

By Thomas M. Selden, Brandy J. Lipton, and Sandra L. Decker

# Medicaid Expansion And Marketplace Eligibility Both Increased Coverage, With Trade-Offs In Access, Affordability

DOI: 10.1377/hlthaff.2017.0830  
HEALTH AFFAIRS 36,  
NO. 12 (2017): 2069–2077  
©2017 Project HOPE—  
The People-to-People Health  
Foundation, Inc.

**ABSTRACT** Affordable Care Act (ACA) provisions implemented in 2014 provide a valuable case study regarding the merits of using public versus subsidized private insurance to help low-income people obtain and finance health care. In particular, nonelderly adults with incomes of 100–138 percent of the federal poverty level gained Medicaid eligibility if they lived in states that implemented the ACA's Medicaid expansion, whereas those in nonexpansion states became eligible for subsidized Marketplace coverage. Using data for 2008–15 from the National Health Interview Survey, we found that as of 2015, adults with family incomes in this range had experienced large declines in uninsurance rates in both expansion and nonexpansion states (the adjusted declines were 22 percentage points and 18 percentage points, respectively). Adults in expansion and nonexpansion states also experienced similar increases in having a usual source of care and primary care visits, and similar reductions in delayed receipt of medical care due to cost. There were, however, important differences: Adults in expansion states experienced larger reductions in out-of-pocket spending but also faced greater difficulty accessing physician care relative to adults in nonexpansion states.

**Thomas M. Selden** is director of the Division of Research and Modeling, Center for Financing, Access and Cost Trends, Agency for Healthcare Research and Quality (AHRQ), in Rockville, Maryland.

**Brandy J. Lipton** is an assistant professor in the Graduate School of Public Health at San Diego State University, in California.

**Sandra L. Decker** (Sandra.decker@ahrq.hhs.gov) is a senior fellow in the Division of Research and Modeling, Center for Financing, Access and Cost Trends, at AHRQ.

**T**he ongoing debate over health care reform includes important questions regarding the merits of using public versus subsidized private insurance to help low-income people access and finance health care. Our study took a novel approach to assessing the effects of the Affordable Care Act (ACA) to help shed light on this issue. Numerous studies have explored the ACA's impact on families with incomes of up to 138 percent of the federal poverty level in states that did and those that did not expand eligibility for Medicaid.<sup>1–7</sup> Our analysis narrowed the focus to adults with family incomes of 100–138 percent of poverty who lacked access to employer-sponsored insurance. These adults either gained eligibility for Medicaid if they lived in

states that expanded eligibility under the ACA or could obtain subsidized Marketplace coverage if they lived in nonexpansion states. This provides a valuable case study of the differential effects of offering public versus subsidized private insurance.

Using data for 2008–15 from the National Health Interview Survey (NHIS), we examined how these very different strategies for covering low-income families affected a range of outcomes, including insurance coverage, access to care, use of care, and financial burdens and barriers. Adults in both groups experienced substantial reductions in uninsurance, increases in having a usual source of care, and increases in primary care use. However, we observed important trade-offs between the two approaches with

respect to out-of-pocket payments and access to physician care.

### Background

The ACA expanded Medicaid eligibility for most adults younger than age sixty-five with incomes up to 138 percent of poverty. It also established subsidized private Marketplace coverage for nonelderly people with incomes of 100–400 percent of poverty if they did not have access to Medicare, Medicaid, or affordable employer-sponsored coverage. Furthermore, the ACA established individual and employer mandates that created financial incentives to promote coverage. However, not all states implemented the Medicaid expansion, and numerous studies have used the resulting “natural experiment” to compare outcomes before and after 2014 between states that did and those that did not expand Medicaid.<sup>1–10</sup>

The previous literature’s main focus was on the population with incomes up to 138 percent of poverty, and its goal was to inform state Medicaid expansion decisions.<sup>1–7</sup> However, the population with incomes up to 138 percent of poverty combines two groups that were treated very differently by the ACA in nonexpansion states. Adults with incomes above poverty and without access to affordable employer-sponsored insurance became newly eligible for subsidized Marketplace coverage. In contrast, the ACA did not provide subsidized Marketplace coverage to those who fell into the “coverage gap” (that is, those with incomes below poverty) or to those who had affordable employer-sponsored insurance. Narrowing our focus to the group with incomes of 100–138 percent of poverty and without offers of employer-sponsored coverage provided a more direct comparison between using public insurance and using subsidized private insurance to help low-income populations obtain and finance health care.

Within this narrower income band, it would not be surprising to see large increases in health insurance coverage in both expansion and nonexpansion states, given that Medicaid coverage had zero (or near-zero) premiums and that subsidies limited Marketplace premiums to 2 percent of income for the second-lowest-cost silver plan (among nonsmoking adults with incomes of 100–138 percent of poverty). However, we expected very different changes in source of coverage (public versus private) in the two groups of states, as well as related differences in dimensions of care. For example, despite cost-sharing subsidies for Marketplace enrollees (which increased the effective actuarial value of silver plans to 94 percent for adults in this income

group), extremely low Medicaid copayments were predicted to result in lower out-of-pocket spending in Medicaid compared to the Marketplace.<sup>11</sup> Also, the two types of coverage generally have very different provider payment rates, which raises concerns about access to care in Medicaid.<sup>12–15</sup> Our goal was to help quantify the impacts of these two very different treatments.

