Laying Down the Welcome Mat: The Impact of the ACA Medicaid Expansion on Health Coverage for Previously Eligible Children[†]

Benjamin C. Chu[‡]

August 9, 2022

[†]I thank Timothy Halliday, Teresa Molina, Sang Hyop Lee, Ruben Juarez, Victoria Fan and participants at the UH Mānoa Applied Microeconomics Seminar for excellent comments and feedback that have contributed to the progress of this paper. I have not received any funding for this project. All errors are my own.

[‡]Doctoral Candidate, University of Hawai'i at Mānoa. Address: 2424 Maile Way, 525 Saunders Hall, Honolulu, HI 96822. email: bcchu@hawaii.edu

Abstract

In this paper, I estimate the effects of the Patient Protection and Affordable Care Act Medicaid Expansion on health coverage among families with children who were previously eligible for Medicaid prior to the expansion. I utilize the American Community Survey (ACS) from 2012 to 2017 and adopt a difference-in-differences approach that measures the changes in health coverage for Medicaid and CHIP eligible children before and after the ACA Medicaid expansion. I find that there are modest yet significant increases in public coverage across all years for children who were previously eligible for Medicaid and CHIP prior to the expansion, providing evidence of a "welcome mat" effect. However, I observe significant crowding out in employer-sponsored insurance for children who were previously eligible as well as children who became newly eligible under the new adjusted gross income (MAGI) thresholds established after 2014.

Keywords: Medicaid, CHIP, ACA, Welcome Mat

JEL Classifications: I13, I38

1 Introduction

Medicaid and the Children's Health Insurance Program (CHIP) have been essential pathways for providing insurance to low-income children. With the introduction of CHIP as part of the Balanced Budget Act of 1997, states received federal funds to cover children and pregnant women who were uninsured but had incomes exceeding the existing thresholds set for Medicaid. Currently, the program provides health coverage to nearly 6.8 million individuals each month, the majority of which are children (CMS 2021). Over the last few decades, Medicaid and CHIP have helped to significantly reduce the number of uninsured children by more than 60% (Dubay and Kenney 2018); however, nearly 6 in 10 uninsured children are eligible but are not currently enrolled (Haley et al. 2021).

The reduction in the number of uninsured children was attributed to the establishment of the Affordable Care Act (ACA) in 2010 that brought upon the largest reform of the United States healthcare system since the introduction of Medicaid and Medicare in 1965 (Georgetown University Center for Children and Families 2017). Arguably, the most significant component was the state-elected expansion of Medicaid to low-income adults. The expansion has resulted in significant and greater reductions in the rates of the number of uninsured residing in states that expanded Medicaid, relative to states that elected to not participate in the expansion (Courtemanche et al. 2017; Decker et al. 2017 ; Kaestner et al. 2017; Miller and Wherry 2017; Simon et al. 2017; Sommers et al. 2015; Wherry and Miller 2016).[1]

While a significant portion of adults became eligible under the expansion, eligibility for Medicaid and CHIP was largely unchanged for children both prior to and after the expansion. This was largely a result of the maintenance of eligibility (MOE) provision that prohibited states from restricting children's eligibility limits and enrollment policies.[2] This implies that many of the children who enrolled into Medicaid did so while being already eligible. This phenomenon has been

[1]These estimates range between 2 to 15 percentage points in the literature for low-income adults (Courtemanche et al. 2017; Duggan et al. 2019; Frean et al. 2017; Leung and Mas 2018; Simon et al. 2017; Wherry and Miller 2016).

[2]This no longer applies to children with incomes above 300% FPL as of October 2019.

labeled known as the "welcome mat" effect that features gains in public coverage among individuals who were already eligible for Medicaid and CHIP (Frean et al. 2017; Hudson and Moriya 2017).

The "welcome mat" effect could be explained by a variety of factors unrelated to the modification of children's Medicaid and CHIP eligibility thresholds. The ACA's outreach and enrollment strategies promoted affordable options in insurance programs, informed families about penalties for failing to meet insurance coverage mandates, and reduced administrative barriers to enrollment (Aizer 2007). Other features of the ACA that assisted in improving eligibility determination for Medicaid include, but are not limited to, the reduction or elimination of waiting periods; real-time eligibility determination; adopting uniform measures in counting income; and shifting to modernized, technology-driven approaches for enrollment and renewal procedures. These co-occurring features could have contributed to an increase in public coverage of a group that, otherwise, was not the main intended audience of the ACA Medicaid expansion.

In this paper, I estimate the impact of the 2014 ACA Medicaid expansion on health coverage for children who were eligible for Medicaid and CHIP prior to the expansion ("welcome mat" effect). I utilize national-level data from the 2012–2017 American Community Survey (ACS), and adopt a difference-in-differences strategy that measures the changes in children's eligibility for Medicaid and CHIP on children's health coverage before and after the ACA Medicaid expansion. The ACS collects data on individual demographics, health coverage, and income (measured as a percentage of the federal poverty line). I construct children's eligibility by measuring income against the state-age Modified Adjusted Gross Income (MAGI) thresholds made available by the Kaiser Family Foundation (KFF).

I find a modest but statistically significant "welcome mat" effect ranging between 1.3 and 3.5 percentage points in public coverage for children who were previously eligible for Medicaid and CHIP. This is important given that a significant portion (between 37 and 42%) of my sample was deemed already eligible for Medicaid and CHIP when states expanded Medicaid. Consequently, the "welcome mat" effect explains roughly 60–75% of gains in public coverage for children during the roll-out of the ACA Medicaid expansion, with the effect declining overtime. Additionally, I

find that there were significant increases in public coverage ranging between 1.8 and 7.9 percentage points for children who became eligible for Medicaid and CHIP after the expansion took place. Both sets of coefficients are robust with various specification checks, such as partialing out states that expanded early and including controls for eligibility for premium subsidies in non-expansion states. When introducing a triple difference specification across states, time and expansion status, I find that increases for public coverage for both previous and newly eligible children are stronger in expansion states compared to non-expansion states. This potentially highlights the effectiveness in outreach and enrollment strategies in states that expanded Medicaid to adults.

Surprisingly, I find significant evidence of crowd-out for private insurance, mainly employer sponsored insurance (ESI), for both the previously eligible and newly eligible children. This finding is interesting as previous studies that have examined the "welcome mat" effect found no evidence of crowding out Frean et al. (2017). The size of private insurance crowd-out are similar to those in previous studies where they observed crowd-out rates for low-income adults ranging between 23% to 33% (Courtemanche et al., 2017; Kaestner et al., 2017). Given that much of the literature has found negligible effects of the ACA expansion on labor supply (Duggan et al. 2019; Leung and Mas 2018; Kaestner et al. 2017), it is unlikely that crowd-out from employer sponsored insurance could likely be attributed job leave. Instead, my findings could suggest that parents could prefer fully subsidized and comprehensive public coverage over limited and costly private coverage for their children.

Most studies that have examined the impacts of the ACA expansion on health coverage did not attempt to measure the "welcome mat" effect, as there are complexities associated with measuring income against Medicaid eligibility thresholds (Currie and Gruber 1996a; Currie and Gruber 1996b). Frean et al. (2017) measured the "welcome" effect concurrently with other ACA policy measures, such as the individual mandate and premium subsidies, for all individuals between 0 and 64 years old. They found that the ACA led to significant decreases in the uninsured rate, with 29% of decreases occurring among previously eligible individuals ("welcome mat" effect). However, they do not separately estimate the "welcome mat" effect for children.

Hudson and Moriya (2017) attempted to quantify the "welcome mat" effect by modeling children's eligibility after their parents' eligibility thresholds, and found evidence of a "welcome mat" effect among children whose parents were previously eligible for Medicaid. However, parents' eligibility thresholds are much lower than those for children and, therefore, could understate the "welcome mat" effect for children. Furthermore, they excluded thresholds for separate CHIP and limited their sample to those below 138% FPL, both of which could significantly reduce the fraction of children eligible for Medicaid and CHIP.

While it is evident that there have been improvements in children's receiving health coverage, the mechanisms behind this are not yet clear. This paper makes several contributions to this. First, this paper estimates the "welcome mat" effect strictly for children by using children's eligibility using their state-age MAGI thresholds and those for separate CHIP. My study is unique in its finding of crowding out of private insurance among children who were either previously eligible or newly eligible for Medicaid and CHIP. Lastly, this paper is the first to document the heterogeneous "welcome mat" effects across race and ethnicity and by states' expansion status.

The paper proceeds as follows. Section 2 provides background on the provisions of the ACA and its effects on Medicaid and CHIP. Section 3 describes my data and eligibility measurements. Section 4 provides my empirical methodology. Section 5 presents my findings. Section 6 discusses the implications and interpretations of my results. Section 7 concludes.

2 Background

The Children's Health Insurance Program (CHIP) was introduced under the Balanced Budget Act of 1997 and serves as an essential source of health insurance for children, covering millions of children each month. CHIP is a federal-state partnership that provides health coverage to uninsured children in families with incomes too high to qualify for Medicaid but too low to afford private coverage. The financing model for CHIP includes enhanced federal support, where states receive federal matching funds based on the Medicaid formula for all children qualifying for CHIP (even if

they are already covered by their Medicaid program). However, the degree of federal participation is greater than for Medicaid. Lastly, state governments can design their CHIP program in one of three ways: (1) a separate CHIP program, (2) through their Medicaid program, or (3) a combination of both.

Much of the growth in Medicaid and CHIP during recent years can be attributed to the policies introduced in the 2010 Affordable Care Act (ACA). The ACA was created for the purpose of achieving nearly universal coverage in the United States by introducing mandates, subsidizing premiums for private insurance purchases, expanding Medicaid, and reforming insurance markets and health insurance changes Gruber (2011). Originally, the ACA proposed to expand Medicaid nationwide to all individuals with incomes below 138% of the federal poverty line (FPL), but was rejected by the Supreme Court in 2012.[3] However, in 2012, the Supreme Court ruled that states could voluntarily elect to participate in the expansion instead of being subjected to a mandate. Consequently, twenty-five states (including DC) adopted the Medicaid expansion on January 1st, 2014, with seven additional states following between 2014 and 2017. I map each state's expansion status from 2014–2017 in Figure 1. This resulted in the average eligibility threshold rate for all childless adults in expansion states increasing from 30% FPL in 2013 to 138% in 2014. However, compared to adults, the eligibility thresholds for children were relatively robust before and after the expansion. Since 2014, the median income eligibility level for CHIP has been roughly 255% of the FPL (Brooks et al. 2021).[4] Furthermore, as illustrated in Figure 2, there are minor differences in children's eligibility status based on states' expansion status across income levels.

There were many changes, aside from the expansion of Medicaid, that were introduced in the ACA and could've potentially affected children's' enrollment into Medicaid and CHIP. First, the ACA redefined how financial eligibility is determined in Medicaid for non-disabled groups with the introduction of the Modified Adjusted Gross Income (MAGI) system. MAGI is calculated by applying various deductions to adjusted gross income (AGI). Moreover, the ACA required states to

[3]The statutory cutoff for Medicaid eligibility in expansion states is 133% of the FPL, but the ACA requires states to apply a standard income disregard equivalent to 5% of the FPL, essentially raising the eligibility threshold to 138% of the FPL.

[4]The appendix provides several maps that summarize the changes in the eligibility thresholds before and after the expansion for several age groups and separate CHIP.

convert their eligibility criteria prior to its enactment to MAGI equivalent levels. This reduced the complexity in income-counting methods that were used prior to the ACA in determining eligibility across states (Brooks et al. 2021). The ACA also introduced the maintenance of effort (MOE) provision that required states to maintain Medicaid and CHIP income eligibility standards, preserve enrollment policies, and prohibit increases in premiums.[5] Together with the ACA Medicaid expansion, the MOE provision greatly reduced uninsured rates for children to their lowest points (Georgetown University Center for Children and Families 2017).

Several non-income related features of the ACA contributed to a phenomenon known as the "welcome mat" effect, where enrollment increased for those who were previously eligible prior to the expansion, but didn't enroll until after the expansion took place. The ACA's implementation of outreach and enrollment strategies most likely promoted affordable options in insurance programs, informed families about penalties for failing to meet insurance coverage mandates, and reduced administrative barriers to enrollment (Aizer 2007). Other features of the ACA that assisted in improving eligibility determination for Medicaid include, but are not limited to, the reduction or elimination of waiting periods; real-time eligibility determination; and shifting to modernized, technology-driven approaches for enrollment and renewal procedures. Together, these factors could have led to a "welcome mat" effect in public coverage gains for children already eligible for Medicaid and CHIP.

