

Figure 1. Premium Tax Credit for a 25-Year-Old, ACA v. AHCA, in Seattle and Charlotte
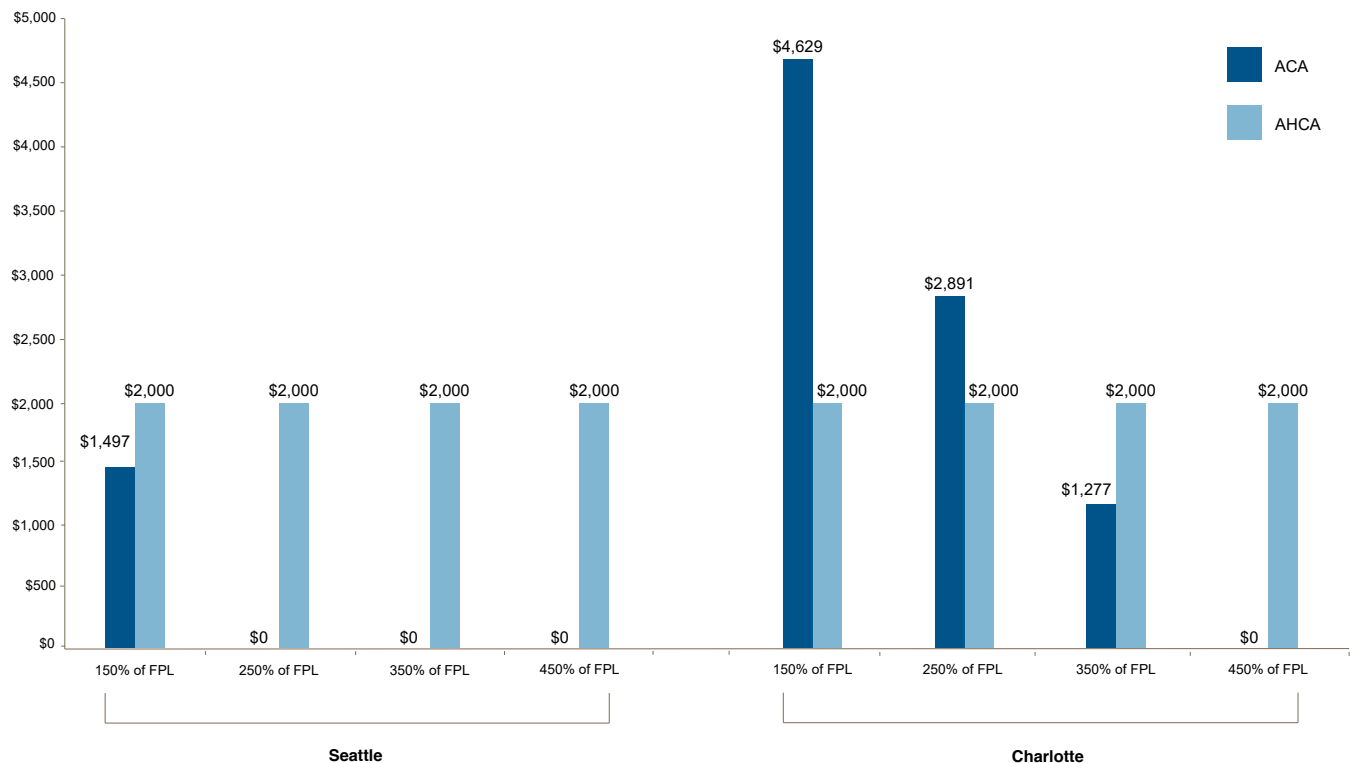
Age 25

Table 2 and Figure 1 show that whether a 25-year-old would receive a higher tax credit under the ACA or under the AHCA differs significantly based on his or her income and whether he or she lives in a high-premium or low-premium area. Twenty-five year olds at both 150 and 250 percent of FPL receive higher tax credits under the ACA if they live in high-premium areas (Birmingham, Oklahoma City, Tucson, Charleston, and Charlotte), but receive higher tax credits under the AHCA if they live in low-premium areas (Cleveland, Detroit, Seattle, Providence, Los Angeles). Young adults with incomes of 350 and 450 percent of FPL would receive large premium tax credits under the AHCA, regardless of the city they live in, because the AHCA's tax credits do not decrease for people in this higher income range.

For example, a 25-year-old with an income of 250 percent of FPL living in a low-cost market would be eligible under the ACA for a very small tax credit or none at all because the premium he or she faces would fall below the percentage-of-income cap that applies to him or her. In Los Angeles, the ACA tax credit would be only $7 per year, and in Seattle it would be $0; compare this to the AHCA tax credit of $2,000 in each market. In the high-premium markets, on the other hand, the ACA tax credits are greater than the AHCA tax credits for people at that same income level of 250 percent of FPL. For example, that same 25-year-old would receive $2,891 in ACA tax credits in Charlotte versus $2,000 in all markets under the AHCA. At income of 350 percent of FPL, the ACA tax credit in low-premium markets is $0 as well because the benchmark premiums are less than the percentage-of-income cap of 9.69 percent; people at that income level would receive $2,000 in credits under the AHCA. At 350 percent of FPL, the ACA tax credits are less than the AHCA credits even in high-cost markets since the former decrease with increasing income. At 450 percent of FPL, the ACA provides no financial assistance, while the AHCA would continue to provide $2,000 in each market.

Age 45

Similar findings hold for 45-year-olds (Table 2). For people with incomes of 150 percent of FPL, the AHCA tax credits are greater than the ACA tax credits in the low-premium, more competitive insurance markets, but the ACA tax credits are far greater in the high-premium markets: ACA tax credits are $5,937 in Birmingham and $7,012 in Charlotte compared with $3,000 AHCA tax credits in all. The same is true for those at 250 percent of FPL: people living in the low-premium markets would receive

larger tax credits under the AHCA than they do under the ACA (in Seattle, for example, the AHCA credits are $3,000 versus $753, respectively), while those in the high-premium markets receive larger ACA tax credits (in Charlotte, for example, $5,274 under the ACA versus $3,000 under the AHCA). For those at 350 percent of FPL, AHCA tax credits are greater in all but the two most expensive markets. At 450 percent of FPL, the AHCA would provide tax credits, but the ACA does not.

Age 64

The results (Table 2 and Figure 2) show that 64-year-olds generally receive higher tax credits under the ACA than they would under the AHCA; AHCA tax credits would have to be increased significantly for this to change. For 64-year-olds with incomes of 150 percent of FPL, the ACA provides substantially higher tax credits in all markets. The same is true for those with incomes of 250 percent of FPL in all but the least costly market studied (Cleveland). Premiums increase with age, and therefore the ACA's structure, which ties financial assistance to the size of the premium faced, provides protection to older adults that the AHCA does not. The AHCA tax credits vary by a factor of two to one from oldest to youngest adult, while premiums under it could vary by five to one (states could choose to have them vary by more or less than five to one, but the bill considers five to one standard). The ACA's premiums vary by a more limited factor, no more than three to one for oldest to youngest adults, but its premium tax credits keep up with that premium variation as people age. In a low-price market such as Seattle, the ACA tax credit for a 64-year-old with income of 150 percent of FPL is $5,968; under the AHCA, that tax credit would be $4,000. In a high-price market such as Charlotte, the ACA subsidy is $15,362, while the AHCA tax credit would be $4,000. For 64-year-olds with incomes of 250 percent of FPL, the ACA tax credits are modestly larger than the AHCA credits in low-premium markets (with the exception of Cleveland), but in the high-premium markets, the ACA credits are substantially greater (e.g. $ 12,568 in Charleston and $13,625 in Charlotte versus $4,000 in both markets under the AHCA).

For 64-year-olds with incomes of 350 percent of FPL, the ACA tax credits are significantly lower than for those with lower incomes because the percentage of income that these higher-income individuals are expected to pay toward their coverage is higher. Importantly, however, ACA tax credits are still tied to the actual premiums faced by people at this income level, so their tax credits can still be quite large in high premium cities. For 64-year-olds, the AHCA tax subsidies are greater than the

Table 2. Comparison of ACA and AHCA Tax Credits by Age and Income for Selected Cities

25-year old	150% of FPL		250% of FPL		350% of FPL		450% of FPL	
	ACA	AHCA	ACA	AHCA	ACA	AHCA	ACA	AHCA
Cleveland	$1,412	$2,000	$0	$2,000	$0	$2,000	$0	$2,000
Detroit	$1,483	$2,000	$0	$2,000	$0	$2,000	$0	$2,000
Seattle	$1,497	$2,000	$0	$2,000	$0	$2,000	$0	$2,000
Providence	$1,710	$2,000	$0	$2,000	$0	$2,000	$0	$2,000
Los Angeles	$1,744	$2,000	$7	$2,000	$0	$2,000	$0	$2,000
Birmingham	$3,885	$2,000	$2,148	$2,000	$533	$2,000	$0	$2,000
Oklahoma City	$3,894	$2,000	$2,156	$2,000	$542	$2,000	$0	$2,000
Tucson	$3,977	$2,000	$2,240	$2,000	$625	$2,000	$0	$2,000
Charleston, WV	$4,276	$2,000	$2,539	$2,000	$924	$2,000	$0	$2,000
Charlotte	$4,629	$2,000	$2,891	$2,000	$1,277	$2,000	$0	$2,000
45-year old	**150% of FPL**		**250% of FPL**		**350% of FPL**		**450% of FPL**	
	ACA	AHCA	ACA	AHCA	ACA	AHCA	ACA	AHCA
Cleveland	$2,366	$3,000	$629	$3,000	$0	$3,000	$0	$3,000
Detroit	$2,470	$3,000	$733	$3,000	$0	$3,000	$0	$3,000
Seattle	$2,490	$3,000	$753	$3,000	$0	$3,000	$0	$3,000
Providence	$2,797	$3,000	$1,060	$3,000	$0	$3,000	$0	$3,000
Los Angeles	$2,847	$3,000	$1,109	$3,000	$0	$3,000	$0	$3,000
Birmingham	$5,937	$3,000	$4,200	$3,000	$2,585	$3,000	$0	$3,000
Oklahoma City	$5,950	$3,000	$4,213	$3,000	$2,598	$3,000	$0	$3,000
Tucson	$6,071	$3,000	$4,334	$3,000	$2,719	$3,000	$0	$3,000
Charleston, WV	$6,503	$3,000	$4,766	$3,000	$3,151	$3,000	$0	$3,000
Charlotte	$7,012	$3,000	$5,274	$3,000	$3,660	$3,000	$0	$3,000
64-year old	**150% of FPL**		**250% of FPL**		**350% of FPL**		**450% of FPL**	
	ACA	AHCA	ACA	AHCA	ACA	AHCA	ACA	AHCA
Cleveland	$5,711	$4,000	$3,973	$4,000	$2,359	$4,000	$0	$4,000
Detroit	$5,926	$4,000	$4,189	$4,000	$2,574	$4,000	$0	$4,000
Seattle	$5,968	$4,000	$4,231	$4,000	$2,616	$4,000	$0	$4,000
Providence	$6,606	$4,000	$4,869	$4,000	$3,254	$4,000	$0	$4,000
Los Angeles	$6,709	$4,000	$4,972	$4,000	$3,357	$4,000	$0	$4,000
Birmingham	$13,131	$4,000	$11,393	$4,000	$9,778	$4,000	$0	$4,000
Oklahoma City	$13,157	$4,000	$11,420	$4,000	$9,805	$4,000	$0	$4,000
Tucson	$13,408	$4,000	$11,670	$4,000	$10,056	$4,000	$0	$4,000
Charleston, WV	$14,306	$4,000	$12,568	$4,000	$10,954	$4,000	$0	$4,000
Charlotte	$15,362	$4,000	$13,625	$4,000	$12,010	$4,000	$0	$4,000

Note: The ACA's tax credits are linked to benchmark premiums each year, and we have ACA premium data for 2017 but not for future years. The AHCA delineates its new tax credits beginning in 2020. As a consequence, we compare 2017 ACA tax credits with the 2020 AHCA tax credits. This comparison has the effect of making the AHCA tax credits look larger relative to ACA tax credits than would actually be the case. An apples to apples comparison would require deflating the AHCA tax credit amounts by CPI + 1 percentage point for each year between 2017 and 2020.

Figure 2. Premium Tax Credit for a 64-Year-Old, ACA v. AHCA, in Seattle and Charlotte
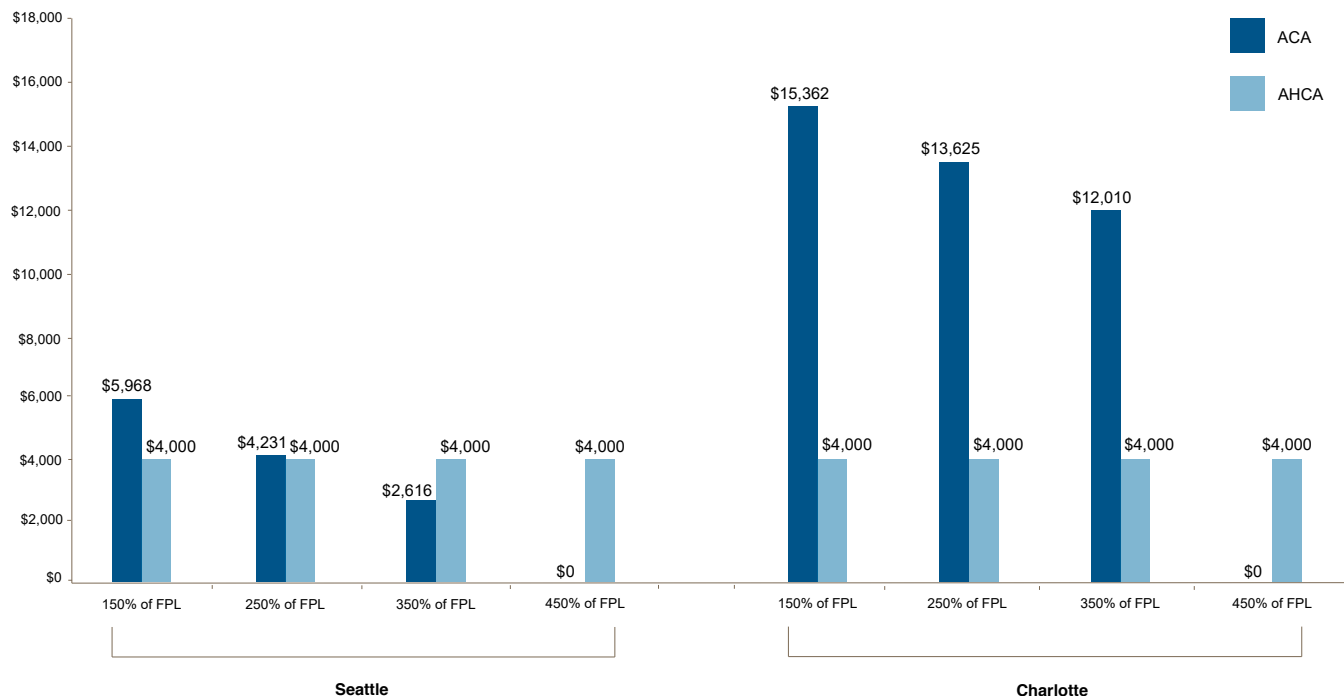
Table 3. Comparison of Premium Tax Credits for a Family of Four under the ACA and the AHCA (Two 35-year-old adults and two children), for Selected Cities

	150% of FPL		250% of FPL		350% of FPL		450% of FPL	
	ACA	AHCA	ACA	AHCA	ACA	AHCA	ACA	AHCA
Cleveland	$6,478	$9,000	$2,934	$9,000	$0	$9,000	$0	$9,000
Detroit	$6,745	$9,000	$3,201	$9,000	$0	$9,000	$0	$9,000
Seattle	$6,797	$9,000	$3,253	$9,000	$0	$9,000	$0	$9,000
Providence	$7,586	$9,000	$4,043	$9,000	$0	$9,000	$0	$9,000
Los Angeles	$7,714	$9,000	$4,171	$9,000	$877	$9,000	$0	$9,000
Birmingham	$15,664	$9,000	$12,120	$9,000	$8,826	$9,000	$0	$9,000
Oklahoma City	$15,697	$9,000	$12,153	$9,000	$8,859	$9,000	$0	$9,000
Tucson	$16,007	$9,000	$12,463	$9,000	$9,169	$9,000	$0	$9,000
Charleston, WV	$17,119	$9,000	$13,575	$9,000	$10,281	$9,000	$0	$9,000
Charlotte	$18,427	$9,000	$14,883	$9,000	$11,589	$9,000	$0	$9,000

Note: The ACA's tax credits are linked to benchmark premiums each year, and we have ACA premium data for 2017 but not for future years. The AHCA delineates its new tax credits beginning in 2020. As a consequence, we compare 2017 ACA tax credits with the 2020 AHCA tax credits. This comparison has the effect of making the AHCA tax credits look larger relative to ACA tax credits than would actually be the case. An apples to apples comparison would require deflating the AHCA tax credit amounts by CPI + 1 percentage point for each year between 2017 and 2020.

ACA tax credits in the low-premium markets, but in the high-premium markets, they would still receive much greater tax credits under the ACA than under the AHCA. In Charlotte, for example, the ACA tax credit at 350 percent of the FPL would be $12,010, while the AHCA tax credit would be $4,000. Again, the ACA does not provide tax credits to 64-year-olds with incomes over 400 percent of FPL, so people at 450 percent of FPL would receive a tax credit under the AHCA ($4,000) but not under the ACA.

Families

In Table 3 we look at family premiums, using a family of four as an illustrative example (two 35-year-old adults and two children). At an income of 150 percent of FPL ($36,450 in 2017), AHCA tax credits are greater for families in low-premium markets. In high-premium markets, the ACA tax credits are greater for families at that same income level. In Charleston, WV, for example, the ACA tax credit for a family with income of 150 percent of FPL would be $17,119. A comparable family would receive $9,000 in tax credits under the AHCA. This same pattern holds for incomes of 250 percent of FPL ($60,750 in 2017): in the low-premium markets, the AHCA tax credits are higher, and the reverse is true in the high-premium markets, where the ACA tax credits are considerably greater than the AHCA ones. For families with incomes of 350 percent of FPL ($85,050 in 2017), again the same pattern holds. Families who would receive no tax credits under the ACA (such as those in Cleveland, Detroit, Seattle, and Providence) would receive $9,000 in AHCA tax credits. But in some high-price markets (such as Charleston and Charlotte), the ACA tax credits are substantially greater. In other markets, however, families with incomes of 350 percent of FPL or over 450 percent of FPL would receive higher tax credits under the AHCA.