### Study Data And Methods

**DATA SOURCE, SAMPLE, AND OUTCOMES** The NHIS is a nationally representative health survey of the US civilian noninstitutionalized population that is conducted by the National Center for Health Statistics.<sup>16</sup> It collects information on a wide variety of health topics, including insurance coverage by type, access to care, financial burdens, and barriers to care. Importantly for our analysis, the NHIS also contains information on the eligibility for employer-sponsored insurance of respondents and their spouses. Our data came from a restricted-use version of the survey that included information on state expansion status.

We limited our sample to respondents ages 19–64 whose family incomes were 100–138 percent of poverty. We excluded from the sample people who held Medicare coverage or had access to employer-sponsored insurance (from either their own or their spouses’ employers). This allowed us to define a population of adults in nonexpansion states who were eligible for Marketplace subsidies and a comparable group of adults in expansion states.<sup>17</sup> We also excluded from the sample noncitizens who had resided in the United States for fewer than five years, because this group is generally ineligible for Medicaid. Finally, to simplify the comparison between states that relied on public coverage and those that relied on private coverage, we excluded residents of Alaska, Indiana, and Pennsylvania, which expanded Medicaid in 2015 and were therefore expansion states in 2015 but nonexpansion states in 2014. This yielded a sample of up to 20,099 adults for questions asked of all people and up to 8,383 for questions asked of only one adult per household. However, precise sample sizes by outcome varied due to differing years of availability as well as item nonresponse.

We assigned members of our sample to health insurance coverage using three hierarchical categories: uninsured, any public (primarily Medicaid), and private (primarily Marketplace or other nongroup coverage, given that our sample excluded adults with access to employer-sponsored insurance). Measures of access to care were having a usual source of care other than the emergency department (ED), having

trouble finding a doctor or provider, being unable to find a doctor or provider, not being accepted as a new patient, not having health insurance accepted, delays in receiving care because the time to receive an appointment was too long, and delays because the wait time to see the doctor was too long. Data for all of these measures except for having a usual source of care were available beginning in 2011 and referred to access issues experienced during the past year. Utilization measures were having had any primary care doctor visit, any specialist visit, any ED visit, and any hospitalization during the past year.

Measures pertaining to out-of-pocket spending on medical care were delaying care due to cost, not getting care due to cost, skipping or taking less medication than prescribed due to cost (if the respondent had been prescribed medication), having any out-of-pocket spending (excluding premiums), having out-of-pocket spending (excluding premiums) that exceeded \$2,000, and being somewhat or very worried about future ability to pay medical bills from sickness or injury. All of these measures except the last referred to the past year. Data about skipping or taking less medication due to cost and being somewhat or very worried about future ability to pay medical bills were available beginning in 2011. (For sample sizes by outcome variable, see Appendix Exhibit 1.)<sup>18</sup>

We did not examine the use of particular preventive care services because some of the outcomes were not measured consistently in all years of our study period and because some types of preventive care were recommended only for a subset of adults (by age or sex), which further reduced our already limited sample. (Sample means for the pre- and post-2014 periods are presented in Appendix Exhibits 2 and 3.)<sup>18</sup>

**STATISTICAL ANALYSIS** We used a difference-in-differences approach, comparing outcomes in 2014 and 2015 to those in the period 2008–13 for states that had expanded Medicaid as of 2014 versus states that did not expand Medicaid in either 2014 or 2015. (For a list of included states by expansion status, see Appendix Exhibit 4.)<sup>18</sup> Our approach assumed that trends in outcomes would not have differed between expansion and nonexpansion states absent the ACA. To test the validity of this assumption, we examined pre-2014 trends by estimating each outcome as a function of a linear quarterly time trend interacted with Medicaid expansion status (along with other control variables). Prereform trends were generally similar in expansion and nonexpansion states, with trends differing significantly ( $p < 0.05$ ) for only one outcome (having a usual source of care) and marginally significant-

ly ( $p < 0.10$ ) for having any out-of-pocket spending and for delays in receiving care because the appointment wait time was too long. (For differences in prereform outcome trends, see Appendix Exhibit 5.)<sup>18</sup> These results suggest that divergence in outcomes starting in 2014 was likely the result of states' choices regarding ACA reforms.

Following previous studies, we used linear probability models for ease of interpretation.<sup>1,2,19</sup> These models included controls for age, sex, race/ethnicity, education, marital status, employment status, parental status, residence in a metropolitan area, and citizenship status; a linear quarterly time trend; and state fixed effects.<sup>20</sup>

State fixed effects helped control for preexisting differences between expansion and nonexpansion states. For example, pre-ACA Medicaid eligibility rules tended to be more generous in expansion compared to nonexpansion states,<sup>21</sup> which led to lower uninsurance rates among low-income adults in expansion states even before 2014.<sup>22</sup> In sensitivity analyses, we tested whether our models accounted for this particular difference by limiting the sample to childless adults, who were far less likely than parents to be eligible for Medicaid before the ACA. This did not substantially affect our results. (For regression results for childless adults, see Appendix Exhibit 6.)<sup>18</sup>

The main coefficients of interest were 2014 and 2015 dummy variables and the interaction between these variables and state Medicaid expansion status. Some outcomes, such as having a usual source of care, would respond to changes in insurance status only after some time had passed. We therefore focused on results for 2015, which may provide a more complete representation of ACA-related changes compared to results in 2014.<sup>23</sup> (Results for 2014 are reported in Appendix Exhibit 7.)<sup>18</sup> All estimates used sample weights, and standard errors allowed for clustering at the state level. Differences reported in the text were significant at  $p < 0.05$  unless otherwise noted.