There have been several challenges in maintaining funds for CHIP during recent years. On May 8, 2018, the Trump Administration submitted to Congress a proposal requesting a reduction of over $7 billion for the annual Children's Health Insurance Program. The proposal would have rescinded over $5.1 billion in the amounts made available by the Medicaid CHIP Reauthorization Act of 2015 to accompany the 2017 national allotments to states. This comprised $2 billion in recoveries as of May 7, 2018, and $3.1 billion in unobligated balances that were available as of October 1, 2017. The proposal would also rescind nearly $1.9 billion in amounts available for the CHIP Contingency Fund. The Contingency Fund provides payments to states that experience

[5]This requirement was modified in 2018 under the Healthy Kids Act and only applies to families with incomes of less than 300% of the FPL.

issues with over enrollment. Currently, Congress has extended annual funding for CHIP until September 30, 2027. However, the future of CHIP funding is unknown given the uncertainty of the political landscape moving forward. Important provisions like the MOE requirement and temporary increases in federal CHIP matching rates that are essential for delivering and maintaining continuous coverage could be eliminated if sufficient appropriations for CHIP is not secured.

3 Data

I utilize the 2012–2017 American Community Survey (ACS) as the primary data source in my study. The American Community Survey (ACS), which the United States Census Bureau conducts every month, is the largest household survey in the nation, surveying almost 3 million people annually, or over 92 percent of the country's population. The ACS includes information on health insurance coverage, measures of poverty and income, individual demographics, employment and geographic location. Since the ACS is mandatory, issues arising from sample selection are less likely to occur. The survey identifies all 50 states (including DC) along with localities, or Public Use Microdata Areas (PUMAs). PUMAS are made up of approximately 2300 mutually exclusive areas, each with at least 100,000 people. I am unable to use data prior to 2012 because the PUMA boundaries were redrawn using the Decennial Census after 2011.

Given my focus on children, I restrict my sample to those ages 18 and under with at least one biological parent present and living in the same household. I exclude married minors, children with Medicare coverage, and non-U.S. citizens.[6] The ACS also identifies household members by disability status (hearing difficulties, physical difficulties, etc.). Due to the complexities of determining eligibility for this population, I also exclude them from the analysis.

The ACS asks each respondent if they are covered by any of the following categories of health insurance: Medicaid, Medicare, employer-sponsored, non-group private, TRICARE or other mili-

[6]Non-US citizens are ineligible for Medicaid unless they meet the requirement of waiting at least 5 years to receive "qualified" immigration status before becoming eligible. Exemptions exist for some groups (refugees, asylees, and lawfully permanent residents who were formally refugees or asylees).

tary health care, Medical Assistance, government assistance programs for low-income or disabled individuals, or any unspecified. This allowed me to categorize health coverage into the following types: public (Medicaid), employer sponsored, non-group private, or uninsured, which serve as the variables of interest in this study. Although the Census uses the ACS as a reliable source to determine how many Americans have health insurance, it does have its limitations for determining Medicaid eligibility because it only asks respondents if they have ever received "Medicaid, Medical Assistance, or any type of government-assistance plan for low-income individuals or individuals with disabilities." This presents a potential issue, as respondents may misreport private coverage as public coverage and vice versa.[7]

I divide Medicaid and CHIP-eligible children into two mutually exclusive groups: those who were "previously eligible" and those who were "newly eligible". The first group is comprised of children who were eligible for Medicaid and CHIP prior to the 2014 ACA expansion. These children define the "welcome mat" population that may have enrolled due to reductions in administrative barriers, the individual mandate, outreach efforts and other provisions under the ACA (Aizer 2007). Identifying the take-up of Medicaid and CHIP is important for this population given that the income-related eligibility requirements for Medicaid and CHIP were relatively robust between 2012 and 2017. Therefore, any increases observed for this group would reflect the effectiveness of the policies or actions under the ACA that were unrelated to expanding income generosity in existing state programs. The newly eligible population represents children who became eligible under the new Medicaid and CHIP income thresholds set by the state after the 2014 ACA Medicaid expansion took place.

To measure eligibility status, I use ratios of family income to poverty thresholds for households provided in the ACS. The ACS calculates poverty status as a ratio of family income to the poverty threshold set based on family size and the number of related children under 18.[8] For example, the poverty threshold in 2015 for a 3-person family with one child under 18 was $19,708. Suppose the

[7] Mach and O'Hara (2011) found that the ACS typically overestimates non-group private coverage compared to other data sources.

[8] Measures not considered when calculating family income include non-cash benefits (e.g. food stamps and housing subsidies), capital gains or losses, and tax credits.

family's income for that year was $40,000. The child's poverty status in that family is measured as approximately 2.03 or 203% above the federal poverty line (FPL). The thresholds are provided by the Current Population Survey (CPS), vary across years, and are set separately for Alaska and Hawai'i.

The Medicaid eligibility rates were constructed based on a set of MAGI-converted thresholds based on state and age obtained by the Centers for Medicare and Medicaid Services (CMS) and the Kaiser Family Foundation (KFF). I standardize the eligibility determinations using the 2013 state MAGI-converted thresholds for age group and separate CHIP.[9] I define a child in a given age group and state to be previously eligible for Medicaid and CHIP if their family income, measured as a percentage of the FPL, is below the state-age MAGI-converted threshold set before the 2014 ACA Medicaid expansion. Similarly, I define a child to be newly eligible for Medicaid and CHIP if their family income, measured as a percentage of the FPL, is below the state-age MAGI-converted threshold set in either 2014, 2015, 2016 or 2017, but above the thresholds set prior to the expansion.[10]

There are a few limitations concerning eligibility that are worth noting. First, eligibility was simulated as it was not available in the ACS. Frean et al. (2017) argued that the income distribution across state-areas may be related to private insurance premiums, Medicaid expansion, and unobserved factors correlated with family income and preferences for insurance. Furthermore, they stated that the mapping of income reported by the ACS onto ACS-related eligibility is imprecise and biased toward the null. They addressed these issues by using a simulated measure of eligibility proposed in Currie and Gruber (1996a) and Currie and Gruber (1996b) as an instrument for Medicaid eligibility. Their results did not significantly differ from what was reported as the main result. Therefore, this provides some reassurance as this study adopts an empirical framework.

[9] I applied the ACA's statutory 5% income disregard to all MAGI-converted thresholds. As a robustness check, I standardized the thresholds using 2012 state MAGI-converted thresholds and found this to have negligible impact on my results.

[10] There are very few instances where a state's MAGI-converted threshold after the expansion becomes less generous than what it set prior to the expansion. An example of this is Arkansas, where the threshold for children ages 6-18 in 2016 was 147%, but 200% in 2013. As a robustness check, I omitted states where this occurs and found that this had little to no impact on my results.

3.1 Summary Statistics

Table 1 presents the summary statistics of the mutually exclusive eligibility measures, stratified by race/ethnicity and disability status. The sample statistics are weighted using ACS weights. Approximately 42% of children were eligible for Medicaid and CHIP prior to the expansion, with rates decreasing over time. This represents a growth in family income as most states either maintained or increased the MAGI-converted threshold limits. The increases in the limits summarized in figures A1, A2, A3 and A4 of the appendix resulted in approximately 9.6–10.2% of children becoming eligible for Medicaid and CHIP after the expansion. Both prior to and after the expansion, White children were significantly less eligible for Medicaid and CHIP compared to other racial/ethnic groups.

Table 2 shows the time trends in health coverage by race and ethnicity from 2012 to 2017. public coverage grew steadily at a net increase of 2.2% in 2016, but fell to 1.7% in 2017. In terms of race and ethnicity, Black and Hispanic children gained more public coverage than White children up to 2016, but they lost more public coverage in 2017. Across all years, CSHCNs saw fewer gains in public coverage compared to non-disabled children. Generally, increases in private insurance were observed more for Black and Hispanic children than for White children. There was a net decrease in uninsured rates of 1% in 2014, 2.1% in 2015, 2.4% in 2016, and 2.1% in 2017, compared to the 2012-2013 period. The increase in 2017 is consistent with a previous report that documented the increases in the uninsured rate for children starting in 2017 (Alker and Corcoran, 2020). Coverage gains were greatest for Hispanic children (3.8%) and fewer for Black children (1.9%), and White children (1.4%).

4 Empirical Methodology

I adopt a difference in differences (DD) framework similar to Frean et al. (2017) that leverages the longitudinal design of the ACS. I estimate changes in health insurance coverage that resulted from changes in Medicaid and CHIP eligibility under the ACA Medicaid expansion. I set 2012–2013

as the pre-ACA baseline period and estimate the policy effects separately for 2014, 2015, 2016, and 2017, given that the policies under the ACA may have evolved over time. I estimate the following model:

$$
\begin{aligned}
Y_{iat} = \beta_0 + \beta_1 PreviouslyEligible_{ia} \qquad (1)\\
+\beta_2 NewlyEligible2014_{ia} + \beta_3 NewlyEligible2015_{ia}\\
+\beta_4 NewlyEligible2016_{ia} + \beta_5 NewlyEligible2017_{ia}\\
+\beta_6 PreviouslyEligible_{ia} * \theta_{2014} + \beta_7 PreviouslyEligible_{ia} * \theta_{2015}\\
+\beta_8 PreviouslyEligible_{ia} * \theta_{2016} + \beta_9 PreviouslyEligible_{ia} * \theta_{2017}\\
+\beta_{10} NewlyEligible2014_{ia} * \theta_{2014} + \beta_{11} NewlyEligible2015_{ia} * \theta_{2015}\\
+\beta_{12} NewlyEligible2016_{ia} * \theta_{2016} + \beta_{13} NewlyEligible2017_{ia} * \theta_{2017}\\
+\beta_x X_{iat} + \theta_t + \nu_i + \gamma_a + \omega_{ia} + \epsilon_{iat}
\end{aligned}
$$

where Y_{iat} is a binary indicator for either: Medicaid and CHIP, employer sponsored, non-group private, or no health coverage. The term $PreviouslyEligible_{ia}$ equals to 1 if child i observed in year t was eligible for Medicaid and CHIP under the 2013 age-year MAGI-converted thresholds set in PUMA a, and 0 otherwise. There are four eligibility parameters that indicate whether child i was newly eligible for Medicaid and CHIP under the age-year MAGI-converted thresholds set in PUMA a in year t. The term $NewlyEligible2014_{ia}$ equals 1 if child i observed in year t was eligible for Medicaid and CHIP under the 2014 age-year MAGI-converted thresholds set in PUMA a, but ineligible according to the 2013 MAGI-converted thresholds, and 0 otherwise. I define the remaining parameters for 2015 to 2017 in the same fashion. Each of the parameters is interacted with a post-ACA year fixed effect and captures the policy impacts of the ACA Medicaid expansion on health coverage for each year after the expansion took place. Therefore, β_6 through β_{13} serves as the main coefficients of interest.

The term X_{ijt} is a vector containing demographic characteristics of the mother: age, educational attainment, work status, marital status, disability status, number of children, and the child: sex, age, and race and ethnicity. I include indicators for whether the child's father is present and

control for the father's work status. I include year, θ_t, income group, ν_i and PUMA, γ_a, fixed effects into the regression.[11] Additionally, I adjust the model using annual county-level unemployment rates directly from the Bureau of Labor Statistics. I denote ϵ_{iat} as a random error term. All standards errors are clustered at the PUMA-level to account to serial correlation (Bertrand et al., 2004).

5 Results

5.1 Estimating the Welcome Mat Effect

In Table 3, I estimate the difference-in-differences model outlined in equation 1 to measure the effects of increasing Medicaid and CHIP eligibility on various categories of health coverage for children. The summary statistics for the demographic controls can be found in Table A1 of the appendix. The results reveal a significant positive relationship between public coverage and all eligibility measures. The coefficients show that the ACA expansion led to both modest and significant increases of roughly 1.3 (2014), 2.6 (2015), 3.1 (2016), and 3.5 (2017) percentage points in public coverage for children who were eligible for Medicaid and CHIP prior to the expansion. This provides evidence of a "welcome mat" effect that is steadily increasing over time, with the effect doubling from 2014 to 2015, but flattening in 2017. This suggests that non-income related features of the ACA may have been effective in driving the "welcome mat" effect.