Cost-Sharing Reductions: ACA Only

Under the ACA, each marketplace-participating insurer must offer at least one silver-level plan, and each silver-level plan must have cost-sharing reduction plans associated with it that accommodate the cost-sharing subsidies offered to eligible enrollees with incomes below 250 percent of FPL. Thus, each marketplace silver-level plan has a standard 70 percent actuarial value structure as well as variants with actuarial values of 94 percent, 87 percent, and 73 percent. In Table 4 we present deductibles and out-of-pocket maximums for coverage for a single adult associated with the benchmark plan in each of our

10 study cities, along with the deductibles and out-of-pocket maximums for the cost-sharing reduction plans associated with that benchmark plan.

Predicting the structure of health insurance plans that would be offered under the AHCA compared with those offered under the ACA is challenging, and we do not attempt to do that in this brief. However, because the AHCA would provide more flexibility to insurers in the design of their nongroup insurance plans and in the actuarial value of those plans, deductibles and out-of-pocket maximums can be expected to be significantly higher under the AHCA than those associated with silver-level plans under the ACA. The AHCA does not provide for any cost-sharing subsidies for lower-income enrollees. Thus, comparing the cost-sharing requirements of standard ACA silver-level plans to cost-sharing requirements in cost-sharing reduction plans very likely understates the difference in the out-of-pocket liabilities that people with modest incomes would face under the AHCA versus the ACA.

The deductibles and out-of-pocket maximums for benchmark plans vary across the study cities, as do co-payments and co-insurance; the latter are not shown for simplicity. There are many ways for an insurer to construct a plan with a particular actuarial value. It could use higher deductibles but lower out-of-pocket maximums, or it could offer no deductible but higher co-payments or co-insurance. Taking all cost-sharing requirements into account, however, each benchmark silver plan has a computed actuarial value within the range of 68 to 72 percent. Across the study cities, deductibles for single coverage in the benchmark silver-level plans under the ACA range from $2,400 (in Detroit) to $5,500 (in Cleveland), and out-of-pocket maximums range from $6,500 (in Cleveland) to $7,150 (in Detroit, Providence, Charleston, and Charlotte). As noted, these standard cost-sharing requirements are likely smaller than what would be typical for plans under the AHCA, but they provide a first-order sense of the increased out-of-pocket liability that low-income people would face under the AHCA compared with the ACA.

Eligible marketplace enrollees with incomes below 150 percent of FPL can receive a 94 percent actuarial value plan for the premium contribution required of a standard silver-level plan. The benchmark 94 percent actuarial value plans in Cleveland, Detroit, and Providence have no deductibles (Table 4). In the other markets, deductibles range from $75 to $575. These

reduced requirements lower deductibles for this income group by $2,400 to $5,925 depending upon the city. Those with incomes between 150 and 200 percent of FPL are eligible for 87 percent actuarial-value plans, and these lower deductibles by $1,850 to $5,050 depending upon the city. Even the much more modest 73 percent actuarial-value plans offered to those with incomes between 200 and 250 percent of FPL can lead to substantially reduced deductibles (up to reductions of $2,000) depending upon the city and the plan structure.

Out-of-pocket maximums are also much lower for low-income marketplace enrollees under the ACA (Table 4). This is particularly true for those with incomes below 200 percent of FPL who are eligible for the largest cost-sharing reductions

(i.e., the highest actuarial-value plans). Enrollees in 94 percent actuarial-value plans have their total yearly out-of-pocket liabilities reduced by $4,400 to $6,400 depending upon the city. Those enrolled in 87 percent actuarial value plans have their total yearly out-of-pocket liability reduced by $4,400 to $5,850, again depending upon the city. Even those eligible for 73 percent actuarial-value plans have their potential costs lowered by $950 to $2,600. Again, these lowered liabilities are most likely significant underestimates of the differences between ACA and AHCA out-of-pocket liabilities for these low-income people because the AHCA would permit lower actuarial-value plans than does the ACA, and the AHCA would provide no cost-sharing assistance.

Table 4. Comparison of ACA Marketplace Deductibles and Out-of-Pocket Maximums for Selected Cities' Benchmark Plan, 2017

Deductibles

	70% AV (standard)	94% AV	87% AV	73% AV	Difference between standard and 94% AV	Difference between standard and 87% AV	Difference between standard and 73% AV
Cleveland	$5,500	$0	$450	$3,500	$5,500	$5,050	$2,000
Detroit	$2,400	$0	$500	$2,275	$2,400	$1,900	$125
Seattle	$6,500	$575	$1,750	$5,000	$5,925	$4,750	$1,500
Providence	$3,000	$0	$500	$3,000	$3,000	$2,500	$0
Los Angeles	$2,500	$75	$650	$2,200	$2,425	$1,850	$300
Birmingham	$2,600	$100	$400	$1,750	$2,500	$2,200	$850
Oklahoma City	$4,000	$250	$500	$3,800	$3,750	$3,500	$200
Tucson	$4,000	$75	$1,000	$3,000	$3,925	$3,000	$1,000
Charleston, WV	$3,500	$250	$700	$3,000	$3,250	$2,800	$500
Charlotte	$5,000	$500	$1,000	$3,000	$4,500	$4,000	$2,000

Out of-Pocket Maximums

	70% AV (standard)	94% AV	87% AV	73% AV	Difference between standard and 94% AV	Difference between standard and 87% AV	Difference between standard and 73% AV
Cleveland	$6,500	$700	$2,250	$5,450	$5,800	$4,250	$1,050
Detroit	$7,150	$1,250	$2,250	$5,700	$5,900	$4,900	$1,450
Seattle	$6,500	$515	$1,750	$5,000	$5,985	$4,750	$1,500
Providence	$7,150	$1,150	$2,250	$5,500	$6,000	$4,900	$1,650
Los Angeles	$6,800	$2,350	$2,350	$5,700	$4,450	$4,450	$1,100
Birmingham	$6,850	$450	$1,000	$4,250	$6,400	$5,850	$2,600
Oklahoma City	$6,850	$600	$2,000	$5,700	$6,250	$4,850	$1,150
Tucson	$6,650	$2,250	$2,250	$5,700	$4,400	$4,400	$950
Charleston, WV	$7,150	$1,250	$2,000	$5,700	$5,900	$5,150	$1,450
Charlotte	$7,150	$800	$2,350	$5,700	$6,350	$4,800	$1,450

Note: AV = actuarial value.

CONCLUSION

The AHCA tax credits are designed to be simple and easy to understand: they vary with age and are consistent across incomes until $75,000 for single people and $150,000 for families. The ACA tax credits are more complicated and are equal to the difference between the second-lowest-cost (benchmark) silver-level plan premium and a defined percentage of income, with the percentage of income increasing as income rises and with no assistance for those with income of 400 percent of FPL or higher. We find that the AHCA tax credits tend to be higher than the ACA tax credits for higher-income people and younger adults living in low-premium areas. Lower-income older adults receive higher tax credits under the ACA than they would under the AHCA regardless of whether they live in high-premium or low-premium areas. The design of the ACA's credits means that they increase when needed: they are higher for low-income people, older adults, and for people living in higher-premium markets. Further, the cost-sharing assistance under by the ACA provides substantial additional financial protection for lower-income enrollees; the AHCA offers no such assistance.

Tax credits that vary with age alone (or, as under the AHCA, that only decrease once income crosses a high threshold) cannot target government assistance to those with the greatest need. To provide a tax credit that meets the needs of those living in higher-premium areas without varying credit amounts geographically, additional assistance would need to be provided across the country, leading to much more government spending than under the AHCA or the ACA. To provide age-related assistance across the income distribution (or across much of the income distribution) without varying the credits by income, larger tax credits would need to be provided to all if adequate coverage is to be affordable to the low-income population. That could be done, but the government costs would again be much higher than under the ACA or the AHCA.

High-premium insurance markets typically reflect limited insurer or provider competition.[3] Nothing in the AHCA would change this dynamic, and therefore geographic premium differences like those under current law would remain. Further, reduced regulation of insurance plan standards under the AHCA would lead to different plans being offered by insurers than are offered under the ACA. Under the AHCA, benefits can be expected to be narrower and cost-sharing requirements greater. Although such changes in offered plans could lead to lower premiums (absent a worsening risk pool), the trade-off would be higher out-of-pocket requirements and more services excluded entirely from insurance coverage and left for people to pay for fully when needed. The differences in financial assistance offered under the ACA and the AHCA could play out into much greater differences in financial burdens for people with health problems versus those without them and for those in states that regulate insurance to a greater extent than those in states that do not.

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TRANSFORM CARE

New Analysis: Potential Impact of Defunding CSR Payments

May 12, 2017

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The House narrowly passed the American Health Care Act on May 4 and the bill now heads to the Senate. Regardless of what happens in the other chamber, payers are expecting ACA exchanges to continue at least through 2018. That leaves them setting 2018 rates and their individual market strategy for 2018 amidst much uncertainty.

One of the more immediate questions facing payers is whether cost sharing reduction (CSR) payments will continue. With no definitive answer from the Trump administration, it is expected that most payers will plan for CSR defunding. And, where permitted by their regulators, it is expected that

payers will offset the potential loss of those payments by raising premium rates on silver exchange plans. (These are the only plans that provide CSR.)

New analysis from Oliver Wyman Actuarial Consulting finds that "loading" the lost payments onto silver plans in this way could grant millions of marketplace enrollees access to low- or no-cost health coverage.

Here, Dianna Welch, FSA, MAAA, and Kurt Giesa, FSA, MAAA, of Oliver Wyman Actuarial Consulting explain this possible impact of defunding CSR payments. And read summaries of the analysis on NPR and Vox.

About CSR

The ACA provides tax credits to individuals with low and moderate incomes to help make health insurance premiums more affordable. Under the ACA, premium subsidies are calculated using the difference between the cost of coverage (which is based on the second lowest-cost silver plan available in a market) and affordability (which is based on a percentage of an individual's income).

To help people with low and moderate incomes manage out-of-pocket costs, the ACA requires payers to provide cost sharing reductions (CSR), which serve to lower deductibles, copayments, and out-of-pocket limits. CSR are only available under silver-level exchange plans, and they are only available to people earning 250 percent or less of the federal poverty level (FPL). Nearly three-quarters of the people (6.8 million) who purchased 2017 health insurance via the federal exchanges had incomes meeting that threshold and thus could qualify for CSR.

Under the ACA, the federal government is supposed to reimburse payers for their cost of providing CSR. For the 2016 benefit year, the government

provided $7 billion; for the 2017 benefit year the payments are expected to hit $10 billion, assuming funding continues through year-end. These payments are viewed by some as critical to payers' continued participation in the ACA exchanges.

Uncertainty of CSR funding

In 2014, House Republicans sued the Obama administration, claiming Congress never appropriated CSR funds. In 2016, a lower federal court agreed with House Republicans and ordered the government to stop making CSR payments, but it allowed the payments to continue while the government appealed the decision.

Industry groups lobbied Congress to incorporate permanent appropriation for CSR payments into the recent spending bill. And many cautioned that not including it would lead to a spike in premiums and seriously damage the exchange market.

However, the $1 trillion spending bill passed by Congress last week did not include permanent appropriation. The decision to continue CSR payments now rests with the executive branch, and the administration has not stated definitively whether or not they will continue.

Payers' likely reaction to CSR defunding

Payers now find themselves approaching the rate-filing deadline not knowing if they will receive CSR payments in 2018. Many are likely to plan for CSR defunding and attempt to build that into their rates, or file two sets of rates where the regulators will allow it.

Kaiser Family Foundation estimates that defunding CSR payments would cause premiums in silver plans to increase by 19 percent. Payers could raise

premiums across all plans, but we think that is unlikely because raising the price on other metal-level plans could price exchange plans out of the market and cause consumers to seek less-expensive off-exchange plans.

Of course, payer responses to CSR defunding will be influenced by local market dynamics. For example, payers that face a difficult regulatory environment, or are unwilling (or unable) to accept a large influx of new members if other insurers leave the market may choose to exit the exchanges themselves. So might those that view the overall uncertainty of this market as being too much risk to bear.

However, we can assume that some payers will respond to CSR defunding by significantly raising rates on their exchange silver plan premiums. For the purposes of this illustration, we have assumed that payers would price their silver plans using a weighted average of the 94 and 87 percent CSR plans—an actuarial value (AV) of roughly 91 percent. This is based on the assumption that individuals eligible for CSR plans with a more moderate cost-sharing element (73 percent AV), as well as those who are enrolled in silver plans but not eligible for CSR, would move to bronze or gold plans rather than subsidize those enrollees eligible for higher CSR.

The twist

Because subsidies in 2018 will be based on the cost of the second lowest-cost silver plan, any increase in those premium rates will cause subsidies to increase in parallel.

In fact, according to our projections, subsidies could increase to the extent that they would actually exceed the cost of a bronze plan for many lower-income enrollees. A substantial portion of the nearly 7 million marketplace

enrollees eligible for CSR could receive a bronze-level plan for no cost, or upgrade to a gold-level plan at very low premiums.

Two market scenarios

In the table below, we show how premium levels could change using actual 2017 premiums for a 40-year-old and a 60-year-old in Phoenix, Arizona, a relatively high-cost area; and a 40-year-old and 60-year-old in Detroit, Michigan, a relatively low-cost area.

The projection shows that if CSR is defunded and payers load the cost onto silver plans assuming a 91 percent AV, the structure of the premium subsidies would translate to very low-cost or no-cost plans for most low- and middle-income consumers.

OLIVER WYMAN

POSSIBLE IMPACT OF DEFUNDING CSR

Premium costs in two sample markets, assuming CSRs are defunded and the cost is loaded onto exchange silver plans.

DETROIT
MI

At every income level up through 300% FPL, enrollees will be able to obtain a gold plan for only a few dollars more than the silver plan.

	FPL	BRONZE	SILVER	GOLD
AGE 40	150%	$0	$57	$60
	200%	14	125	128
	250%	91	202	205
	300%	177	288	290
AGE 60	150%	$0	$53	$58
	200%	0	120	126
	250%	0	197	203
	300%	47	283	289

Monthly premium

PHOENIX

PHOENIX
AZ

	FPL	BRONZE	SILVER	GOLD
AGE 40	150%	$0	$20	$63
	200%	0	88	131
	250%	0	165	208
	300%	79	251	294
AGE 60	150%	$0	$0	$65
	200%	0	41	133
	250%	0	118	210
	300%	0	204	296

Monthly premium

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According to our projections, a 40-year-old in Phoenix earning up through 250 percent of FPL would be able to obtain a bronze plan for no cost. Meanwhile, a 60-year-old in Phoenix earning up through 300 percent FPL would be able to get a bronze plan for no cost; and a 60-year-old earning 150 percent FPL could get a gold plan for just $65 per month.

In Detroit, both 40-year-olds and 60-year-olds earning up through 300 percent FPL could obtain a gold plan at essentially the same cost of a silver

plan.

Market impact

With or without CSR payments, profitability and growth in today's complex market will only come from identifying key consumer segments and then targeting products that engage consumers in meaningful ways. The availability of no- or lower-cost bronze and gold plans could lead to a shift in enrollment between metal-level plans. It might also encourage some subsidy-eligible people who have not previously purchased plans to enroll. Payers may want to revisit their product portfolio to ensure that the plans they will be bringing to market in 2018 reflect the possibility that CSR will not be funded. They should also be prepared for the possibility that competitors could react to defunding by raising rates on silver plans, and that could dramatically change consumers' preferences.

At the very least, payers will want to carefully consider how they build the cost of unfunded CSR into their own 2018 premiums.

As we noted, payers are facing tremendous uncertainty in setting premiums and strategy for the individual market. The potential lack of CSR funding—and how a payer's enrollees *and* competitors will respond to it—is one of the greatest. Yet as our analysis shows, CSR defunding may also create opportunities, and payers should be prepared to capitalize on these.

It should be noted that if AHCA passes the Senate, it could have an impact on this analysis. If that bill passes, the ACA's individual mandate would go away immediately, and some enrollees might be expected to leave the market, regardless of the affordability of plans. In addition, the AHCA's Patient and State Stability Fund, which transfers money from the Treasury

Department to states to help manage high-risk pools, would begin in 2018. That could help lower premiums across the board.

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Effect of the Affordable Care Act on Health Care Access

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ABSTRACT

ISSUE: The Affordable Care Act's (ACA) coverage provisions have extended health insurance coverage to millions of Americans. While the effects of the Medicaid expansion and marketplace establishments on coverage have been well studied, the resulting effects of coverage on access to health care remain unclear.

GOAL: To examine how the 2014 coverage expansions affected health care access following the first open enrollment period of October 2013 to March 2014.

METHODS: Analysis of data from the National Health Interview Survey (NHIS) and the Behavioral Risk Factor Surveillance System (BRFSS).

FINDINGS AND CONCLUSIONS: We find that gaining insurance coverage through the expansions decreased the probability of not receiving medical care by between 20.9 percent and 25 percent. Gaining insurance coverage also increased the probability of having a usual place of care by between 47.1 percent and 86.5 percent. These findings suggest that not only has the ACA decreased the number of uninsured Americans, but has substantially improved access to care for those who gained coverage.

KEY TAKEAWAYS

▸ Expanding Medicaid coverage and establishing state marketplaces has decreased the number of uninsured Americans and substantially improved access to care for those who gained coverage.

▸ Gaining insurance coverage through the ACA decreased the likelihood that a person will report not receiving medical care because of costs by between 20.9 percent and 25 percent.

▸ Becoming insured under the ACA also was associated with an increased probability of having a usual place of care.

