Original Research Article

The Affordable Care Act's Coverage Impacts in the Trump Era

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Abstract

The 2016 US presidential election created uncertainty about the future of the Affordable Care Act (ACA) and led to postponed implementation of certain provisions, reduced funding for outreach, and the removal of the individual mandate tax penalty. In this article, we estimate how the causal impact of the ACA on insurance coverage changed during 2017 through 2019, the first 3 years of the Trump administration, compared to 2016. Data come from the 2011–2019 waves of the American Community Survey (ACS), with the sample restricted to non-elderly adults. Our model leverages variation in treatment intensity from state Medicaid expansion decisions and pre-ACA uninsured rates. We find that the coverage gains from the components of the law that took effect nationally—such as the individual mandate and regulations and subsidies in the private non-group market—fell from 5 percentage points in 2016 to 3.6 percentage points in 2019. In contrast, the coverage gains from the Medicaid expansion increased in 2017 (7.0 percentage points) before returning to the 2016 level of coverage gains in 2019 (5.9 percentage points). The net effect of the ACA in expansion states is a combination of these trends, with coverage gains falling from 10.8 percentage points in 2016 to 9.6 percentage points in 2019.

Keywords

ACA, Affordable Care Act, Medicaid, health insurance, marketplace

- **What do we already know about this topic?**
  - We know the ACA increased insurance coverage prior to the Trump administration.
- **How does your research contribute to the field?**
  - We extend the literature by examining how changes in management of the ACA during the first 3 years of the Trump administration impacted insurance coverage.
- **What are your research's implications toward theory, practice, or policy?**
  - Our results suggest that the majority of the coverage gains from the ACA persisted under the Trump administration, we do find some evidence of dynamic treatment effects that differ by state Medicaid expansion status.

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Introduction

The transition from the Trump to the Biden administration illustrates that the Affordable Care Act (ACA) and its impact on coverage remains a contentious political issue. For instance, when eleven states and the District of Columbia (DC) re-opened enrollment in their state-run Marketplaces in 2020 to allow workers laid off due to the pandemic to sign up for coverage, the Trump administration did not re-open the federal Marketplace.[1] In addition, the Trump administration supported the challenge to the ACA's constitutionality, which was recently rejected by the Supreme Court.[2-4] The Biden administration, on the other hand, is pursuing different strategies, including re-opening the federal Marketplace.[5] Given this back and forth, it is natural to ask how coverage under the ACA fared during the Trump administration. The answer serves both as an assessment of changes made during the Trump administration as well as a baseline with which to evaluate inevitable future changes.

The purpose of this article is to examine how the causal effect of the ACA on coverage changed during the first 3 years of the Trump administration (2017–2019) compared to 2016. While a large literature studies the coverage impacts of the ACA,[6-21] to our knowledge, we provide the first estimates of the causal effect of the ACA on coverage rates and sources using data through 2019. We are only aware of two prior articles that even include data through 2018 to speak to the impact of the Trump administration.[9,10]

There were several key events associated with the ACA that could have influenced coverage between 2017 and 2019 as compared to 2016. The ACA overhauled private non-group insurance markets through a combination of regulations, subsidies, a Marketplace to facilitate comparisons and purchases, and a mandate for individuals to obtain coverage or pay a tax penalty.[22] In addition, resources were invested in outreach and education efforts to promote participation. The 2016 election of President Trump and Republican majorities in both houses of Congress created the possibility that any or all of these components of the ACA could soon be eliminated or weakened. Anticipation of these changes could have affected consumer choices during the open enrollment period for the 2017 plan year, which was only just beginning at the time of the election, even before concrete policy actions were taken. For instance, some individuals might have gambled that the Trump administration would not actively enforce the mandate even if it remained in effect. Uncertainty and anticipation likely affected insurers' decisions about plan offerings and prices as well, though perhaps not until the 2018 plan year since they had to make decisions about 2017 Marketplace offerings before the election.

In addition to the effects of general uncertainty and altered expectations, several specific policy actions after President Trump took office might have also reduced Marketplace coverage. First, an executive order in January of 2017 encouraged the federal government to waive or delay the implementation of any features of the ACA that would impose a burden, either financial or regulatory.[23,24] For example, in 2017 the Internal Revenue Service began processing tax refunds for individuals even if they failed to submit proof of insurance coverage, as required by the ACA. This process change reduces the incentive to purchase coverage.[25] Second, funding for ACA outreach and education programs was reduced for open enrollment periods associated with 2017 and 2018 plans.[26] Third, the administration discontinued cost sharing reduction (CSR) payments to insurers for silver Marketplace plans in October 2017,[27] likely leading some insurers to reduce plan offerings, leave markets, or raise prices in 2018.[28] Many states attempted to offset potential price increases by increasing only the premiums of silver plans, a strategy known as silver loading.[29]

More generally, perpetual political debate and legislative efforts to repeal or replace the ACA—including the "skinny" repeal bill that missed passage by just one Senate vote in July 2017—led to even greater uncertainty for insurers and consumers. Finally, the tax reform package passed in December of 2017 eliminated the ACA's individual mandate tax penalty starting in the 2019 tax year,[30] which could have led to anticipatory responses by individuals or insurers in 2018 and concrete responses to these policy changes in 2019.[28]

The other major way the ACA expanded insurance coverage was by expanding Medicaid for all individuals under 138% of the Federal Poverty Level (FPL), though a Supreme Court decision made this expansion optional for states.[22] While the Federal government does not control state-run Medicaid programs as directly as the Marketplace, under the Trump administration states were allowed to seek federal approval to require Medicaid beneficiaries to provide verification that they either work or go to school. Multiple states received federal approval to implement Medicaid work requirements via a waiver during the Trump administration. However, the Biden administration informed these states in February 2021 that they must withdraw these waivers because they do not promote Medicaid program objectives.[31]

Recent descriptive evidence suggests that coverage fell by about 0.5 percentage points between 2017 and 2018, but it is unclear whether that drop is attributable to the weakening of the ACA as opposed to other factors, such as dynamics in the employer-sponsored insurance (ESI) market.[32] Our methodological approach, building upon recent literature, aims to identify causal effects of both the ACA's Medicaid expansion and its package of nationwide reforms (e.g., individual mandate, regulations, subsidies, and health insurance exchanges) by leveraging variation across time, state Medicaid expansion status, and local area pre-treatment uninsured rate.[9,33-41] The latter allows for a dose-response framework, with the key assumption being that the coverage gains from both the Medicaid and national reforms are proportional to the percentage of residents initially lacking coverage.

Our results suggest that, while the majority of coverage gains from the ACA remained intact under the Trump administration, there were some noteworthy changes. In non-Medicaid expansion states, where the ACA mostly influenced private non-group insurance markets, we find that the ACA's effect on non-elderly adults' probability of having coverage fell from 5 percentage points in 2016 to 3.8 percentage points in 2017 and 2018 and 3.6

percentage points in 2019, with the difference relative to 2016 being statistically significant in each case. In Medicaid expansion states, we estimate similar gains in coverage in 2016 through 2018 (about 11 percentage points in each year), before a fall to 9.6 percentage points in 2019.

Institutional Background

In this section, we provide more institutional background on the ACA and how its implementation has changed over time, with a specific focus on individually purchased coverage. The ACA overhauled private non-group insurance markets through a combination of policies initially implemented in 2014 that included regulations, subsidies, a Marketplace to facilitate comparisons and purchases, and a mandate for individuals to obtain coverage or pay a tax penalty.[22] In addition, resources were invested in outreach and education efforts to promote participation. Studies focusing on the impact of this bundle of policies through the end of the Obama administration (2014–2016) found increases in coverage,[33-37,40] though the individual mandate itself was found to have little impact.[22] Other work found that Navigator programs and other forms of direct application assistance appeared to improve coverage rates.[42]

The 2016 election of President Trump and Republican majorities in both houses of Congress created the possibility that any or all of these components of the ACA could soon be eliminated or weakened. Anticipation of these changes could have affected consumer choices during the open enrollment period for the 2017 plan year, which was only just beginning at the time of the election, even before concrete policy actions were taken. Uncertainty and anticipation likely affected insurers' decisions about plan offerings and prices as well, though perhaps not until the 2018 plan year since they had to make decisions about 2017 Marketplace offerings before the election.[43] It is not clear to what extent the insurers factored in predictions about the election into their 2017 offerings. Perhaps Republican repeal and replace plans that included a grace period for the ACA to remain intact provided a weak signal of potential short run stability. It is worth noting that Marketplace rates rose sharply for the 2017 plan year relative to 2016, resulting in higher average premiums that became the base for future rates.[44] This may have put downward pressure on subsequent enrollment. Multiple articles have documented trends over time in insurer participation and premiums across local markets.[45-48]

Several concrete policy changes occurred during the first few years of the Trump administration that were expected to impact the ACA. In 2017, the Internal Revenue Service began processing tax refunds for individuals even if they failed to submit proof of insurance coverage, as required by the ACA. This likely further reduced the already small coverage impacts of the individual mandate mentioned above. Funding for ACA outreach and advertising was reduced by 90% between 2017 and 2020.[26,49] In addition, Navigator funding in [32] federal Marketplace states fell by 84% on average from $63 million to $10 million. Research has found that changes in such policies, including messaging, impact search behavior and enrollment.[50,51]

Another major policy change was the Trump administration's decision to discontinue CSR payments to insurers for silver Marketplace plans in October 2017,[27] likely leading some insurers to reduce plan offerings, leave markets, or raise prices in 2018.[28] Many states responded by employing a strategy laid out in a 2016 Urban Institute brief known as the "silver switch" or "silver loading," in which insurers offset the loss of CSR payments by increasing the premiums of silver plans but not bronze and gold plans.[47] For those receiving a Marketplace subsidy, silver loading actually increased the affordability of Marketplace plans by creating larger spreads between the premiums of the benchmark silver plan and less expensive plans. This in turn dramatically increased the availability of zero-dollar premium plans. The sliver loading strategy was implemented by [43] state insurance commissioners in 2018.[52] Research on silver loading found that it was associated with increases in overall affordability,[52-55] increased plan switching behavior,[56] and may have counteracted some of the enrollment effects of other Trump administration policies.[57] Other work suggests that the decision to expand Medicaid was associated with reductions in Marketplace premiums.[58]

More generally, perpetual political debate and legislative efforts to repeal or replace the ACA—including the "skinny" repeal bill that missed passage by just one Senate vote in July 2017—led to even greater uncertainty for insurers and consumers. Finally, the tax reform package passed in December of 2017 eliminated the ACA's individual mandate tax penalty starting in the 2019 tax year,[30] which could have led to anticipatory responses by individuals or insurers in 2018 and concrete responses to these policy changes in 2019.[28]

Data

Our analysis uses data from 2011 through 2019 of the American Community Survey (ACS). The ACS surveys roughly 1% of the US population per year. Its mandatory nature reduces sample selection concerns and provides a high and stable response rate.[59] We restrict our sample to respondents aged 19–64 because this was the ACA's target population. We start with 2011 to avoid measuring the effect of the provisions of the ACA that took effect in 2010 (i.e., the dependent coverage mandate) and because a 3-year pretreatment period (2011–2013) allows us to indirectly evaluate our econometric model.

Our approach relies on within state variation in uninsured rates in 2013 to identify the causal effect of the national components of the ACA. The ACS includes identifiers for each respondent's state and Public Use Microdata Area (PUMA), which represents an area within state of at least 100 000 people.[60] Unfortunately, PUMA boundaries changed

during the sample period, so we cannot use PUMAs to continuously identify the respondents' geographic area. Instead, we follow the previous literature identify core-based statistical areas (CBSAs) identifiable in all years using the old and new PUMA boundaries.[33] A complicating factor is that CBSAs can span multiple states, so we isolate the portion of the CBSA in each state as separate local areas. CBSAs also do not cover all areas within a state, so we create additional local areas for the non-CBSA portion in each state to avoid dropping any respondents. Our final dataset consists of 630 local CBSA and non-CBSA areas that each contain between 356 and 78 781 respondents in 2013, with a median of 1020 and a mean of 2811 respondents.

We use the ACS question on insurance coverage to estimate 2013 local area uninsured rates. The ACS asks at the time of the survey if the person is currently covered by any type of insurance and provides a list of eight categories to choose from. These include "insurance though a current or former employer or union," "insurance purchased directly from an insurance company," "Medicare," "Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability," "TRICARE or other military health care," "VA (including those who have ever used or enrolled for VA health care)," "Indian Health Service," and "any other type of health insurance or health coverage plan." Answers are not mutually exclusive, so a respondent can choose more than one type of coverage or none of them, which we define as being uninsured. We create four binary indicators flagging affirmative responses for any coverage, ESI, directly-purchased insurance, and Medicaid.

Other ACS variables we use as controls include gender, race/ethnicity, being a citizen, being born abroad, family structure, education, labor force participation, and household income. Specifically, we create binary variables for each respondent age between 19 and 64, female, race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, and other race/ethnicity), foreign born, US citizenship status, married, and separate indicators counting the number of children under the age of 18 living in the household (one, two, three, four, and five or more). We measure educational attainment with an indicator for the highest level of completed education (less than a high school degree, high school degree, some college, and college graduate), and we measure labor force participation with indicators for being a student and for being unemployed. We measure household income using an indicator for each 10-point increment of income as a percentage of the FPL (with the highest category including everyone over 500% of the FPL). Lastly, we include the annual state unemployment rate from the Bureau of Labor Statistics.