My results exhibit trends similar to Frean et al. (2017), but at a smaller magnitude, with the authors modeling for all individuals between 0-64 years old and including multiple policy variables. Additionally, the Hudson and Moriya (2017) found that the "welcome mat" effect was decreasing over time, where the opposite occurs in my findings. This demonstrates that modeling children's eligibility after those for parents presents a new perspective on the "welcome mat" effects of children's

[11] I stratified the income into the following groups: 0-50% FPL, 50-100% FPL, 100-138% FPL, 138-200% FPL, 200-250% FPL, 250-300% FPL, 300-350% FPL, 350-400% FPL, 400-450% FPL, 450-500% FPL, and greater than 500% FPL.

enrollment in Medicaid.[12] The next set of coefficients measures the impact on health coverage of children who became eligible for Medicaid under the ACA expansion. The coefficients show that the ACA expansion led to significant increases of roughly 1.8 (2014), 5.2 (2015), 7.9 (2016), and 7.3 (2017) percentage points in public coverage for children who became newly eligible for Medicaid and CHIP after 2014. These patterns are consistent with Table 2, where public coverage decreased in 2017.

Using the eligibility means from Table 1 and the coefficients from Table 3, I estimate that in 2014, the ACA Medicaid expansion to the portion of those eligible prior to the expansion (41.1%) led to an increase in public coverage of 0.54 percentage points. The effects of the expansion to the newly eligible population (8.1%) led to an increase of 0.17 percentage points in public coverage. These amounts sum to a 0.71 percentage increase in public coverage in 2014. The total increases in public coverage sum up to 1.55 percentage points in 2015, 2.0 percentage points in 2016, and 2.05 percentage points in 2017. In 2014, 76 percent of the public coverage gains may be attributed to the "welcome mat," compared to 67 percent in 2015, 60 percent in 2016, and 63 percent in 2017. These estimates suggest that the increasing enrollment of children in Medicaid and CHIP following the ACA Medicaid expansion was mostly credited to the "welcome mat" effect, even as more children acquired eligibility for the programs.

Starting in 2015, I observed small but significant estimates of crowd-out in employer sponsored insurance for both the previously eligible and newly eligible population. This is an important finding as it presents new evidence of private insurance crowd-out introduced in the ACA and has not been conclusively established in the literature for children. Sommers et al. (2015) leveraged the variation of early expansions across counties in California and found no evidence of crowd-out among already children. However, their sample was limited prior to 2014, when crowd-out only occurred in 2015 in my results. Frean et al. (2017) found no degree of crowd-out in their results when leveraging the variation in MAGI thresholds across households and age groups. However, it is important to note

[12]It is important to note the authors restricted their sample to children whose family incomes were below 138% of the FPL and did not model for CHIP. This approach is infeasible in my analysis as the MAGI-converted income thresholds for children are well above 138%, preventing me from differentiating between those who were previously eligible and newly eligible for Medicaid and CHIP.

that the authors incorporated other policy elements of the ACA into their analysis, such as subsidies for non-group private insurance and tax penalties under the individual mandate. Additionally, they did not extend their sample past 2015 or restrict their analysis exclusively to children. Hamersma et al. (2019) modeled children's eligibility after that for parents and found some evidence of crowd-out, but only for some persistently disadvantaged subgroups. Other studies have documented some degree of crowd-out in private insurance but used states' expansion status instead of MAGI thresholds as a proxy for eligibility into Medicaid (Courtemanche et al., 2017; Kaestner et al., 2017 and Duggan et al., 2019).

Overall, my findings for private insurance support a 2013 report that predicted enrollment in employer-sponsored insurance would decrease by nearly 20 million as a result of the ACA (Gallen and Mulligan 2013). However, it is uncertain whether the crowding out of employer-sponsored insurance can be attributed to job leave. Past literature has been inconclusive in finding any causal effects of the ACA Medicaid expansion on labor supply (Duggan et al. 2019; Leung and Mas 2018; Kaestner et al. 2017). Other studies found that in response to employer mandates, some employers opted out of providing health insurance to part-time workers, forcing employees to obtain coverage through other means (Batkins et al. 2014 and Mulligan 2020). My findings could suggest that parents may prefer fully subsidized and comprehensive public coverage for their children over restrictive and costly private coverage. However, additional research is needed to substantiate this claim.

5.2 Heterogeneous Effects by Race/Ethnicity

Seeing that several studies have documented racial/ethnic disparities in acquiring public coverage[13], I estimate equation (1) by race/ethnicity and report my results in Table 4. Overall there is a strong "welcome mat" effect for White children as public coverage increased by 1.7 to 5.3 percentage points, depending on the year. Additionally, there is evidence of private insurance crowd-out in 2016 and 2017 for White children previously eligible for Medicaid and CHIP.

[13]For a more extensive review of the literature, see Medicaid et al. (2021).

The effects of the expansion on public coverage for Black children are insignificant and close to zero, suggesting that Black children were more likely than White children to have enrolled in Medicaid prior to the expansion. This is consistent with Table 2 showing that public coverage is significantly higher for Black children compared to White children. An alternative explanation is that that the poverty rate for Black households is nearly three times higher than the poverty rate observed for White households (DeNavas-Walt et al., 2013), making it easier for Black children to enroll prior to the expansion. Furthermore, I observe significant increases in employer sponsored insurance between 2015 and 2017 for Black children and between 2016 and 2017 for Hispanic children. This suggests that other ACA policies, such as the employer mandate, were effective in insuring children from minority households. Lastly, I observe a small but significant "welcome mat" effect in public coverage for previously eligible Hispanic children, which could likely be attributed to the small degree of crowd-out in non-group private insurance.[14]

Among children who became newly eligible for Medicaid after the expansion, the gains in public coverage for Black and Hispanic children exceeded those for White children in 2014 and 2015. However, this pattern reverses starting in 2016. This is consistent with the health coverage trends outlined in Table 2, where Medicaid gains were greatest for Hispanic and Black children from 2012 to 2015, but then experienced greater decreases relative to White children. Furthermore, White children experienced greater crowding out in private insurance in 2016 and 2017, while Hispanic and Black children experienced far less. However, although public coverage gains amongst the newly eligible population were strong for White children, the net losses in uninsured rate were significant and stronger for Black and Hispanic children, providing evidence that the ACA did assist in reducing racial disparities in health coverage for children.

[14]This may be a product of measurement error of private insurance as the wording of the ACS may influence respondents to misreport Medicaid or employer sponsored insurance as non-group private insurance(Pascale et al., 2016). This is supported by the fact that the ACS typically reports overestimates of non-group private coverage compared to other data sources (Mach and O'Hara, 2011). Furthermore, previous studies have cited barriers relating to fear, confusion, and language related to the process of applying for health coverage and disproportionately affecting the Hispanic population (Stuber et al., 2000) and (Kaiser Family Foundation, 2021).

5.3 Welcome Mat Effects by States' Expansion Status

In Figure 2, we saw that children were on average more eligible for Medicaid and CHIP in expansion states compared to non-expansion across various levels of income. Moreover, it is possible that efforts in outreach and the implementation of enrollment strategies were more effectively made in states that participated in the Medicaid expansion versus states that did not. This would spur greater increases in public coverage among previously eligible children, thus resulting in higher incidences of the "welcome mat" effect. To test this, I employ a triple difference model that exploits the variation across eligibility status, year, and states' expansion status on health coverage. I estimate the following model:

$$
\begin{aligned}
Y_{iat} = \beta_0 + \beta_1 Expand_{ia} + \beta_2 PreviouslyEligible_{ia} \\
+\beta_3 NewlyEligible2014_{ia} + \beta_4 NewlyEligible2015_{ia} \\
+\beta_5 NewlyEligible2016_{ia} + \beta_6 NewlyEligible2017_{ia} \\
+\beta_7 PreviouslyEligible_{ia} * Expand_{ia} \\
+\beta_8 NewlyEligible2014_{ia} * Expand_{ia} + \beta_9 NewlyEligible2015_{ia} * Expand_{ia} \\
+\beta_{10} NewlyEligible2016_{ia} * Expand_{ia} + \beta_{11} NewlyEligible2017_{ia} * Expand_{ia} \\
+\beta_{12} PreviouslyEligible_{ia} * \theta_{2014} + \beta_{13} PreviouslyEligible_{ia} * \theta_{2015} \\
+\beta_{14} PreviouslyEligible_{ia} * \theta_{2016} + \beta_{15} PreviouslyEligible_{ia} * \theta_{2017} \\
+\beta_{16} NewlyEligible2014_{ia} * \theta_{2014} + \beta_{17} NewlyEligible2015_{ia} * \theta_{2015} \\
+\beta_{18} NewlyEligible2016_{ia} * \theta_{2016} + \beta_{19} NewlyEligible2017_{ia} * \theta_{2017} \\
+\beta_{20} PreviouslyEligible_{ia} * \theta_{2014} * Expand_{ia} + \beta_{21} PreviouslyEligible_{ia} * \theta_{2015} * Expand_{ia} \\
+\beta_{22} PreviouslyEligible_{ia} * \theta_{2016} * Expand_{ia} + \beta_{23} PreviouslyEligible_{ia} * \theta_{2017} * Expand_{ia} \\
+\beta_{24} NewlyEligible2014_{ia} * \theta_{2014} * Expand_{ia} + \beta_{25} NewlyEligible2015_{ia} * \theta_{2015} * Expand_{ia} \\
+\beta_{26} NewlyEligible2016_{ia} * \theta_{2016} * Expand_{ia} + \beta_{27} NewlyEligible2017_{ia} * \theta_{2017} * Expand_{ia} \\
+\beta_x X_{iat} + \theta_t + \nu_i + \gamma_a + \omega_{ia} + \epsilon_{iat}
\end{aligned}
\tag{4}
$$

where $Expand_{ia}$ is a treatment variable that equals 1 if individual i resided in a state s that expanded Medicaid at time t, and 0 otherwise. As some states expanded later in the year or in succeeding years, this term is activated the year after it was adopted. The variation in the timing of states' decisions to expand Medicaid eligibility is therefore reflected by Z_{st}. A state is considered to have expanded in a given year if it did so on or before July 1st.[15]

In Table 5, I observe that for all years, the "welcome mat" effect is more pronounced in expansion states than in non-expansion states. From 2015 to 2017, I observe significant and positive increases in public coverage for the newly eligible population in expansion states compared to non-expansion states. However, this does show that there was a partial delay in the public insurance uptake in the first year of the ACA expansion. Moreover, I find significant crowding out in non-group private insurance for the same population. This result is bolstered by the fact that residents of non-expansion states were given access to subsidies for private insurance purchased in the marketplace.

Interestingly, I find significant crowd-out in ESI insurance in expansion states vs. non-expansion states, but only for the previously eligible population. This accompanied the negligible and insignificant changes in the uninsured rate for the same group, except in 2014, where the estimate is small. This supports the notion that parents would prefer highly subsidized public insurance over costly private insurance for their children, as it would considerably help families with lower incomes. This is plausible given the significant costs parents‘ incur when investing in their children's health care.[16]

[15]There are 6 states: AK, IN, LA, MT, NH and PA that expanded Medicaid after July 1st, 2014. I define states PA (January 1, 2015), IN (February 1, 2015), and NH (August 15, 2014) to have expanded in 2015. I define the remaining states AK (September 1, 2015), MT (January 1, 2016), and LA (July 1, 2016) as having expanded in 2016.

[16]According to a 2015 report from the United States Department of Agriculture, roughly 9% of expenses for children between ages 0 and 17 went to health care (Lino et al. 2017). Additionally, the report found that the average cost of raising a child from birth to age 17 was $233,610 (in 2015 dollars).

