The Patient Protection and Affordable Care Act and the Utilization of Health Care Services among Young Adults

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Abstract

The adult dependent coverage provision of the Patient Protection and Affordable Care Act (ACA) is one of the earlier, and most popular, ACA provisions to go into effect. Implemented in September of 2010, this provision allows young adults up to age 26 to stay on the policy of those upon whom they are dependent, typically their parents or legal guardians, and in the process reduces the net cost of insurance coverage for this group. We assess whether, and to what extent, young adults are taking advantage of this new provision, which has important implications towards evaluating the coverage mandate and the risk-sharing stipulated by the ACA. Specifically, this study analyzes the causal impact of the adult dependent coverage provision on healthcare coverage and the prevalence of being uninsured among the affected population, and subsequent effects of this policy shift on the utilization of healthcare services. The empirical analyses are based on multiple waves of the National Health Interview Surveys, spanning 2005-2013, the period which enveloped the enactment of the adult dependent coverage provision. Difference-in-differences models are estimated to account for unobserved confounding trends. These models suggest that the dependent coverage provision raised insurance coverage among young adults significantly by 7.4 percentage points, and the number of doctor visits by 3 percent. These estimates imply that policy shifts that reduce the net cost of insurance are effective in raising coverage. The entry of newly insured young adults, who are generally in better health relative to the rest of the population, also implies a more diversified risk-sharing pool. Furthermore, greater coverage is associated with greater contact with physicians, as shown by the increase in physician visits, and this may lead to early diagnoses of medical conditions and timely and more cost-effective treatment among previously uninsured individuals.
Keywords: Health care utilization, difference-in-differences, health insurance, health policy, Affordable Care Act

Introduction

The Patient Protection and Affordable Care Act (ACA), passed into law in March 2010, sought to extend coverage to the millions of Americans who either could not afford it, or were ineligible for private insurance plans. One of the more popular stipulations of the law is the adult dependent coverage provision, which went into effect in September of 2010 and allows dependents up to age 26 to stay on their parents’ health insurance plans. Prior to this provision, health care providers could remove dependents from health plans based on their age, location of residence, and other factors that make them unattractive to cover from the perspective of the insurer (Monheit et al. 2011). Historically, young adults have had one of the highest rates of uninsurance. For instance, data from the National Health Interview Surveys show that almost 32% of young adults (ages 19-25) lacked insurance prior to 2010. Several factors contribute to this low prevalence of healthcare coverage among young adults. First, young adults are typically in better health relative to the rest of the population, and hence may place a lower marginal valuation on being insured. Second, they are typically still in school or just entering the workforce, with lower incomes compared to the rest of the population, which further reduces the demand for healthcare coverage. Third, in states that have some form of community rating (for instance MA, NY, NJ)\(^1\), there is typically a cross-subsidy in insurance costs from younger,

\(^1\) Community rating imposes some form of prohibition on insurance premium variations based on the actual risk or health status of the individual. Thus, premiums are usually based on some average characteristics of the group rather than the actual characteristics of the individual. Under the ACA, for instance, premium rates can be modified only based on the number of individuals to be covered by the policy, area, age (older adults can be charged at more three times the rate of similar younger adults), and tobacco use. Insurers cannot
healthier individuals to older, less healthy individuals, and younger adults generally face higher health insurance premiums in such states. Thus, many non-poor young adults opt out of buying private insurance coverage. The ACA’s adult dependent coverage provision is therefore aimed at ensuring coverage for a demographic group with historically low insurance coverage rates, and creating a uniform standard across all 50 states (Ibid).

The dependent coverage provision raises several interesting questions. First, did this provision succeed in raising insurance rates amongst a group that has typically lacked coverage? Second, given that young adults have also historically had low rates of healthcare utilization, did the dependent coverage provision raise healthcare utilization and physician contact among this population? Lack of coverage is typically associated with delaying a physical examination and appropriate preventive care. Physician contact is also found to encourage engagement in healthy behaviors and reduce health-depreciating behaviors such as smoking (Dave and Kaestner 2009). Hence, an important issue towards evaluating the broader effects of the ACA is determining whether, and to what extent, the policy shift has been effective in raising insurance coverage and physician contact among previously uninsured individuals. These questions, which are the focus of this study, are vital towards understanding the impact of one of the ACA’s more popular components, and the law as a whole. The results will also provide valuable information to policymakers regarding the optimality and effectiveness of such provisions such as the dependent coverage provision, and the consequences of future legislative initiatives. The next section discusses the relevant literature surrounding the ACA.