The Commonwealth Fund

BACKGROUND

One of the main goals of health reform like the Affordable Care Act (ACA) is to expand insurance coverage and, ultimately, to increase access to care. Among its reforms, the ACA expanded Medicaid coverage in participating states to all nonelderly adults with incomes below 133 percent of the federal poverty level (FPL), about $16,000 for an individual or $33,500 for a family of four, and provided subsidized insurance through the health care marketplaces for small businesses and individuals without access to employment-based insurance. Since the ACA's first open enrollment period in the fall of 2013, the number of uninsured Americans has fallen from 41 million to 27 million.[1]

Many prior studies have examined the relationship between insurance coverage and access to care. Virtually all have found that people with health insurance, whether Medicaid or private coverage, have better access to services. However, studies that compare people with and without coverage can be biased; people who choose to participate in coverage may differ from those who do not.[2] For instance, people in poorer health may be more likely to sign up for care than healthy people.

A few studies have examined how access to care at the population level has improved since ACA implementation.[3,4] One study, using the Gallup-Healthways Well-Being Index, found that by the end of the second enrollment period in 2015, the proportion of Americans without a personal doctor decreased by 3.5 percentage points and the proportion reporting an inability to afford care decreased by 5.5 percentage points.[5] These improvements were more pronounced in states that expanded Medicaid. Another study, using data from the Health Reform Monitoring Survey (HRMS), examined how various measures of access and affordability changed between the first and second open enrollment periods.[6] Among all income groups, there were significant improvements, including increases in the proportion reporting a regular source of care and in those reporting decreases in unmet needs because of cost of care. A recent Commonwealth Fund survey found that 72 percent of those enrolled in a marketplace plan

or in Medicaid had used their insurance to visit a doctor, hospital, or other health care provider. More than half said they would not have been able to access or afford care before getting coverage through the ACA.[7] There is also evidence to suggest that the ACA has significantly reduced health disparities between racial and ethnic groups.[8]

While these studies avoid the problems of selection in the prior literature, they do not fully disentangle improvements in access resulting from the ACA and those resulting from other contemporaneous changes, such as slower growth in health care costs and an improving economy.

In this study, we used two datasets— the National Health Interview Survey (NHIS) restricted use data and the Behavioral Risk Factor Surveillance System (BRFSS)— to directly estimate the effect of the ACA's first open enrollment on health care access. The initial rollout of the ACA varied across states during that period, depending on how well state websites and enrollment processes operated in the early months of 2014, as well as whether states chose to participate in the Medicaid expansion. We use this variation to more accurately identify the effects of new coverage and capture the impact of the ACA. We measured access to medical care in the past year and access to a personal doctor or usual place of care.

FINDINGS

Effect of Increases in Marketplace Enrollment on Access to Care on a Population-Wide Basis

Before implementation of the ACA's coverage expansions, many Americans had inadequate access to care. A substantial share of the nonelderly population—from 9 percent to 19 percent, depending on the question asked— went without care because of cost in the period before the ACA expansions were implemented. The percentage was somewhat higher among those in the income range that is eligible for marketplace subsidies and much higher among those with incomes in the Medicaid-eligible range (Exhibit 1). Many adults reported that they had no usual place of care.

Exhibit 1. Access to Care Before Implementation of ACA's Coverage Expansions, by Income

	Nonelderly adult population		Nonelderly, eligible for marketplace subsidy		Nonelderly, eligible for Medicaid	
	NHIS	BRFSS	NHIS	BRFSS	NHIS	BRFSS
Did not get care because of cost	9%	19%	11.6%	24%	18.3%	33.4%
No usual place of care	18.3%	26.5%	21.2%	30.3%	27.1%	38.2%

Notes: Includes nonelderly adults ages 18 to 64. NHIS "cost" question: "During the past 12 months, was there any time when [you] needed medical care, but did not get it because [person] couldn't afford it?" BRFSS "cost" question: "Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?" NHIS "usual place of care" question: "Is there a place that you USUALLY go to when you are sick or need advice about your health?" BRFSS "usual place of care" question: "Do you have one person you think of as your personal doctor or health care provider?"

Source: NHIS 2010–2013 annual survey data and BRFSS 2011–2013 annual survey data.

We examined how increases in marketplace enrollment affected how people in a state accessed care, controlling for states' decisions to expand Medicaid. In the NHIS data, we found that for each additional 1 percent of the nonelderly population enrolled in the marketplace, 0.23 percent fewer were likely to report not getting medical care because of cost. On average, 2.5 percent of the U.S. population was enrolled in the marketplaces in 2014. These data imply that enrollment in the marketplaces decreased the national rate of not getting medical care because of costs by 0.57 percentage points. Relative to the baseline level in Exhibit 1, this estimate suggests that marketplace enrollment in 2014 alone reduced the number of people facing cost-related barriers to access by 6 percent.

Similarly, for every 1 percent increase in the number of nonelderly people enrolled in the marketplaces, 0.51 percent more report having a usual place to get medical care (Exhibit 2). Given the national marketplace enrollment in 2014, this translates into a 1.3 percentage point increase in the rate of nonelderly adults who report a usual place to access medical care. The effects are larger in the BRFSS data. These estimates imply that enrollment in the marketplaces increased the rate of nonelderly population with a usual place of care by 2 percentage points.

Exhibit 2. Effect of a 1% Increase in the Marketplace Enrollment Rate on Health Care Access, Nonelderly Adult Population

	Marketplace enrollment rate effects	
VARIABLES	(1) NHIS	(2) BRFSS
Did not get care because of cost	−0.229%*	−0.212%
No usual place of care	0.505%**	0.782%***

*** p<0.01, ** p<0.05, * p<0.1

Notes: Includes nonelderly adults ages 18 to 64. Marketplace enrollment rates and Medicaid expansion decisions in same logistic regression model. Model controls for state Medicaid expansion decisions. Standard errors are robust and are clustered on state*month. Logistic regression models control for year, state, month, as well as for patient demographics such as age, income, gender, race, educational attainment, employment status, and marital status.

Source: NHIS 2010–2014 annual survey data and BRFSS 2011–2014 annual survey data.

Effects of Marketplace and Medicaid Coverage on Enrollees' Access to Care

The population-level effects described above show how access to care changed across a state's population. On an individual basis, gaining insurance coverage through the ACA decreases the probability that a person will report not receiving medical care because of costs by 20.9 percent (Exhibit 3), according to the NHIS data. In the BRFSS data, insurance coverage is associated with a 25 percent decrease in the probability of not receiving medical care because of cost. To put this figure in context, prior to implementation of the insurance expansions, about 47 percent of uninsured people reported that they were unable to access care because of cost. Gaining coverage cut that figure by half. Getting coverage through the ACA is also associated with very substantial increases in the probability of having a usual place of care—by 47.1 percent according to the NHIS data and 86.5 percent in the BRFSS data.[9] These figures imply that people who gained coverage through the ACA's expansions were just as likely to have a usual source of care as were those who had held insurance prior to the coverage expansions.

DISCUSSION

When the ACA was first introduced and debated, some opponents of the law argued that it was not needed because uninsured people already had adequate access to care.[10] Since its passage, others have argued that the insurance coverage provided to people under the ACA provides insufficient protection against high costs or offers such limited networks that the newly insured cannot find care.[11,12] These arguments imply that the ACA would not generate improvements in access to care.

Our analysis provides strong evidence that this implication is false. Expanding Medicaid coverage and establishing state marketplaces have not only decreased the number of Americans who are uninsured but has substantially improved access to care for those who gained coverage. People who are newly insured through the ACA are much less likely than uninsured people to report that they are unable to get care or delayed getting care because of cost. They are just as likely as those who have always been covered to report that they now have a usual place of care.

Exhibit 3. Effects of Gaining Coverage Through the ACA on Access to Care

VARIABLES	(1) NHIS	(2) BRFSS
Did not get care because of cost	−20.9%*	−25%*
No usual place of care	47.1%**	86.5%***

*** p<0.01, ** p<0.05, * p<0.1

Notes: Includes nonelderly adults ages 18 to 64. Marketplace enrollment rates and Medicaid expansion decisions used as instruments for insurance coverage. Standard errors are robust and are clustered on state*month. Two-stage least squares (2SLS) IV regression models control for year, state, month, as well as for patient demographics such as age, income, gender, race, educational attainment, employment status, and marital status. Specification test results are reported in Appendix Table C.

Source: NHIS 2010–2014 annual survey data and BRFSS 2011–2014 annual survey data.

HOW THIS STUDY WAS CONDUCTED

Data Source and Sample

NHIS/BRFSS Data and Public Use Files

We used two datasets—the National Health Interview Survey (NHIS) restricted use data and the Behavioral Risk Factor Surveillance System (BRFSS)—to directly estimate the effect of insurance coverage on health care access. The NHIS is a national survey administered in person that is designed specifically to track trends in health and coverage over time.[13] In 2014, the NHIS sample design included 87,000 individuals. The NHIS includes questions on whether a person is covered by health insurance and on the type of coverage held.

The BRFSS is a state-based telephone survey conducted by the Centers for Disease Control and Prevention that collects health-related data across all states in the country. The BRFSS includes a very large sample—over 450,000 people are included in the 2014 BRFSS sample.[14] The BRFSS was not designed to track health insurance and does not include information on the type of coverage held by an individual. It asks only whether or not the respondent is covered by health insurance at the time of interview.[15] In 2011, BRFSS began surveying cell phone users in addition to landline users, and also shifted from a post-stratification statistical weighting method to an iterative proportional fitting method. As a result, data from the 2011 survey year and onward are not comparable to data prior to the 2011 survey year. Although the NHIS and BRFSS questions about access are similar, the wording is not exactly the same. A detailed comparison of the two datasets can be found in Appendix Table A.

The NHIS data include a set of questions about family income that allow interviewers to compute the ratio of family income to the poverty threshold, the basis of ACA subsidy allocation. The BRFSS does not report exact income and only asks respondents for household income ranges. We define those Medicaid-eligible as the nonelderly adult population (ages 18–64) with family income <125 percent of the federal poverty level (FPL) in the NHIS, or household income <$35,000 in the BRFSS. We define the marketplace-eligible population as those

with family income from 125 percent to 400 percent FPL in the NHIS, or household income from $15,000 to $75,000 in the BRFSS.

We use survey weights in both the NHIS and BRFSS to reflect national population estimates.

Non-NHIS/BRFSS Data

Monthly enrollment data were extracted from the Charles Gaba Blog, which uses state-level enrollment figures from monthly reports released by the CMS and HHS. Denominator data for rates were drawn from the March 2013 Current Population Survey (CPS) release. State Medicaid expansion decisions and their timing were taken from an online Kaiser table (see Appendix Table B).

For our purposes, a critical feature of both of these datasets is that they each include information on an individual's state of residence and on the month in which he or she was interviewed. We matched each interview to the enrollment rate in the marketplace or the status of the Medicaid expansion in the interviewee's state at the end of the month prior to the interview. For example, if John was interviewed in February 2014 in California, we matched John to the marketplace enrollment rate and Medicaid expansion status of California at the end of January 2014.

In prior work, we showed how increases in enrollment and Medicaid expansion decisions affected coverage.[16] We used logistic regressions to estimate changes in the probability that an individual held health insurance coverage as the share of the population enrolled in the marketplace in his or her state increased and as states expanded or did not expand Medicaid. By combining these two sets of estimates, we can estimate how access to care changed for those who themselves gained coverage through the expansions. We report results combining marketplace and Medicaid populations and use a method called two-stage least squares.

We first assess how changes in the marketplace enrollment rate and in state Medicaid expansion

decisions affect our access outcome measures. We conduct these analyses for the total nonelderly adult population using both marketplace rates and Medicaid decisions in the same regressions, and then separately for the marketplace- and Medicaid-eligible populations, using marketplace enrollment rates and Medicaid expansion decisions, respectively. These analyses control for calendar month of interview, state, and year of interview, and for individual age, income, gender, race, educational attainment, employment status, and marital status. Standard errors are clustered at the state*month level.

Instrumental Variable Regressions

Enrollment in insurance coverage is not random—those who have coverage are likely to be different from those who do not have coverage. This makes it challenging to estimate the effects of coverage gained through the ACA on access. To address this, we use a method called two-stage least squares (2SLS) instrumental–variable regressions. We take advantage of the likelihood that state Medicaid expansion decisions and marketplace

enrollment rates at a point in time are exogenous to an individual—that is, they do not depend on an individual's preferences. This is very likely in the case of Medicaid expansions, which are the product of state government decisions, not individual choices. As we showed previously, much of the variation in marketplace enrollment rates in 2014 likewise stemmed from the effectiveness of state rollouts of the coverage expansions, not individual preferences.

We use marketplace enrollment rates and Medicaid expansion status at a point in time as instruments to predict the insured people who were most likely to have gained coverage through the ACA expansions. We perform two tests to gauge the appropriateness of our strategy. First, we test to make sure that our instruments adequately predict coverage. Second, when using both instruments, we test to see whether they are both exogenous (assuming the Medicaid expansion is). In each case, the instruments adequately predict coverage (F statistic >10). In all specifications we fail to reject the hypothesis that both of the instruments are exogenous at the 5 percent level.[17]

NOTES

1   R. Gareld, M. Majerol, Anthony Damico, *The Uninsured: A Primer—Key Facts about Health Insurance and the Uninsured in the Era of Health Reform* (Kaiser Commission on Medicaid and the Uninsured, Nov. 2016).

2   H. Levy and D. Meltzer, "The Impact of Health Insurance on Health," *Annual Review of Public Health,* April 2008 29:399–409.

3   S. L. Hayes, S. R. Collins, D. C. Radley, D. McCarthy, and S. Beutel, *A Long Way in a Short Time: States' Progress on Health Care Coverage and Access, 2013–2015* (The Commonwealth Fund, Dec. 2016).

4   S. R. Collins, M. Z. Gunja, M. M. Doty, and S. Beutel, *How the Affordable Care Act Has Improved Americans' Ability to Buy Health Insurance on Their Own: Findings from the Commonwealth Fund Biennial Health Insurance Survey, 2016* (The Commonwealth Fund, Feb. 2016).

5   B. D. Sommers, M. Z. Gunja, K. Finegold et al., "Changes in Self-Reported Insurance Coverage, Access to Care, and Health Under the Affordable Care Act," *Journal of the American Medical Association,* July 28, 2015 314(4):366–74.

6   A. Shartzer, S. K. Long, and N. Anderson, "Access to Care and Affordability Have Improved Following Affordable Care Act Implementation; Problems Remain," *Health Affairs* Web First, Jan. 2016 35(1):1–8.

7   S. R. Collins, M. Z. Gunja, M. M. Doty, and S. Beutel, *Americans' Experiences with ACA Marketplace and Medicaid Coverage: Access to Care and Satisfaction* (The Commonwealth Fund, May 2016).

8   S. L. Hayes, P. Riley, D. C. Radley, and D. McCarthy, *Closing the Gap: Past Performance of Health Insurance in Reducing Racial and Ethnic Disparities in Access to Care Could Be an Indication of Future Results* (The Commonwealth Fund, March 2015).

9   The range in coverage is wide because the surveys ask slightly different questions and use different baseline rates of coverage.

10 A. Terkel and S. Stein, "Mitt Romney, on *60 Minutes,* Cites Emergency Room as Health Care Option for Uninsured," *Huffington Post,* Sept. 24, 2012.

11 S. C. Dorner, D. B. Jacobs, and B. D. Sommers, "Adequacy of Outpatient Specialty Care Access in Marketplace Plans Under the Affordable Care Act," *Journal of the American Medical Association,* Oct. 27, 2015 314(16):1749–50.

12 R. Moffit, *Four Years of Obamacare: Early Warnings Come True* (Heritage Foundation, April 28, 2014).

13 The household response rate for the NHIS ranged from 73.8% to 82.0% for the 2010 to 2014 survey years.

14 The national telephone response rate for BRFSS ranged from 48.7% to 54.6% for survey years 2011 to 2014.

15 There is also considerably more month-to-month volatility in national average uninsurance rates measured in the BRFSS compared to the NHIS.

16 S. Glied, S. Ma, and S. Verbofsky, *How Much of a Factor Is the Affordable Care Act in the Declining Uninsured Rate?* (The Commonwealth Fund, Dec. 2016).

17 The overidentification J-test statistic for the BRFSS estimate of not getting care because of cost is 3.24, which is significant at the 10% level.

ABOUT THE AUTHORS

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Appendix Table A. NHIS vs BRFSS Survey Comparison

Panel A: Sample Design		
	NHIS	BRFSS
Years included	2010–2014	2011–2014
Response rate	73.8%–82.0%	48.7%–54.6%
Sample in 2014	87,000	450,000

Panel B: Survey Question Comparison		
	NHIS	BRFSS
Insurance Coverage	NOTCOV—Are you covered by any kind of health insurance or some other kind of health care plan? 1—Not covered 2—Covered	HLTHPLN1—Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare, or Indian Health Service? 1—Yes 2—No
Medicaid Income Eligible **NHIS—** Family income less than 125% **BRFSS—** Household income less than $35,000	RAT_CAT2—Ratio of family income to the poverty threshold: 1 <50% 2 50%–74% 3 75%–99% 4 100%–124% 5 125%–149% 6 150%–174% 7 175%–199% 8 200%–249% 9 250%–299% 10 300%–349% 11 350%–399% 12 400%–449% 13 450%–499% 14 500%+ 15 <100% (no further detail) 16 100%–199% (no further detail) 17 200%+ (no further detail)	INCOME2—Is your annual household income from all sources: 1 <$10,000 2 <$15,000 3 <$20,000 4 <$25,000 5 <$35,000 6 <$50,000 7 ≤$75,000 8 >$75,000
Marketplace Income Eligible **NHIS—** Family income 125%–400% FPL **BRFSS—** Household income $15,000–$75,000	RAT_CAT2—Ratio of family income to the poverty threshold: (see above)	INCOME2—Is your annual household income from all sources: (see above)
Did not get medical care because of costs? 0—No 1—Yes	PNMED12M—During the past 12 months, was there any time when [person] needed medical care, but did not get it because [person] couldn't afford it? 1—Yes 2—No	MEDCOST—Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? 1—Yes 2—No
Usual place of care/personal doctor? 0—No 1—Yes	AUSUALPL—Is there a place that you USUALLY go to when you are sick or need advice about your health? 1—Yes 2—No 3—There is more than one place	PERSDOC2—Do you have one person you think of as your personal doctor or health care provider? 1—Yes, only one 2—More than one 3—No

Appendix Table B. Medicaid Expansion Decisions and Timing, by State, 2014

Alabama	No
Alaska	No
Arizona	Yes, as of 1/1/2014
Arkansas	Yes, as of 1/1/2014
California	Yes, as of 11/1/2010
Colorado	Yes, as of 4/1/2012
Connecticut	Yes, as of 4/1/2010
Delaware	Yes, as of 1/1/2014
District of Columbia	Yes, as of 7/1/2010
Florida	No
Georgia	No
Hawaii	Yes, as of 1/1/2014
Idaho	No
Illinois	Yes, as of 1/1/2014
Indiana	No
Iowa	Yes, as of 1/1/2014
Kansas	No
Kentucky	Yes, as of 1/1/2014
Louisiana	No
Maine	No
Maryland	Yes, as of 1/1/2014
Massachusetts	Yes, as of 1/1/2014
Michigan	Yes, as of 4/1/2014
Minnesota	Yes, as of 3/1/2010
Mississippi	No
Missouri	No
Montana	No
Nebraska	No
Nevada	Yes, as of 1/1/2014
New Hampshire	Yes, as of 8/15/2014
New Jersey	Yes, as of 4/14/2011
New Mexico	Yes, as of 1/1/2014
New York	Yes, as of 1/1/2014
North Carolina	No
North Dakota	Yes, as of 1/1/2014
Ohio	Yes, as of 1/1/2014
Oklahoma	No
Oregon	Yes, as of 1/1/2014
Pennsylvania	No
Rhode Island	Yes, as of 1/1/2014
South Carolina	No
South Dakota	No
Tennessee	No
Texas	No
Utah	No
Vermont	Yes, as of 1/1/2014
Virginia	No
Washington	Yes, as of 1/3/2011
West Virginia	Yes, as of 1/1/2014
Wisconsin	No
Wyoming	No

Source: Henry J. Kaiser Family Foundation.