6 Robustness Checks

6.1 Early Expansion States

Before the ACA Medicaid expansion was implemented, there were six states (CA, CT, DC, MN, NJ, and WA) that expanded public coverage prior to 2014, between 2011 and 2013. The early expansion of Medicaid in these states was mainly targeted towards low-income childless adults and parents, but had little to no impact on children's MAGI-converted thresholds. However, it is possible that parents who qualified for Medicaid prior to the expansion may have been motivated to enroll their children as well. It has been documented that children's patterns in health care utilization are conditional on whether or not their parents' are eligible for Medicaid.[17] Therefore, I follow Frean et al. (2017) and Kaestner et al. (2017) by sorting these states into a mutually exclusive category called $EarlyExpansionEligible_{ia}$. I modify equation (3) and redefine my model below

$$
\begin{aligned}
Y_{iat} = \beta_0 + \beta_1 PreviouslyEligible_{ia} + \beta_2 EarlyExpansionEligible_{ia} \\
+\beta_3 NewlyEligible2014_{ia} + \beta_4 NewlyEligible2015_{ia} \\
+\beta_5 NewlyEligible2016_{ia} + \beta_6 NewlyEligible2017_{ia} \\
+\beta_7 PreviouslyEligible_{ia} * \theta_{2014} + \beta_8 PreviouslyEligible_{ia} * \theta_{2015} \\
+\beta_9 PreviouslyEligible_{ia} * \theta_{2016} + \beta_{10} PreviouslyEligible_{ia} * \theta_{2017} \\
+\beta_{11} EarlyExpansionEligible_{ia} * \theta_{2014} + \beta_{12} EarlyExpansionEligible_{ia} * \theta_{2015} \\
+\beta_{13} EarlyExpansionEligible_{ia} * \theta_{2016} + \beta_{14} EarlyExpansionEligible_{ia} * \theta_{2017} \\
+\beta_{15} NewlyEligible2014_{ia} * \theta_{2014} + \beta_{16} NewlyEligible2015_{ia} * \theta_{2015} \\
+\beta_{17} NewlyEligible2016_{ia} * \theta_{2016} + \beta_{18} NewlyEligible2017_{ia} * \theta_{2017} \\
+\beta_x X_{iat} + \theta_t + \nu_i + \gamma_a + \omega_{ia} + \epsilon_{iat}
\end{aligned}
\tag{2}
$$

[17] For example, Halliday and Akee (2020) conducted a study in Hawai'i and found that when Compact of Free Association (COFA) migrant parents became ineligible for Medicaid, there was a significant decline in inpatient use and ER visits for their children despite them still qualifying for Medicaid.

where $EarlyExpansionEligible_{ia}$ equals 1 if child i, who resides in an early expansion state, is eligible for Medicaid and CHIP based on the 2013 age-year MAGI-converted thresholds in PUMA a and 0 otherwise.

Compared to Table 3, the coefficients for public coverage in the previously eligible population are slightly smaller in magnitude, but remain positive and significant. However, the coefficients for all health insurance variables in the newly eligible population are virtually unaffected. Among children in states that expanded Medicaid early, gains in public coverage amounted to 2.4 percentage points in 2014, 5.1 percentage points in 2015, 5.5 percentage points in 2016, and 5.3 percentage points in 2017. There is some degree of private insurance crowd-out, but the sizes of the coefficients are relatively small and are either insignificant or on the edge of significance. Overall, my estimates are relatively robust under this specification.

6.2 Eligibility for Premium Subsidies

Under the ACA, those with incomes between 100 and 400% FPL and residing in non-expansion states were eligible for subsidies to purchase non-group private insurance in ACA marketplaces. However, these subsidies were unavailable to individuals that received an offer to acquire ESI from their employer. Unfortunately, the ACS does not collect information on whether an individual was offered ESI by their employer, but chose not to enroll. Therefore, I define a child as being "subsidy eligible" if they did not have employer sponsored insurance, resided in a non-expansion state, and had an income of between 100-400% FPL. I follow Hudson and Moriya (2017) and modify the equation (1) by including an additional parameter that indicates whether a child's parents were eligible for subsidies for non-group private insurance. This will allow me to test if

eligibility for premium subsidies has any impact on my results.

$$
\begin{aligned}
Y_{iat} = \beta_0 + \beta_1 PreviouslyEligible_{ia} + \beta_2 SubsidyEligible_{ia} \\
+\beta_3 NewlyEligible2014_{ia} + \beta_4 NewlyEligible2015_{ia} \\
+\beta_5 NewlyEligible2016_{ia} + \beta_6 NewlyEligible2017_{ia} \\
+\beta_7 PreviouslyEligible_{ia} * \theta_{2014} + \beta_8 PreviouslyEligible_{ia} * \theta_{2015} \\
+\beta_9 PreviouslyEligible_{ia} * \theta_{2016} + \beta_{10} PreviouslyEligible_{ia} * \theta_{2017} \\
+\beta_{11} NewlyEligible2014_{ia} * \theta_{2014} + \beta_{12} NewlyEligible2015_{ia} * \theta_{2015} \\
+\beta_{13} NewlyEligible2016_{ia} * \theta_{2016} + \beta_{14} NewlyEligible2017_{ia} * \theta_{2017} \\
+\beta_{15} SubsidyEligible_{ia} * \theta_{2014} + \beta_{16} SubsidyEligible_{ia} * \theta_{2015} \\
+\beta_{17} SubsidyEligible_{ia} * \theta_{2016} + \beta_{18} SubsidyEligible_{ia} * \theta_{2017} \\
+\beta_x X_{iat} + \theta_t + \nu_i + \gamma_a + \omega_{ia} + \epsilon_{iat}
\end{aligned}
\tag{3}
$$

The term $SubsidyEligible_{ia}$ equals 1 if a child was eligible for the subsidy based on the criteria summarized above and 0 otherwise.[18]

The coefficients for those previously eligible and newly eligible are relatively unchanged from what was reported in the main result, showing my estimates are robust to this specification. Among children who were eligible for subsidies for non-group private insurance, there was a great degree of crowd-out from public insurance to private insurance. Interestingly, the coefficients for employer-sponsored insurance are all positive and significant from 2014–2017. However, this could be a result of the effects of the employer mandate that were more effective in non-expansion states. As mentioned earlier, this could also be the result of measurement error in private insurance, where respondents may have mistakenly reported non-group private coverage as employer-sponsored insurance. Lastly, the coefficients for non-group private coverage are significant starting in 2014 and highest in 2015, but start decreasing where they become negative and insignificant in 2017.[19]

[18]Note that this term is not mutually exclusive from the other eligibility terms due to children still having MAGI thresholds that deem them eligible for Medicaid and CHIP coverage in non-expansion states.

[19]A possible explanation for this could be the result of the temporary risk corridor program implemented under the ACA for 2014–2016. The program was to assist insurers in covering the unpredictable costs of

7 Conclusion

Since the implementation of the ACA Medicaid expansion, there have been significant gains in Medicaid and CHIP coverage for not only newly eligible recipients, but for those who were already eligible for Medicaid and CHIP prior to the expansion. Children, who had already had generally generous rates prior to and after the expansion, are an important but frequently overlooked group. Using children's MAGI threshold rates, I find significant "welcome" mat effects in public coverage for already eligible children. These effects persisted and increased across years until 2017. In addition, I find significant increases in public coverage for children who became eligible for Medicaid and CHIP. My findings show that the ACA Medicaid expansion was effective in providing public assistance to a population who otherwise should have seen minimal effects. However, I find evidence of crowding out in employer-sponsored insurance for both populations starting in 2015. My findings could reflect parent's preferences or reliance of fully subsidized public coverage for their children, although further research in this area is warranted.

This is the first paper to estimate the "welcome mat" effects of the ACA Medicaid expansions solely for children through the use of children's MAGI threshold rates. The establishment of a "welcome mat" effect highlights the importance of provisions that are currently protected in the ACA and mainly intended for children, such as the maintenance of effort (MOE) provision and enhanced federal matching funds for CHIP. However, as the appropriations for CHIP funding ends in 2027, many of these components that have protected children's eligibility for Medicaid and CHIP could cease, forcing millions of parents to find alternative sources of health coverage for their children. Therefore, this paper contributes to a narrow literature of evaluating the "welcome mat" effect for children and has important implications for policymakers, who have the potential to shape the future of CHIP. It is imperative for Congress to not only permanently fund CHIP, but also make improvements that assist children who face additional barriers to health as a consequence of income, geography, household dynamics, race/ethnicity, and other social determinants of health.

enrollees with various health conditions. Ultimately, the Human Health Services (HHS) was unable to pay out the claims of the insurers. This resulted in an unexpected negative shock to revenues and the large exit of insurers such as Aetna and United from the Marketplaces in 2016 and 2017 (Layton et al., 2018).

References

Aizer, A. Public health insurance, program take-up, and child health. *The Review of Economics and Statistics*, 89(3):400–415, 2007.

Alker, J. and Corcoran, A. Children's uninsured rate rises by largest annual jump in more than a decade. *Washington, DC: Georgetown University Health Policy Institute, Center for Children and Families*, 2020.

Batkins, S., Gitis, B., and Ryan, C. Obamacare's impact on small business wages and employment. In *American Action Forum*, 2014.

Bertrand, M., Duflo, E., and Mullainathan, S. How much should we trust differences-in-differences estimates? *The Quarterly journal of economics*, 119(1):249–275, 2004.

Brooks, T., Gardner, A., Tolbert, J., Dolan, R., and Pham, O. Medicaid and chip eligibility and enrollment policies as of january 2021: Findings from a 50-state survey. *Kaiser Family Foundation*, 8, 2021.

CMS. March 2021 medicaid & chip enrollment data highlights, 2021.

Courtemanche, C., Marton, J., Ukert, B., Yelowitz, A., and Zapata, D. Early impacts of the affordable care act on health insurance coverage in medicaid expansion and non-expansion states. *Journal of Policy Analysis and Management*, 36(1):178–210, 2017.

Currie, J. and Gruber, J. Health insurance eligibility, utilization of medical care, and child health. *The Quarterly Journal of Economics*, 111(2):431–466, 1996a.

Currie, J. and Gruber, J. Saving babies: The efficacy and cost of recent changes in the medicaid eligibility of pregnant women. *Journal of political Economy*, 104(6):1263–1296, 1996b.

Decker, S. L., Lipton, B. J., and Sommers, B. D. Medicaid expansion coverage effects grew in 2015 with continued improvements in coverage quality. *Health affairs*, 36(5):819–825, 2017.

DeNavas-Walt, C., Proctor, B. D., and Smith, J. C. Income, poverty, and health insurance coverage in the united states: 2012. current population reports p60-245. *US Census Bureau*, 2013.

Dubay, L. and Kenney, G. M. When the chips are down—health coverage and care at risk for us children. *New England Journal of Medicine*, 378(7):597–599, 2018.

Duggan, M., Goda, G. S., and Jackson, E. The effects of the affordable care act on health insurance coverage and labor market outcomes. *National Tax Journal*, 72(2):261–322, 2019.

Frean, M., Gruber, J., and Sommers, B. D. Premium subsidies, the mandate, and medicaid expansion: Coverage effects of the affordable care act. *Journal of Health Economics*, 53:72–86, 2017.

Gallen, T. S. and Mulligan, C. B. Wedges, labor market behavior, and health insurance coverage under the affordable care act. Technical report, National Bureau of Economic Research, 2013.

Georgetown University Center for Children and Families. The maintenance of effort (moe) provision in the affordable care act. https://ccf.georgetown.edu/wp-content/uploads/2017/05/ MOE-fact-sheet-FINAL.pdf, 2017.

Gruber, J. The impacts of the affordable care act: how reasonable are the projections? *National Tax Journal*, 64(3):893–908, 2011.

Haley, J. M., Kenney, G. M., Pan, C. W., Wang, R., Lynch, V., and Buettgens, M. Uninsurance rose among children and parents in 2019. *Washington, DC: Urban Institute, July*, 15, 2021.

Halliday, T. J. and Akee, R. Q. The impact of medicaid on medical utilization in a vulnerable population: evidence from cofa migrants. *Health Economics*, 29(10):1231–1250, 2020.

Hamersma, S., Kim, M., and Timpe, B. The effect of parental medicaid expansions on children's health insurance coverage. *Contemporary Economic Policy*, 37(2):297–311, 2019.

Hudson, J. L. and Moriya, A. S. Medicaid expansion for adults had measurable 'welcome mat'effects on their children. *Health affairs*, 36(9):1643–1651, 2017.

Kaestner, R., Garrett, B., Chen, J., Gangopadhyaya, A., and Fleming, C. Effects of aca medicaid expansions on health insurance coverage and labor supply. *Journal of Policy Analysis and Management*, 36(3):608–642, 2017.

Kaiser Family Foundation. Health coverage of immigrants. https://www.kff.org/racial-equity-and-health-policy/fact-sheet/health-coverage-of-immigrants/, 2021.

Layton, T. J., Montz, E., and Shepard, M. Health plan payment in us marketplaces: regulated competition with a weak mandate. In *Risk Adjustment, Risk Sharing and Premium Regulation in Health Insurance Markets*, pages 491–522. Elsevier, 2018.

Leung, P. and Mas, A. Employment effects of the affordable care act medicaid expansions. *Industrial Relations: A Journal of Economy and Society*, 57(2):206–234, 2018.

Lino, M., Kuczynski, K., Rodriguez, N., and Schap, T. *Expenditures on children by families, 2015*. Center for Nutrition Policy and Promotion, US Department of Agriculture, 2017.