**LIMITATIONS** Our study had several limitations. First, all of our regression estimates controlled for time trends and compositional changes in the population of interest, and our difference-in-differences estimates also accounted for other events coinciding with the ACA that influenced outcomes similarly in expansion and nonexpansion states. Nevertheless, we cannot conclusively attribute causality to our findings. Moreover, estimates for changes in outcomes in expansion and nonexpansion states did not account for other events that coincided with the ACA and thus require stronger assumptions to be interpreted as causal.

Second, our study design relied heavily on the

accuracy of the NHIS income data, which we used to identify adults with family incomes of 100–138 percent of poverty. In addition to household reporting errors and imputed missing values, the NHIS family income measures reflect income from the previous year and family units that may differ from eligibility units used to calculate eligibility for Medicaid and Marketplace subsidies. Our sample may therefore include adults whose incomes were actually below 100 percent or above 138 percent of poverty. Errors of the former type could tend to accentuate changes in expansion compared to nonexpansion states, because adults with incomes below poverty were not eligible for subsidized Marketplace coverage in nonexpansion states. Errors of the latter type, which might be more prevalent because of households' underreporting of income, could tend to attenuate our difference-in-differences estimates, because adults with incomes above 138 percent of poverty received the same "treatment" of subsidized Marketplace coverage in both groups of states.

As a sensitivity test, we recalculated our estimates using a narrower income band, 110–130 percent of poverty, which reduced the probability that adults in the sample were incorrectly categorized. Doing so reduced the precision of our estimates, but it did not substantially affect most of the results. (For these regression results, see Appendix Exhibit 8.)<sup>18</sup> As another sensitivity test, we recalculated our estimates as the average across samples defined using multiply imputed income. This did not substantially affect our coefficient estimates or standard errors.<sup>24</sup> (For these regression results, see Appendix Exhibit 9.)<sup>18</sup>

Third, although the ACA's main insurance reforms occurred in 2014, some changes occurred before that year. For example, some expansion states implemented the ACA Medicaid expansions before 2014. Also, some young adults ages 19–25 may have gained access to employer-sponsored insurance through their parents' plans as a result of the ACA's dependent coverage provision, which was implemented in 2010. We included these cases in part because of evidence that coverage grew substantially starting in 2014 in early expansion states and among adults younger than age 26.<sup>25–27</sup> As in previous studies,<sup>1,2</sup> in our analysis excluding early expansion states or young adults had little impact on our results. (For the results of these regressions, see Appendix Exhibits 10 and 11.)<sup>18</sup> However, our study did not account for differences in how the Medicaid expansion was implemented in adopting states (for example, Arkansas had a waiver that allowed it to use expansion funds to subsidize Marketplace coverage).

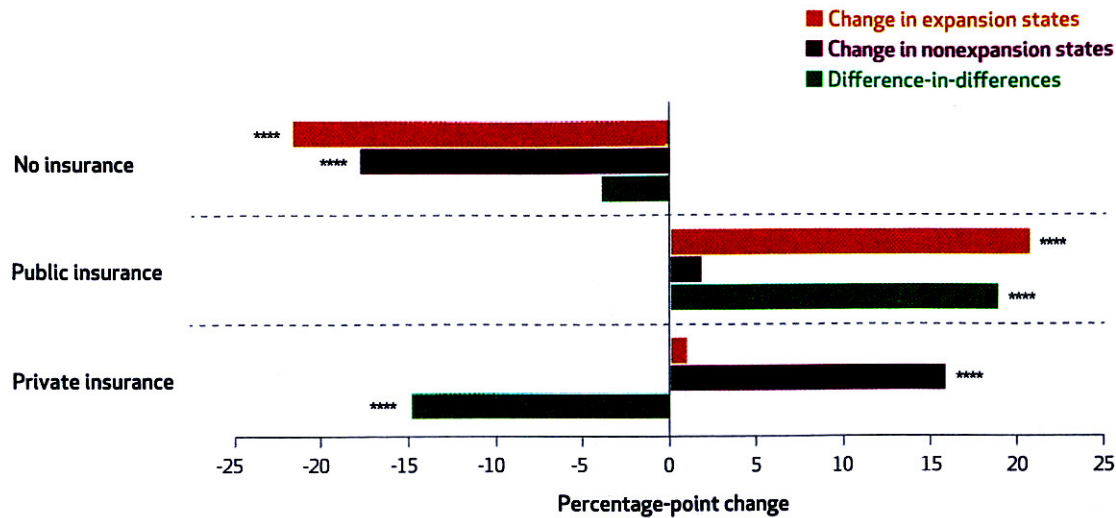
## Study Results

Low-income adults in both expansion and non-expansion states had experienced large reductions in uninsurance rates as of 2015, compared to the 2008–13 baseline: reductions of 21.7 percentage points in expansion states and 17.8 percentage points in nonexpansion states; the difference in these declines was not significant (Exhibit 1).