Appendix Table C. First Stage Regression: Marginal Effects of State Enrollment Rates and Medicaid Expansion Decisions on Insurance Coverage, Nonelderly Adult Population, NHIS 2010–2014 and BRFSS 2011–2014

	(1) NHIS	(2) BRFSS
Uninsured rate (Fall 2013)	20.7%	22.7%
% population enrolled in marketplace	91.8%***	67.5%***
State expanded Medicaid	1.7%***	2.3%***
Observations	275,986	1,119,064

*** p<0.01, ** p<0.05, * p<0.1

Notes: Includes nonelderly adults ages 18 to 64. Standard errors are robust and are clustered on state*month. Logistic regression models control for year, state, month, as well as for patient demographics such as age, income, gender, race, educational attainment, employment status, and marital status.

Source: NHIS 2010–2014 annual survey data and BRFSS 2011–2014 annual survey data.

The Effects of Premiums and Cost Sharing on Low-Income Populations: Updated Review of Research Findings

Samantha Artiga, Petry Ubri, and Julia Zur

Key Findings

Recently, there has been increased interest at the federal and state level to expand the use of premiums and cost sharing in Medicaid as a way to promote personal responsibility, prepare beneficiaries to transition to commercial and private insurance, and support consumers in making value-conscious health decisions. This brief reviews research from 65 papers published between 2000 and March 2017 on the effects of premiums and cost sharing on low-income populations in Medicaid and CHIP. This research has primarily focused on how premiums and cost sharing affect coverage and access to and use of care; some studies also have examined effects on safety net providers and state savings. The effects on individuals, providers, and state costs reflect varied implementation of premiums and cost sharing across states as well as differing premium and cost sharing amounts. Together, the research finds:

- **Premiums serve as a barrier to obtaining and maintaining Medicaid and CHIP coverage among low-income individuals.** These effects are largest among those with the lowest incomes, particularly among individuals with incomes below poverty. Some individuals losing Medicaid or CHIP coverage move to other coverage, but others become uninsured, especially those with lower incomes. Individuals who become uninsured face increased barriers to accessing care, greater unmet health needs, and increased financial burdens.

- **Even relatively small levels of cost sharing in the range of $1 to $5 are associated with reduced use of care, including necessary services.** Research also finds that cost sharing can result in unintended consequences, such as increased use of the emergency room, and that cost sharing negatively affects access to care and health outcomes. For example, studies find that increases in cost sharing are associated with increased rates of uncontrolled hypertension and hypercholesterolemia and reduced treatment for children with asthma. Additionally, research finds that cost sharing increases financial burdens for families, causing some to cut back on necessities or borrow money to pay for care.

- **State savings from premiums and cost sharing in Medicaid and CHIP are limited.** Research shows that potential revenue gains from premiums and cost sharing are offset by increased disenrollment; increased use of more expensive services, such as emergency room care; increased costs in other areas, such as resources for uninsured individuals; and administrative expenses. Studies also show that raising premiums and cost sharing in Medicaid and CHIP increases pressures on safety net providers, such as community health centers and hospitals.

Introduction

Recently, there has been increased interest at the federal and state level to expand the use of premiums and cost sharing in Medicaid. Current rules limit premiums and cost sharing in Medicaid to facilitate access to coverage and care for the low-income population served by the program, who have limited resources to spend on out-of-pocket costs. Proponents of increasing premiums and cost sharing in Medicaid indicate that doing so will promote personal responsibility, prepare beneficiaries to transition to commercial and private insurance, and support consumers in making value-conscious health decisions.[1]

This brief, which updates an earlier brief "*Premiums and Cost-Sharing in Medicaid: A Review of Research Findings,*" reviews research on the effects of premiums and cost sharing on low-income populations in Medicaid and CHIP. It draws on findings from 65 papers published between 2000 and March 2017, including peer-reviewed studies and freestanding reports, government reports, and white papers by research and policy organizations. This research has primarily focused on how premiums and cost sharing affect coverage and access to care; some studies also have examined effects on state savings. The effects on individuals, providers, and state costs reflect varied implementation of premiums and cost sharing across states as well as differing premium and cost sharing amounts.

Premiums and Cost Sharing in Medicaid and CHIP Today

Currently, states have options to charge premiums and cost sharing in Medicaid and CHIP that vary by income and eligibility group (Box 1). Reflecting these options, premiums and cost sharing in Medicaid and CHIP vary across states and groups. As of January 2017, 30 states charge premiums or enrollment fees and 25 states charge cost sharing for children in Medicaid or CHIP.[2] Most of these charges are limited to children in CHIP since the program covers children with higher family incomes than Medicaid and has different premium and cost sharing rules. States generally do not charge premiums for parents in Medicaid, but 39 states charge cost sharing for parents and 23 of the 32 states that implemented the Affordable Care Act (ACA) Medicaid expansion to low-income adults charge cost sharing for expansion adults.[3] Six states have waivers to charge premiums or monthly contributions for adults that are not otherwise allowed.[4]

Box 1: Medicaid and CHIP Premium and Cost Sharing Rules

Medicaid

- States may charge premiums for enrollees with incomes above 150% of the federal poverty level (FPL), including children and adults. Enrollees with incomes below 150% FPL may not be charged premiums.
- States may charge cost sharing up to maximums that vary by income (Table 1). States cannot charge cost sharing for emergency, family planning, pregnancy-related services, preventive services for children, or preventive services defined as essential health benefits in Alternative Benefit Plans in Medicaid. In addition, states generally cannot charge cost sharing to children enrolled through mandatory eligibility categories. The minimum eligibility standard for children is 133% FPL, although some states have higher minimums.
- Overall, premium and cost sharing amounts for family members enrolled in Medicaid may not exceed 5% of household income. This 5% cap is applied on a monthly or quarterly basis.

CHIP

- States have somewhat greater flexibility to charge premiums and cost sharing for children in CHIP, although there are limits on the amounts that states can charge, including an overall cap of 5% of household income.

Table 1: Maximum Allowable Cost Sharing Amounts in Medicaid by Income

	<100% FPL	100% 150% FPL	>150% FPL
Outpatient Services	$4	10% of state cost	20% of state cost
Non-Emergency use of ER	$8	$8	No limit (subject to overall 5% of household income limit)
Prescription Drugs Preferred Non-Preferred	 $4 $8	 $4 $8	 $4 20% of state cost
Inpatient Services	$75 per stay	10% of state cost	20% of state cost

Notes: Some groups and services are exempt from cost sharing, including children enrolled in Medicaid through mandatory eligibility pathways, emergency services, family planning services, pregnancy related services, and preventive services for children. Maximum allowable amounts are as of FY2014. Beginning October 1, 2015, maximum allowable amounts increase annually by the percentage increase in the medical care component of the Consumer Price Index for All Urban Consumers (CPI-U).

Effects of Premiums (Table 1)

A large body of research shows that premiums can serve as a barrier to obtaining and maintaining Medicaid and CHIP coverage among low-income individuals. Studies show that premiums in Medicaid and CHIP lead to a reduction in coverage among both children and adults.[5,6,7,8,9,10] Numerous studies find that premiums increase disenrollment from Medicaid and CHIP among adults and children, shorten lengths of Medicaid and CHIP enrollment, and deter eligible adults and children from enrolling in Medicaid and CHIP.[11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39]

Although some individuals who disenroll from Medicaid or CHIP following premium increases move to other sources of coverage, others become uninsured and face negative effects on their access to care and financial security. Those with lower incomes and those without a worker in the family are more likely to become uninsured compared to those with relatively higher incomes or with a worker in the family, reflecting less availability of employer coverage.[40,41,42,43,44,45,46,47,48,49] Studies also show that those who become uninsured following premium increases face increased barriers to accessing care, have greater unmet health needs, and face increased financial burdens.[50,51,52,53,54] Several studies suggest that these negative effects on health care are largest among individuals with greater health care needs.[55,56]

Premium effects are largest for those with the lowest incomes, particularly among those with incomes below poverty. Given that most states limit premium charges to children in CHIP, most studies of premium effects have focused on children in CHIP, who generally have incomes above 100% or 150% of the federal poverty level. A range of these studies show that premium effects are larger among children at the lower end of this income range, who have greater disenrollment and increased likelihood of becoming uninsured.[57,58,59,60,61,62,63,64,65] Reflecting the more limited use of premiums among Medicaid enrollees with incomes below poverty, fewer studies have focused on this population. However, studies that have focused on poor Medicaid enrollees found substantial negative effects on enrollment from premiums.[66,67,68,69] For example, in Oregon, nearly half of adults disenrolled from Medicaid after a premium increase with a maximum premium amount of $20, with many becoming uninsured and facing barriers to accessing care, unmet health needs, and increased financial burdens.[70,71,72] Similarly, a more recent study of the Healthy Indiana Plan waiver program for Medicaid expansion adults with incomes below 138% FPL, which requires premiums that range from $1-$100 to enroll in a more comprehensive plan, found that 55% of eligible individuals either did not make their

initial payment or missed a payment.[73] Research also finds that premium effects may vary by other factors beyond income. For example, one study finds larger effects of premiums among families without an offer of employer-sponsored coverage.[74] Some research also suggests that increases in Medicaid and CHIP premiums may have larger effects on coverage for children of color and among children whose families have lower levels of educational attainment.[75,76,77]

Research finds varying implications of premiums for individuals with significant health needs. Overall, individuals with greater health needs are less likely to disenroll from Medicaid or CHIP coverage and are more likely to have longer periods of Medicaid or CHIP coverage compared to those with fewer health needs.[78,79,80,81] However, findings vary regarding how individuals with health needs respond to premium increases. Some studies show that individuals with greater health needs are less sensitive to premium increases compared to those with fewer health needs, reflecting their increased need for services.[82,83] These findings suggest that individuals with greater health needs are more likely than those with less significant health needs to remain enrolled following premium increases, but then face increased financial burdens to maintain their coverage. Other studies find that children with increased health needs are as likely or more likely than those with fewer health needs to disenroll from coverage following premium increases, suggesting premiums may lead to children going without coverage despite ongoing health needs.[84,85]

Effects of Cost Sharing (Table 2)

A wide range of studies find that even relatively small levels of cost sharing, in the range of $1 to $5, are associated with reduced use of care, including necessary services. The RAND health insurance experiment (HIE), conducted in the 1970s and still considered the seminal study on the effects of cost sharing on individual behavior, shows a reduction in use of services after cost sharing increased, regardless of income.[86] Since then, a growing body of research has found that cost sharing is associated with reduced utilization of services,[87] including vaccinations,[88] prescription drugs,[89,90,91,92] mental health visits,[93] preventive and primary care,[94,95,96,97,98] and inpatient and outpatient care,[99,100] and decreased adherence to medications.[101,102,103] In many of these studies, copayment increases as small as $1-$5 can effect use of care. Some studies find that lower-income individuals are more likely to reduce their use of services, including essential services, than higher-income individuals.[104,105] Research also suggests that copayments can result in unintended consequences, such as increased use of other costlier services like the emergency room.[106] Two studies have found that copayments do not negatively affect utilization.[107,108] In one case, the authors suggest that increases in provider reimbursement may have negated effects of the copayment increases, particularly if not all copayments were being collected by providers at the point of care.[109]

Research points to varying effects of cost sharing for people with significant health needs. Some studies find that utilization among individuals with chronic conditions or significant health needs is less sensitive to copayments compared to those with fewer health needs. As such, these individuals face increased cost burdens associated with accessing care because of copayment increases.[110,111] Other research finds that even relatively small copayments can reduce utilization among individuals with significant health needs.[112,113,114]

Numerous studies find that cost sharing has negative effects on individuals' ability to access needed care and health outcomes and increases financial burdens for families.[115,116,117,118,119,120,121,122] For example, studies have found that increases in cost sharing are associated with increased rates of

uncontrolled hypertension and hypercholesterolemia[123] and reduced treatment for children with asthma.[124] Increases in cost sharing also increase financial burdens for families, causing some to cut back on necessities or borrow money to pay for care. In particular, small copayments can add up quickly when an individual needs ongoing care or multiple medications.[125,126]

Findings on how cost sharing affects non-emergent use of the emergency room are limited. One study found that these copayments reduce non-urgent visits.[127] Other studies find that these copayments do not affect use of the emergency room.[128,129]

Effects on State Budgets and Providers (Table 3)

Research suggests that state savings from premiums and cost sharing in Medicaid and CHIP are limited. Studies find that potential increases in revenue from premium and cost sharing are offset by increased disenrollment; increased use of more expensive services, such as emergency room care; increased costs in other areas, such as resources for uninsured individuals; and administrative expenses.[130,131,132,133,134,135,136] One state study found increased revenues from premiums without significant effects on enrollment, but authors note a range of program-specific factors that may have contributed to this finding, including it being limited to a Medicaid-buy in program for individuals with disabilities with incomes above 150% FPL who may be less price-sensitive to the increase and the state implementing administrative processes designed to minimize disenrollment.[137]

Studies also show that increases in premiums and cost sharing in Medicaid and CHIP can increase pressures on safety net providers, such as community health centers and hospitals. Several studies show that coverage losses following premium increases lead to increases in the share of uninsured patients seen by providers[138,139,140] and increased emergency department use by uninsured individuals.[141,142] One study also found that increases in copayments led to community health centers having to divert resources for medications for uninsured individuals to help people who could not afford copayments and that copayments increased the rate of "no shows" for appointments at community health centers.[143]

Conclusion

Recently, there has been increased interest at the federal and state levels to expand the use of premiums and cost sharing in Medicaid as a way to promote personal responsibility, prepare beneficiaries to transition to commercial and private insurance, and support consumers in making value-conscious health decisions. Current rules limit premiums and cost sharing in Medicaid to facilitate access to coverage and care for the low-income population served by the program, who have limited resources to spend on out-of-pocket costs. This review of a wide body of research provides insight into the potential effects of increasing premiums and cost sharing for Medicaid enrollees. It shows that premiums serve as a barrier to obtaining and maintaining coverage for low-income individuals, particularly those with the most limited incomes, and that even relatively small levels of cost sharing reduce utilization of services. As such, increases in premiums and cost sharing result in increased barriers to coverage and care, greater unmet health needs, and increased financial burdens for families. Further, the research suggests that state savings from premiums and cost sharing in Medicaid and CHIP are limited and that increases in premiums and cost sharing in Medicaid and CHIP can increase pressures on safety-net providers.

Endnotes

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By Benjamin D. Sommers, Bethany Maylone, Robert J. Blendon, E. John Orav, and Arnold M. Epstein

Three-Year Impacts Of The Affordable Care Act: Improved Medical Care And Health Among Low-Income Adults

ABSTRACT Major policy uncertainty continues to surround the Affordable Care Act (ACA) at both the state and federal levels. We assessed changes in health care use and self-reported health after three years of the ACA's coverage expansion, using survey data collected from low-income adults through the end of 2016 in three states: Kentucky, which expanded Medicaid; Arkansas, which expanded private insurance to low-income adults using the federal Marketplace; and Texas, which did not expand coverage. We used a difference-in-differences model with a control group and an instrumental variables model to provide individual-level estimates of the effects of gaining insurance. By the end of 2016 the uninsurance rate in the two expansion states had dropped by more than 20 percentage points relative to the nonexpansion state. For uninsured people gaining coverage, this change was associated with a 41-percentage-point increase in having a usual source of care, a $337 reduction in annual out-of-pocket spending, significant increases in preventive health visits and glucose testing, and a 23-percentage-point increase in "excellent" self-reported health. Among adults with chronic conditions, we found improvements in affordability of care, regular care for those conditions, medication adherence, and self-reported health.

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The Affordable Care Act (ACA) has produced the largest gains in insurance coverage in nearly fifty years,[1] but the results of the 2016 election left it with an uncertain future. Although the initial attempt to partially repeal the law fell short in March 2017, a revised bill passed the House in early May, and Senate debate is pending. Estimates are that as many as twenty million Americans have obtained insurance under the ACA,[2] with more than half via Medicaid and the remainder largely from health insurance Marketplaces.[3] Meanwhile, several states that have not yet expanded Medicaid are in the midst of a renewed debate over this possibility.[4] Understanding the impact of the ACA's coverage expansion on medical care and health is critical to evaluating future policy efforts related to the law.

National studies of the full nonelderly population have detected improvements in trends in coverage, satisfaction with insurance, and access to care.[5,6] Research specifically comparing populations in Medicaid expansion versus nonexpansion states has shown important clinical changes for these populations, including increased primary care visits,[7] improved blood pressure control and Pap testing rates,[8] and improved self-reported health status.[9,10] However, published analyses have been limited to using data from 2014 or 2015.[11] Since insurance expansions extend their reach gradually,[12] updated analyses with more recent data could provide valuable insights.