Mach, A. and O'Hara, B. Do people really have multiple health insurance plans? estimates of nongroup health insurance in the american community survey. *Washington, DC: US Census Bureau. Accessed April*, 10:2013, 2011.

Medicaid, Payment, C., and (MACPAC), A. C. Racial and ethnic disparities in medicaid: An annotated bibliography. https://www.macpac.gov/wp-content/uploads/2021/04/Racial-and-Ethnic-Disparities-in-Medicaid-An-Annotated-Bibliography.pdf, 2021.

Miller, S. and Wherry, L. R. Health and access to care during the first 2 years of the aca medicaid expansions. *New England Journal of Medicine*, 376(10):947–956, 2017.

Mulligan, C. B. The employer penalty, voluntary compliance, and the size distribution of firms: Evidence from a survey of small businesses. *Tax Policy and the Economy*, 34(1):139–171, 2020.

Pascale, J., Call, K., Fertig, A., and Oellerich, D. Validating self-reported health insurance coverage: preliminary results on cps and acs. *Washington, DC: United States Census Bureau*, 2016.

Simon, K., Soni, A., and Cawley, J. The impact of health insurance on preventive care and health behaviors: evidence from the first two years of the aca medicaid expansions. *Journal of Policy Analysis and Management*, 36(2):390–417, 2017.

Sommers, B. D., Gunja, M. Z., Finegold, K., and Musco, T. Changes in self-reported insurance coverage, access to care, and health under the affordable care act. *Jama*, 314(4):366–374, 2015.

Stuber, J. P., Maloy, K. A., Rosenbaum, S., and Jones, K. C. Beyond stigma: What barriers actually affect the decisions of low-income families to enroll in medicaid? 2000.

Wherry, L. R. and Miller, S. Early coverage, access, utilization, and health effects associated with the affordable care act medicaid expansions: a quasi-experimental study. *Annals of internal medicine*, 164(12):795–803, 2016.

Table 1: Time Trends of Medicaid and CHIP Eligibility Variables 2012-2017

	2012		2013		2014		2015		2016		2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
All												
Previously Eligible	41.8%	(49.3%)	41.5%	(49.3%)	41.1%	(49.2%)	39.8%	(49.0%)	38.5%	(48.6%)	37.1%	(48.3%)
Newly Eligible	-	-	-	-	9.6%	(29.5%)	9.8%	(29.7%)	10.1%	(30.1%)	10.2%	(30.2%)
White												
Previously Eligible	32.7%	(46.9%)	32.2%	(46.7%)	31.6%	(46.5%)	30.6%	(46.1%)	29.0%	(45.4%)	28.0%	(44.9%)
Newly Eligible	-	-	-	-	6.7%	(25.0%)	6.5%	(24.7%)	6.8%	(25.3%)	6.9%	(25.3%)
Black												
Previously Eligible	62.3%	(48.5%)	62.3%	(48.5%)	62.1%	(48.5%)	60.4%	(48.9%)	58.5%	(49.3%)	56.6%	(49.6%)
Newly Eligible	-	-	-	-	8.9%	(28.5%)	9.5%	(29.3%)	9.7%	(29.6%)	10.6%	(30.8%)
Hispanic												
Previously Eligible	54.3%	(49.8%)	53.9%	(49.8%)	53.6%	(49.9%)	51.9%	(50.0%)	50.7%	(50.0%)	48.5%	(50.0%)
Newly Eligible	-	-	-	-	17.1%	(37.6%)	17.7%	(38.2%)	17.8%	(38.3%)	17.7%	(38.1%)

Notes: Table presents weighted means, with standard deviations in parentheses, for children ages 0-18 years old with a biological mother present. Data is sourced from the ACS for the years 2012-2017. All eligibility variables are constructed by comparing income-to-poverty thresholds from the ACS to MAGI-converted thresholds available by state- year and taken directly from the Kaiser Family Foundation and Medicaid.gov. The measure "Previously Eligible" was constructed based on 2013 state eligibility criteria.

Table 2: Time Trends of Health Insurance Variables 2012-2017

	2012		2013		2014		2015		2016		2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
All												
Public Coverage	32.5%	(46.9%)	32.8%	(46.9%)	33.6%	(47.2%)	34.8%	(47.6%)	34.8%	(47.6%)	34.3%	(47.5%)
Employed Sponsored	56.5%	(49.6%)	55.9%	(49.6%)	56.1%	(49.6%)	55.8%	(49.7%)	56.2%	(49.6%)	57.0%	(49.5%)
Non-Group Private	7.6%	(26.5%)	7.0%	(25.5%)	7.2%	(25.9%)	7.7%	(26.6%)	7.7%	(26.7%)	7.3%	(26.0%)
Uninsured	6.2%	(24.1%)	6.4%	(24.4%)	5.3%	(22.3%)	4.2%	(20.1%)	3.9%	(19.4%)	4.2%	(20.0%)
White												
Public Coverage	20.4%	(40.3%)	20.5%	(40.4%)	21.1%	(40.8%)	22.1%	(41.5%)	22.1%	(41.5%)	21.7%	(41.2%)
Employed Sponsored	68.4%	(46.5%)	67.8%	(46.7%)	68.0%	(46.6%)	67.6%	(46.8%)	67.9%	(46.7%)	68.8%	(46.3%)
Non-Group Private	9.2%	(28.8%)	8.6%	(28.2%)	8.7%	(28.2%)	9.1%	(28.8%)	9.2%	(28.9%)	8.4%	(27.7%)
Uninsured	4.8%	(21.4%)	5.1%	(21.9%)	4.3%	(20.4%)	3.6%	(18.7%)	3.3%	(17.9%)	3.6%	(18.6%)
Black												
Public Coverage	52.4%	(49.9%)	52.7%	(49.9%)	54.2%	(49.8%)	54.6%	(49.8%)	54.2%	(49.8%)	53.0%	(49.9%)
Employed Sponsored	40.5%	(49.1%)	40.0%	(49.0%)	39.2%	(48.8%)	39.7%	(48.9%)	40.7%	(49.1%)	42.1%	(49.4%)
Non-Group Private	4.7%	(21.1%)	4.1%	(19.9%)	4.3%	(20.3%)	4.7%	(21.3%)	5.0%	(21.8%)	4.7%	(21.2%)
Uninsured	5.4%	(22.7%)	5.5%	(22.8%)	4.4%	(20.5%)	3.6%	(18.7%)	3.0%	(17.2%)	3.6%	(18.6%)
Hispanic												
Public Coverage	52.3%	(49.9%)	52.7%	(49.9%)	52.9%	(49.9%)	55.2%	(49.7%)	55.0%	(49.8%)	53.9%	(49.9%)
Employed Sponsored	35.8%	(47.9%)	35.2%	(47.8%)	36.5%	(48.1%)	35.9%	(48.0%)	36.6%	(48.2)	37.6%	(48.4%)
Non-Group Private	5.0%	(21.7%)	4.2%	(20.0%)	4.8%	(21.3%)	5.3%	(22.4%)	5.3%	(22.4%)	5.6%	(22.9%)
Uninsured	10.0%	(30.0%)	9.9%	(29.9%)	8.1%	(27.2%)	6.1%	(23.9%)	6.0%	(23.7%)	6.1%	(23.9%)

Notes: Table presents weighted means, with standard deviations in parentheses, for children ages 0-18 years old with at least one biological parent present. Data is sourced from the ACS for the years 2012-2017.

Table 3: Difference-in-Differences Results of the Effects of ACA Expansion on Health Coverage for Children

	(1) Public	(2) ESI	(3) Non-Group	(4) Uninsured
Medicaid Eligibility (Previous)				
Previously Eligible 2014 * Yr 2014	0.013***	-0.004	0.004**	-0.010***
	(0.002)	(0.003)	(0.002)	(0.001)
Previously Eligible 2015 * Yr 2015	0.026***	-0.008***	0.003*	-0.016***
	(0.002)	(0.003)	(0.002)	(0.001)
Previously Eligible 2016 * Yr 2016	0.031***	-0.009***	0.003	-0.021***
	(0.002)	(0.003)	(0.002)	(0.001)
Previously Eligible 2017 * Yr 2017	0.035***	-0.016***	0.007***	-0.020***
	(0.003)	(0.003)	(0.002)	(0.002)
Medicaid Eligibility (New)				
Newly Eligible 2014 * Yr 2014	0.018***	-0.001	-0.001	-0.017***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2015 * Yr 2015	0.052***	-0.016***	-0.001	-0.037***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2016 * Yr 2016	0.079***	-0.029***	-0.005**	-0.039***
	(0.005)	(0.005)	(0.002)	(0.003)
Newly Eligible 2017 * Yr 2017	0.073***	-0.029***	0.001	-0.040***
	(0.005)	(0.005)	(0.003)	(0.003)
Policy Controls				
Previously Eligible	0.022***	-0.018***	-0.004**	0.002
	(0.003)	(0.003)	(0.002)	(0.002)
Newly Eligible 2014	0.010	-0.036**	0.013	0.006
	(0.018)	(0.017)	(0.009)	(0.007)
Newly Eligible 2015	0.033*	-0.024	-0.012	0.009
	(0.019)	(0.018)	(0.009)	(0.008)
Newly Eligible 2016	-0.044	0.066*	0.038*	-0.065**
	(0.035)	(0.040)	(0.021)	(0.027)
Newly Eligible 2017	0.012	-0.027	-0.042**	0.066**
	(0.034)	(0.039)	(0.021)	(0.027)
Observations	3,248,152	3,248,152	3,248,152	3,248,152

Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

Table 4: Difference-in-Differences Results of the Effects of ACA Expansion on Health Coverage for Children by Race/Ethnicity

	White				Black				Hispanic			
	Public	ESI	Non-Group	Uninsured	Public	ESI	Non-Group	Uninsured	Public	ESI	Non-Group	Uninsured
Medicaid Eligibility (Previous)												
Previously Eligible 2014 * Yr 2014	0.016***	-0.006*	0.003	-0.011***	0.003	0.006	0.006	-0.006	0.007	-0.003	0.002	-0.006
	(0.003)	(0.004)	(0.002)	(0.002)	(0.006)	(0.007)	(0.004)	(0.004)	(0.006)	(0.006)	(0.003)	(0.004)
Previously Eligible 2015 * Yr 2015	0.037***	-0.016***	0.004*	-0.017***	-0.001	0.012	0.000	-0.006	0.015***	-0.006	-0.003	-0.007**
	(0.003)	(0.004)	(0.002)	(0.002)	(0.007)	(0.008)	(0.004)	(0.004)	(0.005)	(0.006)	(0.004)	(0.004)
Previously Eligible 2016 * Yr 2016	0.047***	-0.023***	0.001	-0.022***	-0.003	0.019**	-0.000	-0.012***	0.009	0.001	0.001	-0.012***
	(0.004)	(0.004)	(0.002)	(0.002)	(0.007)	(0.008)	(0.004)	(0.003)	(0.006)	(0.006)	(0.004)	(0.004)
Previously Eligible 2017 * Yr 2017	0.050***	-0.029***	0.005**	-0.020***	-0.001	0.008	0.006	-0.007**	0.009	0.001	0.004	-0.013***
	(0.004)	(0.004)	(0.002)	(0.002)	(0.007)	(0.008)	(0.004)	(0.004)	(0.006)	(0.006)	(0.004)	(0.004)
Medicaid Eligibility (New)												
Newly Eligible 2014 * Yr 2014	0.015**	0.001	-0.001	-0.012***	0.029**	-0.001	-0.000	-0.020***	0.014*	-0.004	-0.002	-0.016***
	(0.007)	(0.007)	(0.005)	(0.004)	(0.014)	(0.014)	(0.007)	(0.007)	(0.008)	(0.009)	(0.004)	(0.006)
Newly Eligible 2015 * Yr 2015	0.039***	-0.013*	0.001	-0.023***	0.037**	-0.014	0.003	-0.027***	0.055***	-0.017**	-0.008*	-0.037***
	(0.007)	(0.007)	(0.005)	(0.004)	(0.014)	(0.014)	(0.007)	(0.007)	(0.008)	(0.009)	(0.004)	(0.005)
Newly Eligible 2016 * Yr 2016	0.073***	-0.032***	-0.001	-0.025***	0.061***	-0.025*	-0.010*	-0.034***	0.071***	-0.025***	-0.007	-0.037***
	(0.007)	(0.007)	(0.004)	(0.004)	(0.013)	(0.013)	(0.006)	(0.006)	(0.008)	(0.008)	(0.004)	(0.005)
Newly Eligible 2017 * Yr 2017	0.064***	-0.028***	0.001	-0.027***	0.035**	-0.011	0.003	-0.024***	0.069***	-0.025***	-0.003	-0.044***
	(0.007)	(0.007)	(0.004)	(0.004)	(0.014)	(0.013)	(0.006)	(0.007)	(0.009)	(0.009)	(0.004)	(0.005)
Policy Controls												
Previously Eligible	0.015***	-0.014***	-0.004*	0.003*	0.026***	-0.026***	-0.009**	0.005	0.046***	-0.029***	-0.003	-0.008**
	(0.003)	(0.003)	(0.002)	(0.002)	(0.007)	(0.008)	(0.004)	(0.004)	(0.006)	(0.006)	(0.003)	(0.004)
Newly Eligible 2014	-0.002	-0.036*	0.009	0.010	-0.008	0.067	0.001	0.008	-0.022	-0.028	0.029	0.004
	(0.021)	(0.020)	(0.012)	(0.006)	(0.042)	(0.070)	(0.027)	(0.013)	(0.039)	(0.038)	(0.023)	(0.025)
Newly Eligible 2015	0.028	-0.007	-0.006	0.002	0.068	-0.136*	0.007	-0.007	0.006	0.017	-0.021	0.019
	(0.023)	(0.021)	(0.012)	(0.007)	(0.044)	(0.071)	(0.027)	(0.015)	(0.045)	(0.044)	(0.022)	(0.026)
Newly Eligible 2016	-0.026	0.049	0.067*	-0.087**	-0.111	0.228	-0.057	-0.100	-0.008	0.033	0.010	-0.047
	(0.043)	(0.057)	(0.036)	(0.034)	(0.121)	(0.140)	(0.075)	(0.096)	(0.065)	(0.068)	(0.033)	(0.052)
Newly Eligible 2017	0.012	-0.025	-0.070**	0.084**	0.050	-0.173	0.044	0.121	0.042	-0.042	-0.018	0.032
	(0.041)	(0.057)	(0.035)	(0.033)	(0.120)	(0.140)	(0.075)	(0.096)	(0.061)	(0.065)	(0.033)	(0.052)
Observations	1,976,144	1,976,144	1,976,144	1,976,144	362,743	362,743	362,743	362,743	632,904	632,904	632,904	632,904