These results underline the importance of studying this narrow subset of the population. In comparison, adults with incomes below the poverty level experienced a 20.2-percentage-point decline in uninsurance in expansion states from 2008–13 to 2015 but only a 9.9-percentage-point decline in nonexpansion states—a difference-in-differences of –10.3 percentage points ( $p < 0.01$ ) (Appendix Exhibit 12).<sup>18</sup> The findings in Exhibit 1 are also consistent with our hypothesis that uninsurance reductions in the two groups of states would be accomplished in very different ways, with expansion states experiencing large increases in public coverage and non-expansion states having large increases in private insurance.

Despite the large differences in coverage mix shown in Exhibit 1, adults in both groups of states reported large increases (8–9 percentage points) in having a usual source of care from the 2008–13 baseline to 2015 (Exhibit 2). (The difference in these estimates was small and not significant, although caution in interpretation is warranted because the prereform trends were significantly different for this outcome.) The other measures in Exhibit 2 seem to tell a different story. Adults gaining eligibility for subsidized Marketplace coverage experienced reductions in having trouble finding a provider (marginally significant), being unable to find a provider (significant), and not being accepted as a new patient (marginally significant). We did not find similar improvements on these dimensions among adults gaining eligibility for Medicaid. (The differences-in-differences estimates for these measures were not significant, with the exception of being unable to find a provider.) Furthermore, only in expansion states did we observe increased reports of delays in receiving care because wait times to get an appointment or see a doctor were too long, with the difference-in-differences being at least marginally significant in both cases.

People in both groups of states experienced large and significant increases in having seen a primary care doctor in the past year from 2008–13 to 2015, with increases of 6.9 percentage points in expansion states and 10.3 percentage points in nonexpansion states (the difference-in-differences estimate was not signif-

**EXHIBIT 1****Changes in insurance status for low-income adults before and after the expansion of eligibility for Medicaid and implementation of the Marketplaces under the Affordable Care Act, by state expansion status**

**SOURCE** Authors' analysis of data for 2008–15 from the National Health Interview Survey. **NOTES** The sample consisted of 19,917 survey respondents interviewed in the period 2008–15 whose family income was 100–138 percent of the federal poverty level. Estimates were obtained from linear probability regression models, as explained in the text. States that expanded eligibility for their Medicaid programs during 2014 were considered expansion states. States that expanded eligibility during 2015 were excluded from the sample. Difference-in-differences shows the estimated change in each outcome from 2008–13 to 2015 for expansion states relative to the corresponding change in those time periods for nonexpansion states. \*\*\*\* $p < 0.001$

icant) (Exhibit 3). Estimated increases in having seen a specialist were smaller and not significant, as were increases in having had an ED visit and an inpatient hospital stay.

For both groups of states, the large declines in uninsurance translated into fewer adults having delayed care or not gotten care due to cost. Declines in these measures of access difficulties were roughly 6–8 percentage points in both groups of states from the 2008–13 baseline to 2015 (Exhibit 4). Only in expansion states, however, did we observe fewer adults taking less-than-prescribed amounts of medicine due to cost, with the difference-in-differences being –7.8 percentage points. (The reduction in the expansion states was not significant, although the difference-in-differences was.) The pattern of results was somewhat similar for skipping prescribed medications due to cost, but in addition to the difference of –7.2 percentage points in expansion states not being significant, the difference-in-differences was imprecisely estimated. The prevalence of having any out-of-pocket spending declined in expansion states but not in nonexpansion states, for a difference-in-differences of –6.9 percentage points. We also found similar results for the prevalence of having out-of-pocket spending in excess of \$2,000, with a difference-in-differences of –5.4 percentage points.

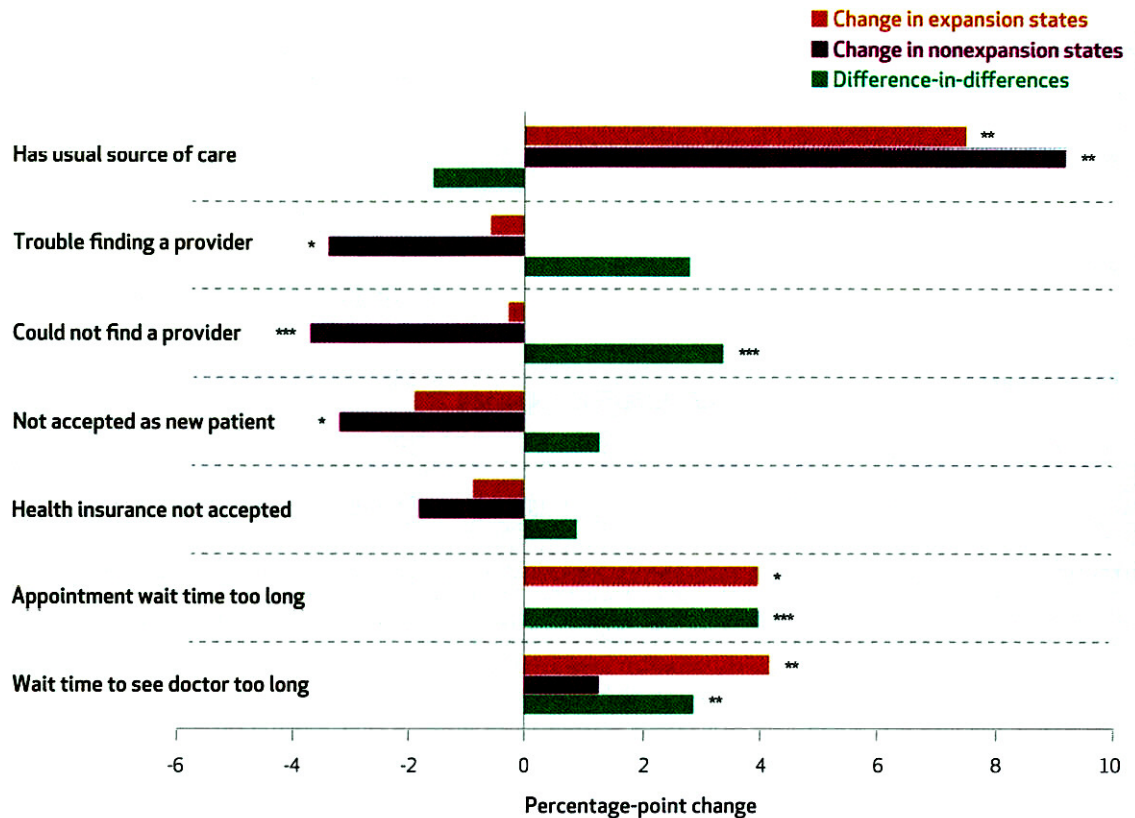
Despite this difference in out-of-pocket spending, we observed little change in either group of states in the prevalence of having experienced problems paying medical bills from 2008–13 to 2015 (data not shown). At the same time, there was a sharp difference between the two groups in being somewhat or very worried about future ability to pay medical bills from sickness or injury. The prevalence of such concerns dropped by 7.9 percentage points in expansion states and rose by 7.1 percentage points in nonexpansion states (Exhibit 4). The latter change was not significant, though the –15.0-percentage-point difference-in-differences was.