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modify rates based on medical claims or health history, gender, and any other characteristics outside those noted above.

2 Adults who meet certain state-specific income thresholds may qualify for public insurance coverage through Medicaid.
Review of the literature

The Rand Corporation’s Health Insurance Experiment is one of the most comprehensive reviews of the effects of cost sharing in the market for health care (Brook et al. 1982). The study was conducted from 1971-1982 and involved more than 7,700 individuals from across the United States. Participants were all under the age of 65, so as to preclude them from gaining access to Medicare, and each was assigned a health insurance plan involving a varied level of cost sharing at either: 25%, 50%, 95%, one plan involving free health care, and one HMO-style cooperative plan that also provided free care. The study concluded that there was no significant link between the quality of care received by participants and cost sharing (Brook et al. 1982). The estimated price elasticity of medical spending was -0.2, consistent with the hypothesized moral hazard – as cost-sharing decreases and the individual bears smaller out-of-pocket spending on medical care, the demand for medical care increases. Other studies suggest that lower cost-sharing reduces the quantity of preventive services demanded, such as mammograms, and that certain individuals are particularly sensitive to price changes should be exempted from cost-sharing (Trivedi 2008).

A Medicaid expansion pilot program in Oregon provides additional insight (Apfeld 2013). The program had room for about 10,000 additional Medicaid beneficiaries. Because 90,000 persons applied for these openings, the state held a lottery. Participants were selected at random and provided with Medicaid coverage. Those who were selected for Medicaid coverage consumed an average of $1,171 more in health services. This suggests that the ACA’s dependent coverage provision may potentially increase health care utilization.

Increased coverage comes with additional costs as a result of an increase in health care utilization (Office of Technology Assessment 1992). Individuals relying on public insurance are 2.5 times as likely to experience inadequate health care services and 4 times as likely to
experience an adverse health outcome. This study supports the original Rand experiment, since it concludes that variations in insurance coverage do affect health care utilization.

Recent analyses of the ACA adult dependent coverage provision suggest an increase in the prevalence of health insurance among those aged 19-25 (Martinez and Cohen 2011, Mendes 2011). Other studies have calculated an increase in enrollment of 2.5 million, or an equivalent gain of 9 percentage points in the rates of the insured for the aforementioned age group (Sommers and Schwartz 2011). One of these studies utilized a difference-in-differences analysis to estimate the effect of the ACA on younger adults (Cantor et al 2012). Using data from the Current Population Survey, they concluded there was a significant increase in coverage among the young adult age group, and a corresponding decrease in in their uninsured rate. However, no analyses to date have used data from the National Health Interview Survey (NHIS) to conduct a ‘difference-in-differences’ analysis, or attempted to calculate the impact of the ACA-dependent coverage provision on health care utilization based on the NHIS, a large-scale nationally-representative study of the U.S. population.

Other studies have examined the ACA and utilization, but in terms of the Medicaid expansion rather than the dependent coverage provision (Hofer et al. 2011). It was found, assuming stable levels of physician productivity, that expanded coverage would increase annual primary care visits by between 15.07 - 24.26 million per year by 2019, requiring a 4,307 - 6,940 increase in the number of primary care physicians to meet the increased demand. This conclusion raises a policy implication regarding the ACA and the dependent coverage provision: the possibility that the new demand for physicians will not be met, and that the quality of care administered may falter as a result of overburdened offices and emergency rooms. One of the
goals of this paper is to examine whether such fears are warranted. The following section describes the data sources and the variables used in the analysis.