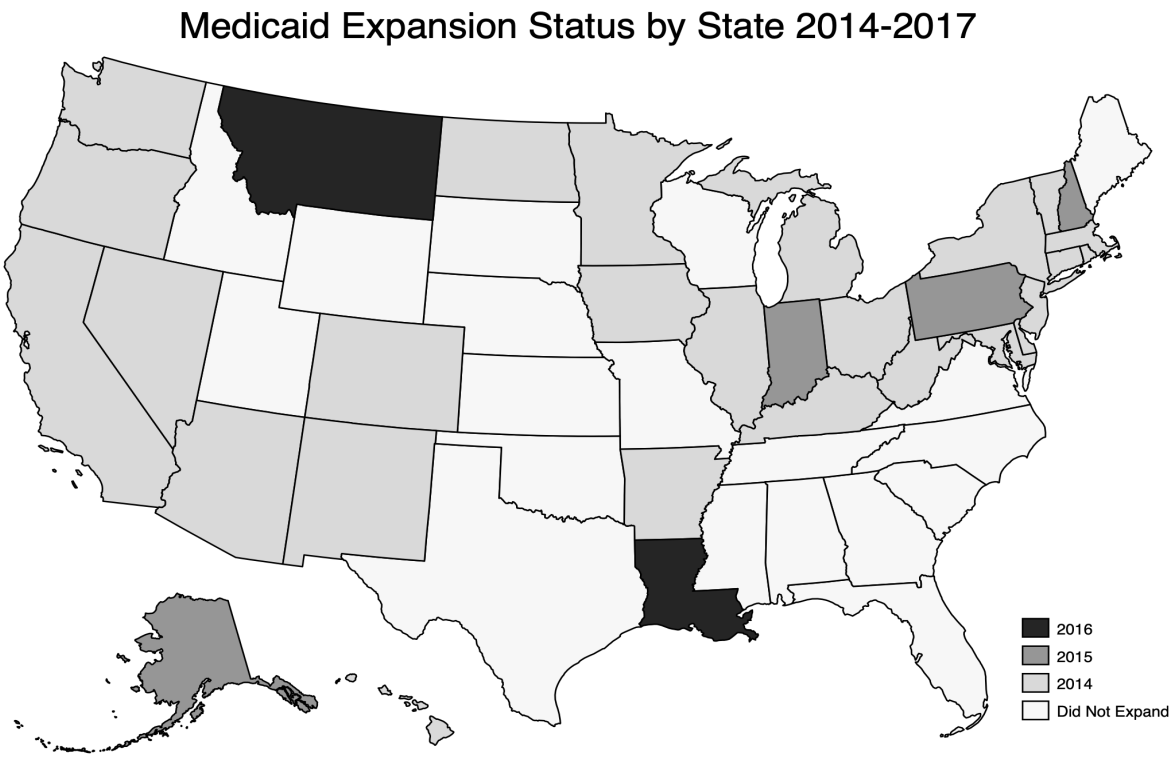
Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

Table 5: Triple Difference-in-Differences Results of the Effects of ACA Expansion on Health Coverage for Children by States' Expansion Status

	(1) Public	(2) ESI	(3) Non-Group	(4) Uninsured
Medicaid Eligibility (Previous) * Expand				
Previously Eligible 2014 * Yr 2014 * Expand	0.012**	-0.006	0.002	-0.009***
	(0.005)	(0.005)	(0.003)	(0.003)
Previously Eligible 2015 * Yr 2015 * Expand	0.018***	-0.015***	0.003	-0.003
	(0.005)	(0.005)	(0.003)	(0.003)
Previously Eligible 2016 * Yr 2016 * Expand	0.017***	-0.025***	0.005	0.004
	(0.005)	(0.005)	(0.003)	(0.003)
Previously Eligible 2017 * Yr 2017 * Expand	0.010*	-0.013**	0.000	0.002
	(0.005)	(0.005)	(0.003)	(0.003)
Medicaid Eligibility (New) * Expand				
Newly Eligible 2014 * Yr 2014 * Expand	0.015	0.002	0.002	-0.022***
	(0.010)	(0.010)	(0.005)	(0.006)
Newly Eligible 2015 * Yr 2015 * Expand	0.023**	0.012	-0.012**	-0.017***
	(0.010)	(0.010)	(0.005)	(0.006)
Newly Eligible 2016 * Yr 2016 * Expand	0.034***	-0.008	-0.010**	-0.011**
	(0.010)	(0.010)	(0.005)	(0.006)
Newly Eligible 2017 * Yr 2017 * Expand	0.028***	-0.005	-0.011**	-0.015***
	(0.010)	(0.010)	(0.005)	(0.006)
Medicaid Eligibility (Previous)				
Previously Eligible 2014 * Yr 2014	0.007*	-0.001	0.002	-0.006**
	(0.003)	(0.004)	(0.002)	(0.002)
Previously Eligible 2015 * Yr 2015	0.014***	0.002	0.000	-0.014***
	(0.004)	(0.004)	(0.002)	(0.002)
Previously Eligible 2016 * Yr 2016	0.020***	0.006	-0.001	-0.024***
	(0.004)	(0.004)	(0.002)	(0.002)
Previously Eligible 2017 * Yr 2017	0.028***	-0.007*	0.006**	-0.021***
	(0.004)	(0.004)	(0.002)	(0.003)
Medicaid Eligibility (New)				
Newly Eligible 2014 * Yr 2014	0.009	-0.003	-0.002	-0.003
	(0.008)	(0.008)	(0.004)	(0.005)
Newly Eligible 2015 * Yr 2015	0.036***	-0.023***	0.007*	-0.026***
	(0.008)	(0.008)	(0.004)	(0.005)
Newly Eligible 2016 * Yr 2016	0.055***	-0.023***	0.001	-0.031***
	(0.008)	(0.008)	(0.004)	(0.005)
Newly Eligible 2017 * Yr 2017	0.053***	-0.024***	0.008*	-0.029***
	(0.008)	(0.008)	(0.004)	(0.005)
Observations	3,248,152	3,248,152	3,248,152	3,248,152

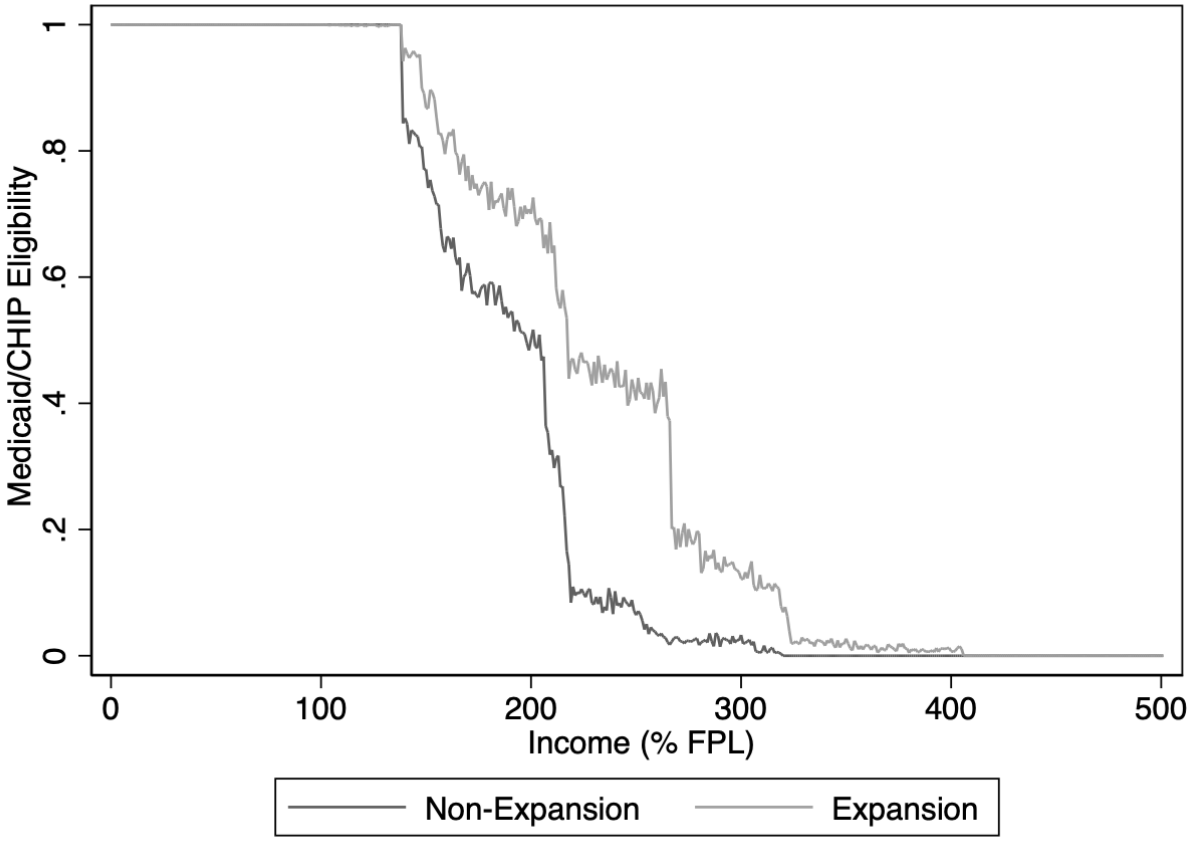
Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

Figure 1: ACA Medicaid Expansion Status (2014-2017)



Note: Figure was created by author using information on states' expansion status from the Kaiser Family Foundation (KFF).

Figure 2: Mean Medicaid/CHIP Eligibility by Income (% FPL): Ages 0-18



Note: Figure was created by author using information on states' Medicaid thresholds from the Kaiser Family Foundation (KFF).