Our policy variables of interest, whether and when a state expanded Medicaid via the ACA, were collected from the Kaiser Family Foundation.[61] Twenty four states plus DC expanded Medicaid in January of 2014, and nine additional states expanded later (Michigan (effective date 4/1/14), New Hampshire (8/15/14), Pennsylvania (1/1/15), Indiana (2/1/15), Alaska (9/1/15), Montana (1/1/16), Louisiana (7/1/16), Virginia (1/1/19), Maine (1/10/19 with coverage retroactive to 7/2/18)), so by the end of 2019, we have a total of 34 expansion states including DC. We assign the starting date of these states' expansions in our analysis accordingly. We also collect information regarding the implementation of the 2014 ACA Marketplaces.[61,62] Several states struggled with the initial rollout of their Marketplace websites, so we include indicators for whether a state established their own Marketplace and whether it experienced glitches. These indicators control for differential responses in Marketplace take-up due to initial troubles associated with outreach and enrollment.

To examine whether controlling for local Marketplace premium changes over time might impact insurance coverage, we obtained premium HIX Compare (HIX) data, a database of ACA-compliant plans from 2014 to 2019.[63] Within each health care market (rating area), we obtained the least-expensive bronze plan and as a benchmark, the second-lowest silver plan. We calculated the spread between the plans and a count of the number of insurers in each rating area. The HIX often lists multiple variants of the same plan with different premiums depending on optional, unsubsidized services like vision. We restrict the sample to unique plans, and plans without these additional features. The finest geographic identifier in the ACS is the PUMA. We first map PUMAs into counties for states that define rating areas within counties and PUMAs into zip codes for states that define rating areas within zip codes. We then assign a PUMA to the rating area where the plurality of the PUMA's population resides. Occasionally, ratings areas change over time. Finally, although the HIX data are extremely comprehensive, in 2014 the premiums are missing for a number of states with their own exchanges. We code the premium level or spread as zero in 2014 for such cases, and construct an indicator for missing premiums. For a small number of PUMAs that could not be merged from 2015 onward, we do the same, as well as for all pre-ACA years.

Summary statistics are displayed in Table A1 for our four coverage outcomes in 2013 for the full sample as well as stratified by state expansion decision and whether the uninsured rate was above or below the median. In the full sample, the average baseline insurance rate was 79% in 2013, with 60% having ESI, 9.4% having individually purchased coverage, and about 11% having Medicaid coverage. To give a sense of how coverage changes over time, Figure A1 plots changes in insurance coverage by type over time for our sample, also stratified by expansion status and 2013 uninsured rate.

Methods

Our methodology follows several recent studies[9,33-41] and aims to separately identify the causal impact of the national

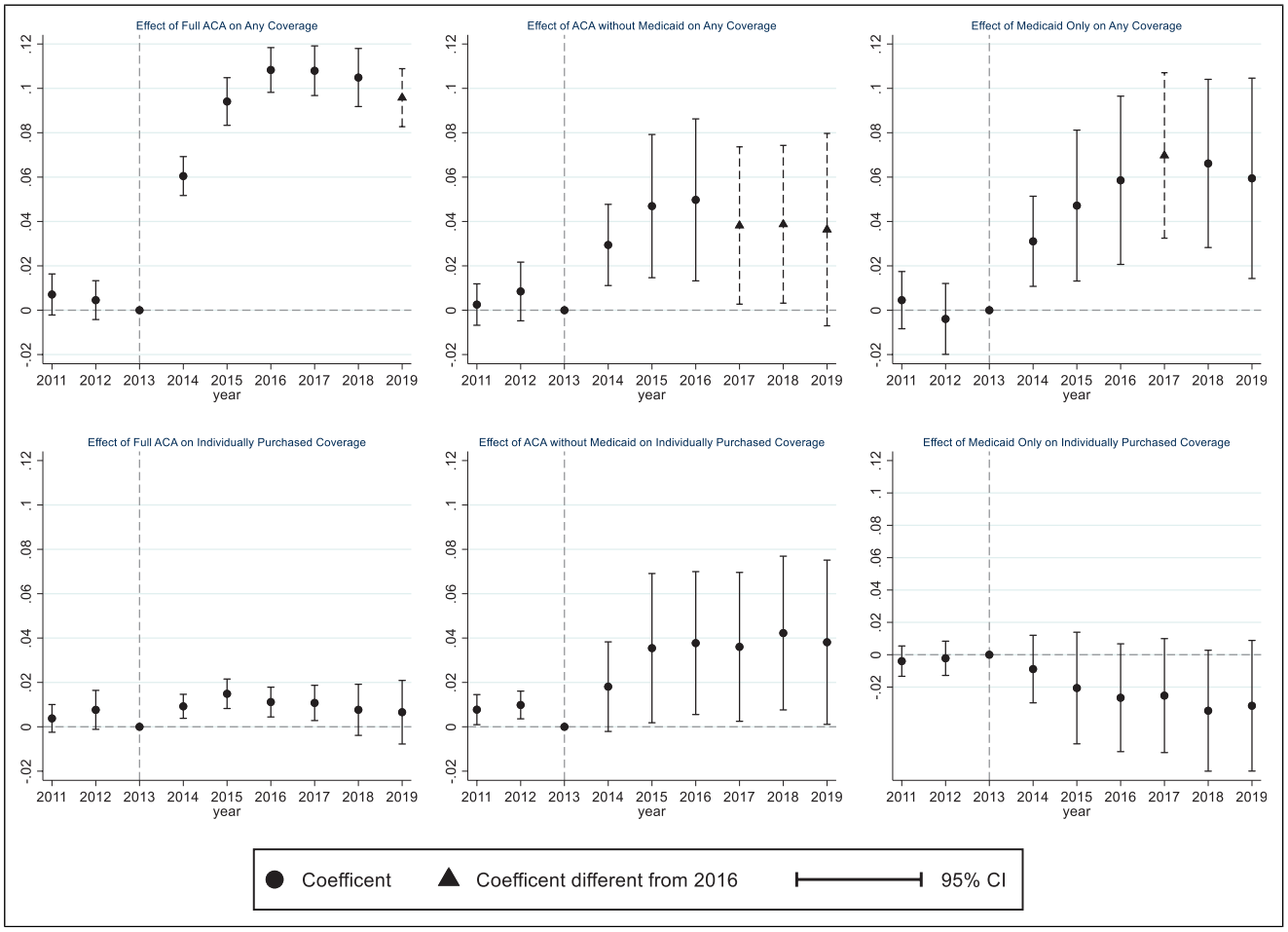

Figure 1. Change in insurance coverage due to various components of Affordable Care Act.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effects in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

components of the ACA and the Medicaid expansion by leveraging variation in time, state Medicaid expansion decisions, and pre-ACA local area uninsured rates. These studies typically specify a regression equation such as

$$y_{iast} = \gamma_0 + \gamma_1(UNINSURED_{as} * POST_t) + \gamma_2 MEDICAID_{st} + \gamma_3(UNINSURED_{as} * MEDICAID_{st}) + \gamma_4 X_{iast} + \theta_t + \alpha_{as} + \varepsilon_{iast} \quad (1)$$

where y_{iast} is an indicator of coverage for individual i in local area a in state s in year t, $POST_t$ indicates the post-reform period of 2014 or later, X_{iast} is a vector of previously described controls, $MEDICAID_{st}$ indicates whether state s had expanded Medicaid by year t, $UNINSURED_{as}$ is the 2013 uninsured rate in local area a within state s, θ_t represents year fixed effects, α_{as} represents local area fixed effects, and ε_{iast} is a standard error term. Equation (1) is therefore akin to a difference-in-difference-in-differences model, though we write $MEDICAID_{st}$ rather than $MEDICAID_s * POST_t$ since some states adopted the Medicaid expansion after 2014.

The logic behind including pre-ACA uninsured rate as a third "difference" is that it measures the potential "dose" impact from the ACA's coverage expansion where the larger an area's uninsured population, the more people should gain coverage as a result of expansion initiatives. Since the ACA involved multiple expansion initiatives—the Medicaid expansion that varied by state and time and the reforms related to private markets that only varied by time—the model interacts $UNINSURED_{as}$ with both $MEDICAID_{st}$ and $POST_t$.

Our implementation of the dose-response framework requires two key assumptions.[33] First, the ACA's causal effect is zero if the baseline uninsured rate is zero. Second, the causal effect increases linearly as the baseline uninsured rate rises. This means that the combined effect of the national components of the ACA is given by $\gamma_1 * UNINSURED_{as}$,

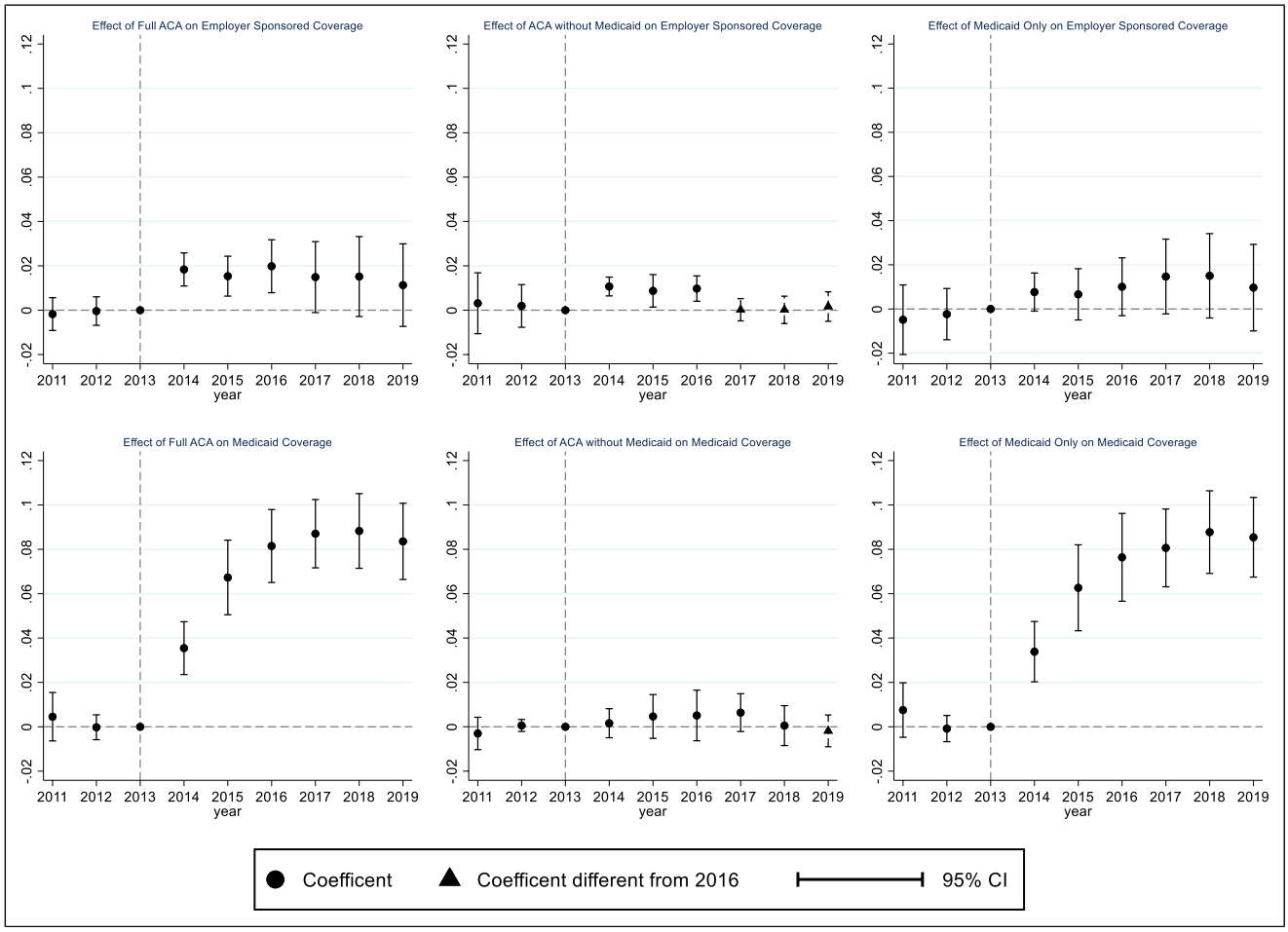

Figure 2. Change in insurance coverage due to various components of Affordable Care Act.
Notes. See notes from Figure 1.

while the effect of the ACA Medicaid expansion alone is given by $\gamma_3 * UNINSURED_{as}$. The effect of the "fully implemented" ACA is the sum of these separate impacts, or $\gamma_1 * UNINSURED_{as} + \gamma_3 * UNINSURED_{as}$. We report all results as the predicted effect of the ACA at the sample mean baseline (2013) uninsured rate.

While estimates based on equation (1) provide average effects over the 2014–2019 time period, we are primarily interested in how the coverage effects of the ACA varied over time, especially in the first three years of the Trump administration. Therefore, we estimate event study models where we replace $POST_t$ with a set of year dummies. Our event study DDD model is given by the following equation

$$\begin{aligned} y_{iast} = \varphi &+ \sum_{t=1}^{T} \theta_t (UNINSURED_{as} * Y_t) \\ &+ \sum_{t=1}^{T} \alpha_t (MEDICAID_s * Y_t) \\ &+ \sum_{t=1}^{T} \beta_t (UNINSURED_{as} * MEDICAID_s * Y_t) \\ &+ \delta X_{iast} + \alpha_{as} + \varepsilon_{iast} \end{aligned} \tag{2}$$

where Y_t, indicates whether year t is 2011, 2012, …, 2019, respectively for t = 1, 2, …, 8, with 2013 being the omitted year. We estimate event study models for our full sample as well as for sub-sets of the sample stratified by income.