Data

The data for the analyses were obtained from the U.S. National Health Interview Surveys (NHIS), a cross-sectional nationally-representative household survey that covers the fifty states and the District of Colombia, with a response rate near 90 percent. The NHIS is the chief source of information on the health of the U.S. population, and the survey has been conducted by the National Center for Health Statistics (NCHS) and the Centers for Disease Control and Prevention (CDC) continuously since its beginning in 1957. We utilize information from nine annual waves spanning 2005-2013, a period which enveloped the policy shift in question. We restrict the analyses to those whose income levels are above the federal poverty line in order to bypass those who may be eligible for coverage under Medicaid. The “treatment” or the target group comprises of adults ages 19-25 who would be potentially impacted by the dependent coverage provision. Hence, we study trends in insurance coverage and outcome related to healthcare utilization for this target group prior to and subsequent to 2010 when the provision became effective. In order to account for confounding unobserved trends over this period, we also consider a “control” group of similar adults ages 27-33 who are not eligible to receive coverage under the dependent care provision and thus should not be impacted by this policy shift.³

³We follow the literature and exclude 26 year olds to minimize measurement error since this is a transition age between eligibility and ineligibility under the dependent care coverage provision. Our conclusions are robust to including 26 year olds in the analyses.
Dependent Variables

The primary survey questions used in the analysis related to the number of doctor’s office visits in the prior 2 weeks at the time of the survey, the number of emergency room (ER) visits in the prior 12 months, and health insurance coverage status. Based on these responses, we constructed a dichotomous indicator for whether the respondent had any health insurance coverage, and continuous measures for the number of doctor visits and hospital ER visits in the prior 2 weeks and prior 12 months respectively based on the midpoint of the categorical interval responses.

Independent Variables

In all analyses we control for: gender (dichotomous indicator for female; reference group is males); marital status (dichotomous indicators for widowed, divorced, separated, and never married; reference group is married); race/ethnicity (dichotomous indicators for Hispanic, non-Hispanic black, and non-Hispanic other race; reference group is Hispanic white); and educational attainment (dichotomous indicators for high school graduate, some college, and college or above; reference group is less-than-high school educated).

Table 1 presents the means for our analysis sample stratified across age groups (19-25 vs. 27-33) and across periods (pre-2010 which preceded the dependent care provision, and post-2010 subsequent to the policy shift). The sample size is 48,743 person-wave observations. As suggested by the unconditional means, insurance coverage increased among the target group (ages 19-25) by about 6 percentage points after the policy shift, from about 58% to 64%. This increase occurred while coverage for the slightly older group of adults (ages 27-33), who should not have been impacted by the policy, was decreasing; in fact, coverage for this control group
decreased by about one percentage point. We formalize this analysis, while controlling for demographics, in the difference-in-differences econometric framework below.

**Methodology**

The objective of this study is to assess the causal impact of the dependent care coverage provision, effective in 2010, on insurance coverage and healthcare utilization. Consider the following specification, estimated for the target group of individuals ages 19-25, relating outcome $Y$ (alternately measured as insurance coverage, doctor visits, and ER visits) to a dichotomous indicator for the $i^{th}$ individual in year $t$ to a dichotomous indicator for the periods subsequent to the policy shift (Post2010) and a vector ($X$) of demographic factors. The individual-level error term is denoted by $\varepsilon$.

$$ Y_{it} \mid \text{TARGET} = \lambda_0 + \lambda_1 \text{(Post2010)} + X_{it} \Phi + \varepsilon_{it} $$(1)

In the above model, $\lambda_1$ represents the policy effect, that is the change in insurance coverage (and alternately other outcomes related to healthcare utilization) among the target group (ages 19-25) after the policy shift, conditional on key demographic factors (gender, race/ethnicity, marital status, and educational attainment).