Table A1: Summary Statistics for Control Variables

	Mean	SD
Child's Demographics		
Female	0.49	0.50
Age	9.02	5.36
Has Disability	0.04	0.20
Race/Ethnicity: Non-Hispanic White	0.54	0.50
Race/Ethnicity: Non-Hispanic Black	0.15	0.36
Race/Ethnicity: Hispanic	0.23	0.42
Household Income (% of the FPL)	273.04	167.64
Number of Related Children in Household	2.34	1.24
Mother's Demographics		
Age	38.01	7.87
Married	0.73	0.44
Education: No High School Degree	0.12	0.32
Education: High School Degree	0.21	0.41
Education: Some College	0.33	0.47
Education: College Degree or More	0.34	0.48
Work Status: Doesn't Work	0.28	0.45
Work Status: Part-Time	0.21	0.41
Work Status: Full-Time	0.51	0.50
Father's Demographics		
Age	40.63	8.44
Married	0.90	0.30
Educational Attainment (Less than Highschool)	0.13	0.33
Educational Attainment (At Least Highschool)	0.24	0.43
Educational Attainment (Some College)	0.22	0.42
Educational Attainment (College or More)	0.49	0.50
Work Status (No Work)	0.06	0.23
Work Status (Part Time)	0.06	0.24
Work Status (Full Time)	0.91	0.29
Observations	3,386,074	

Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

Table A2: Difference-in-Differences Results of the Effects of ACA Expansion on Health Coverage for Children, Including Early Expansion States

	(1) Public	(2) ESI	(3) Non-Group	(4) Uninsured
Medicaid Eligibility (Previous)				
Previously Eligible 2014 * Yr 2014	0.010***	-0.004	0.004**	-0.009***
	(0.003)	(0.003)	(0.002)	(0.002)
Previously Eligible 2015 * Yr 2015	0.021***	-0.006**	0.004**	-0.014***
	(0.003)	(0.003)	(0.002)	(0.002)
Previously Eligible 2016 * Yr 2016	0.026***	-0.009***	0.004**	-0.020***
	(0.003)	(0.003)	(0.002)	(0.002)
Previously Eligible 2017 * Yr 2017	0.031***	-0.016***	0.009***	-0.018***
	(0.003)	(0.003)	(0.002)	(0.002)
Medicaid Eligibility (Early)				
Early Eligible 2014 * Yr 2014	0.024***	-0.005	0.001	-0.018***
	(0.005)	(0.005)	(0.003)	(0.003)
Early Eligible 2015 * Yr 2015	0.051***	-0.016***	-0.002	-0.028***
	(0.005)	(0.005)	(0.003)	(0.003)
Early Eligible 2016 * Yr 2016	0.055***	-0.014***	-0.006	-0.030***
	(0.006)	(0.005)	(0.004)	(0.003)
Early Eligible 2017 * Yr 2017	0.053***	-0.016***	-0.001	-0.029***
	(0.006)	(0.005)	(0.004)	(0.003)
Medicaid Eligibility (New)				
Newly Eligible 2014 * Yr 2014	0.018***	-0.001	-0.001	-0.017***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2015 * Yr 2015	0.052***	-0.016***	-0.001	-0.037***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2016 * Yr 2016	0.079***	-0.029***	-0.005**	-0.039***
	(0.005)	(0.005)	(0.002)	(0.003)
Newly Eligible 2017 * Yr 2017	0.073***	-0.029***	0.001	-0.040***
	(0.005)	(0.005)	(0.003)	(0.003)
Policy Controls				
Previously Eligible	0.024***	-0.018***	-0.005***	0.001
	(0.003)	(0.003)	(0.002)	(0.002)
Early Eligible	0.010**	-0.019***	0.004	0.002
	(0.005)	(0.004)	(0.003)	(0.003)
Newly Eligible 2014	0.009	-0.036**	0.013	0.008
	(0.018)	(0.017)	(0.009)	(0.007)
Newly Eligible 2015	0.034*	-0.025	-0.011	0.007
	(0.019)	(0.018)	(0.009)	(0.008)
Newly Eligible 2016	-0.045	0.066*	0.037*	-0.064**
	(0.035)	(0.040)	(0.021)	(0.027)
Newly Eligible 2017	0.013	-0.028	-0.041**	0.065**
	(0.034)	(0.039)	(0.021)	(0.027)
Observations	3,248,152	3,248,152	3,248,152	3,248,152

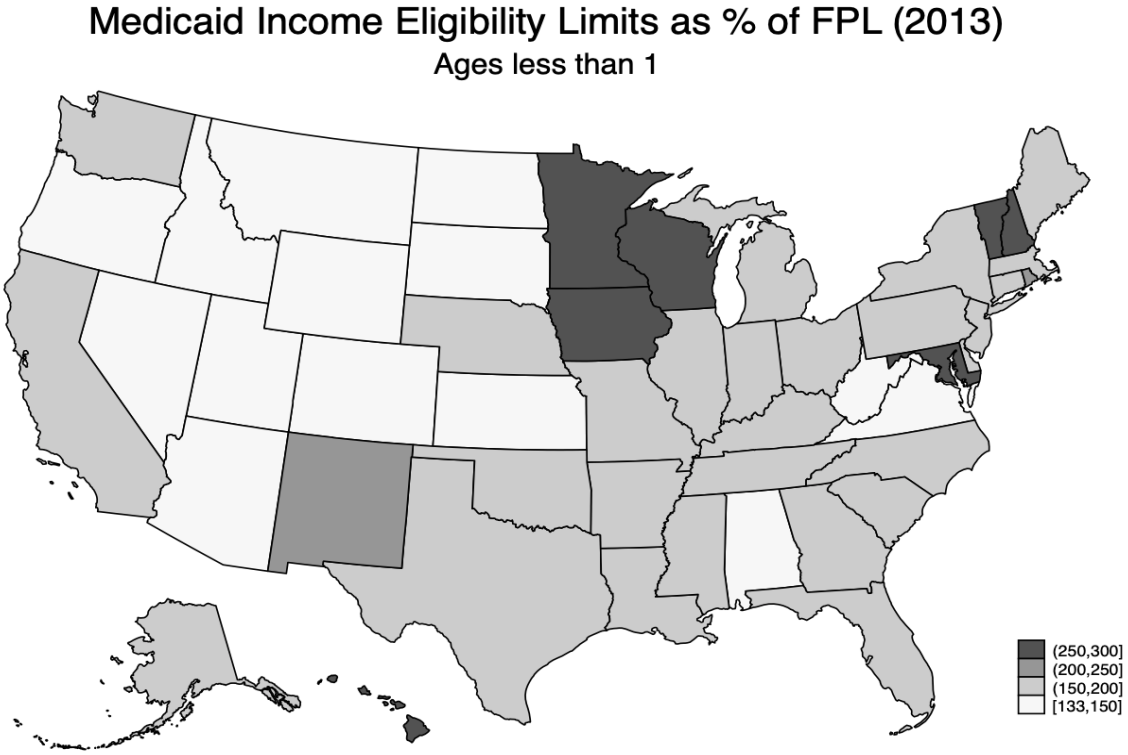
Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

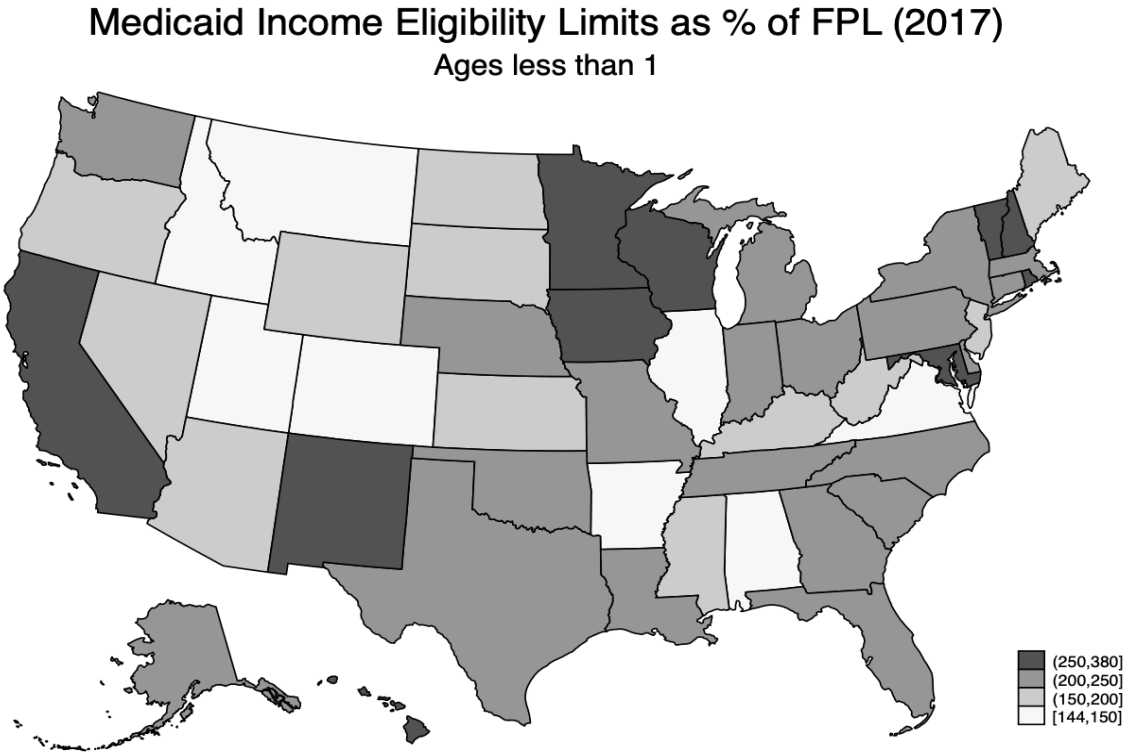
Table A3: Difference-in-Differences Results of the Effects of ACA Expansion on Health Coverage for Children, Including Eligibility for Marketplace Subsidies

	(1) Public	(2) ESI	(3) Non-Group	(4) Uninsured
Medicaid Eligibility (Previous)				
Previously Eligible 2014 * Yr 2014	0.013***	-0.004*	0.004***	-0.011***
	(0.002)	(0.003)	(0.001)	(0.001)
Previously Eligible 2015 * Yr 2015	0.026***	-0.004*	0.002	-0.018***
	(0.002)	(0.002)	(0.002)	(0.001)
Previously Eligible 2016 * Yr 2016	0.031***	-0.006**	0.002	-0.023***
	(0.003)	(0.003)	(0.002)	(0.001)
Previously Eligible 2017 * Yr 2017	0.034***	-0.011***	0.004**	-0.021***
	(0.003)	(0.003)	(0.002)	(0.001)
Medicaid Eligibility (New)				
Newly Eligible 2014 * Yr 2014	0.018***	-0.001	-0.000	-0.017***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2015 * Yr 2015	0.051***	-0.013***	-0.001	-0.038***
	(0.005)	(0.005)	(0.003)	(0.003)
Newly Eligible 2016 * Yr 2016	0.078***	-0.026***	-0.006**	-0.040***
	(0.005)	(0.005)	(0.002)	(0.003)
Newly Eligible 2017 * Yr 2017	0.072***	-0.024***	-0.002	-0.041***
	(0.005)	(0.005)	(0.003)	(0.003)
Subsidy Eligibility				
Subsidy Eligible * Yr 2014	-0.004*	0.000	0.019*	-0.019**
	(0.002)	(0.003)	(0.010)	(0.008)
Subsidy Eligible * Yr 2015	-0.014***	0.013***	0.035***	-0.045***
	(0.002)	(0.003)	(0.010)	(0.008)
Subsidy Eligible * Yr 2016	-0.019***	0.013***	0.025**	-0.034***
	(0.002)	(0.003)	(0.011)	(0.008)
Subsidy Eligible * Yr 2017	-0.020***	0.015***	-0.011	-0.000
	(0.002)	(0.003)	(0.011)	(0.009)
Policy Impacts				
Previously Eligible	0.023***	0.000	-0.016***	-0.001
	(0.003)	(0.003)	(0.002)	(0.002)
Newly Eligible 2014	0.010	-0.034**	0.012	0.006
	(0.018)	(0.017)	(0.009)	(0.007)
Newly Eligible 2015	0.034*	-0.019	-0.016*	0.008
	(0.019)	(0.018)	(0.009)	(0.008)
Newly Eligible 2016	-0.045	0.057	0.043**	-0.064**
	(0.035)	(0.040)	(0.021)	(0.027)
Newly Eligible 2017	0.014	-0.008	-0.054**	0.063**
	(0.034)	(0.039)	(0.021)	(0.027)
Subsidy Eligible	-0.036***	-0.888***	0.556***	0.178***
	(0.002)	(0.003)	(0.010)	(0.006)
Observations	3,248,152	3,248,152	3,248,152	3,248,152

Notes: *** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses and clustered at the PUMA level.The solid line separates the pre- and post-treatment event study coefficients. The sample is restricted to childless adults age 26-34 with incomes below 138% FPL. Controls include sex, race, educational attainment, age group, work status, marital status, foreign-born status, and citizenship status. All estimates were weighted using ACS weights.