### Discussion

We examined a subset of the US population that had little access to affordable insurance before the ACA but became eligible in 2014 for two very different types of affordable coverage, depending on residence in expansion or nonexpansion states. Reductions in rates of uninsurance were achieved in both groups of states, via increases in public coverage through Medicaid expansion states and increases in private coverage through the Marketplaces in nonexpansion states. Our results suggest that previously documented<sup>11–10</sup> larger declines in uninsurance in expansion states were likely due to differences in coverage

**EXHIBIT 2**

**Changes in measures of access to providers for low-income adults before and after the expansion of eligibility for Medicaid and implementation of the Marketplaces under the Affordable Care Act, by state expansion status, 2008–15**



**SOURCE** Authors' analysis of data for 2008–15 from the National Health Interview Survey. **NOTES** The sample consisted of up to 5,769 survey respondents interviewed in the period 2011–15 whose family income was 100–138 percent of the federal poverty level, except for the sample for "has a usual source of care," which consisted of 8,310 respondents. Appendix Exhibit 1 presents precise sample sizes by outcome (see Note 18 in text). Estimates were obtained from linear probability regression models, as explained in the text. States that expanded their Medicaid programs during 2014 were considered expansion states. States that expanded during 2015 were excluded from the sample. Difference-in-differences shows the estimated change in each outcome for expansion states relative to the corresponding change for nonexpansion states. \* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$

changes in the population with incomes below poverty. We found no significant difference in the magnitude of the decline in uninsurance rates between the two groups of states when we focused on the population whose members had incomes of 100–138 percent of poverty but did not have offers of employer-sponsored coverage. In contrast, we found a difference-in-differences of –10.3 percentage points in uninsurance rates in expansion relative to nonexpansion states when we considered only the population with incomes below poverty (Appendix Exhibit 12).<sup>18</sup>

Since we focused on the population with incomes of 100–138 percent of poverty, it might not have been surprising that the magnitude of the decline in uninsurance rates was similar in both groups of states. This is likely because Medicaid coverage imposed zero or near-zero premiums on enrollees, and adults in nonexpansion states with incomes in this range were eligible for

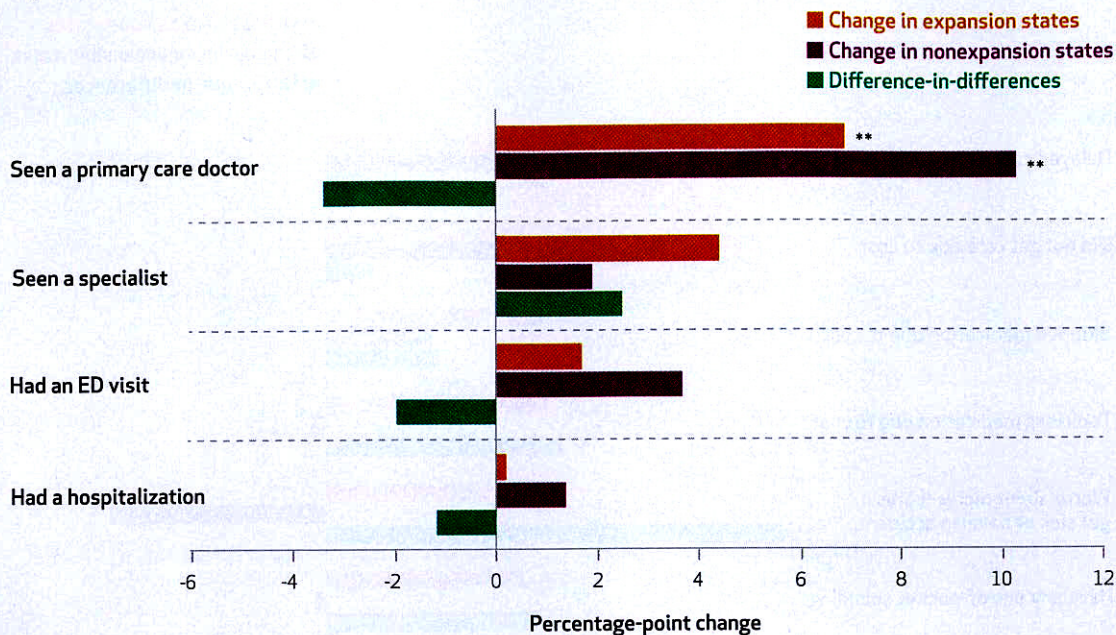
Marketplace subsidies—which limited premiums to 2 percent of income for the second-lowest-cost silver plan. More interesting, we believe, were the changes in a range of other outcomes that were associated with these large shifts in coverage.