When interpreting the event study coefficients involving Medicaid, it is helpful to note that only two states (Maine and Virginia) expanded Medicaid during the Trump administration. Therefore, the identifying variation comes almost exclusively from changing impacts of the Medicaid expansions that were already in place prior to the 2016 election, as opposed to the addition of new expansion states.

This event study model also allows us to indirectly test the identifying assumptions required for a causal interpretation of equation (1).[33] The identifying assumption for the effect of the national components of the ACA is that, in the absence of the ACA, any changes in the outcomes that would have occurred in 2014–2019 would not have been systematically correlated with local area uninsured rates, conditional on the controls. The identifying assumption for the impact of Medicaid expansion is that, in the absence of ACA, the differential changes in the outcomes in 2014–2019

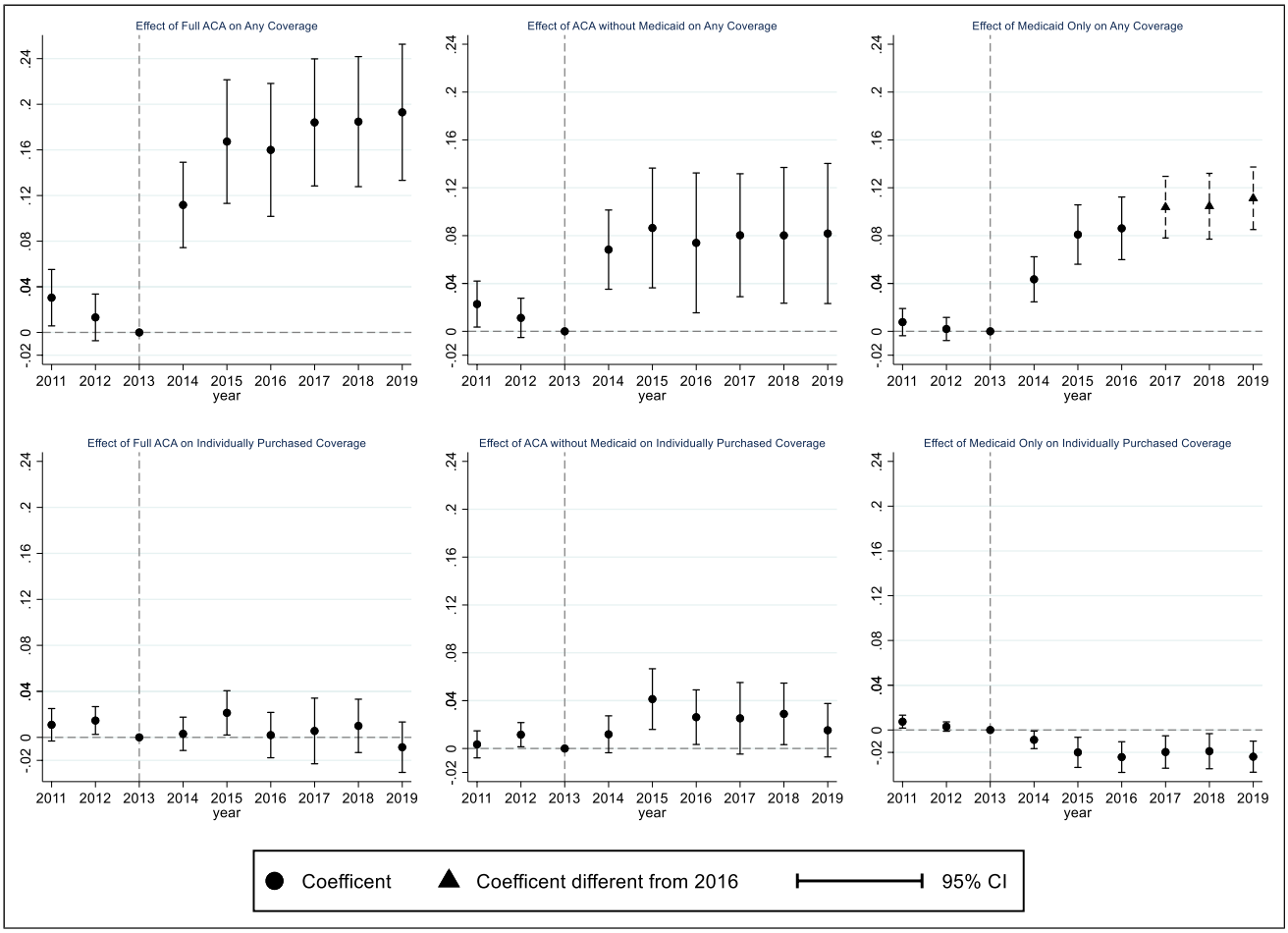

Figure 3. Subsample analysis, less than 138% of federal poverty level.
Notes. See notes from Figure 1.

between expansion and non-expansion states would not have been correlated with pre-reform uninsured rates. If our estimated changes in the outcomes from 2011-2013 are correlated with pre-ACA uninsured rates (i.e., θ_1 or θ_2 are significant) or our estimates of the interactions of the local area uninsured rate with Medicaid expansion status from 2011-2013 are statistically significant (i.e., β_1 or β_2 are significant), this would indicate problems with our assumptions.

We also conduct a large number of robustness checks. First, we exclude 19–25 year olds, who were affected by the 2010 ACA dependent coverage provision and thus partially "treated" by the ACA prior to 2014. In the second and third checks, we drop early expansion states using two different specifications—states that expanded between April 2010 and March 2012 (California, Connecticut, Washington DC, Minnesota, New Jersey, and Washington) and states that expanded prior to 2010 (Delaware, Washington DC, Massachusetts, New York, and Vermont). In the fourth, fifth and sixth checks, we drop all early expanders, all late expanders, and early and late expanders, respectively. In the seventh check, we drop New York and Minnesota since they both adopted a Basic Health Program (BHP), an ACA option permitting state-administered coverage in lieu of Marketplace coverage for those with incomes below 200% of the FPL who would otherwise qualify for Marketplace subsidies.[64] In the eighth check, we reclassify Maine as a non-expansion state given the odd retroactive nature of their expansion. In the ninth check, we drop our control for initial exchange glitches and instead include a time varying control for state based exchange status.[65,66] In the 10th check, we add controls for state Republican presidential vote share in the 2012 and 2016 elections as proxies for state partisanship,[67-69] as well as a time varying indicator for whether a state has a state based reinsurance program.[70] In the 11th check, we add controls for Marketplace premium levels, premium spreads, and the number of insurers.[63] In the 12th check, we use state rather than local area uninsured rates and include additional state controls for labor market and economic conditions. Finally, we reexamine the income stratification for our individually purchased coverage outcome, using income categories of

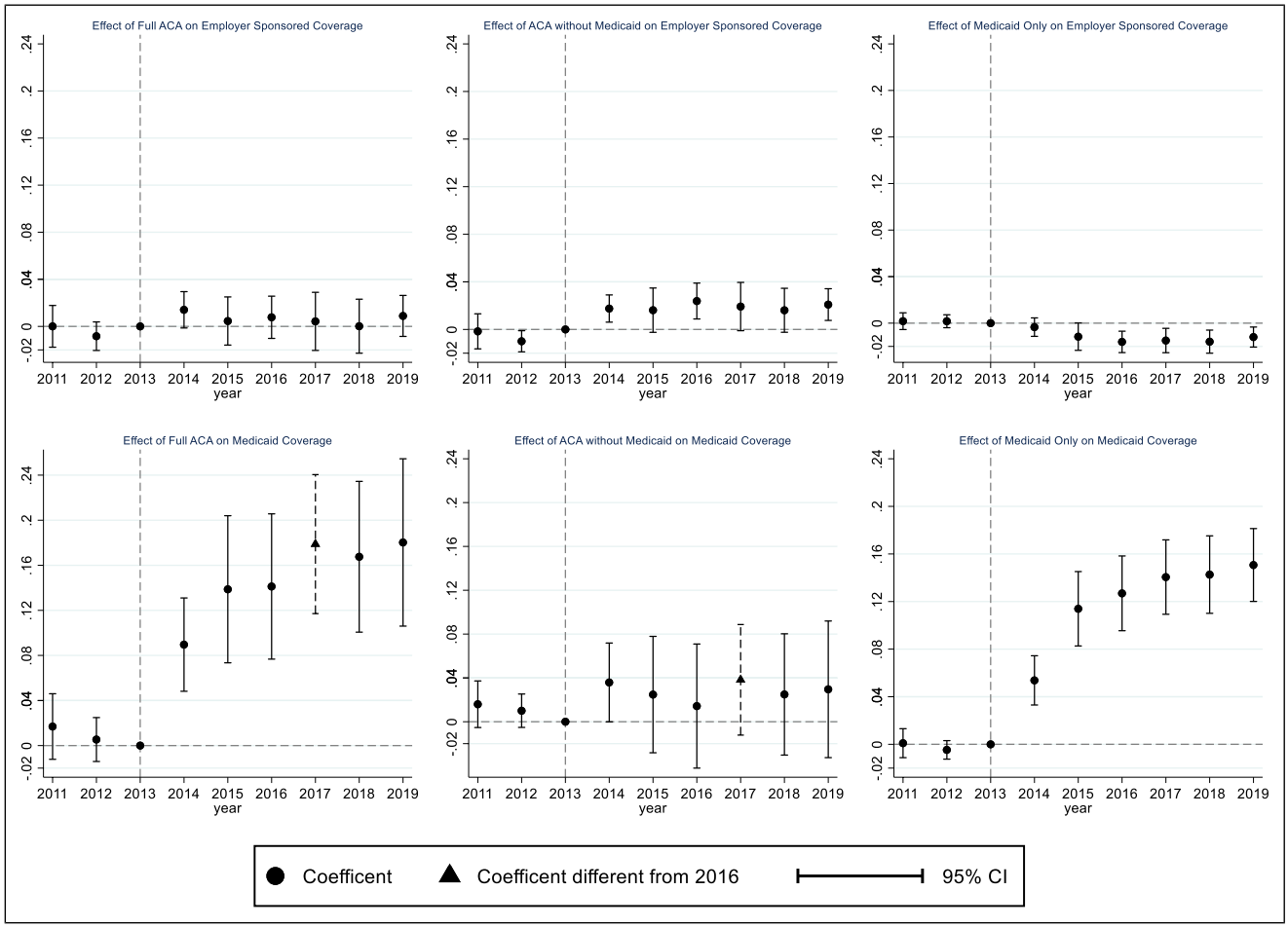

Figure 4. Subsample analysis, Less than 138% of federal poverty level.
Notes. See notes from Figure 1.

below 138% of the FPL, 138–250% of the FPL, and greater than 250% of the FPL.

Results

Figures 1 and 2 report implied year-by-year effects of the ACA that multiply the coefficient estimates from equation (2) by the average local area pre-ACA uninsured rate (20.3%). Each row represents results from a different regression measuring the effect of the ACA on a different coverage outcome (any coverage, individual coverage, ESI, and Medicaid coverage). The first column displays the implied "full effect" of the ACA, which represents both the implied effect of the national components of the ACA, including Marketplace coverage and the individual mandate, as well as the implied effect of the ACA Medicaid expansion. The middle column displays the implied effect of the national components of the ACA alone, and the last column displays the implied effect of the Medicaid expansion alone. Thus, the implied effects reported in the first column represent the sum of the middle and last columns.

The event study specification traces out the dynamic effects of the ACA in each year from 2014 to 2019, with 2013 as the reference year. We test whether estimated effects for each year are statistically significantly different than 2013. We also test if the estimates in 2017, 2018, and 2019 are statistically significantly different from 2016. Table A2 reports our baseline event study estimates in table rather than graphical form. The pre-ACA coefficients (effects in 2011 and 2012) estimated in our event study also allows us to indirectly test the validity of our baseline DDD model.

We begin by examining the pre-2013 implied effects depicted in Figures 1 and 2. Ideally, we want to see no more of the pre-2013 coefficients to be significant than we should expect by chance, which is around 5%. A substantially higher percentage would call our approach into question by suggesting an "impact" of the ACA prior to implementation. We see that 2 out of 24 pre-2013 implied effects (8.3%) are significant. The two pre-reform significant effects are associated with individual coverage. Overall, this gives us confidence in a casual interpretation of our results for most outcomes.