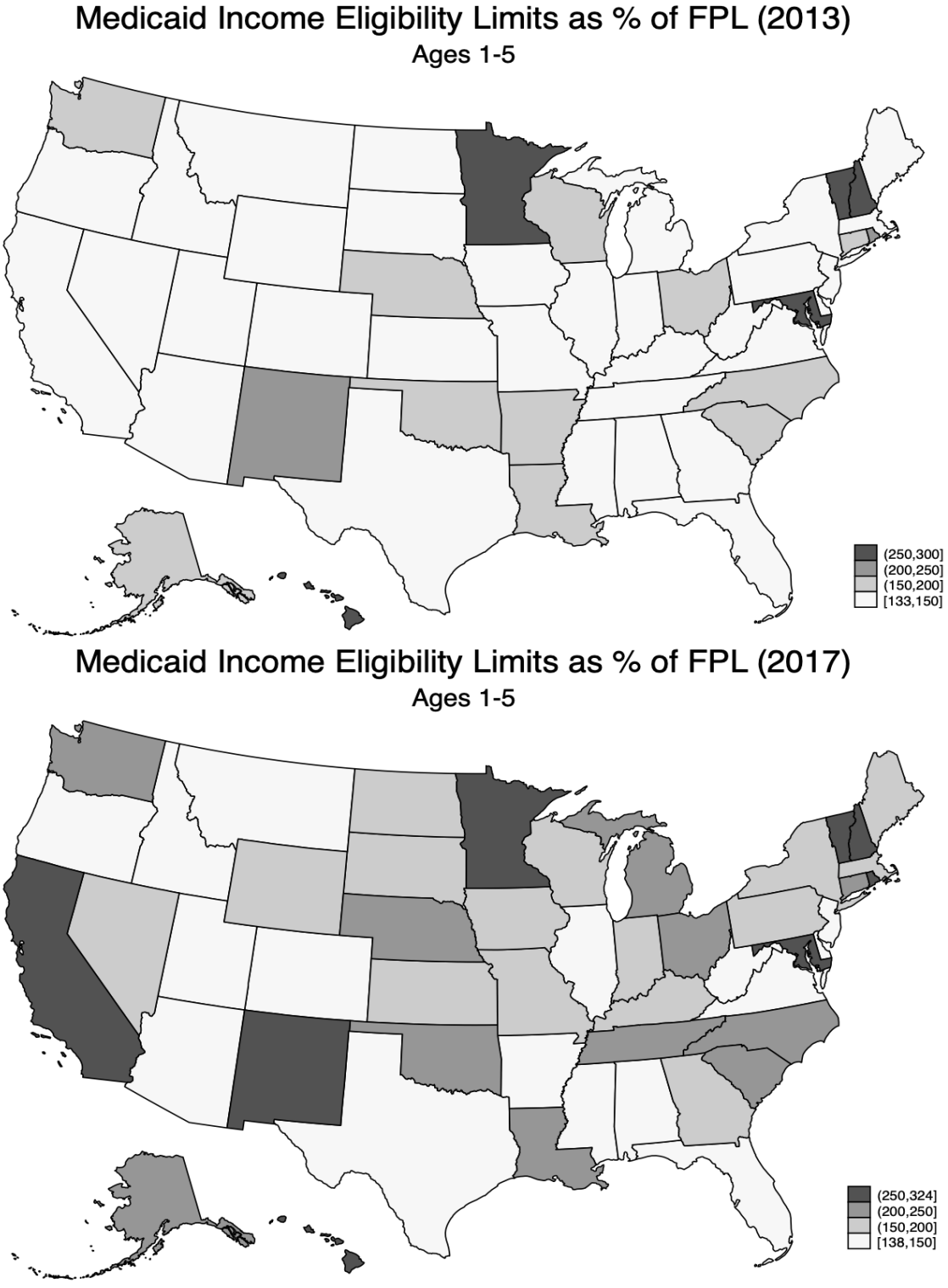
Figure A1: Medicaid Income Eligibility Limits as % of FPL (2013-2017): Ages < 1





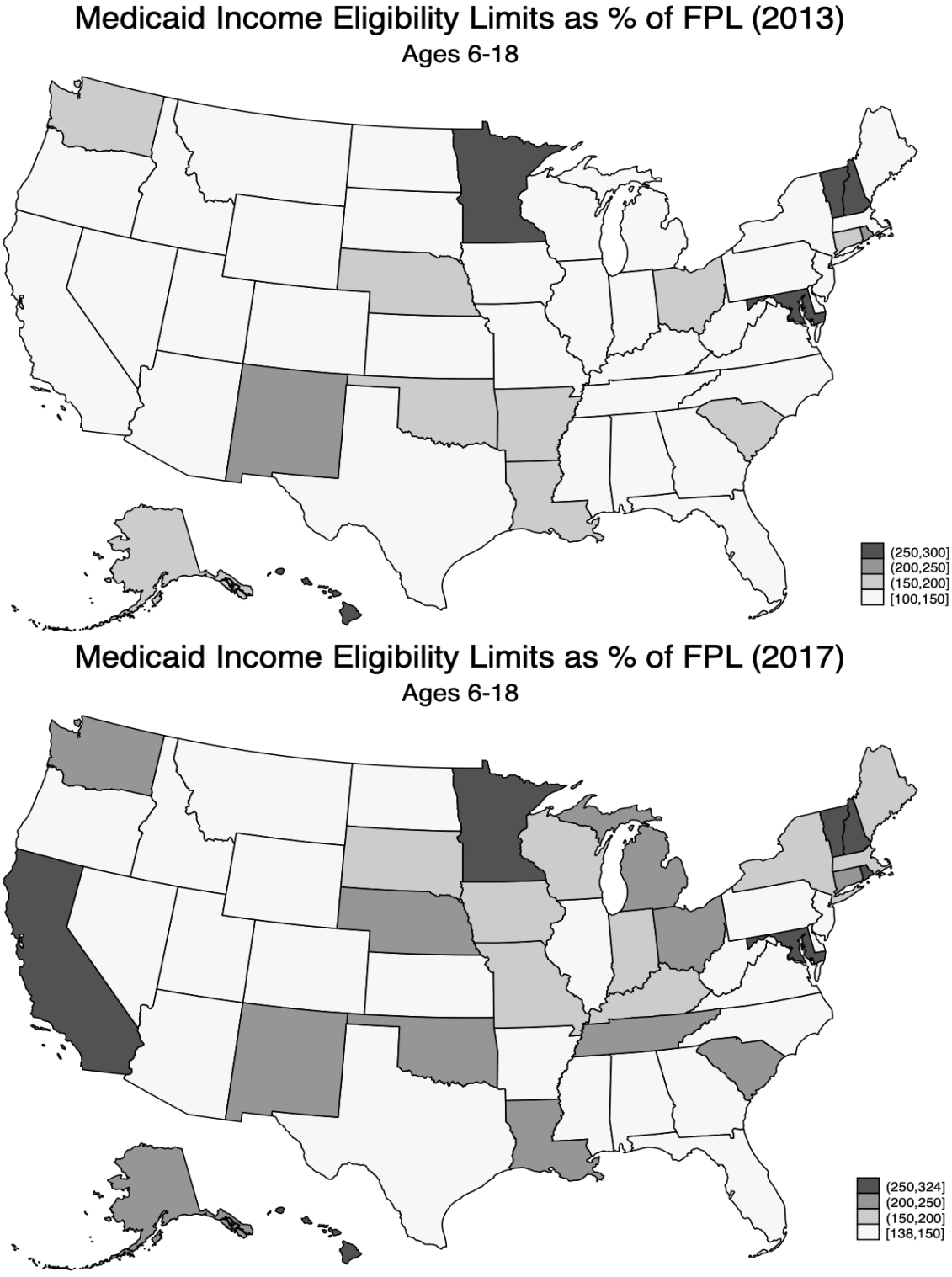
Note: Figure was created by author using information on states' Medicaid eligibility thresholds rates from the Kaiser Family Foundation (KFF).

Figure A2: Medicaid Income Eligibility Limits as % of FPL (2013-2017): Ages 1-5



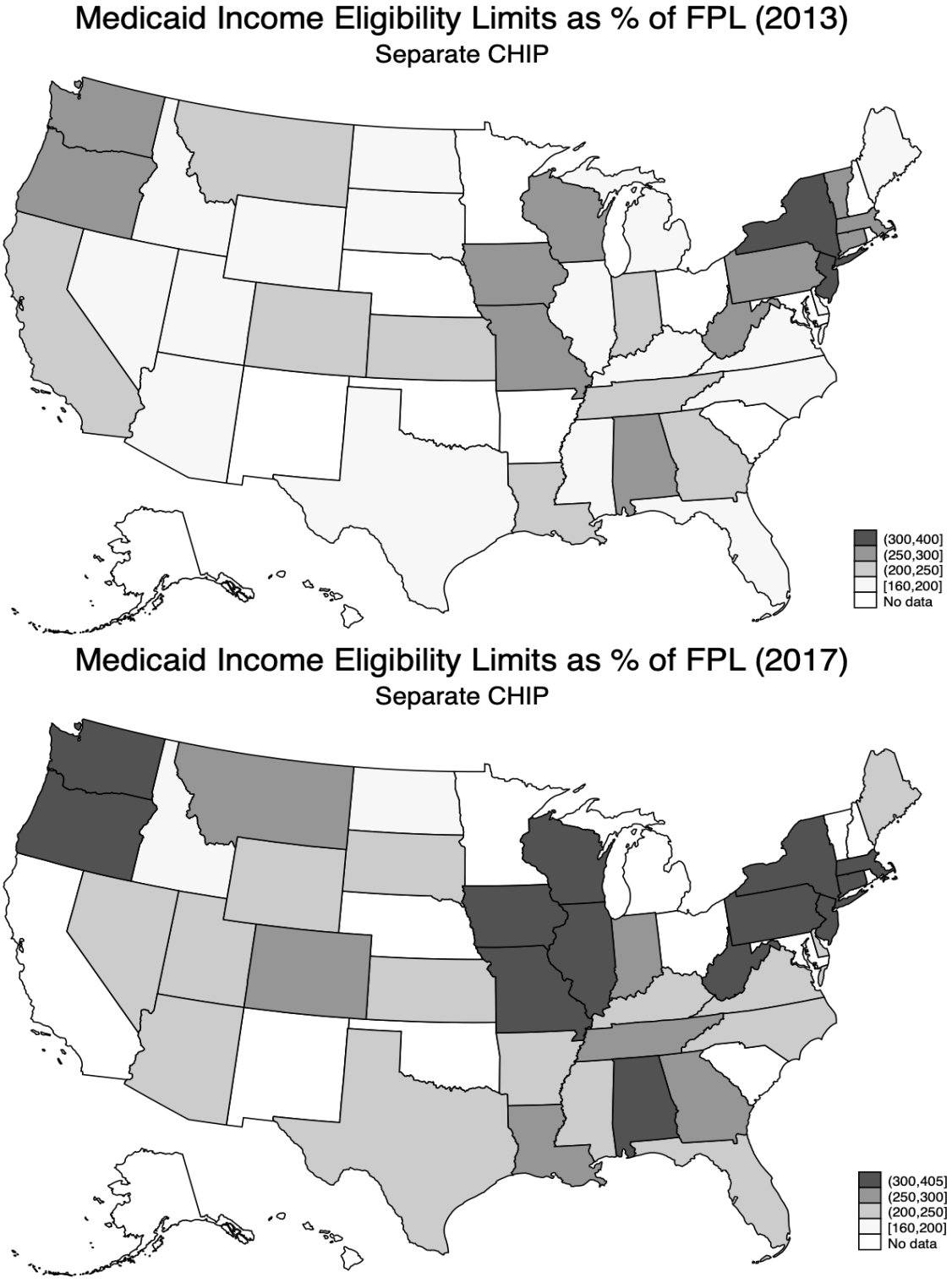
Note: Figure was created by author using information on states' Medicaid eligibility thresholds rates from the Kaiser Family Foundation (KFF).

Figure A3: Medicaid Income Eligibility Limits as % of FPL (2013-2017): Ages 6-18



Note: Figure was created by author using information on states' Medicaid eligibility thresholds rates from the Kaiser Family Foundation (KFF).

Figure A4: Medicaid Income Eligibility Limits as % of FPL (2013-2017): Separate CHIP



Note: Figure was created by author using information on states' Medicaid eligibility thresholds rates from the Kaiser Family Foundation (KFF).