Increases in the probability of having had at least one visit to a primary care doctor in the past year were not significantly different between the two groups of states. This result again implies that differential impacts documented in other work<sup>1–10</sup> were likely due to differences in the population with incomes below poverty. We did not find evidence of differentially lower use of specialty or ED care among adults who gained access to Medicaid, compared to those who gained access to subsidized Marketplace coverage.

Significant differences-in-differences were observed, however, as we moved beyond general measures of access to and use of health care.

**EXHIBIT 3**

**Changes in measures of care use by low-income adults before and after the expansion of eligibility for Medicaid and implementation of the Marketplaces under the Affordable Care Act, by state expansion status, 2008–15**



**SOURCE** Authors' analysis of data for 2008–15 from the National Health Interview Survey. **NOTES** The sample consisted of up to 8,266 survey respondents interviewed in the period 2008–15 whose family income was 100–138 percent of the federal poverty level, except for the sample for “had a hospitalization,” which consisted of 20,081 respondents. Appendix Exhibit 1 presents precise sample sizes by outcome (see Note 18 in text). Estimates were obtained from linear probability regression models, as explained in the text. States that expanded their Medicaid programs during 2014 were considered expansion states. States that expanded during 2015 were excluded from the sample. Difference-in-differences shows the estimated change in each outcome for expansion states relative to the corresponding change for nonexpansion states. \*\* $p < 0.05$

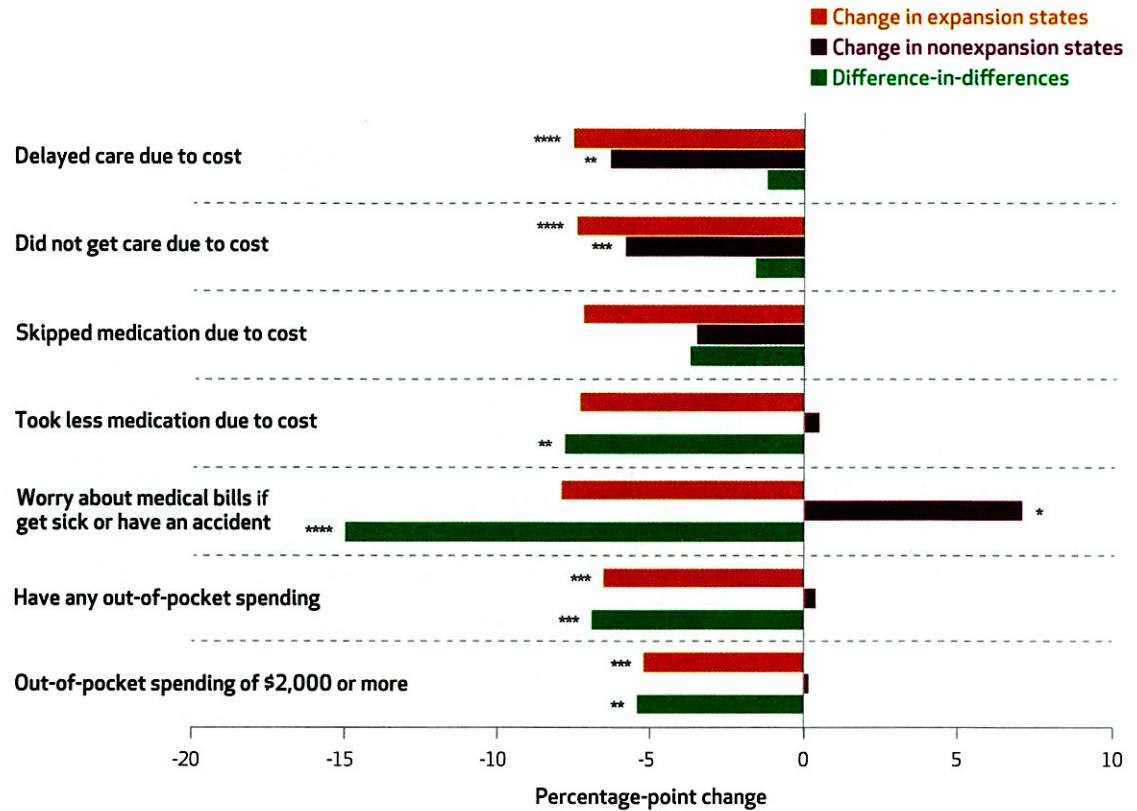
Reductions in difficulty in finding a provider to accept low-income patients from the 2008–13 baseline to 2015 were greater in nonexpansion than expansion states. Increases in having delayed care because of long wait times for appointments and to see providers were greater in expansion than in nonexpansion states. These results may in part reflect experiences arising from increased attempts to find a provider and make appointments among new Medicaid enrollees who had been uninsured before the ACA's Medicaid expansion. Previous research has documented that Medicaid's payments to providers were typically far below those of private insurance or Medicare,<sup>12</sup> and our findings were not surprising when viewed through that lens. Low provider reimbursement undoubtedly reduces the budgetary cost of Medicaid but may have implications in terms of access, as some previous work has found.<sup>12,14</sup> It is also possible that provider capacity could be constrained in some areas within expansion states,<sup>28</sup> although at least one recent study found no evidence of such effects.<sup>29</sup>