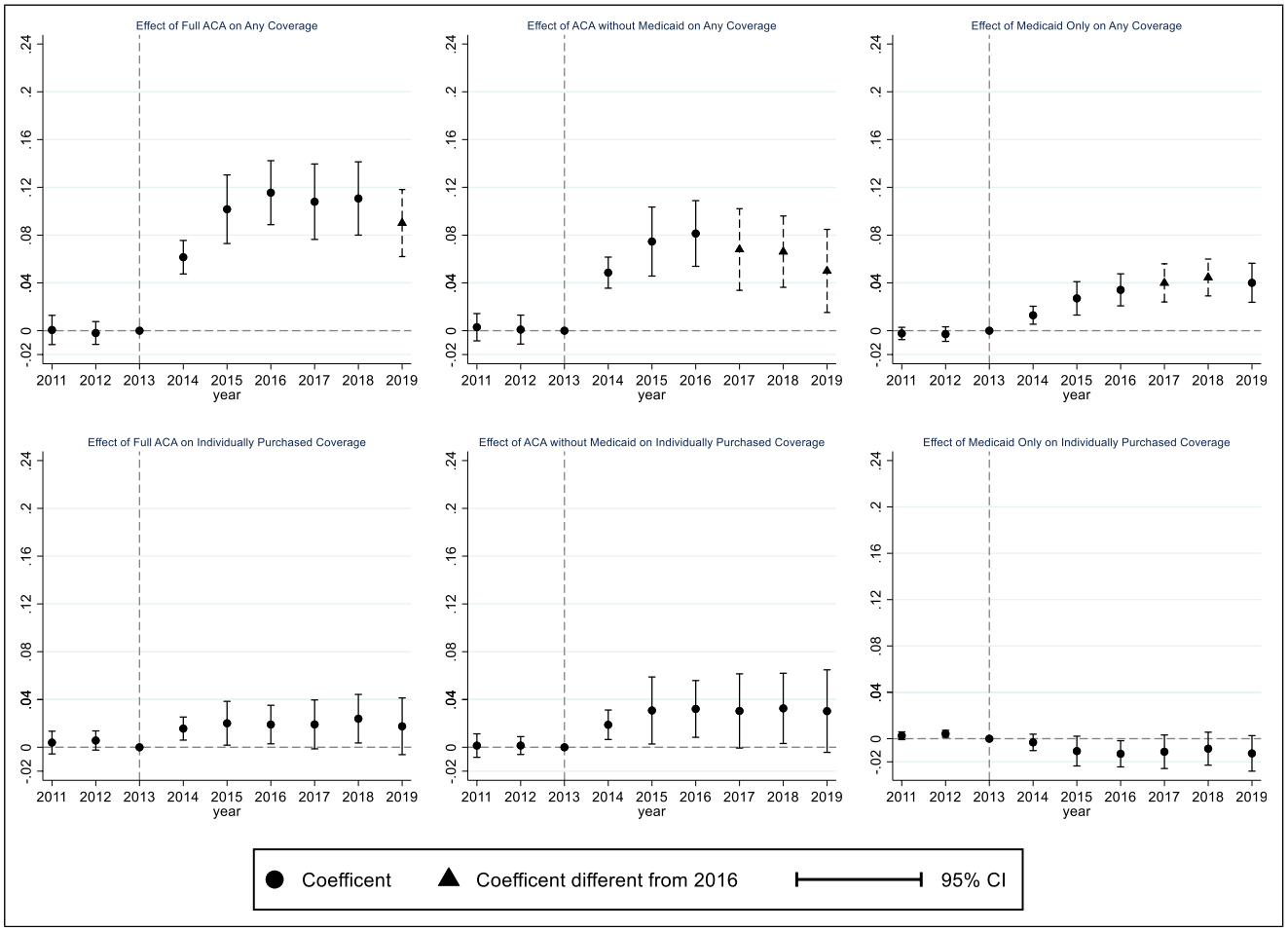

Figure 5. Subsample analysis, 138–400% of federal poverty level.
Notes. See notes from Figure 1.

We now turn to the year-by-year implied effects of the ACA. We see in the top row of Figure 1 that in the last 3 years of the Obama administration the full ACA led to statistically significant increases in the likelihood of reporting any coverage growing from 6.0 percentage points in 2014 to 10.8 percentage points in 2016 relative to 2013. In the first 2 years of the Trump administration, the increase in the likelihood of having any coverage remained roughly unchanged—about 11 percentage points—before falling to a 9.6 percentage point gain in 2019. The difference between the 2016 estimate (10.8 percentage point increase) and the 2019 estimate (9.6 percent point increase) is statistically significant.

We depict the impact of the full ACA on individual coverage, ESI, and Medicaid in the bottom row of Figure 1, the top row of Figure 2, and the bottom row of Figure 2, respectively. While the full ACA led to a statistically significant 1.1 percentage point increase in the likelihood of having individual coverage in 2017 relative to 2013, we see no statistically significant impact in 2018 or 2019. None of these estimates are statistically significantly different than 2016. We observe a statistically significant increase in the likelihood of having ESI due to the full ACA in each year between 2014 and 2016 compared to 2013, but there was no statistically significant increase between 2017 and 2019. None of the 2017, 2018, or 2019 estimates are statistically significant relative to 2016 either.

With respect to Medicaid, we see that in the last 3 Obama years the full ACA led to statistically significant increases in Medicaid coverage growing from 3.5 percentage points in 2014 to 8.2 percentage points in 2016 relative to 2013. In the first 3 years of the Trump administration (2017–2019), the increase in Medicaid due to the full ACA was between 8.4 and 8.8 percentage points relative to 2013. None of these estimates are statistically significantly different from 2016.

The remaining columns in Figures 1 and 2 decompose the impact of the full ACA into the impact of the national components of the ACA alone and the impact of the ACA Medicaid expansion alone. The top middle column of Figure 1 suggests that the national components of the ACA led to statistically significantly smaller increases in the likelihood of reporting any coverage during the first 3 years of the

Trump administration (3.8 percentage points in 2017 and 2018 and 3.6 percentage points in 2019) compared to 2016. These smaller increases in the likelihood of reporting any coverage are being driven primarily by the smaller increases in ESI during the first 3 years of the Trump administration when compared to 2016 (top middle panel of Figure 2).

The last column of Figures 1 and 2 suggests that the Medicaid expansion led to a statistically significantly larger increase in the likelihood of reporting any coverage in 2017 (7.0 percentage points) compared to 2016 (5.9 percentage points), before returning to the 2016 level of coverage gains in 2019. Not surprisingly, the bottom right panel of Figure 2 shows that the growth in the likelihood of reporting any coverage due to the Medicaid expansion can be attributed to increases in the likelihood of reporting Medicaid coverage.

To recap our baseline results, in a typical non-expansion state, coverage growth due the national components of the ACA fell during the first 3 years of the Trump administration (2017–2019) as compared to 2016. In a typical expansion state, the combined effects of the national components of the ACA and the Medicaid expansion led to increases in the likelihood of being covered that remained roughly unchanged—about 11 percentage points—in the first 2 years of the Trump administration relative to 2016 before falling to a 9.6 percentage point gain in 2019.

We stratify the sample by income to evaluate if particular income sub-samples drive our results, especially the weaker impact of the national components of ACA on ESI between 2017 and 2019. Figures 3-8 show event study results for income sub-samples of 0 to 138% of the FPL, 138 to 400% of FPL, and more than 400% of FPL respectively. Broadly speaking, the full sample results appear to be driven by those with income above 138% of the FPL. In Figure 6, we see that the national components of the ACA led to statistically significantly smaller increases in ESI in 2018 and 2019 relative to 2016 among those with income between 138 and 400% of the FPL. We also observe smaller increases in ESI during the first 3 years of the Trump administration relative to 2016 among those with income above 400% of the FPL in

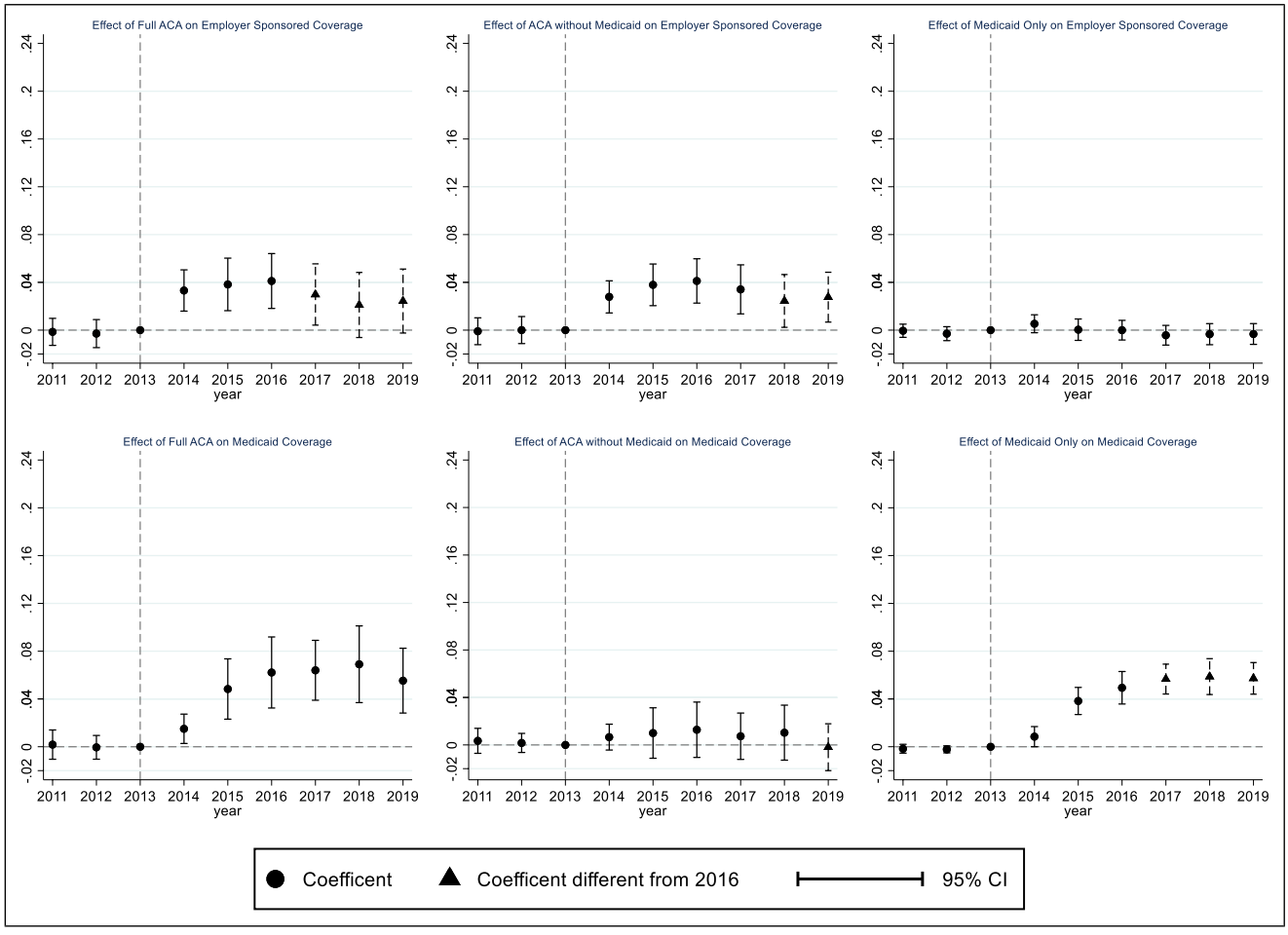

Figure 6. Subsample analysis, 138–400% of federal poverty level.
Notes. See notes from Figure 1.

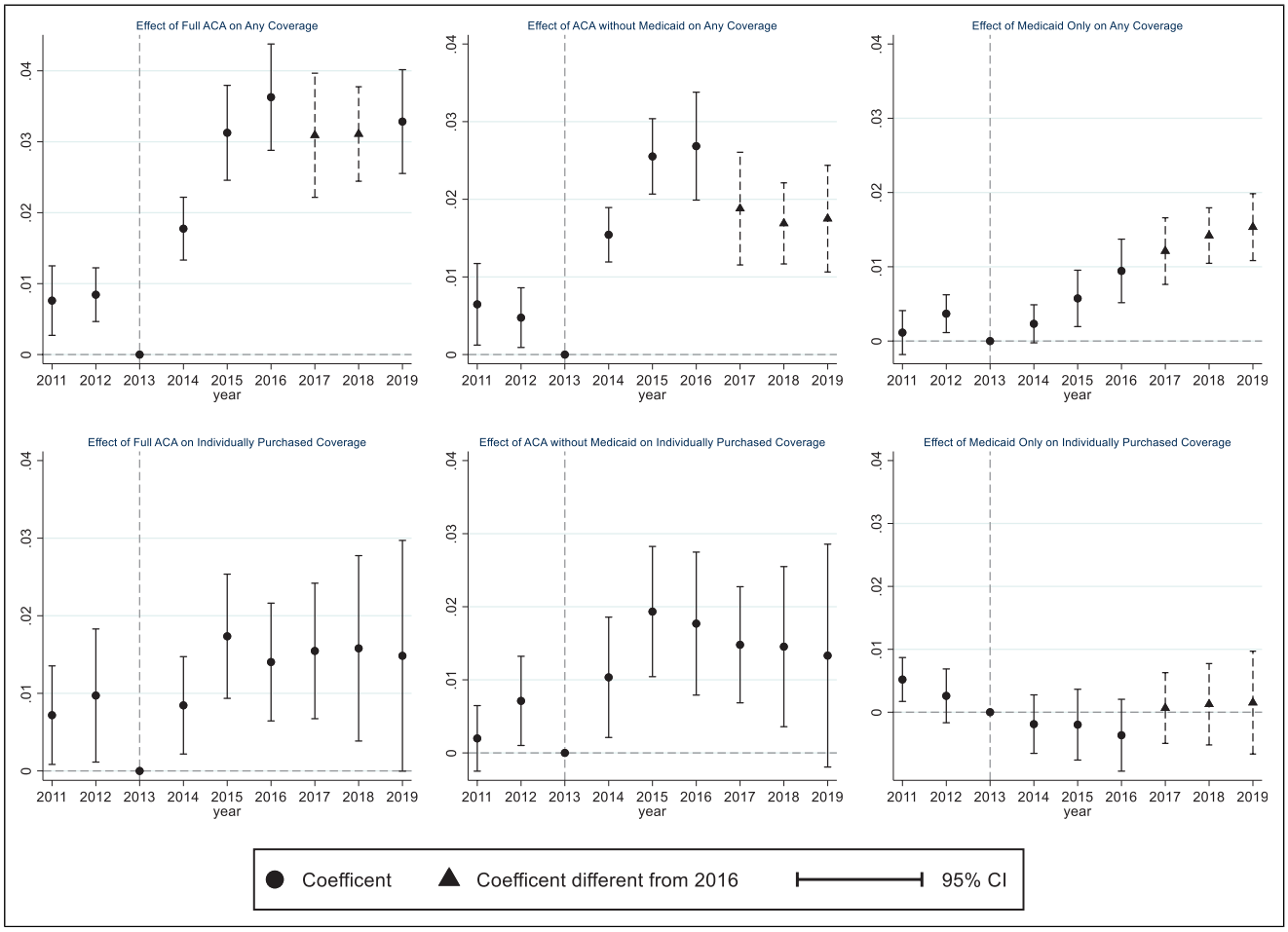

Figure 7. Subsample analysis, more than 400% of federal poverty level.
Notes. See notes from Figure 1.