Meanwhile, patients with chronic medical

conditions such as hypertension, depression, or diabetes may have the most to gain from coverage expansion. These conditions affect nearly half of all Americans—disproportionately those who have gained coverage under the ACA.[13] Given the high costs of care for this group[14] and the public health implications of these conditions,[15] there is much policy interest in whether expanding coverage improves quality of care and health in this population.

Our objective was to assess ongoing changes in health care use and self-reported health among low-income adults, including those with chronic conditions, after three full years of the ACA's coverage expansion. Using survey data from three states collected through the end of 2016, we provide timely evidence of the law's ongoing impact on patient care.

Study Data And Methods

STUDY DESIGN We conducted a difference-in-differences analysis, which compares pre- versus post-expansion outcomes in two expansion states, with one non-expansion state as the control group. Our study states were Kentucky, which expanded coverage to low-income adults via Medicaid beginning in 2014; Arkansas, which used federal Medicaid funding to provide private insurance from the health insurance Marketplace to low-income adults beginning in 2014; and Texas, which did not expand coverage to low-income adults. Thus, our study captures elements of both private Marketplace insurance expansion and Medicaid expansion under the ACA; for brevity, we refer below to "ACA expansions" to describe Kentucky's Medicaid expansion and Arkansas's "private option" approach. In sensitivity analyses, we tested for differences between these two approaches.

We selected Texas as a comparison state for Kentucky and Arkansas because it is a nonexpansion state in the same census region that had a similarly restrictive set of Medicaid eligibility criteria before implementation of the ACA (Texas covered parents only up to 26 percent of poverty as of 2012, compared to 17 percent for Arkansas and 59 percent in Kentucky, versus the national median of 81 percent).[16] Our study design relied on the assumption that if not for Medicaid expansion, trends in coverage and other outcomes would have been similar across these three states. Data from the Census Bureau show that coverage trends for our study population were similar in all three states during the period 2010–13 (see online Appendix Figure 1),[17] offering support for this assumption.

For our primary difference-in-differences model, we identified the expansion effects sepa-

rately for each year of expansion—2014, 2015, and 2016—all compared to the pre-expansion 2013 data. This approach allowed us to trace out differential changes over time. We also tested a model that pooled 2015–16 together to increase statistical power.

We then conducted an instrumental variables analysis, to estimate individual-level changes in health care outcomes for uninsured people who acquired coverage under the ACA. We repeated this analysis among the subset reporting at least one chronic condition. The instrumental variables approach uses a quasi-experimental source of variation in a key predictor to identify the treatment effect of that predictor;[18] in our case, the variation was the state ACA expansion policy, and the key predictor of interest was having health insurance. This approach builds on the underlying quasi-experimental design of our difference-in-differences model but provides more directly interpretable estimates of patient-level outcomes, similar to the local average treatment effect estimated using an instrumental variables model in the Oregon Health Insurance Experiment.[19] This approach does not change the causal inference for our study, which still relies on the assumption that in the absence of the ACA expansion, trends in our outcomes would have been similar in Texas and the expansion states.

One key assumption for an instrumental variables analysis is that the instrument has a significant relationship with the predictor of interest; here, the state expansion decisions clearly had large effects on insurance coverage. The other key assumption is that the instrument (state expansion) affects outcomes only via the predictor of interest (insurance coverage). While this seems plausible in our case, other potential aspects of coverage expansions might affect access to care and health, even among people who did not gain insurance. For instance, there could be positive spillovers of expansion via better funding to safety-net institutions,[20] which would bias our instrumental variables estimates upward. There also could be negative spillovers via reduced health system capacity to care for populations that already had coverage when the expansions took place,[21] which would have the opposite effect on our estimates. In addition, some people might not have gone from uninsured to insured but simply switched types of coverage because of expansion. These influences are likely swamped by the individual-level effects of gaining insurance, but they are nonetheless potential sources of bias.

DATA We contracted with a research firm to conduct a random-digit-dialing telephone survey from November to December each year, from 2013 to 2016. The survey sample contained US

Individual-level estimates indicate that people who gained coverage saw large, policy-relevant changes.

citizens ages 19–64, with family incomes below 138 percent of the federal poverty level—the ACA's Medicaid expansion eligibility threshold. The survey was available in Spanish and English, and the sample included cellphone and landline users. Each year we recruited a new sample split equally across our three study states. Annual sample sizes ranged from 2,209 to 3,011, for an overall total of 10,885. The study was exempted from review by the Harvard T.H. Chan School of Public Health's Institutional Review Board since the investigators had access to deidentified data only.

The overall response rate was 22 percent, which compares favorably to response rates of several other surveys that have been used to evaluate the ACA.[22–24] Previous research demonstrates that the use of population weighting in random-digit-dialing telephone surveys can mitigate nonresponse bias and produce estimates similar to those from government surveys.[25–27] Accordingly, our analyses were weighted to demographic targets for low-income adults in our study states based on age, sex, education, marital status, race/ethnicity, geographic region, population density, and cellphone use. Our survey has been previously validated against two large government-sponsored sources: the American Community Survey, conducted by the Census Bureau, and the Behavioral Risk Factor Surveillance System, conducted by the Centers for Disease Control and Prevention. In that validation, we compared estimates for low-income adults in our three study states for coverage and several measures of access to care in our survey and the government data sets. We found moderate-to-strong correlations and a range of absolute differences in estimates consistent with analogous differences between various federal surveys.[9,22]

STATISTICAL ANALYSIS For each outcome, we estimated a linear regression model including binary indicators for each year and state, plus interaction terms between "expansion state" and

each post-expansion year (2014, 2015, and 2016). These interaction terms captured the changes attributable to coverage expansion for each year of the expansion, compared to the nonexpansion state. All models adjusted for age, sex, race/ethnicity, education, family size, income, urban versus rural residence, and state. Regression equations are in the Appendix Methods.[17]

Our study outcomes spanned seven domains: health insurance (uninsured, Medicaid, and private insurance, in which each individual was assigned a primary type of insurance [see the Appendix Methods],[17] as well as any coverage changes within twelve months); access to care (having a personal doctor, usual location of care, difficulty obtaining primary care and specialty appointments, and reasons for emergency department [ED] use); affordability (skipping needed care or medications due to cost, trouble with medical bills, and medical out-of-pocket spending); utilization (outpatient, ED, and inpatient care in the prior twelve months); preventive care (receipt of a checkup, cholesterol test, or glucose test in the prior twelve months); quality of care (cholesterol and glucose testing for high-risk patients, regular care for chronic conditions, and self-rated quality of care); and health status (self-reported health on a five-point scale[28] and a two-item depression score[29]).

We then examined the same outcomes (other than coverage) in an instrumental variables analysis. We used a two-stage least-squares regression,[30] in which the first stage predicted the likelihood of a person having any health insurance as a function of state expansion decisions and the year, using the difference-in-differences model described above (see Appendix Table 1).[17] The second stage then provided an estimate of the impact of gaining insurance from the ACA expansion on individual-level health care outcomes. This method also has the advantage of using all four years of data simultaneously to produce a single estimated policy effect from expansion.

We used Stata 14.0 for all analyses. All regression models used county-level robust clustered standard errors to account for the nonindependence of observations within the same state and county.

SENSITIVITY AND SUBGROUP ANALYSES We repeated our instrumental variables analysis for the subset of respondents who reported having been diagnosed with any of nine chronic conditions: hypertension, coronary artery disease, stroke, asthma/chronic obstructive pulmonary disease (COPD), kidney disease, diabetes, depression, cancer (other than skin cancer), or substance abuse. We also tested whether the

prevalence of these conditions changed in association with expansion status.

We conducted several sensitivity analyses. We tested the impact of pooling 2015 and 2016 expansion state data together to increase statistical power. To account for multiple hypothesis testing within each domain or family of outcomes, we estimated "family-wise" p values using a step-down bootstrapping approach similar to other recent analyses.[11,31] We also tested a spatial correlation model described below.

Finally, we repeated our primary model with the expansion states divided into Kentucky's Medicaid expansion versus Arkansas's private option. This produced separate estimates for expansion effects in Arkansas and Kentucky.

LIMITATIONS Our analysis had several limitations. First, our study examined only three states. This means that our results might not generalize to the nation as a whole. It also affected our estimation of standard errors and the possibility of idiosyncratic changes in any given state exerting an outsize influence on our findings. In studies with a larger number of states, the use of state-clustered standard errors can limit this risk, but standard methods to estimate correlation within states are biased when there are only three states.[32] Instead, we used county-level clustering to estimate standard errors as in our previous work with this data set,[9] and we also present results using spatial correlation across counties similar to other health care analyses using small numbers of states.[33] Our main findings were similar under both alternatives.

Second, as discussed earlier, the response rate for random-digit-dialing telephone surveys like ours is lower than that for government interview surveys. However, we believe that the trade-off of timeliness and the ability to design our own comprehensive survey outweighed those concerns, particularly given the previous validation of our survey instrument.[9]

Other limitations are inherent to our study's quasi-experimental design, which helps control for secular trends and takes advantage of a non-expansion state as a comparator but is still subject to unmeasured confounders that vary over time across states. Our instrumental variables analyses produced estimates with fairly wide confidence intervals, which means that the exact magnitudes of change should be interpreted cautiously. Finally, our data are all self-reported, which may be subject to errors in memory and other biases. However, our findings in several domains are consistent with ACA studies using nonsurvey data such as pharmacy claims,[34,35] lab results,[36] and community health center reports.[8]

Our results offer insights into alternative state approaches to coverage expansion.

Study Results

Exhibit 1 presents descriptive statistics by state for our full sample and for those with chronic conditions. Respondents in Texas were disproportionately Latino and urban compared to those in Arkansas and Kentucky. Chronic conditions affected 69 percent in Arkansas, 72 percent in Kentucky, and 55 percent in Texas. Changes in disease prevalence between 2013 and 2016 by state were nonsignificant for all but kidney disease, which showed a small decline in expansion states (−2.2 percentage points, $p = 0.06$) (Appendix Table 2).[17] People with chronic conditions were older and less likely to be male or Latino. Among those with a condition, the mean number of conditions ranged from 2.0 to 2.3 by state, with depression, hypertension, asthma/COPD, and diabetes the most common (Exhibit 1).

Exhibit 2 presents the percentages of respondents in each state that were uninsured during the period 2013–16. The three states began with similar pre-ACA uninsurance rates of approximately 40 percent among low-income adults in 2013. The rate dropped steeply in 2014 in Kentucky and Arkansas and declined more gradually in 2015 and 2016. Meanwhile, the rate fell moderately in 2014 in Texas and then plateaued. By the end of the study period, the uninsurance rate was 7.4 percent in Kentucky, 11.7 percent in Arkansas, and 28.2 percent in Texas.

Exhibit 3 presents regression-based estimates for differential changes in our study outcomes, comparing expansion to nonexpansion states (Appendix Table 3 presents unadjusted mean values for each outcome in each year, by state).[17] Compared to the nonexpansion state, the coverage expansion to low-income adults in the expansion states was associated with an increase in coverage of 14.0 percentage points in 2014, 22.9 percentage points in 2015, and 20.7 percentage points in 2016 (all $p < 0.01$). By 2016, in our main model, the expansions had led to signifi-

EXHIBIT 1

Characteristics of the study sample in three states, 2013–16

Variable	Full sample (N = 10,885)			Adults with chronic conditions (N = 7,734)		
	Arkansas (n = 3,623)	Kentucky (n = 3,639)	Texas (n = 3,623)	Arkansas (n = 2,666)	Kentucky (n = 2,825)	Texas (n = 2,243)
Female	57%	56%	58%	60%	61%	62%
Age (years)						
19-34	41%	39%	46%	34%	31%	33%
35-44	19	20	18	19	21	18
45-54	16	17	16	19	19	20
55-64	23	24	20	28	29	29
Race/ethnicity						
White non-Latino	66%	84%	36%	66%	85%	41%
Latino	4	2	40	3	1	32
Black non-Latino	25	11	19	26	11	22
Other	5	3	5	5	3	4
Education						
Less than high school diploma	20%	25%	23%	22%	28%	25%
High school graduate	47	43	40	49	44	40
Some college/college graduate	33	32	38	29	28	35
Family income (percent of poverty)						
Under 50%	32%	33%	30%	33%	35%	32%
50%–100%	36	36	37	37	36	36
101%–138%	25	23	25	24	22	24
Don't know/refused	7	7	8	6	7	8
Married or living with a partner	41%	42%	40%	40%	40%	37%
Family size (number)	2.9	2.9	3.2	2.8	2.7	3.0
Rural	56%	55%	14%	58%	57%	15%
Chronic conditions						
Hypertension	37%	39%	28%	54%	54%	52%
Coronary artery disease	8	11	6	12	16	12
Stroke	5	6	4	7	8	8
Asthma/COPD	26	31	18	37	43	32
Kidney disease	2	4	2	4	5	4
Diabetes	15	17	14	22	23	26
Depression	41	46	32	60	64	57
Cancer	5	6	3	7	8	6
Substance abuse	4	5	4	6	7	7
≥1 condition	69	72	55	100	100	100
Mean no. of conditions	1.4	1.6	1.1	2.1	2.3	2.0

SOURCE Authors' analysis of data from a telephone survey of US citizens ages 19-64 with family incomes below 138 percent of the federal poverty level, conducted each year from 2013 to 2016. **NOTES** The table reflects pooled estimates for the years 2013–16. Arkansas and Kentucky expanded coverage to low-income adults under the Affordable Care Act, and Texas did not.

cant increases in multiple measures of access to care and affordability, including having a personal doctor and reductions in cost-related delays in both care and medication use. Expansion was associated with a decline in difficulty paying medical bills but an increase in difficulty obtaining appointments with specialists in 2016.

Exhibit 3 also presents changes in utilization and preventive care. Coverage expansion in the expansion states in 2015 and 2016 was associated with a significantly reduced likelihood of any ED visits and an increased likelihood of a checkup within the prior twelve months, but no significant changes in hospitalizations. Our two measures of clinical screening tests—glucose screening and cholesterol monitoring—significantly increased in association with coverage expansion in 2015 or 2016, respectively. Perceived quality of care showed some improvement in 2015 (for example, a reduction in "fair/poor quality of care") that did not persist in 2016. Finally, coverage expansion led to improvements in self-reported health (for "excellent," $p < 0.05$ in 2015; for both "excellent" and "fair/poor," $p < 0.10$ in 2016).

Appendix Tables 4 and 5 present sensitivity analyses for our difference-in-differences model.[17] When we used bootstrapped family-wise p values that accounted for multiple variables within each domain of outcomes, we continued

EXHIBIT 2

Percentage of low-income adults without health insurance in three states, 2013–16
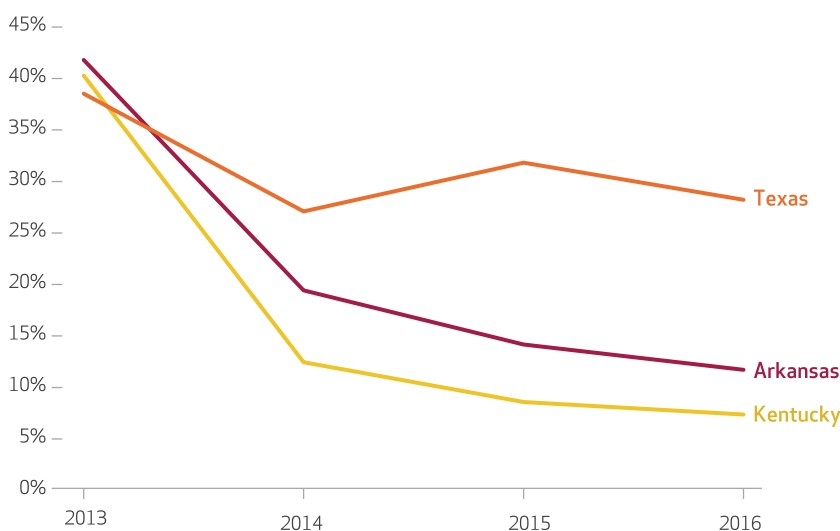
SOURCE Authors' analysis of data from a telephone survey of 10,885 US citizens ages 19–64, with family incomes below 138 percent of the federal poverty level, conducted each year from 2013 to 2016. **NOTES** The survey was conducted in November–December of each year with a new sample, divided evenly among the three states. Arkansas and Kentucky expanded coverage to low-income adults under the Affordable Care Act, and Texas did not.

to find significant changes in 2016 for outcomes related to coverage, access, affordability, and prevention ($p < 0.05$) and quality ($p < 0.10$), but not for utilization and self-reported health. Pooling 2015–16 data together strengthened the statistical significance of some 2016 findings such as private insurance gains, having a usual source of care, out-of-pocket spending, and excellent self-reported health; outcomes in five of seven domains were significant at $p < 0.05$ and in the other two at $p < 0.10$ using family-wise p values. Difficulty obtaining an appointment to see a specialist was no longer significant in the pooled model. In models using spatially correlated standard errors, several estimates were affected by the lack of weighting (which was not feasible with this method), but overall this approach yielded precision similar to that of the main model, which provides support for our primary method using county-level clustering.

Exhibit 4 presents individual-level estimates of changes in these outcomes for patients acquiring insurance, using our instrumental variables model. For the full sample, we estimated that expansion led to significant changes, including a 41-percentage-point increase in having a usual source of care among those gaining coverage, a $337 reduction in medical out-of-pocket spending, a 28-percentage-point reduction in the likelihood of any ED visits, and a 25-percentage-point increase in glucose testing. The proportion in excellent health increased by nearly 23 per-

centage points.

Exhibit 4 also shows instrumental variables results for adults with chronic conditions. While out-of-pocket spending and cholesterol and glucose testing among high-risk patients (those with diabetes, stroke, hypertension, or heart disease) did not change significantly, we otherwise found similar results for most outcomes as in the full sample, including a 51-percentage-point decrease in skipping medications because of cost and a 20-percentage-point increase in excellent health. In a question asked only of this subgroup, we estimated a 56-percentage-point increase in obtaining regular care for chronic conditions.