provides broad coverage with zero or modest cost sharing.<sup>30</sup> Private insurance offered through the Marketplaces often entails significant cost sharing, and—despite cost-sharing reductions for adults with silver plans—was predicted to impose higher out-of-pocket spending than Medicaid for adults with incomes of 100–138 percent of poverty.<sup>11</sup> Despite these differences, reductions in reports of delaying or not getting care due to cost were not significantly different in expansion and nonexpansion states from 2008–13 to 2015. Moreover, results were similar for problems paying medical bills. At the same time, compared to adults in nonexpansion states, those in expansion states experienced reductions in taking less medicine than prescribed due to cost and in having both any out-of-pocket spending and out-of-pocket spending in excess of \$2,000. Moreover, we observed a large increase in adults being somewhat or very worried about their future ability to pay medical bills from sickness or injury in nonexpansion relative to expansion states.

We also found important differences associated with patient cost sharing. Medicaid typically

**EXHIBIT 4**

**Changes in cost-related access measures for low-income adults before and after the expansion of eligibility for Medicaid and implementation of the Marketplaces under the Affordable Care Act, by state expansion status, 2008–15**



**SOURCE** Authors' analysis of data for 2008–15 from the National Health Interview Survey. **NOTES** The sample consisted of up to 20,087 survey respondents interviewed in the period 2008–15 whose family income was 100–138 percent of the federal poverty level, except for the sample for "worry about medical bills," which consisted of 5,743 respondents, and the samples for "skipped medication" and "took less medication" due to cost, which consisted of 4,158 and 4,157 adults, respectively, for whom medication had been prescribed. Appendix Exhibit 1 presents precise sample sizes by outcome (see Note 18 in text). Estimates were obtained from linear probability regression models, as explained in the text. States that expanded their Medicaid programs during 2014 were considered expansion states. States that expanded during 2015 were excluded from the sample. Difference-in-differences shows estimated change in each outcome for expansion states relative to the corresponding change for nonexpansion states. \* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  \*\*\*\* $p < 0.001$

**Conclusion**

Our study examined how one pair of public and private insurance interventions affected the coverage, access to care, utilization, financial burden, and barriers to care for a narrowly defined subset of adults. We found that the public and private approaches were associated with similar reductions in uninsurance rates and increases in use of health care but had differing impacts on some supply-related barriers to care and on financial burdens. As a general rule, care should

be taken when applying the results of any study to other policy settings. Applying our findings to reform proposals with different combinations of premium subsidies, patient cost sharing, provider incentives, and eligible populations would be no exception to this rule. In particular, we urge caution in extrapolating our findings to lower-income adults, who may have greater unmet need, additional financial barriers, and different responses to public versus subsidized private insurance. ■

The authors thank Asako Moriya for performing estimates of the proportion of the population with incomes of 100–138 of poverty who were eligible for Medicaid, based on pre-Affordable Care

Act rules. The majority of this work was completed while Brandy Lipton was an economist at the Agency for Health Care Research and Quality (AHRQ). The views expressed in this article are those

of the authors and do not necessarily represent the views of AHRQ or the Department of Health and Human Services.