Figure 8, but these differences are not statistically significant.

The national components of the ACA do not lead to statistically significant changes in individually purchased coverage in 2019 relative to 2013 for those with income above 138% of the FPL (bottom middle panels of Figures 5 and 7). These findings are of particular interest because this income group and this form of coverage should theoretically be the most affected by the 2019 individual mandate repeal.

Figure A2 through Figure A14 present the results from our specification checks. In Figure A2, we exclude 19–25 year olds. We observe a slightly smaller point estimate for the effect of the national components of the ACA and the Medicaid expansion alone on any coverage, which results in a smaller effect of the full ACA. This is unsurprising because young adults were targeted by the ACA due to their relatively high historic rates of uninsurance.

The next 7 figures address concerns regarding the timing or form of state Medicaid expansions. Figures A3 and A4 drop early expansion states using different classifications of such states, as described earlier. Figure A5 restricts the sample to the 13 treatment states and 16 control states that did not have some form of Medicaid expansion prior to January 2014. Figure A6 drops states that expanded after January 2014. Figure A7 drops all early expanders before 2014 and late expanders after 2014. Figure A8 drops the states that selected the BHP option. Figure A9 reclassifies Maine as a control state given the unusual timing of its expansion. In each case, the results are generally similar to our baseline findings.

Figure A10 replaces our time initial exchange glitch indicator with a time varying state based exchange indicator and suggests that this does not lead to major changes in our results. Figure A11 controls for state partisanship and state based reinsurance program status, which also does not impact our results. Figure A12 controls for Marketplace premium levels, premium spreads, and number of insurers. The inclusion of these premium controls does not lead to major changes in our results. Figure A13 aggregates the 2013 uninsurance rate to the state level and adds additional state level controls (percent of healthcare jobs out of all jobs,

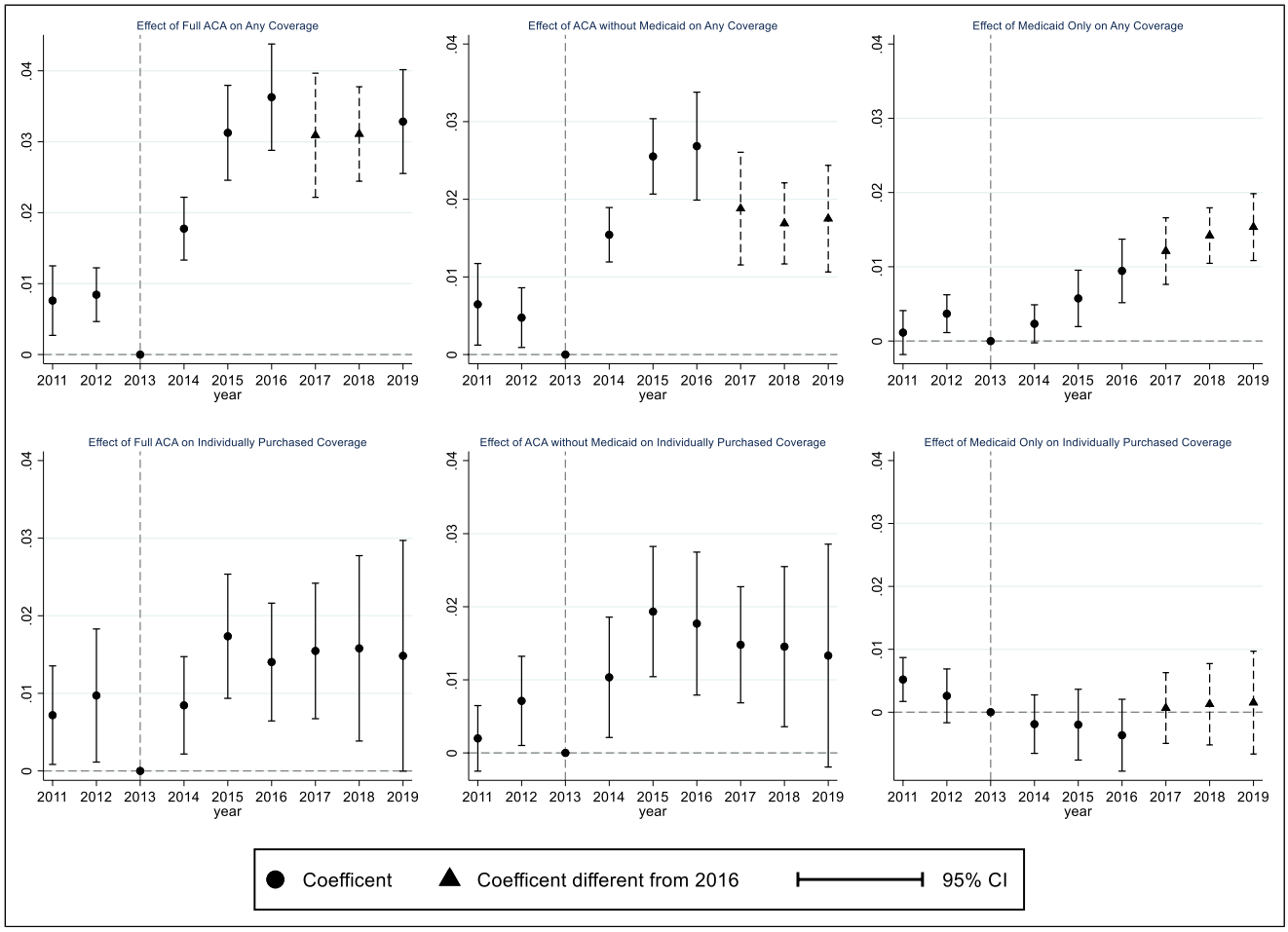

Figure 8. Subsample analysis, more than 400% of federal poverty level.
Notes. See notes from Figure 1.

percent of government jobs out of all jobs, and state per capita GDP) for labor market and economic conditions. We again find similar results.

Finally, Figure A14 reexamines the income stratification categories for our individual coverage analysis. We find larger individual coverage effects due to the national components of the ACA in the 138–250% of the FPL and the above 250% of the FPL regressions compared to the less than 138% of the FPL regression. The point estimates are more often statistically significant in the above 250% of the FPL regressions. This is also the case for our fully implemented ACA analysis. We find little evidence that the ACA Medicaid expansion influenced individual coverage.

Discussion

We examine the coverage impacts of the ACA during the first 3 years of the Trump administration. During this time, several changes in the management of the ACA were debated and implemented, such as reductions in outreach and the duration of open enrollment, the discontinuation of CSR payments, the near-repeal of much of the ACA, and the elimination of the individual mandate tax penalty starting in 2019. Each change may have influenced the coverage impacts of the ACA, either directly or by contributing to a general sense of uncertainty that could have affected consumers and insurers.

We find that, while the majority of coverage gains from the ACA remained intact under the Trump administration, there were some noteworthy changes. In non-expansion states, where the ACA mostly influenced private, non-group insurance markets, we find that the ACA's effect on non-elderly adults' probability of having coverage fell from 5 percentage points in 2016 to 3.8 percentage points in 2017 and 2018 and 3.6 percentage points in 2019, with the difference being statistically significant. In expansion states, we estimate similar coverage gains in 2016 through 2018 (about 11 percentage points in each year), before a fall to 9.6 percentage points in 2019. These smaller estimated gains in 2019 in both expansion and non-expansion states are especially notable given the repeal of the individual mandate, assuming this reflects the ability of individuals to time their response appropriately.

Our results also illustrate the importance of considering the source of coverage in addition to the overall level. In Medicaid expansion states, we find that the share of newly covered individuals on Medicaid rather than private insurance rose from about 50% in 2014–2016 to almost 65% in the first 2 years of the Trump administration, before falling to 56% in 2019. Fluctuations in the source of coverage could be consequential for patients, providers, and government budgets. Medicaid is widely known to reimburse less than private insurance, which could lead to reduced access. On the other hand, a switch from Marketplace to Medicaid coverage stemming from a reduction in income would likely reduce out-of-pocket expenses, as Marketplace plans come with premiums, deductibles, and co-payments that are not fully subsidized. Fiscally, this would shift some of the burden from federal to state governments, as states are responsible for 10% of the cost of the Medicaid expansion but none of the cost of the Marketplace subsidies.

While identifying the exact policy lever(s) driving this shift is beyond the scope of this article, the timing of the changes narrows the possibilities. For the observed 2016–2017 changes, we can rule out factors that would not have mattered until 2018. For instance, substantial supply-side responses were not likely until 2018 or 2019. Plans for 2017 were already listed on the Marketplace at the time of the 2016 election, and the surprising outcome made anticipatory responses unlikely. Moreover, the October 2017 elimination of CSR payments would not have influenced offerings until the 2018 plan year at the earliest. Additionally, the tax reform eliminating the mandate penalty was not passed until December 2017, so while we may have expected some anticipatory effects in 2018, the primary impact should not have emerged until 2019. These latter factors may help to explain the changes we observe between 2018 and 2019.

What factors, then, *could* be responsible for these earlier changes? A reduction in Marketplace coverage starting in 2017 is theoretically consistent with general uncertainty and anticipation of future changes driven by President Trump's election, as well as with reduced outreach at the end of the open enrollment period, which lasted through January 2017.[71] In turn, declines in Marketplace coverage could have led to the increase in Medicaid enrollment in expansion states given the gray area between Medicaid and Marketplace eligibility and challenges associated with enforcing different eligibility rules.[39,72]

Future research should continue to monitor the evolving impact of the ACA. The pandemic dramatically increased the number of individuals eligible for Medicaid or Marketplace subsidies while also influencing insurer risk assessments. The recently passed American Rescue Plan Act of 2021 introduced many short run changes to the ACA to promote coverage, including extending ACA subsidies to higher-income people who do not currently qualify and increasing subsidies for lower-income people who already qualify.[73] In addition, non-expansion states would receive a temporary increase in the federal matching rate for its current Medicaid beneficiaries if the state opts in to the Medicaid expansion. There will likely be pressure to make some of these temporary changes more permanent. Thus, debate over the role of government in the provision and financing of insurance will likely remain a topic of considerable debate.

Appendix

Table A1. Descriptive Statistics for Insurance Coverage

	Full Sample	Medicaid Expansion; at or Above Median Baseline Uninsured	Medicaid Expansion; Below Median Baseline Uninsured	Non-Expansion; at or Above Median Baseline Uninsured	Non-Expansion; Below Median Baseline Uninsured
Any insurance coverage	.792 (.406)	.749 (.433)	.847 (.360)	.726 (.446)	.830 (.375)
Employer-sponsored	.598 (.490)	.547 (.498)	.652 (.476)	.541 (.498)	.640 (.480)
Individually purchased	.094 (.292)	.094 (.291)	.094 (.292)	.090 (.286)	.104 (.305
Medicaid	.106 (.307)	.114 (.317)	.115 (.320)	.089 (.286)	.087 (.282)

Notes. Standard deviations are in parentheses. Medicaid expansion states are those that ever-expanded Medicaid.

Table A2. Event Study Results for Full Sample–Implied Effects.

	Any Insurance	Individually Purchased	Employer-Sponsored	Medicaid
Non-elderly adults aged 19-64 (pre-treatment uninsured rate = .203)				
PANEL I: ACA without Medicaid expansion				
ACA w/o Medicaid expansion 2011 (A)	.003 (.005)	.008* (.003)	.003 (.007)	−.003 (.004)
ACA w/o Medicaid expansion 2012 (A)	.008 (.007)	.010** (.003)	.002 (.005)	.001 (.001)
ACA w/o Medicaid expansion 2014 (A)	.029** (.009)	.018 (.010)	.011*** (.002)	.002 (.003)
ACA w/o Medicaid expansion 2015 (A)	.047** (.016)	.035* (.017)	.009* (.004)	.005 (.005)
ACA w/o Medicaid expansion 2016 (A)	.050** (.018)	.038* (.016)	.010** (.003)	.005 (.006)
ACA w/o Medicaid expansion 2017 (A)	.038* (.017)†††	.036* (.017)	.000 (.003)†††	.006 (.004)
ACA w/o Medicaid expansion 2018 (A)	.038* (.018)†††	.042* (.017)	.000 (.003)††	.001 (.004)
ACA w/o Medicaid expansion 2019 (A)	.036 (.022)††	.038* (.018)	.002 (.003)†	−.002 (.004)†
PANEL II: Medicaid expansion				
Medicaid expansion 2011 (B)	.005 (.006)	−.004 (.005	−.005 (.008)	.008 (.006)
Medicaid expansion 2012 (B)	−.004 (.008)	−.002 (.005)	−.002 (.006)	−.001 (.003)
Medicaid expansion 2014 (B)	.031** (.010)	−.009 (.010)	.008 (.004)	.034*** (.007)
Medicaid expansion 2015 (B)	.047** (.017)	−.021 (.017)	.007 (.006)	.063*** (.010)
Medicaid expansion 2016 (B)	.059** (.019)	−.027 (.017)	.010 (.007)	.076*** (.010)
Medicaid expansion 2017 (B)	.070*** (.018)††	−.025 (.018)	.015 (.010)	.080*** (.009)
Medicaid expansion 2018 (B)	.067** (.019)	−.034 (.019	.014 (.009)	.088*** (.009)
Medicaid expansion 2019 (B)	.059* (.022)	−.032 (.020)	.010 (.010)	.085*** (.009)
Panel III: Full ACA				
Full ACA 2011 (A + B)	.007 (.005)	.004 (.003)	−.002 (.004)	.005 (.005)
Full ACA 2012 (A + B)	.005 (.004)	.008 (.004)	.000 (.003)	.000 (.003)
Full ACA 2014 (A + B)	.060*** (.004)	.009** (.003)	.018*** (.004)	.035*** (.006)
Full ACA 2015 (A + B)	.094*** (.005)	.015*** (.003)	.015** (.004)	.067*** (.008)
Full ACA 2016 (A + B)	.108*** (.005)	.011** (.003)	.020** (.006)	.082*** (.008)
Full ACA 2017 (A + B)	.108*** (.006)	.011** (.004)	.015 (.009)	.087*** (.008)
Full ACA 2018 (A + B)	.105*** (.007)	.008 (.006)	.015 (.009)	.088*** (.008)
Full ACA 2019 (A + B)	.096*** (.007)†	.007 (.007)	.011 (.009)	.084*** (.009)

Notes. Coefficient estimates are shown. Standard errors, heteroskedasticity-robust and clustered by state, are in parentheses. *** indicates statistically significant at 0.1% level; ** 1% level; * 5% level. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 is denoted by ††† at 0.1% level, †† at 1% level and † at 5% level. All regressions include area and time fixed effects, and the full set of controls.
ACA: affordable care act.