However, $\lambda_1$ may be confounded by other trends that may have coincided with the ACA provision over the sample period. We can therefore consider a “control” group of similar individuals ages 26-33, who are not eligible for dependent care coverage and thus would not be affected by the policy shift. Thus, a similar specification can be estimated for this control group, and we denote their coefficients with the asterisk (*).

$$ Y_{it} \mid \text{CONTROL} = \lambda_0^* + \lambda_1^* \text{(Post2010)} + X_{it} \Phi^* + \gamma_{it} $$ (2)
Given that individuals ages 27-33 should not be affected by the policy, we would expect $\lambda_{1*}$ to be 0 – that is, there should be no change in their insurance status due to enactment of the dependent care coverage in 2010. However, if we find that $\lambda_{1*}$ is non-zero, then this is capturing other confounding trends in insurance coverage over this period. We net out these trends from our estimates from equation (1) by subtracting the two coefficients. Thus $(\lambda_{1} - \lambda_{1*})$ would represent the effect of the ACA dependent care coverage on the insurance status of the target group, net of any other confounding trends over this period based on the slightly older adults as the control group. This is known as a difference-in-differences (DD) analysis and is a prominent methodology in econometric studies that aim to quantify causal effects of policy.\(^4\)

The DD framework can be estimated by combining equations (1) and (2) into a single specification as follows:

$$Y_{it} = B_0 + B_1(Target_i) + B_2(Post2010_t) + B_3(Target_i*Post2010_t) + X_{it} \Phi + \mu_{it}$$  \hspace{1cm} (3)

In the above model, $B_1$ corresponds to the average conditional effect of being in the target group (ages 19-25) relative to the control group (ages 27-33) on the outcome of interest. The parameter $B_2$ captures any confounding effects over the period, that is the effect of the policy shift on the outcome among the control group; thus, it is equivalent to $\lambda_{1*}$ in equation (2). The parameter of interest is $B_3$ the coefficient of the interaction term between the target dummy variable and the post-2010 dummy variable. The parameter $B_3$ is equivalent to $(\lambda_{1} - \lambda_{1*})$, and captures the direct effect of the ACA dependent care coverage on insurance status (and other relevant outcomes) among those ages 19-25 relative to the control group, conditional on socio-demographics.

\(^4\) See, for instance, Dave, Corman, and Reichman (2012).
Results

Figure 1 presents trends in insurance coverage by month between the target and control groups. While there is some noise and seasonal monthly variation, two points are apparent in these trends, even before controlling for any other factors. First, prior to the policy shift in 2010, insurance status among adults ages 19-25 was lower relative to older adults ages 27-33. Second, after the ACA dependent coverage provision in 2010, insurance status among the target group of younger adults ages 19-25 jumped about 5-10 percentage points and appeared to reach the prevalence rates of the control group of older adults.

These results are also evident in the formal estimation of the DD model as shown in equation (3), conditional on controls. These results are presented in Table 2, and estimates for insurance status are shown in column (1). These estimates suggest that, on average, the prevalence of healthcare coverage is significantly lower among younger adults ages 19-25, by about 1.6 percentage points, relative to older adults ages 27-33. However, after the dependent provision became effective in 2010, insurance coverage increased by 7.4 percentage points among younger adults relative to the control group (DD estimate of $B_3$, the coefficient of the interaction term. This effect is significant both statistically and economically, and represents a substantial decrease in the prevalence of uninsurance among those ages 19-25. The coefficients of the demographic factors are generally consistent with the literature. For the analysis sample of individuals ages 19-33 (excluding the 26 year olds), females have a slightly higher propensity to be insured relative to males, as do married and non-Hispanic white individuals. The prevalence of insurance also increases with education, consistent with more educated individuals being more risk-averse, having better access to more stable jobs, and having higher incomes.

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5 All reported standard errors are adjusted for heteroscedasticity.
These factors associated with higher education are predicted to raise the demand for insurance, and hence the data show that higher-educated individuals are more likely to have coverage.

Columns (2) and (3) present results for doctor visits and ER visits, respectively. With respect to doctor visits, the patterns are consistent with those discussed above. On average, persons age 19-25 have fewer doctor visits (in the past 2 weeks) compared with older adults. This is reflective of both a lower prevalence of insurance, and in general better health and lower income levels, among the younger age group – factors which would be associated with a reduced demand for medical care. However, as this group gained insurance coverage after the 2010 ACA dependent care provision, there was an increase in their contact with physicians relative to the control group. This is also consistent with the downward sloping demand function for medical care. The availability of insurance reduced the net cost of medical care for this group and raised their demand for doctor visits. The effect size implies approximately a 20% increase in doctor visits relative to the pre-2010 baseline mean (coefficient of the interaction term of 0.0298 from Table 2 divided by the pre-2010 mean of 0.15 from Table 1). Column (3) presents the results for hospital ER visits. Here, we do not find any significant effects of the policy shift on younger adults’ utilization of ER services.

