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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.

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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.

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.

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.

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.

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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.

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