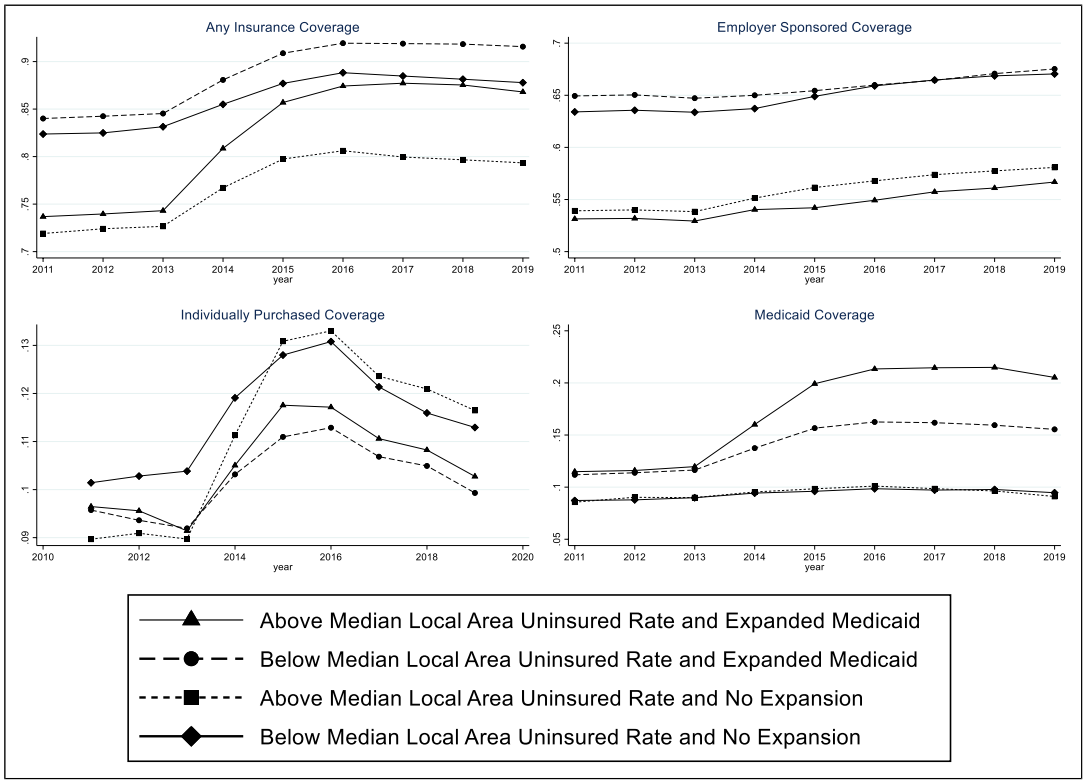

Figure A1. Unadjusted changes in insurance coverage over time.
Notes. This figure plots changes in insurance coverage over time by coverage type stratified by expansion status and 2013 uninsurance rate.

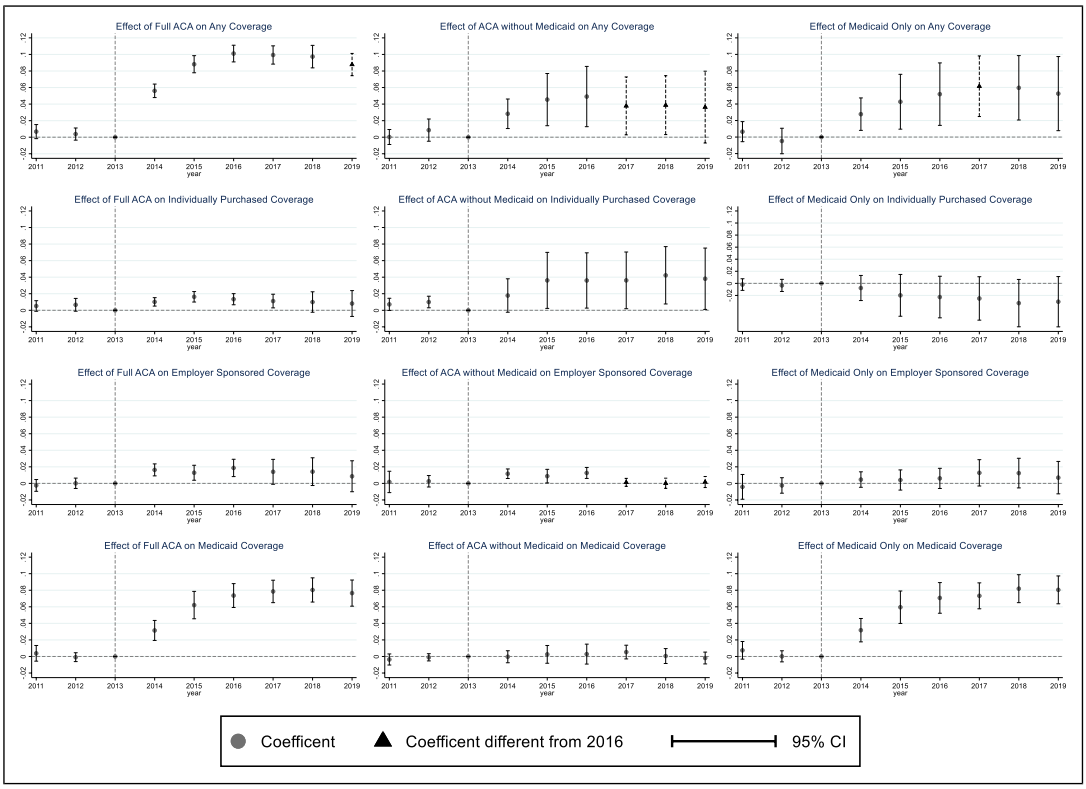

Figure A2. Drop 19–25 year olds.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

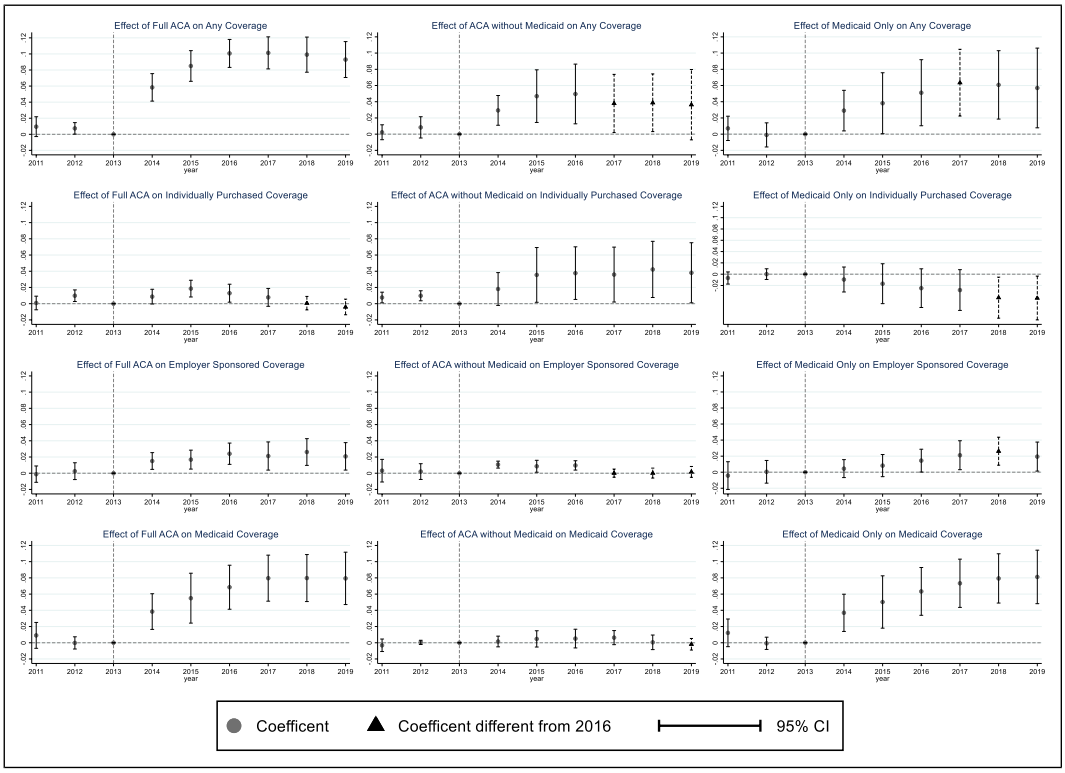

Figure A3. Drop ACA early expanders version 1.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

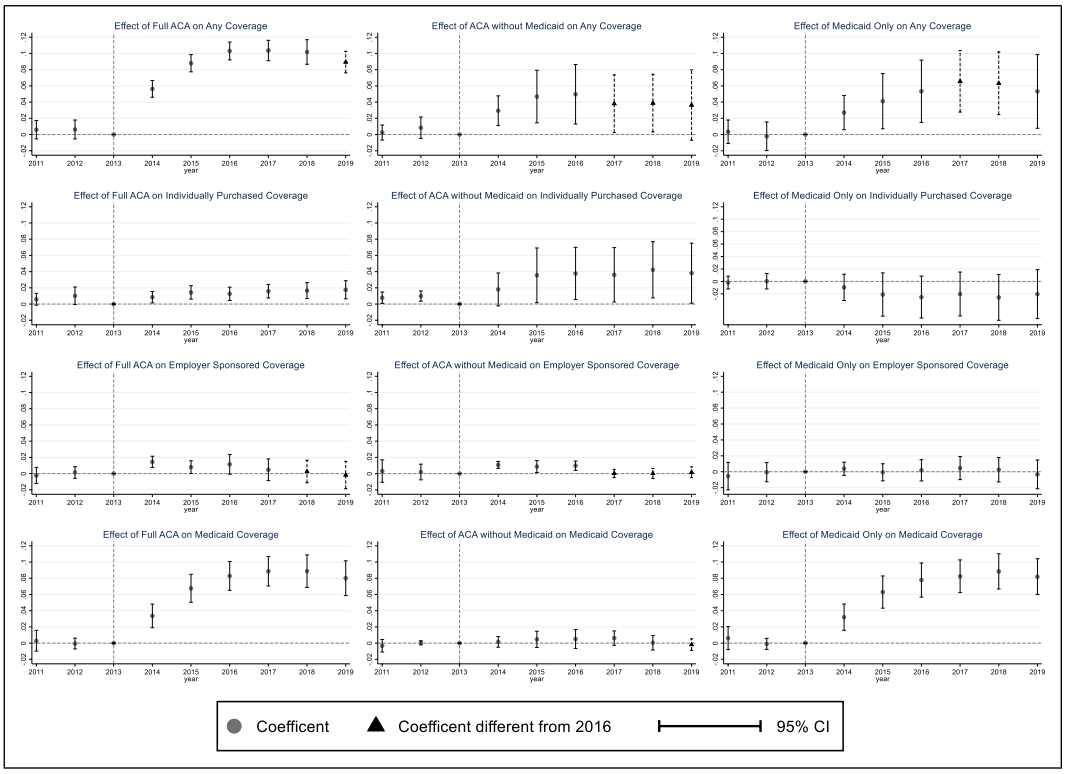

Figure A4. Drop ACA early expanders version 2.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