Comparisons of the 2016 effects of private (Arkansas) versus public (Kentucky) insurance approaches (Appendix Table 6) showed no significant differences for most outcomes.[17] As expected, health insurance types differed, with more private coverage gains in Arkansas and more Medicaid in Kentucky. The only other significant difference was a greater decline in "fair/poor quality of care" in Arkansas compared to Kentucky. Both expansions were associated with significant improvements in numerous outcomes compared to Texas, including access to a personal doctor and medications, trouble with medical bills, checkups and cholesterol testing, and self-reported health.

Discussion

In our analysis of survey data from low-income adults in three states, we note three key contributions to the growing body of research on the ACA. First, we provide the earliest published estimates using data through the law's third year of expansion (2016), allowing us to document the expansion's changing impact on health care outcomes over time. Second, we use an instrumental variables model to produce individual-level estimates of the ACA's coverage impacts, showing large improvements in self-reported health and other outcomes directly relevant to patients. Third, we document benefits in numerous previously unstudied outcomes for adults with chronic conditions—a vulnerable and high-cost population.

Our four years of data indicate that the ACA's coverage expansion to low-income adults was associated with significant improvements in access to primary care and medications, affordability of care, preventive visits, screening tests, and self-reported health. Though coverage gains in the two expansion states were largest in the first two years, with little additional change in 2016, the time course was more variable for access and utilization measures. Some changes were present in 2014 or 2015, while other changes such

EXHIBIT 3

Year-by-year changes in health care outcomes after the Affordable Care Act's coverage expansion in expansion states, compared to nonexpansion

Outcome	2014 expansion	2015 expansion	2016 expansion
COVERAGE			
Uninsured	−14.0***	−22.9***	−20.7***
Medicaid	9.5***	12.2***	17.6***
Private insurance	7.7**	8.5**	5.9*
Coverage change within past year	5.8*	1.2	1.9
ACCESS TO CARE			
Has a personal doctor	7.6*	12.1***	16.7***
Usual source of care[a]	3.8	10.4***	6.8
Trouble obtaining primary care appointment	3.6	0.1	2.1
Trouble obtaining specialist appointment	2.5	1.1	6.4**
ED is usual location of care[a]	−5.1*	−5.9***	−3.7
ED visit because office visit unavailable	4.9**	5.0*	3.5
AFFORDABILITY			
Cost-related delay in care	−4.3	−18.4***	−12.8***
Skipped medication due to cost	−9.9***	−12.0***	−10.5***
Trouble paying medical bills	−8.9***	−14.1***	−10.9***
Annual out-of-pocket medical spending	−$33	−$88**	−$62*
UTILIZATION			
Any office visits in past year	2.3	2.7	4.3
Any ED visits in past year	−1.8	−5.8**	−6.6**
Number of office visits in past year	0.51	0.66**	0.60
Number of ED visits in past year	−0.12	−0.09	0.13
Any hospitalization in past year	−1.6	1.9	2.9
PREVENTION			
Checkup in past year	6.9*	16.0***	11.1**
Cholesterol check in past year	−1.1	1.4	9.9***
Glucose check in past year	2.2	6.3**	4.3
QUALITY OF CARE			
Cholesterol check in high-risk patients[b]	2.3	1.1	2.7
Glucose check in those with diabetes[c]	4.5	11.1**	6.3
Regular care for chronic condition[d]	11.3**	11.5**	11.2**
Excellent quality of care	4.1	1.3	2.0
Fair/poor quality of care	−2.5	−7.3**	−2.3
HEALTH STATUS			
Excellent self-reported health	2.4	5.0**	5.1*
Fair/poor self-reported health	0.6	−3.7	−6.0*
Positive depression screen (PHQ2 ≥2)[e]	2.0	−6.9*	−1.8

SOURCE Authors' analysis of data from a telephone survey of US citizens ages 19-64, with family incomes below 138 percent of the federal poverty level, conducted each year from 2013 to 2016. **NOTES** The sample contained 10,885 adults (minus item nonresponse for each specific outcome), except where otherwise noted below. Results show differences-in-differences estimates for two expansion states (Arkansas and Kentucky) versus the nonexpansion state (Texas), by year. All analyses adjusted for sex, age, race/ethnicity, marital status, family size, education, income, urban versus rural residence, county annual unemployment rate, state, and year. All estimates are reported as percentage-point changes for binary outcomes, other than number of office and emergency department (ED) visits and out-of-pocket spending. [a]Usual source of care was grouped into 3 categories: those reporting an office-based usual source of care, those without any usual source of care, and those using the ED as the usual source of care. [b]Sample limited to patients reporting heart disease, stroke, diabetes, or hypertension ($n = 5,611$). [c]Sample limited to patients reporting a history of diabetes ($n = 2,213$). [d]Sample limited to patients reporting at least one of the following conditions: hypertension, heart attack/coronary artery disease, stroke, asthma/chronic obstructive pulmonary disease (COPD), kidney disease, diabetes, depression, cancer, and substance abuse ($n = 7,734$). [e]PHQ2 is a two-item mental health screening questionnaire with total scores ranging from 0 to 6; see Note 29 in text. *$p < 0.10$ **$p < 0.05$ ***$p < 0.01$

as increased cholesterol testing and reduced fair/poor health did not become evident until 2016.

Individual-level estimates indicate that people who gained coverage saw large, policy-relevant changes. The average newly covered adult experienced savings of $337 per year in out-of-pocket medical spending, a 41-percentage-point increase in the likelihood of having a usual source of care, and a 23-percentage-point increase in

EXHIBIT 4

Instrumental variables analysis: individual-level change per person gaining insurance under the Affordable Care Act

	Effect of any insurance	
Outcome	Full sample	Adults with chronic conditions[a]
ACCESS TO CARE		
Has a personal doctor	62.1***	40.9*
Usual source of care[b]	41.1**	20.0
Trouble obtaining primary care appointment	3.3	−6.5
Trouble obtaining specialist appointment	13.7	25.1*
ED is usual location of care[b]	−23.1**	−0.9
ED visit because office visit unavailable	20.2	29.8
AFFORDABILITY		
Cost-related delay in care	−74.7***	−74.6***
Skipped medication due to cost	−52.3***	−50.8**
Trouble paying medical bills	−58.6***	−66.6***
Annual out-of-pocket medical spending	−$337**	−$361
UTILIZATION		
Any office visits in past year	14.7	−8.2
Any ED visits in past year	−27.6**	−29.5*
Number of office visits in past year	2.86*	2.68
Number of ED visits in past year	−0.05	−0.06
Any hospitalization in past year	10.5	18.0
PREVENTION		
Checkup in past year	64.7***	56.8**
Cholesterol check in past year	20.2	15.7[c]
Glucose check in past year	25.4**	92.0[d]
QUALITY OF CARE		
Regular care for chronic condition	—[e]	55.9***
Excellent quality of care	9.7	31.5
Fair/poor quality of care	−29.8	−27.2
HEALTH STATUS		
Excellent self-reported health	22.7**	20.4**
Fair/poor self-reported health	−20.6	−38.3*
Positive depression screen (PHQ2 ≥2)[f]	−21.9	−31.5

SOURCE Authors' analysis of data from a telephone survey of US citizens ages 19–64, with family incomes below 138 percent of the federal poverty level, conducted each year from 2013 to 2016. **NOTES** The sample contained 10,885 adults (minus item nonresponse for each specific outcome), except where otherwise noted below. Results show local average treatment effect from gaining coverage via expansion in two states that expanded coverage (Arkansas and Kentucky), compared one nonexpansion state (Texas) using two-stage least squares instrumental variables regression. All analyses adjusted for sex, age, race/ethnicity, marital status, family size, education, income, urban versus rural residence, state, and year. All estimates are reported as percentage-point changes for binary outcomes, other than number of office and emergency department (ED) visits and out-of-pocket spending. COPD is chronic obstructive pulmonary disease. [a]Sample limited to patients (n = 7,734 adults) reporting at least one of the following conditions: hypertension, heart attack/coronary artery disease, stroke, asthma/chronic obstructive pulmonary disease (COPD), kidney disease, diabetes, depression, cancer, and substance abuse. [b]Usual source of care was grouped into 3 categories: those reporting an office-based usual source of care, those without any usual source of care, and those using the ED as the usual source of care. [c]Sample limited to patients reporting heart disease, stroke, diabetes, or hypertension (n = 5,611). [d]Sample limited to patients reporting a history of diabetes (n = 2,213). [e]Question not asked of this group. [f]PHQ2 is a two-item mental health screening questionnaire with total scores ranging from 0 to 6; see Note 29 in text. *p < 0.10 **p < 0.05 ***p < 0.01

Insurance Experiment, which showed an average reduction of $390 in medical debt, a 34-percentage-point increase in having an office-based usual source of care, and a 13-percentage-point change in the share reporting excellent, very good, or good health.[31]

These latter results are particularly noteworthy given policy interest in the ACA's impact on health status. For context, prior research indicates that a self-reported health rating of fair or poor confers a mortality risk two to ten times higher than that of people in the healthiest category.[28] Our finding of improved self-reported health is consistent with results in the Oregon study and other pre-ACA Medicaid expansions,[37] though the evidence on similar changes under the ACA has been more mixed.[6,10,11,38] In part, this likely reflects differences in sample frame and timing. Studies that have not found significant changes in self-reported health after the Medicaid expansion have typically used only one or two years of post-expansion data and have studied expansion-related coverage gains on the order of 3–8 percentage points.[6,11,38] Here we assessed three full years of post-expansion data and studied a population experiencing a much larger coverage change of over 20 percentage points.

Adults with chronic conditions—often called "preexisting conditions" in the current policy debate—saw numerous improvements in both access to and quality of care, including more checkups, improved adherence to medications, higher rates of regular care for chronic disease, and—perhaps as a consequence of these changes—improved self-reported health. These findings build on a previous study using national data through 2014 that showed gains in two access measures for adults with chronic conditions (having a checkup and no cost-related delays in care).[39] However, our study included a much richer set of outcomes and two additional years of data.

We detected an increased rate of difficulty obtaining specialist appointments in 2016 in the expansion states, particularly in Kentucky. This is consistent with a recent national study that found an increase in appointment wait times after expansion,[7] as well as some studies showing greater barriers in Medicaid to specialty care than primary care.[40] However, in part this may also reflect that patients without coverage are less likely to attempt to make appointments with specialists; thus, coverage expansion may increase the share who try but experience difficulties in doing so, even as their overall access to care has improved.

Our results also offer insights into alternative state approaches to coverage expansion. With increased interest under the Trump administra-

the likelihood of being in excellent health. The validity of these estimates is supported by their similarity to those from the instrumental variables analyses in the randomized Oregon Health

tion in state flexibility and innovation, we found that a private insurance expansion via Marketplace coverage (as in Arkansas) and a Medicaid expansion (as in Kentucky) produce similar benefits across most study outcomes. Consistent with prior comparisons,[41] the results imply that coverage expansion is quite important for patients, but the type of coverage obtained is less critical.

Conclusion

Over three years of coverage expansion in two states, the ACA was associated with statistically significant and clinically relevant improvements for low-income adults' access to care, use of preventive services, and self-reported health. Among those with chronic conditions, coverage expansion was linked to improved medication adherence, more regular communication with physicians, and improved perceived health status. As policy makers debate the ACA's future and additional states consider whether to expand Medicaid, our findings demonstrate the benefits associated with coverage expansion for two particularly vulnerable populations: low-income adults and those with chronic conditions. ■

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Healthy Marketplace Index: Medical Treatment Indices—Part 1: Spending and Price

Comparing spending and prices for three medical treatments within and across geographies

The Health Care Cost Institute (HCCI), with funding from the Robert Wood Johnson Foundation, calculated a set of measures of health care price, competition, and productivity, which collectively make up the Healthy Marketplace Index (HMI). This is the third HCCI issue brief in a series that reports HMI measures. In this issue brief, we report expenditure (e.g., spending) and price indices for three medical treatments: an injection to alleviate knee pain, arthroscopy and surgery to repair a torn ACL, and a full knee replacement.

The indices reported in this brief are intended to be used to compare total spending and prices for common collections of medical services related to specific treatments. These indices, consistent with all other HMI measures, were calculated and reported at the Core-Based Statistical Area (CBSA). The medical treatment indices can also be used to examine how the treatment specific prices are related to the medical service category price levels. Each of the three price indices reported in this brief generally falls within one of the three overall service categories price indices – inpatient (knee replacement), outpatient (ACL repair), and physician (knee injection) – reported in *Healthy Marketplace Index: Medical Service Category Price Index.*[1]

The treatments selected for analysis were all specific to knees. The previously reported price indices for the categories of medical services are valuable in identifying potential drivers of spending in a CBSA. The treatment-level indices are specific examples that can be used to understand how services for various related medical treatments compare within and across CBSAs and how they relate to overall price indices.

This is the type of detailed price and spending information needed to evaluate how potential policy solutions targeting one aspect of health care services may have direct or indirect impacts on other areas. Examining only three treatments does not provide a comprehensive understanding, but the indices are useful in particular contexts and will hopefully inform future work.

The three treatments exhibited several differences in their patterns of spending and prices. Knee replacement treatments had the highest price on average, but had the least variation in spending and prices across CBSAs, compared to the other treatments. Knee injection, on the other hand, had the widest range of average prices across CBSAs, but was the lowest priced. While price appeared to be a large factor in total spending, there were numerous instances where evidence suggested other factors, such as utilization, likely influenced spending. Comparing the three treatments' price indices to their corresponding medical service category price indices, we found high correlations between knee injection and physician services prices and knee replacement and inpatient facility prices as expected. However, there was a substantially lower correlation between ACL repair and outpatient prices.

KEY FINDINGS

Considerable variation was found in spending and prices across all three treatments
ACL repair had the widest spending index distribution, while knee injection was the largest for prices.

Prices had strong positive correlations to spending for all three treatments
Each set of corresponding treatment indices had a correlation of 0.84 or higher.

Among the three paired treatment—service category correlations, only ACL Repair—Outpatient was not strongly correlated
At the CBSA level, the ACL price index values varied substantially from the outpatient price index trend.

Index calculations

The medical treatment spending and price indices were calculated using 2013 claims data from individuals under age 65, enrolled in an employer-sponsored insurance (ESI) plan from one of 61 CBSAs.[2] Spending and prices were calculated for the set of medical services commonly billed for a given a treatment.[3] For example, the claims for a knee injection could include an office visit, the injection, and the cost of the drug administered. Identification of the medical treatments and associated claims used in constructing the HMI measures were based on the guroo.com "care bundles", but the methodology for calculating the medical treatment indices is specific to the HMI.

For each treatment, a single code indicating the main treatment (e.g., the trigger code) was used to identify instances of the relevant medical care. The knee injections and ACL repairs were identified by Current Procedur-

al Terminology (CPT) codes in the professional and outpatient claims , respectively. The knee replacements were identified by Diagnosis Related Group (DRG) codes in the inpatient files. Using the trigger code date of service, all other services billed on the same day (or billed within the duration of the hospital stay for knee replacements) were identified. For example, knee injections were identified in the professional file, but if outpatient services with claims in the outpatient file were provided to a patient on the same day as the injection, they were also included. Additional detail regarding the services included in each medical treatment index are provided in the Data and Methods section.

For the spending indices, the allowed payments (the actual amount paid to the providers including any patient cost sharing) for all services that occurred on the day of the trigger code were averaged by CBSA and over the total study population. The average was calculated by dividing the sum of the allowed payments by the number of trigger code occurrences identified because some treatments could have been provided multiple times during a year. Each CBSA-level treatment spending average was divided by the treatment's total population average to create an index measure. A CBSA with an index greater than 1.00 implies that an average patient within that CBSA spent more than the average patient from the total population, for the same treatment. Conversely, an index less than 1.00 signifies that an average patient within a given CBSA spent less

than an average patient from the total population.

A standard set of services for each treatment was used to calculate the price index.[4,5] An average price was calculated from the allowed payments for each procedure code, CPT or DRG, in the set. The average prices were calculated by CBSA and for the total population. If a CBSA did not have enough data to calculate an average for a given CPT code, the total population average value was substituted. The average prices for each code in the standardized treatment were summed to create a total treatment average price at the CBSA and total population levels. Each of the CBSA-level prices were divided by the total population price to produce an index normalized to 1.00.

A spending and price index were calculated for each treatment to allow for the examination of the role of prices in overall spending. Variation in average spending could be due to a variety of factors, such as differences in the number of services (e.g., receiving an x-ray or not), utilization of different types services (e.g., a 3-view x-ray versus a 1-view x-ray), or price. By fixing the set, type, and number of services included in the price index, the impact of prices on spending can be identified. If spending and prices in a CBSA are both higher than average, it is likely that price contributes to the higher spending. However, if a CBSA has high spending but low prices, it is more likely the amount and types of services included in an average treatment result

in high spending.

Results

COMPARING INDICES ACROSS CBSAS WITHIN CARE BUNDLES

Summary statistics of the medical treatment spending indices are presented in Table 1. Although the CBSA-level index averages were generally consistent across the three treatment cohorts, there were differences between in the distributions of the CBSA-level index values. The ACL repair spending index had the largest interquartile range (the difference between the 75th and 25th percentiles) of 0.36. The interquartile ranges for the knee injection and knee replacement indices were similar, 0.23 and 0.21, respectively. ACL repair also had the largest difference between the maximum and minimum index values, 0.92. However, the range of knee injection spending index values was nearly as large, 0.89. Thus, for the approximately half of the CBSAs in the study, the range in spending for a knee injection is consistent with the range in spending for a knee replacement, but the overall range in spending for knee injections is similar to the range in spending for ACL repairs.

Price index summary statistics are presented in Table 2. Like the spending index, the middle 50% of CBSAs had similar variation in knee injection and knee replacement prices. The largest difference in prices between the 25th and 75th

Table 1. CBSA-level Spending Index Summary Statistics

	Knee Injection	ACL Repair	Knee Replacement
Average	0.99	0.97	0.97
(Standard Deviation)	(0.20)	(0.22)	(0.17)
Minimum	0.71	0.55	0.65
25th Percentile	0.85	0.80	0.85
50th Percentile	0.93	0.95	0.99
75th Percentile	1.08	1.16	1.06
Maximum	1.60	1.47	1.46

Source: HCCI, 2017.
Note: All indices were calculated using a 2013 baseline. The averages reported in the table were calculated using CBSA-level price indices and may not equal 1.00. To account for the distribution of members, the index baseline was calculated from full analysis sample rather than with CBSA.-level measures.