## NOTES

- 1 Miller S, Wherry LR. Health and access to care during the first 2 years of the ACA Medicaid expansions. *N Engl J Med*. 2017;376(10):947–56.
- 2 Decker SL, Lipton BJ, Sommers BD. Medicaid expansion coverage effects grew in 2015 with continued improvements in coverage quality. *Health Aff (Millwood)*. 2017;36(5):819–25.
- 3 Wherry LR, Miller S. Early coverage, access, utilization, and health effects associated with the Affordable Care Act Medicaid expansions: a quasi-experimental study. *Ann Intern Med*. 2016;164(12):795–803.
- 4 Sommers BD, Maylone B, Blendon RJ, Orav EJ, Epstein AM. Three-year impacts of the Affordable Care Act: improved medical care and health among low-income adults. *Health Aff (Millwood)*. 2017;36(6):1119–28.
- 5 Moriya AS, Selden TM, Simon KI. Little change seen in part-time employment as a result of the Affordable Care Act. *Health Aff (Millwood)*. 2016;35(1):119–23.
- 6 Sommers BD, Gunja MZ, Finegold K, Musco T. Changes in self-reported insurance coverage, access to care, and health under the Affordable Care Act. *JAMA*. 2015;314(4):366–74.
- 7 McMorrow S, Gates JA, Long SK, Kenney GM. Medicaid expansion increased coverage, improved affordability, and reduced psychological distress for low-income parents. *Health Aff (Millwood)*. 2017;36(5):808–18.
- 8 Courtemanche Ch, Marton J, Ukert B, Yelowitz A, Zapata D. Early impacts of the Affordable Care Act on health insurance coverage in Medicaid expansion and non-expansion states. *J Policy Anal Manage*. 2017;36(1):178–210.
- 9 Frean M, Gruber J, Sommers BD. Premium subsidies, the mandate, and Medicaid expansion: coverage effects of the Affordable Care Act. *J Health Econ*. 2017;53:72–86.
- 10 Shartz A, Long SK, Anderson N. Access to care and affordability have improved following the Affordable Care Act implementation; problems remain. *Health Aff (Millwood)*. 2016;35(1):161–8.
- 11 Hill SC. Medicaid expansion in opt-out states would produce consumer savings and less financial burden than exchange coverage. *Health Aff (Millwood)*. 2015;34(2):340–9.
- 12 Zuckerman S, Goin D (Urban Institute, Washington, DC). How much will Medicaid physician fees for primary care rise in 2013? Evidence from a 2012 survey of Medicaid physician fees [Internet]. Washington (DC): Kaiser Commission on Medicaid and the Uninsured; 2012 Dec [cited 2017 Oct 19]. Available from: <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8398.pdf>
- 13 Biener AI, Selden TM. Quantifying public and private insurance payments for physician office visits. *Health Aff (Millwood)*. 2017;36(12):2160–64.
- 14 Decker SL. Acceptance of new Medicaid patients by primary care physicians and experiences with physician availability among children on Medicaid or the Children's Health Insurance Program. *Health Serv Res*. 2015;50(5):1508–27.
- 15 Decker SL. In 2011 nearly one-third of physicians said they would not accept new Medicaid patients, but rising fees may help. *Health Aff (Millwood)*. 2012;31(8):1673–9.
- 16 National Center for Health Statistics. National Health Interview Survey [Internet]. Hyattsville (MD): NCHS; [last updated 2017 Sep 21; cited 2017 Oct 19]. Available from: <https://www.cdc.gov/nchs/nhis/index.htm>
- 17 People were ineligible for Marketplace subsidies if they had access to employer-sponsored insurance with an employee premium contribution for self-only coverage that was less than 9.56 percent of income (in 2015). Because the NHIS collects data on employee premium contributions only if offers of coverage are taken up, we excluded from the sample all employees offered employer-sponsored insurance and their spouses. For comparison to other studies that included offers of employer-sponsored insurance, we present results that include adults with access to employer-sponsored insurance in Appendix Exhibit 13 (see Note 18).
- 18 To access the Appendix, click on the Details tab of the article online.
- 19 Sommers BD, Buchmueller T, Decker SL, Carey C, Kronick R. The Affordable Care Act has led to significant gains in health insurance and access to care for young adults. *Health Aff (Millwood)*. 2013;32(1):165–74.
- 20 We also recomputed our estimates allowing for quarterly fixed effects, which did not affect our results. Appendix Exhibit 9 shows regression results from this and other sensitivity analyses (see Note 18).
- 21 Approximately 12 percent of adults with incomes of 100–138 percent of poverty were eligible for Medicaid in 2014 even under 2013 eligibility rules, and these previously eligible adults were concentrated in expansion states. This information comes from our analysis of data from the American Community Survey.
- 22 Decker SL, Kenney GM, Long SK. Characteristics of uninsured low-income adults in states expanding vs not expanding Medicaid. *JAMA Intern Med*. 2014;174(6):988–9.
- 23 Furthermore, many of the outcomes we assessed have a one-year look-back period (for example, having had any primary care visit in the past year), so that 2014 responses would include information pertaining to 2013.
- 24 We reported estimates using single imputation in the main text, since income was used in our analysis to define the sample, not as a control variable, and since multiple imputation in this case resulted in the Stata error message “estimation sample varies across imputations; results may be biased.” Income was wholly imputed for approximately 9 percent of adults who met other sample inclusion criteria and imputed within reported brackets for approximately another 14 percent of adults.
- 25 Cohen RA, Martinez ME. Health insurance coverage: early release of estimates from the National Health Interview Survey, January March 2014 [Internet]. Hyattsville (MD): National Center for Health Statistics; 2014 Sep [cited 2017 Oct 19]. Available from: <https://www.cdc.gov/nchs/data/nhis/earlyrelease/insur201409.pdf>
- 26 McMorrow S, Kenney GM, Long SK, Anderson N. Uninsurance among young adults continues to decline, particularly in Medicaid expansion states. *Health Aff (Millwood)*. 2015;34(4):616–20.
- 27 Lipton BJ, Decker SL, Sommers BD. The Affordable Care Act appears to have narrowed racial and ethnic disparities in insurance coverage and access to care among young adults. *Med Care Res Rev*. 2017 Apr 27. [Epub ahead of print].
- 28 Huang ES, Finegold K. Seven million Americans live in areas where demand for primary care may exceed supply by more than 10 percent. *Health Aff (Millwood)*. 2013;32(3):614–21.
- 29 Abdus S, Hill SC. Growing insurance coverage did not reduce access to care for the continuously insured. *Health Aff (Millwood)*. 2017;36(5):791–8.
- 30 Rudowitz R, Snyder L. Premiums and cost-sharing in Medicaid [Internet]. Washington (DC): Kaiser Commission on Medicaid and the Uninsured; 2013 Feb [cited 2017 Oct 19]. (Report No. 8416). Available from: <https://kaiserfamilyfoundation.files.wordpress.com/2013/02/8416.pdf>

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.