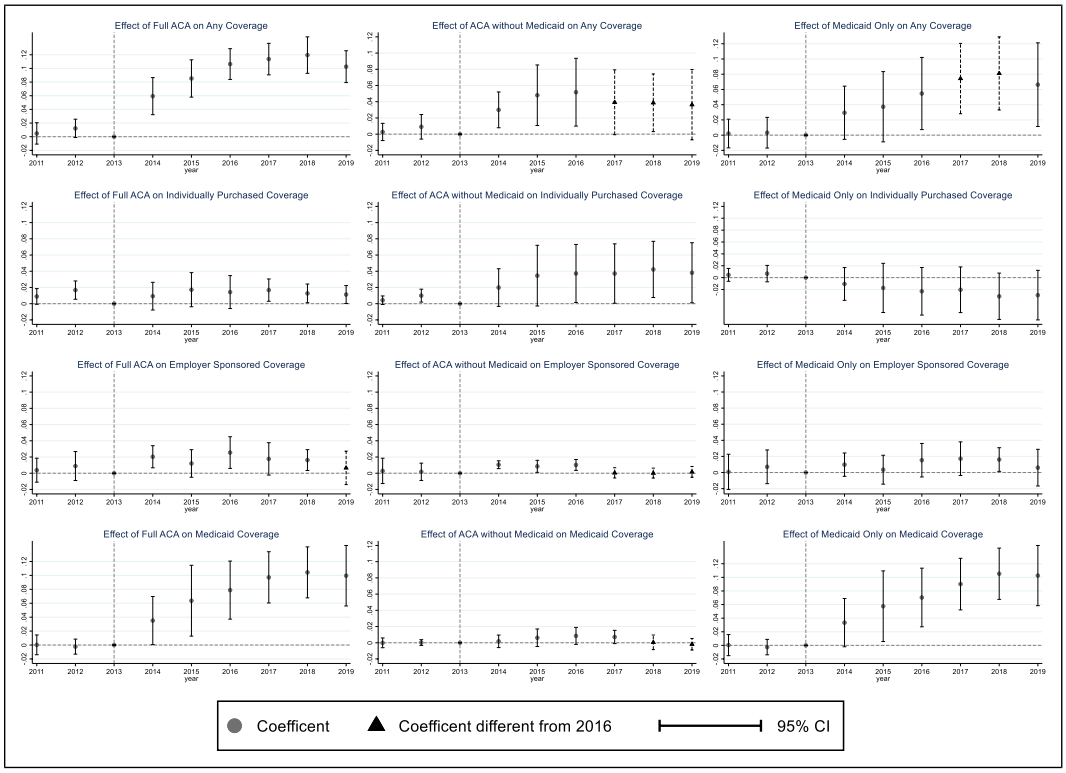

Figure A5. Restrict treatment and control states to those without any form of Medicaid expansion before 2014.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

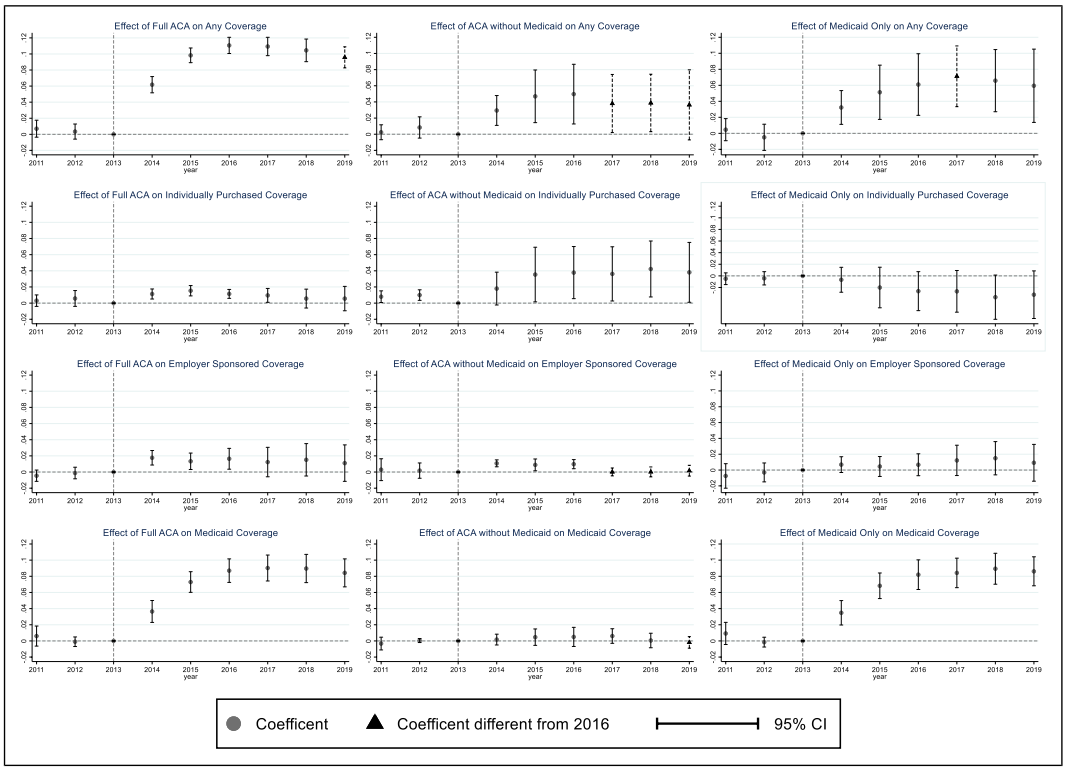

Figure A6. Drop ACA late expanders.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

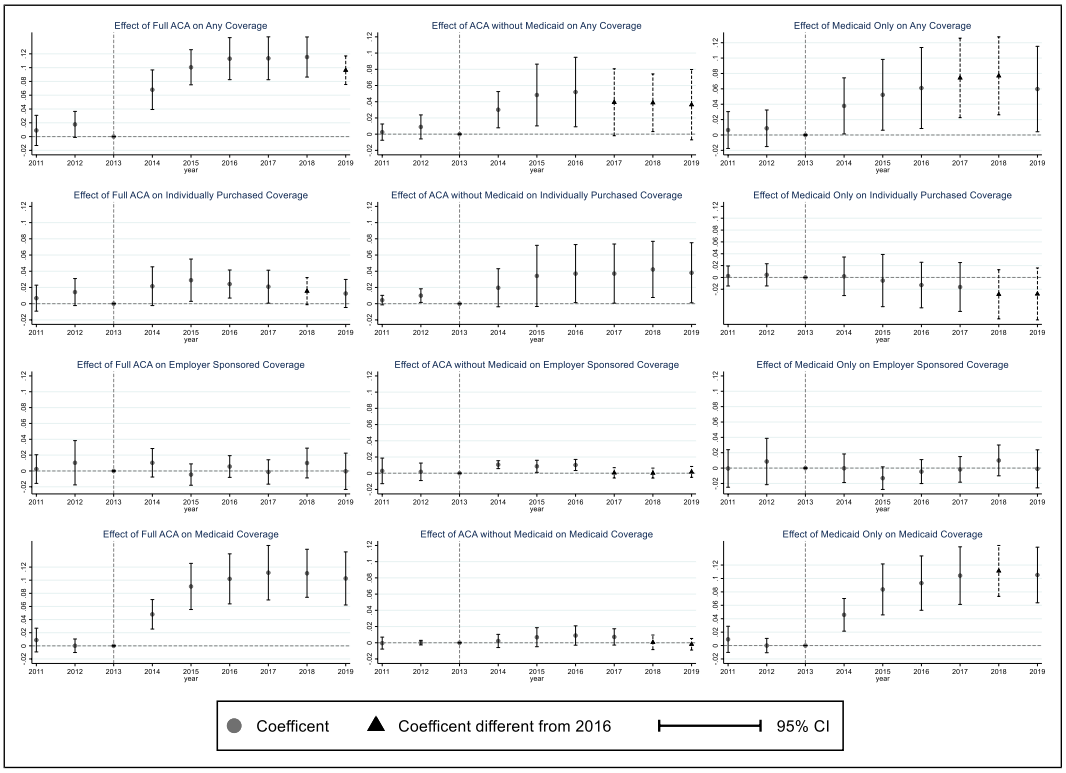

Figure A7. Drop all early and late expanders.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

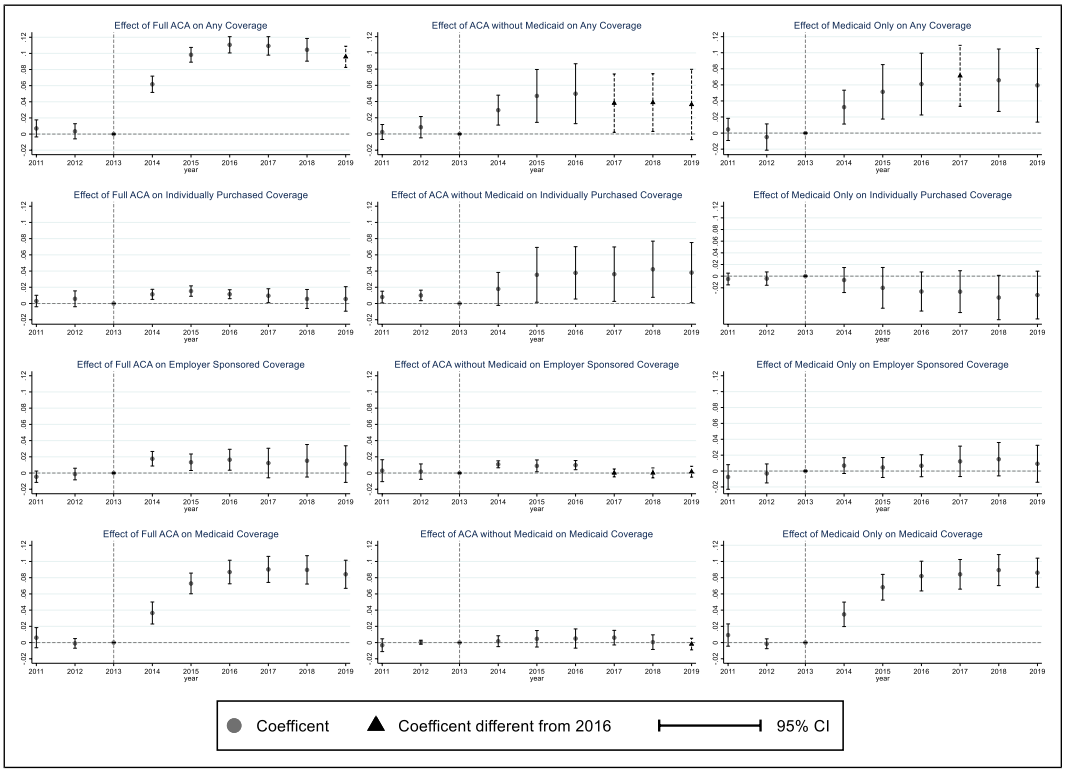

Figure A8. Drop New York and Minnesota.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

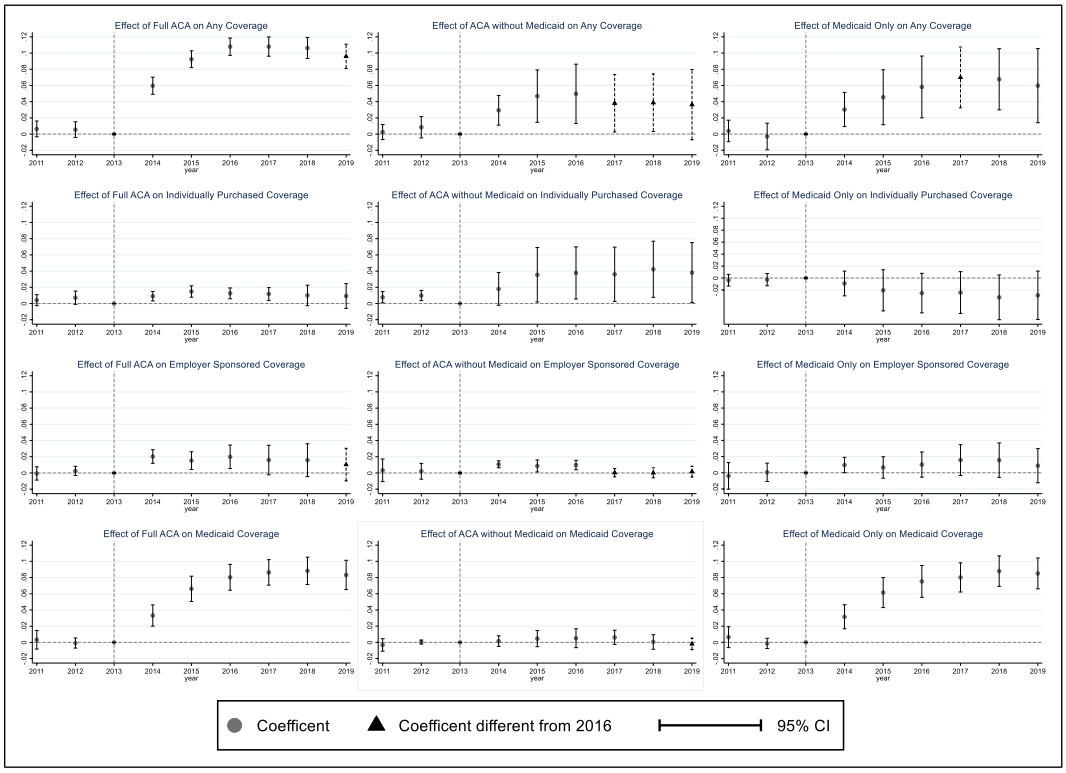

Figure A9. Categorize maine as a control state.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