Table 2. CBSA-level Price Index Summary Statistics

	Knee Injection	ACL Repair	Knee Replacement
Average	1.05	0.95	0.97
(Standard Deviation)	(0.26)	(0.20)	(0.17)
Minimum	0.72	0.59	0.64
25th Percentile	0.88	0.80	0.86
50th Percentile	0.97	0.93	0.98
75th Percentile	1.11	1.08	1.06
Maximum	1.95	1.46	1.48

Source: HCCI, 2017.
Note: All indices were calculated using 2013 claims. The averages reported in the table were calculated using CBSA-level price indices and may not equal 1.00. To account for the distribution of members, the index baseline was calculated from full analysis sample rather than with CBSA.-level measures.

percentiles was also for ACL repair; the interquartile range was 0.28. However, the widest range in prices was for a knee injection. The difference between the maximum and minimum knee injection price indices was 1.23.

Comparing the distribution of spending and price indices is useful to identify patterns; however, the levels of spending and prices are masked by the indices. Although the knee injection price indices had the widest variation, they had the lowest average prices. Table 3 presents the total population average spending and prices relative to the knee injection price. Average spending for an ACL repair was over 30 times greater than for a knee injection, and 98 times greater for a knee replacement. The differences in prices were even larger; prices were over 51 and 163 times, for

ACL repair and knee replacement, respectively, when compared to knee injections. These ratios provide context when interpreting the overall results and assessing the importance of particular results.

Table 4 shows the correlations between the CBSA-level spending and price indices within each treatment. All three measures had strong, positive correlations. The ACL repair indices had the lowest correlation of the three treatment cohorts, 0.8399. This suggests that ACL repair, relative to the other treatments, may be subject to the most variation in utilization across CBSAs. As expected, the highest correlation was for the knee replacement indices. This is due, in part, to the use of a DRG code as the trigger code – the price of the DRG accounted for the majority of total

spending. However, physician and facility services provided during a hospital stay can be billed separately, resulting in differences between the spending and price indices. Hospitals may also provide differing levels of services during the stay, but that level of detail is difficult to ascertain from inpatient claims, which often aggregate allowed payments to a DRG code level.

KNEE INJECTION

The CBSA-level knee injection spending and price indices are presented in Table 5. Orlando-Kissimmee-Sanford, Florida had the lowest knee injection spending index, 0.71. Moreover, the five CBSAs with the lowest knee injection spending index values were all located in Florida, and all nine of the CBSAs in Florida had spending index values less than 1.00.

Table 3. Treatment Cohort Relative Prices

	Spending	Price
Knee Injection	1.00	1.00
ACL Repair	30.94	51.13
Knee Replacement	98.22	163.35

Source: HCCI, 2017.
Note: Price ratios, rather than prices, were reported to facilitate comparisons while complying with HCCI's masking rules regarding price and utilization reporting.

Table 4. Expenditure Index—Price Index Correlations

	Correlation
Knee Injection	0.9127
ACL Repair	0.8399
Knee Replacement	0.9913

Source: HCCI, 2017.
Note: Price ratios, rather than prices, were reported to facilitate comparisons while complying with HCCI's masking rules regarding price and utilization reporting.

Conversely, all five of the CBSAs in Wisconsin had index values above 1.23 (23% or more than the national average), and three of those CBSAs were among the five highest spending indices.

Comparing the spending index to the price index at the CBSA-level can provide insight into how much prices influence spending. For example, the Miami-Fort Lauderdale-West Palm Beach, Florida CBSA spending index was 0.74 and the price index was 0.72. This suggests that below average knee injection prices may be driving the below average spending results. In the Milwaukee-Waukesha-West Allis, Wisconsin area, the price index was the fifth highest price ratio studied, at 1.57 (prices 57% above the national average), but the spending index was only 23% above the national average. This suggests that although both spending and prices were higher than average, utilization factors may have been comparatively lower, resulting in a spending index closer to the national average than the price index. This does not, however, imply that the Milwaukee-Waukesha-West Allis, Wisconsin CBSA had low spending relative to other CBSAs. The Milwaukee spending index was still among in the top 25% of spending index values.

ACL REPAIR

Table 6 presents the CBSA-level ACL repair spending and price indices. Only 26% of the CBSAs (16 total) had a spending index value within 10% of the national average. This was consistent with the summary statistics of the ACL repair having the largest overall and interquartile ranges (Table 2). It also supports the finding that, of the three treatments examined, the ACL repair had the most variation in spending between CBSAs.

The lowest spending index was in Knoxville, Tennessee, 0.55. The spending indices for the other two CBSAs in Tennessee—Nashville-Davidson-Murfreesboro-Franklin, Tennessee (0.86) and Memphis, Tennessee-

Mississippi-Arkansas (0.80)—were also below the median index value (0.95). However, the three lowest index values, other than Knoxville, were geographically distributed: 0.57 in Colorado Springs, Colorado, and 0.61 in both Tucson, Arizona and Augusta-Richmond County, Georgia-South Carolina.

Like the knee injection spending indices, the highest ACL repair spending indices were clustered in Wisconsin. The three highest ACL spending index values were all Wisconsin CBSAs and all the Wisconsin CBSA spending indices were above 1.00. The Racine, Wisconsin CBSA, however, was barely over the national average at 1.01.

The ACL spending and price indices can also be used to study the role of utilization versus price in spending for ACL treatment. Some CBSAs, such as Baltimore-Columbia-Towson, Maryland or Green Bay, Wisconsin, had very similar spending and price indices. This suggests that the below and above average spending for those two CBSAs, respectively, were likely determined mostly by prices.

Conversely, the spending and price index values were not similar in CBSAs such as Charlottesville, Virginia or Corpus Christi, Texas. In Charlottesville, the spending index was 1.19 despite a price index of 0.76, and the Corpus Christi spending index was 0.86 with a price index of 1.08. Even CBSAs with both high spending and prices, like Trenton, New Jersey, did not necessarily have close index values. While the spending rate was 1.25 in Trenton, the price index was 15% higher at 1.44. The large differences between the index values suggest that, in CBSAs like these, additional factors on top of prices drive spending.

KNEE REPLACEMENT

CBSA-level knee replacement spending and price indices are shown in Table 7. Over half of the CBSAs (31) had spending index values within 10% of the national average. Additionally, only 5

CBSAs had a spending index 20% or more than the national average. These CBSA-level results are consistent with the summary statistics – there was relatively less variation across CBSAs in spending for knee replacements, compared to the other two treatment cohorts (Table 2).

Of the 5 spending ratios above 1.20, the highest was in El Paso, Texas, 1.46. The second highest spending index was also in Texas – Dallas-Fort Worth-Arlington , 1.38. However, unlike the other two treatment spending indices, the presence of some high spending CBSAs in Texas was not indicative of an overall trend in Texas. Two CBSAs in Texas had values less than the national average: San Antonio-New Braunfels (0.99) and Corpus Christi (0.85) – the latter was in the lowest quartile of the knee replacement spending index.

As discussed previously, the knee replacement spending and price indices were nearly identical – the two indices had a correlation coefficient of 0.9913 (Table 3). The similarity was due to the knee replacement DRG code price making up, on average, 89% of the total care bundle's spending. It is possible that, during an inpatient stay, varying types or amounts of services could be provided at different hospitals, but this is difficult to discern in the data. The inpatient claims often only provide a DRG code. The DRG is based on groupings of diagnosis and procedure codes, but the separate codes are not always listed.

The differences that do exist between the spending and price indices within a CBSA are due to separately billable physician services provided during a knee replacement treatment. Although a CBSA-level comparison of the spending and price indices is a rudimentary measure of the role of separately billable services, it provides a reasonable starting place to determine if further investigation is warranted.

Table 5. Knee Injection Expenditure and Price Indices

CBSA Name	Expenditure	Price	CBSA Name	Expenditure	Price
Appleton, WI	1.58	1.66	Lexington-Fayette, KY	0.87	0.84
Atlanta-Sandy Springs-Roswell, GA	0.96	1.03	Louisville/Jefferson County, KY-IN	0.85	0.78
Augusta-Richmond County, GA-SC	0.89	1.01	Memphis, TN-MS-AR	0.95	1.05
Austin-Round Rock, TX	1.07	1.01	Miami-Fort Lauderdale-West Palm Beach, FL	0.74	0.72
Baltimore-Columbia-Towson, MD	0.84	0.88	Milwaukee-Waukesha-West Allis, WI	1.23	1.57
Baton Rouge, LA	0.97	0.95	Minneapolis-St. Paul-Bloomington, MN-WI	1.50	1.57
Beaumont-Port Arthur, TX	0.88	0.97	Nashville-Davidson--Murfreesboro--Franklin, TN	1.02	1.07
Boulder, CO	0.89	1.10	New Haven-Milford, CT	1.23	1.35
Bridgeport-Stamford-Norwalk, CT	1.20	1.28	New Orleans-Metairie, LA	0.92	0.88
Cape Coral-Fort Myers, FL	0.96	0.80	New York-Newark-Jersey City, NY-NJ-PA	1.32	1.20
Charlotte-Concord-Gastonia, NC-SC	1.09	1.16	North Port-Sarasota-Bradenton, FL	0.84	0.85
Charlottesville, VA	1.10	1.22	Norwich-New London, CT	0.99	1.11
Chicago-Naperville-Elgin, IL-IN-WI	1.21	1.12	Oklahoma City, OK	0.82	0.88
Cincinnati, OH-KY-IN	0.89	0.94	Omaha-Council Bluffs, NE-IA	1.11	1.32
Colorado Springs, CO	0.97	0.98	Orlando-Kissimmee-Sanford, FL	0.71	0.83
Columbus, OH	0.95	0.94	Palm Bay-Melbourne-Titusville, FL	0.76	0.79
Corpus Christi, TX	0.84	0.80	Peoria, IL	1.08	1.16
Dallas-Fort Worth-Arlington, TX	1.08	0.97	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.88	0.87
Dayton, OH	0.78	0.87	Phoenix-Mesa-Scottsdale, AZ	0.82	0.87
Deltona-Daytona Beach-Ormond Beach, FL	0.76	0.79	Portland-South Portland, ME	1.05	1.10
Denver-Aurora-Lakewood, CO	0.97	0.96	Providence-Warwick, RI-MA	0.97	1.09
Des Moines-West Des Moines, IA	0.93	1.11	Racine, WI	1.29	1.57
El Paso, TX	0.90	0.85	San Antonio-New Braunfels, TX	0.92	0.78
Green Bay, WI	1.60	1.95	Sheboygan, WI	1.42	1.83
Greensboro-High Point, NC	0.85	0.99	St. Louis, MO-IL	0.88	0.88
Hartford-West Hartford-East Hartford, CT	1.18	1.33	Tampa-St. Petersburg-Clearwater, FL	0.74	0.79
Houston-The Woodlands-Sugar Land, TX	1.01	0.89	Trenton, NJ	1.06	1.09
Jacksonville, FL	0.88	0.94	Tucson, AZ	0.85	1.09
Kansas City, MO-KS	0.80	0.90	Tulsa, OK	0.93	0.95
Knoxville, TN	0.90	0.97	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.89	0.94
Lakeland-Winter Haven, FL	0.84	0.88			

Source: HCCI, 2017.

Table 6. ACL Arthroscopy Expenditure and Price Indices

CBSA Name	Expenditure	Price	CBSA Name	Expenditure	Price
Appleton, WI	1.47	1.37	Lexington-Fayette, KY	0.99	1.02
Atlanta-Sandy Springs-Roswell, GA	0.87	1.00	Louisville/Jefferson County, KY-IN	0.83	0.77
Augusta-Richmond County, GA-SC	0.61	0.71	Memphis, TN-MS-AR	0.80	0.76
Austin-Round Rock, TX	0.89	0.98	Miami-Fort Lauderdale-West Palm Beach, FL	0.77	0.82
Baltimore-Columbia-Towson, MD	0.83	0.84	Milwaukee-Waukesha-West Allis, WI	1.11	1.19
Baton Rouge, LA	0.70	0.66	Minneapolis-St. Paul-Bloomington, MN-WI	1.01	0.93
Beaumont-Port Arthur, TX	0.85	0.70	Nashville-Davidson--Murfreesboro--Franklin, TN	0.86	0.87
Boulder, CO	1.01	1.01	New Haven-Milford, CT	0.97	0.99
Bridgeport-Stamford-Norwalk, CT	1.20	1.30	New Orleans-Metairie, LA	1.26	1.02
Cape Coral-Fort Myers, FL	1.20	1.02	New York-Newark-Jersey City, NY-NJ-PA	1.27	1.21
Charlotte-Concord-Gastonia, NC-SC	1.29	1.05	North Port-Sarasota-Bradenton, FL	1.25	0.93
Charlottesville, VA	1.19	0.76	Norwich-New London, CT	1.14	1.09
Chicago-Naperville-Elgin, IL-IN-WI	0.97	0.96	Oklahoma City, OK	0.71	0.65
Cincinnati, OH-KY-IN	0.73	0.79	Omaha-Council Bluffs, NE-IA	1.01	1.09
Colorado Springs, CO	0.57	0.69	Orlando-Kissimmee-Sanford, FL	0.89	0.81
Columbus, OH	1.21	1.14	Palm Bay-Melbourne-Titusville, FL	0.92	0.78
Corpus Christi, TX	0.86	1.08	Peoria, IL	0.95	0.87
Dallas-Fort Worth-Arlington, TX	1.26	1.16	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.00	1.00
Dayton, OH	1.20	1.02	Phoenix-Mesa-Scottsdale, AZ	0.80	0.92
Deltona-Daytona Beach-Ormond Beach, FL	0.76	0.80	Portland-South Portland, ME	1.02	1.05
Denver-Aurora-Lakewood, CO	1.12	1.10	Providence-Warwick, RI-MA	1.12	0.99
Des Moines-West Des Moines, IA	0.60	0.83	Racine, WI	1.01	1.10
El Paso, TX	0.95	0.88	San Antonio-New Braunfels, TX	0.79	0.90
Green Bay, WI	1.37	1.35	Sheboygan, WI	1.39	1.46
Greensboro-High Point, NC	1.16	1.11	St. Louis, MO-IL	0.75	0.80
Hartford-West Hartford-East Hartford, CT	0.94	0.91	Tampa-St. Petersburg-Clearwater, FL	0.93	0.90
Houston-The Woodlands-Sugar Land, TX	1.22	1.10	Trenton, NJ	1.25	1.44
Jacksonville, FL	1.02	0.89	Tucson, AZ	0.61	0.61
Kansas City, MO-KS	0.73	0.76	Tulsa, OK	0.79	0.80
Knoxville, TN	0.55	0.59	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.88	0.96
Lakeland-Winter Haven, FL	0.91	0.78			

Source: HCCI, 2017.

Table 7. Knee Replacement Expenditure and Price Indices

CBSA Name	Expenditure	Price	CBSA Name	Expenditure	Price
Appleton, WI	0.89	0.91	Lexington-Fayette, KY	0.80	0.79
Atlanta-Sandy Springs-Roswell, GA	1.02	1.02	Louisville/Jefferson County, KY-IN	0.75	0.75
Augusta-Richmond County, GA-SC	0.85	0.86	Memphis, TN-MS-AR	0.79	0.77
Austin-Round Rock, TX	1.06	1.06	Miami-Fort Lauderdale-West Palm Beach, FL	0.86	0.86
Baltimore-Columbia-Towson, MD	0.81	0.81	Milwaukee-Waukesha-West Allis, WI	1.03	1.08
Baton Rouge, LA	0.91	0.91	Minneapolis-St. Paul-Bloomington, MN-WI	1.00	0.96
Beaumont-Port Arthur, TX	1.10	1.06	Nashville-Davidson--Murfreesboro--Franklin, TN	1.04	1.06
Boulder, CO	1.10	1.11	New Haven-Milford, CT	1.03	1.03
Bridgeport-Stamford-Norwalk, CT	1.06	1.03	New Orleans-Metairie, LA	0.86	0.86
Cape Coral-Fort Myers, FL	1.15	1.15	New York-Newark-Jersey City, NY-NJ-PA	1.20	1.20
Charlotte-Concord-Gastonia, NC-SC	1.24	1.25	North Port-Sarasota-Bradenton, FL	0.92	0.88
Charlottesville, VA	1.09	1.10	Norwich-New London, CT	0.85	0.84
Chicago-Naperville-Elgin, IL-IN-WI	1.00	1.03	Oklahoma City, OK	0.80	0.82
Cincinnati, OH-KY-IN	1.01	1.01	Omaha-Council Bluffs, NE-IA	1.00	1.02
Colorado Springs, CO	1.10	1.11	Orlando-Kissimmee-Sanford, FL	1.15	1.16
Columbus, OH	1.00	1.02	Palm Bay-Melbourne-Titusville, FL	1.28	1.28
Corpus Christi, TX	0.85	0.82	Peoria, IL	0.73	0.69
Dallas-Fort Worth-Arlington, TX	1.38	1.39	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.14	1.16
Dayton, OH	0.99	1.00	Phoenix-Mesa-Scottsdale, AZ	0.88	0.87
Deltona-Daytona Beach-Ormond Beach, FL	1.00	1.00	Portland-South Portland, ME	0.94	0.96
Denver-Aurora-Lakewood, CO	1.01	0.98	Providence-Warwick, RI-MA	0.92	0.93
Des Moines-West Des Moines, IA	0.67	0.70	Racine, WI	1.01	1.06
El Paso, TX	1.46	1.48	San Antonio-New Braunfels, TX	0.98	0.99
Green Bay, WI	0.94	0.97	Sheboygan, WI	0.85	0.90
Greensboro-High Point, NC	0.94	0.98	St. Louis, MO-IL	0.66	0.68
Hartford-West Hartford-East Hartford, CT	0.93	0.91	Tampa-St. Petersburg-Clearwater, FL	1.02	1.03
Houston-The Woodlands-Sugar Land, TX	1.14	1.10	Trenton, NJ	1.19	1.20
Jacksonville, FL	1.00	0.96	Tucson, AZ	0.65	0.64
Kansas City, MO-KS	0.83	0.85	Tulsa, OK	0.69	0.66
Knoxville, TN	0.71	0.72	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.94	0.96
Lakeland-Winter Haven, FL	0.95	0.95			

Source: HCCI, 2017.