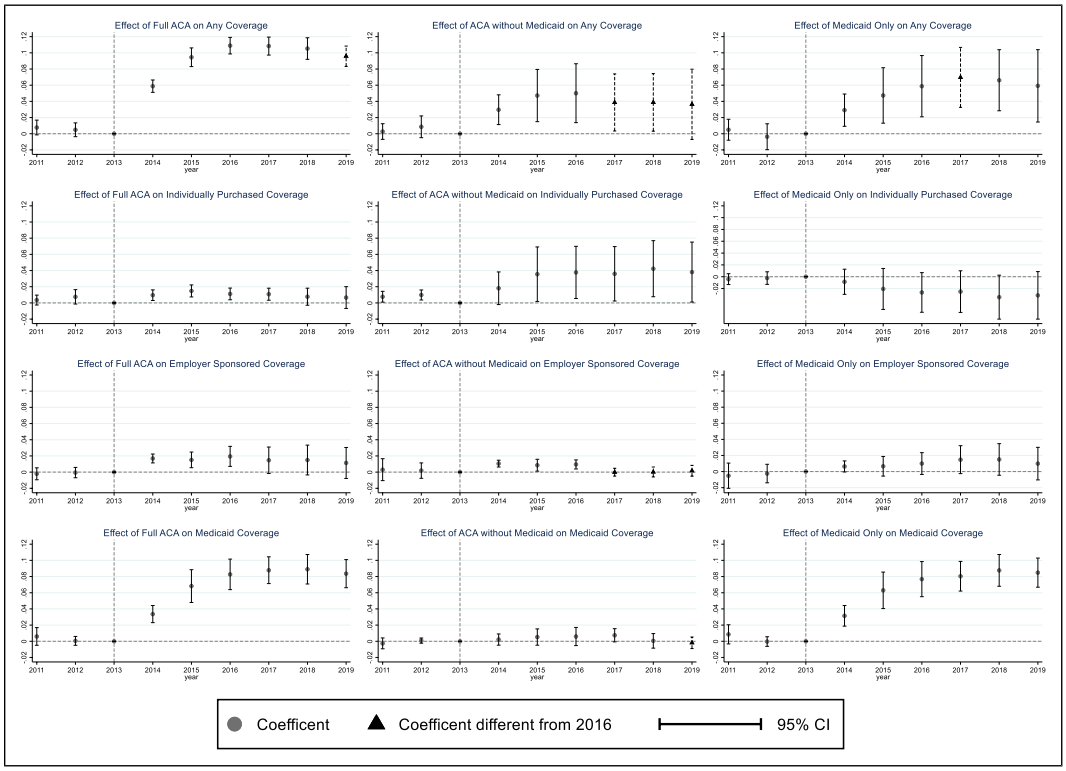

Figure A10. Replace Marketplace glitch indicator with state based Marketplace indicator.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

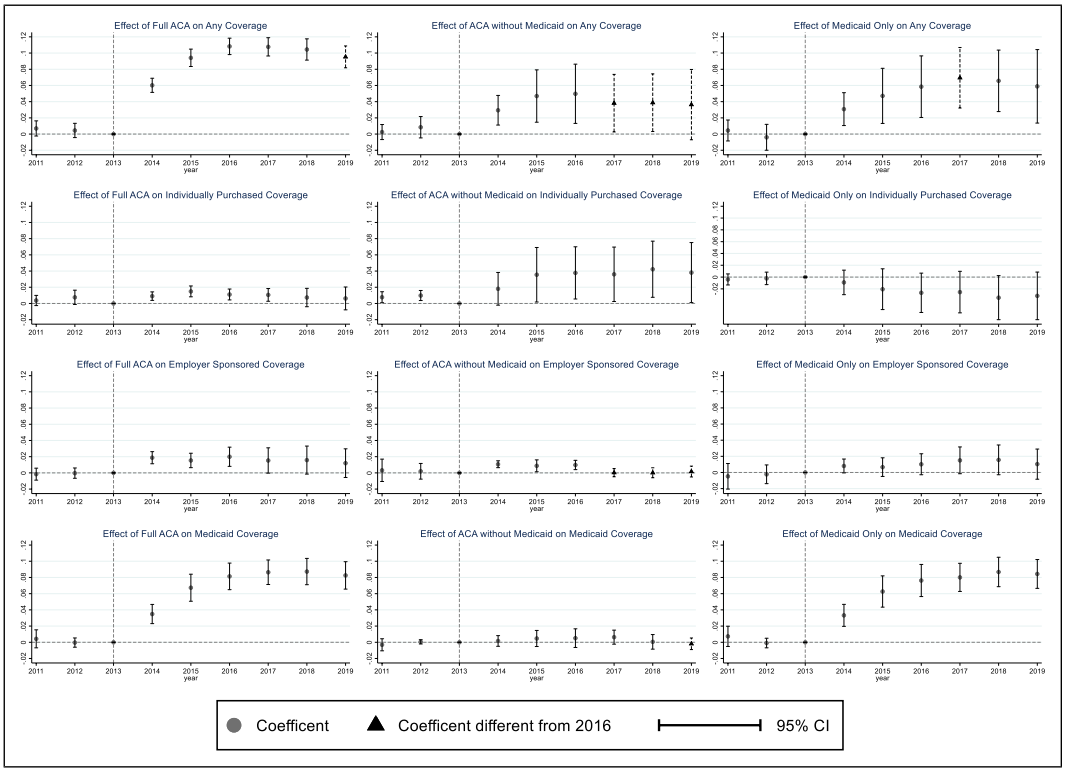

Figure A11. Add state based reinsurance program indicator and state partisan composition controls.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

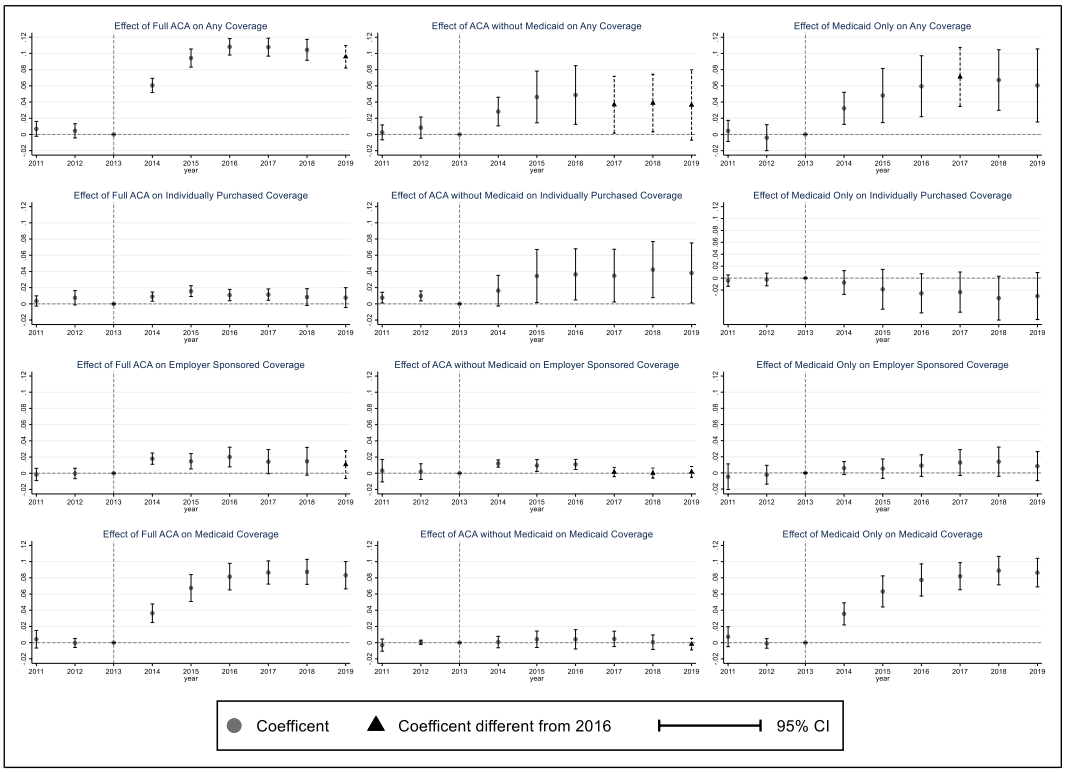

Figure A12. Add controls for marketplace premium changes over time.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

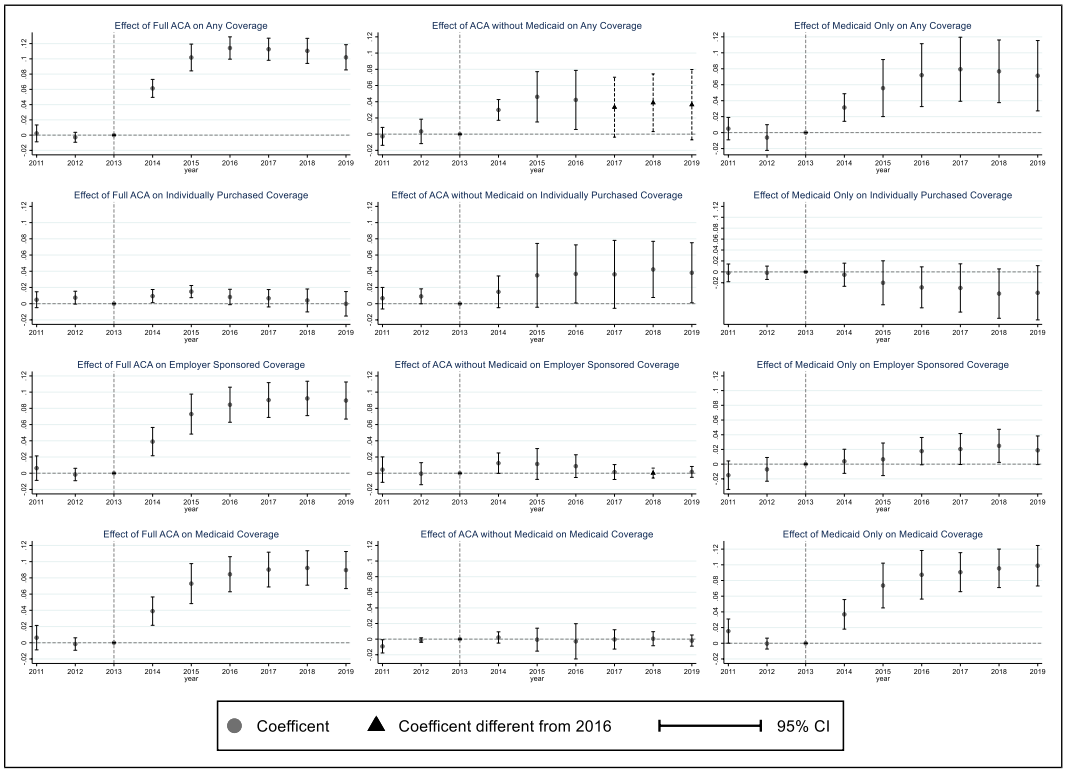

Figure A13. Use state level uninsurance rate with additional state controls.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set.

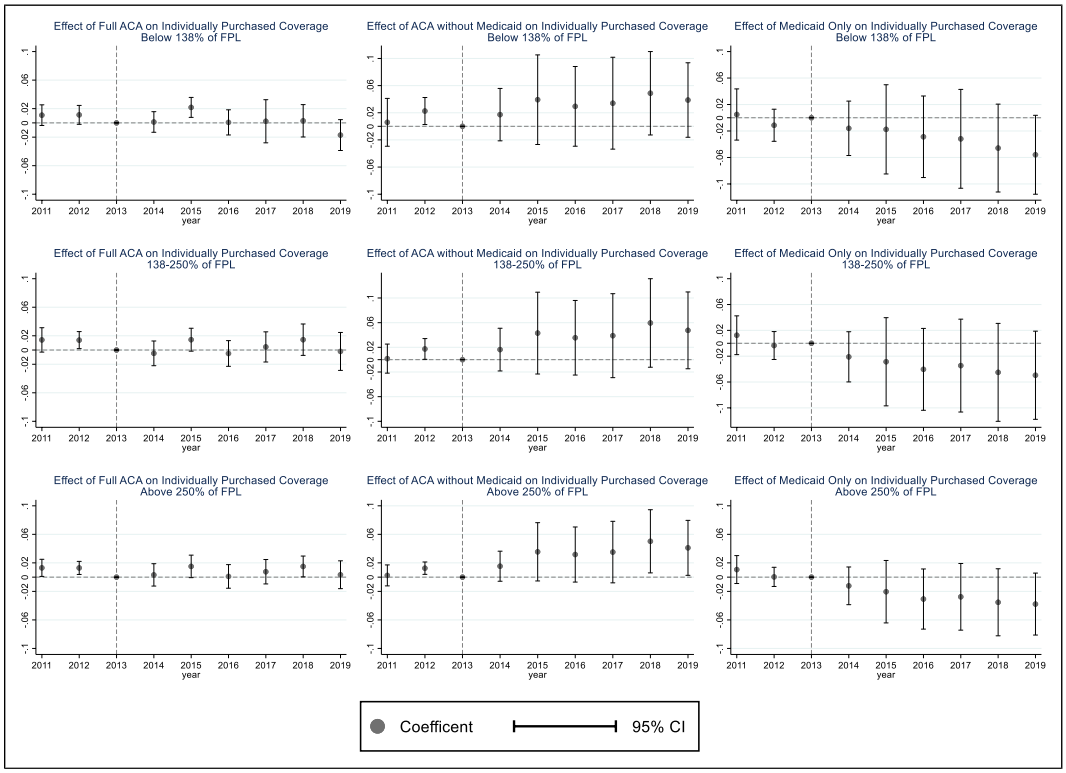

Figure A14. Subsample analysis by income for individual coverage.
Notes. Standard errors are heteroskedasticity-robust and clustered by state. Statistically significantly different effect in 2017, 2018, and 2019 relative to 2016 at 5% level of significance are denoted by a triangle for coefficient. All regressions include area and time fixed effects, and the full set of controls.

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