COMPARING INDICES WITHIN CBSAS ACROSS CARE BUNDLES

Interesting trends were also observed when the spending and price indices were examined across the three medical treatments, within the same CBSA. Some CBSAs, such as Corpus Christi, Texas or New York-Newark-Jersey City, New York, had spending indices that were fairly consistent across the three treatment cohorts. Corpus Christi's spending index rates ranged from 0.84 – 0.86, while New York's three ratios were between 1.20 – 1.32. However, when the price indices within these CBSAs were examined, the possible explanations for the consistency in spending differed by CBSA. In New York, all three price index levels were between 1.20 – 1.22. The uniformly above average prices likely drove the consistently high spending. In Corpus Christi, however, the price indices ranged from 20% less than the national average to 8% higher. Given that relative spending for all three treatments was consistently below the national average, there were likely differences in utilization, as well price, which influenced spending in Corpus Christi.

There were also many CBSAs with spending indices that differed across the three treatments with varying price influences. Some CBSAs, such as Green Bay, Wisconsin, had varying spending index values with correspondingly high and low price index values. Other CBSAs, such as Des Moines-West Des Moines, Iowa, had varying spending indices, but relative spending levels did not appear to be driven by prices. North Port-Sarasota-Bradenton, Florida is an example of a CBSA in which the spending indices differed across treatments, but the price indices were generally consistent. This suggests that, in this CBSA, price may have driven spending for some treatments, but not others.

COMPARING SERVICES TO SERVICE CATEGORIES

As discussed in *Healthy Marketplace Index: Medical Service Category Price Index*, the relative price levels of medical service categories—inpatient, outpatient, physician—can differ within a CBSA. The medical service category price indices are a weighted average prices of the most common services in a category, the top 100 DRGs for the inpatient service category and the top 500 CPTs for the outpatient and physician categories. The three knee related medical treatments were chosen to roughly parallel each of the three medical service categories.[6] Although the services included in the medical treatment indices were not limited to services from only one medical service category, the trigger codes identifying the main procedure from each treatment were identified from a single category; knee injections are physician services, an ACL repair is an outpatient procedure, and a knee replacement is an inpatient surgery. Thus, the medical treatment price indices can be compared to the medical service category price indices.

To identify how the overall treatment category price indices were related, we first found the correlations between the treatment and the medical service category price indices. Of the three correlations of paired treatment and service category, both the knee injection and knee replacement price indices were fairly similar to their overall service types' indices. The knee injection index had a correlation value of 0.953 with the physician price index, and the knee replacement index showed a 0.818 correlation with the inpatient price index. There was less similarity between CBSA-level ACL repair price index and outpatient price index. The correlation was still positive, but only had a magnitude of 0.4452. There was a stronger correlation between ACL repair price indices and the physician price indices (0.5888). This may be due to the large amount of physician services that were also billed as part of an ACL repair in an outpatient facility (approximately half of the claim lines included in the price index were physician services). The set of all medical treatment to medical service category correlations is presented in Table 8.

These CBSA-level relationships between each treatment price index and its respective service category index are graphed in Figures 1–3. The diamond shaped markers in all three figures represent the service category price index values; plotted left to right, from lowest to highest. The corresponding medical treatment price index values for each CBSA were indicated by circular markers on the same vertical line as each service category marker. In Figures 1 and 3, knee injection–physician services and knee replacement–inpatient services, the treatment price index values and the service category price index values have similar trends. The same did not hold true in Figure 2, in which the CBSA-level ACL repair price index values vary considerably from the outpatient price index trend.

Table 8. Care Bundle Price Index—Medical Service Category Price Index Correlations

Care Bundle Price Index	Physician Index	Outpatient Index	Inpatient Index
Knee Injection	0.9529	-0.0266	0.0607
ACL Repair	0.5888	0.4452	0.3045
Knee Replacement	0.1132	0.5945	0.8180

Source: HCCI, 2017.

The similarity between the knee injection price index and the physician price index can be seen by the parallel, and at times overlapping, CBSA-level index values. For example, both indices for Greensboro-High Point, North Carolina are nearly 1.00. The similarity in most CBSAs, however, also lends itself to easily identifying CBSAs where the indices differed (e.g., Dallas-Fort Worth-Arlington, Texas or Providence-Warwick, Rhode Island-Massachusetts). In these two CBSAs, one index was greater than the national average, while the other index value was below the national average. It also appears that there was more divergence in the two indices in CBSAs with higher physician prices, as the knee injection prices tended to be more above average than overall prices in those CBSAs.

In the graph of the ACL repair price indices, ordered by lowest to highest outpatient services prices, there is a slight noticeable upward trend in the knee repair index values, which aligns with

the pattern in outpatient facility prices across CBSAs. However, there is also noticeable variation in the relationships between pairs of indices at the CBSA-level. For example, the Beaumont-Port Author, Texas ACL repair was substantially lower the outpatient price index, but it was not as low as knee repair indices for CBSAs on the far left of the graph. Appleton, Wisconsin was an example of the opposite case, where the knee repair price was substantially higher than the outpatient facility price index. There were also some instances of similarly priced treatment and service categories, such as Atlanta-Sandy Springs Roswell, Georgia, but there were fewer of these instances than the others.

The strong relationship between knee replacement and inpatient facility prices was like that of the relationship between knee injection and physician services prices. The knee replacement price indices generally increase left to right on the graph, across CBSAs, as the inpatient price index values increase. However,

the relationships within CBSAs appear to be opposite that of the knee injection –physician services relationship. As seen in Figure 1, the medical treatment index values tended to be less than the physician price index when the physician price index was below 1.00 and higher than the physician price index when the physician price index was greater than 1.00. In Figure 3, the knee replacement price index values tended to be lower in magnitude for CBSAs with above average inpatient prices, such as Portland-South Portland, Maine. And, CBSAs with below average inpatient prices more often have higher magnitude knee replacement price index values; for example, San Antonio-New Braunfels, Texas. There were also CBSAs, such as Greensboro-High Point, North Carolina, where the inpatient prices and knee replacement prices were both nearly 1.00, as they were for knee injection and physician services prices.

Figure 1. Knee Injection vs. Physician Services Price Indices
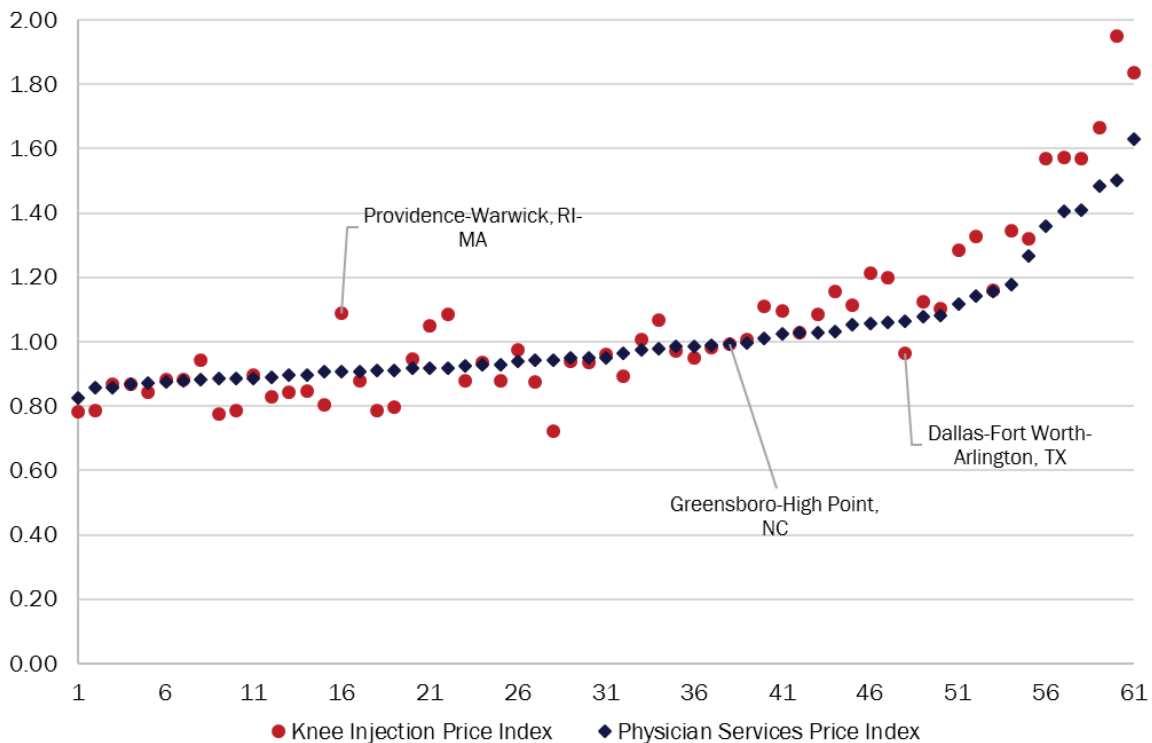
Source: HCCI, 2017.
Note: The physician services price index was calculated in Healthy Marketplace Index: Medical Service Category Price Index.
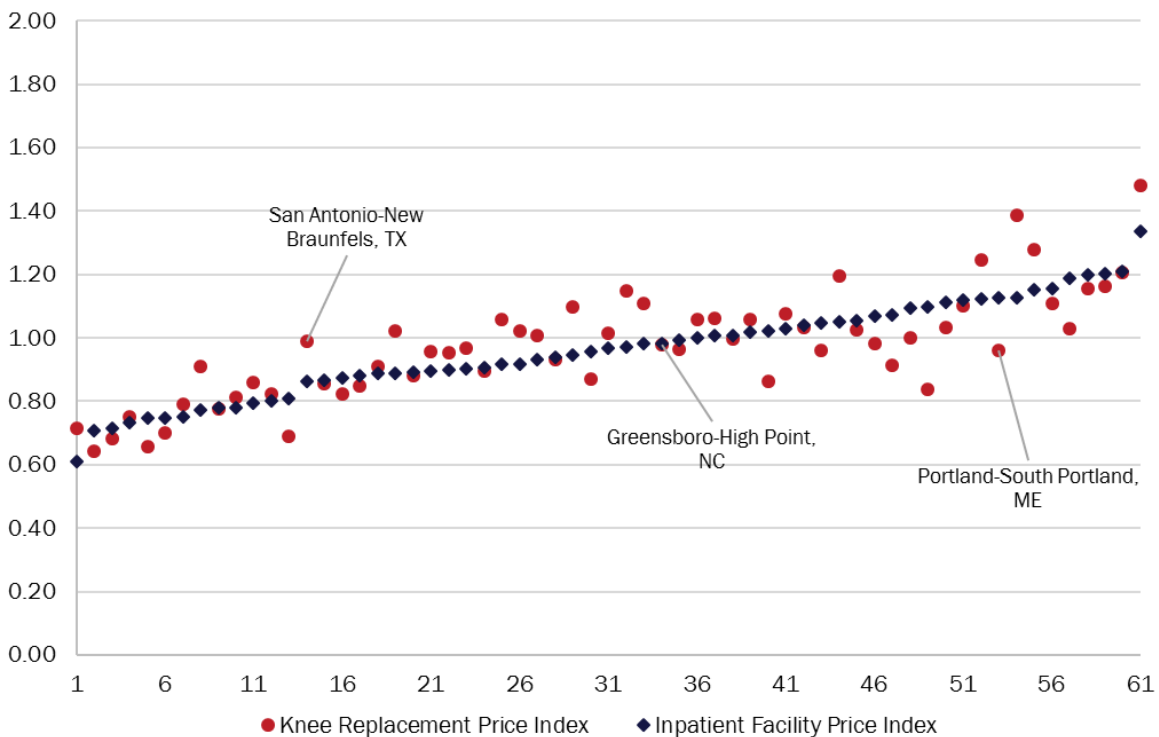
Figure 2. ACL Repair vs. Outpatient Facility Price Indices

Source: HCCI, 2017.
Note: The outpaitnet facility price index was calculated in Healthy Marketplace Index: Medical Service Category Price Index.

Figure 3. Knee Replacement vs. Inpatient Facility Price Indices

Source: HCCI, 2017.
Note: The inpatient facility price index was calculated in Healthy Marketplace Index: Medical Service Category Price Index.

Data and Methods

The treatment cohort eligible populations included all ESI members under age 65 with a positive dollar claim for one the three trigger codes. There were additional inclusion criteria for each of the three medical treatments. Strictly stand alone knee injections were included, while knee injections that were a part of a larger surgery were removed. Only patients with a single outpatient ACL repair trigger code on a day were included (e.g., instances of more than one outpatient surgical ACL procedure on the same day for the same patient were excluded). If a patient had more than one knee replacement in the study year, only the first knee replacement for the patient was included.

The overarching methodology for calculating the spending and price indices was the same. Each of the 61 CBSA-level average payments were divided by the total study population average total payments. The main difference between the two indices was how the average payments were calculated. For the spending indices, the actual amounts paid for all procedures performed on an individual patient on the day of the trigger code procedure or, in the case of a knee replacement, the length of their inpatient admission, were summed and averaged by the number of treatments.

The price index is a total of the average prices of a fixed set of services specific to each treatment. The set of services includes the most common services for each treatment. The number of services included in each set was determined by the average number of services a patient received for a given treatment. [7]

The knee injection price index was composed of three services:
- the knee injection (trigger code)[8],
- a visit to the doctor, and
- a common injection drug (triamcinolone acetonide).

The six services that comprised the ACL repair price were:
- ACL arthroscopy (trigger code),
- the injection of anesthesia,
- an anesthesia drug,
- ultrasonic guidance,
- an implantable anchor/screw, and
- a pain reliever drug injection.

The standard set of seven knee replacement services were:
- inpatient knee replacement surgery (trigger code),
- an anesthesia drug,
- diagnostic radiology/imaging
- initial inpatient care services
- repair, revision, and/or reconstruction procedures
- subsequent hospital care
- hematology. [9,10]

Limitations

The limitations of the HMI medical treatment spending and price indices are comparable to the limitations of the HMI medical service category price indices.[11] First, the analyses were conducted with 2013 HCCI data, which were a convenience sample and may not be representative of the prices among the ESI population not included in the analysis sample. Second, CBSAs are not necessarily a relevant market boundary for all health care analyses. Furthermore, the results may not generalize to CBSAs not included in the study or to rural areas, in the US. Third, the analyses focused on only one population in a single year.

Unlike the medical service category price indices, the medical treatment indices are intended to provide insight in relative costs of specific medical treatments. However, both the spending and price indices are based on averages from the analysis sample and may not represent a particular patient's experience. Moreover, these indices cannot be used to assess or account for the necessity, appropriateness, or value of health care services.

Finally, caution is warranted when com-

paring the indices to make inferences about price and utilization. The indices alone cannot not be used to identify all of the causal factors that influence spending, price, and utilization. Additionally, care must be taken when comparing the medical treatment and service category price indices to make inferences about service category prices. Both types of comparisons, however, can be potentially useful in identifying areas for further investigation.

Conclusion

As noted in a previous HMI brief, the price levels for broad medical service categories can differ within the same geographic area. In this issue brief, we show that prices and spending for three different medical treatments related to the same joint can differ within geographic areas. This may be, in part, because the treatments studied were generally based within a specific medical category. However, we also found that there was not always similarity between treatment and service category price levels within a CBSA. These findings stress the need for specific research questions and subsequently targeted policy proposals.

End Notes

1. Health Care Cost Institute. *Healthy Marketplace Index: Medical Service Category Price Index*. Health Care Cost Institute, Apr. 2016 Web.

2. Additional details regarding the population and geographic units of analysis are available in *Healthy Marketplace Index: Medical Service Category Price Index*. See, Health Care Cost Institute. *Healthy Marketplace Index: Medical Service Category Price Index*. Health Care Cost Institute, Apr. 2016 Web.

3. This could be referred to as an episode of care. The definition of an episode or course of treatment varies depending on the analysis. For example, a single session of chemotherapy could be

considered an episode or an episode of cancer treatment could include the first doctors visit where the biopsy was conducted through chemo, any surgery and subsequent follow-up visits.

4. Standard set of services were determined by finding the average number of services a patient received during each of the three care bundles. Using that number of services as a base, we then found the most frequently observed CPT codes within the claims data used for each care bundle.

5. The average patient experienced 3.1 procedures during a knee injection and 3 CPT services were selected for the standardized bundle. The average patient experienced 6.4 procedures during an ACL repair, 6 services were selected. The average knee replacement patient experienced 8.5 procedures, the 7 most common were used and selected.

6. Health Care Cost Institute. *Healthy Marketplace Index: Medical Service Category Price Index*. Health Care Cost Institute, Apr. 2016 Web.

7. The average patient experienced 3.1 procedures during a knee injection and 3 CPT services were selected for the standardized bundle. The average patient experienced 6.4 procedures during an ACL repair, 6 services were selected. The average knee replacement patient experienced 8.5 procedures, the 7 most common were used and selected.

8. For the ACL arthroscopy CPT code, many patients were billed by a physi-

cian and outpatient facility on the same day. There tended to be large differences in the average prices between the two. Thus, the ACL arthroscopy claims were first summed by patient day to find a "total price". The total price was then used to calculate the ACL repair price for the price index calculation.

9. Among the knee replacement treatments, 70 CPT codes were identified in the claims as billed during an inpatient stay for DRG 470 for at least one patient in over half of the study CBSAs. We grouped the 70 codes into like categories and found the percentage of all knee replacements with a claim for each code. The shares of codes were then summed by category. Seven of the categories had a total share of 30% or more of the total knee replacements. The most prevalent CPT code within six of the seven categories was used as a representative procedure in the standard set of services.

10. The seventh category of services billed during a knee replacement related to "hematology and coagulation procedures". These procedures were observed in over 30% of the knee replacements in total, but no one code within the category was more common than the others. For this service the average price of all six codes in the category was used as the average price of hematology service for the knee replacement price index calculation.

11. Health Care Cost Institute. *Healthy Marketplace Index: Medical Service Cate-*

gory Price Index. Health Care Cost Institute, Apr. 2016 Web.

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