**Discussion**

This study employs a DD framework, based on large-scale nationally representative data from the NHIS, to estimate the effects of the adult dependent coverage provision of the ACA on key outcomes related to insurance status and healthcare utilization. Estimates suggest that this policy shift significant expanded coverage among young adults – a group that has historically had high rates of uninsurance – by about 7 percentage points. Expanding coverage among this
young, relatively healthy sub-population is important for several reasons. First, adding a younger and healthier group to the insured ranks raises the efficiency of the insurance market by promoting greater risk-sharing and allowing for a more diversified pool of insured individuals. Second, consistent and persistent lack of coverage can raise healthcare spending in the long-term since uninsured individuals tend to delay doctor visits and routine preventive care. They also tend to overutilize other forms of more expensive care such as hospital ER services. Thus, expanding health insurance can lead to more timely and cost-effective care, incentivize individuals to seek out routine preventive care, and may reduce healthcare spending in the long run. While the ACA dependent care coverage has been effective for only about 4 years, we find evidence that it was associated with not just an increase in coverage but also an economically and statistically significant increase in doctor visits. This latter effect is consistent with insurance reducing the relative price of medical care for the individual and thus leading to a greater demand for physician services.

Economists model health as a cumulative stock that has been accumulated through life-cycle investments in terms of medical care and lifestyle factors (Grossman 2000). Thus, while it may be too soon to statistically detect positive effects on health due to greater coverage and physician contact, it should be noted that prior studies have shown that gaining health insurance coverage after being consistently uninsured can be health-promoting. Furthermore, physician contact has also been found to promote healthy behaviors and reduce unhealthy behaviors (Dave and Kaestner 2009), and this in turn would be expected to positively affect individuals’ health outcomes over the longer term.

Consistent with the economists’ notion of the health production function, wherein health is “produced” by the individual by combining various inputs such as medical care, time, lifestyle
factors, and such, any changes in health would also lead to productivity increases and thus have other broader spillover effects on wages, income, and labor supply. Furthermore, access to health insurance through the ACA’s dependent coverage provisions also breaks the link between insurance and employment; while employer-sponsored health insurance has been the main form of private coverage in the U.S., the ACA’s dependent coverage provision gives young adults a coverage option that is not linked to their jobs. This may lead to more efficient labor market turnover, reduce job-lock, and enhance longer-term matching of jobs with worker skills and preferences.\(^6\)

**References**


\(^6\) While further research on broader spillover effects is needed, see Bailey (2013) for some evidence that the ACA’s dependent care provision may have increased entrepreneurship.


Figure 1
Trends in Insurance Coverage between Target & Control Group

Target (Ages 19-25): Blue lower line
Control (Age 27-33): Red upper line
Table 1  
Means (Standard Deviations) 
National Health Interview Surveys  
2005 – 2013

<table>
<thead>
<tr>
<th>Variable</th>
<th>19-25 pre-2010</th>
<th>19-25 post-2010</th>
<th>27-33 pre-2010</th>
<th>27-33 post-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>13353</td>
<td>8640</td>
<td>15906</td>
<td>10844</td>
</tr>
<tr>
<td>Has medical insurance (percent)</td>
<td>68.09(59.89)</td>
<td>73.74(57.21)</td>
<td>74.26(54.17)</td>
<td>73.02(55.49)</td>
</tr>
<tr>
<td>Doctor visits in past 2 weeks</td>
<td>0.15(0.65)</td>
<td>0.17(0.65)</td>
<td>0.19(0.76)</td>
<td>0.20(0.76)</td>
</tr>
<tr>
<td>ER visits in past 12 months</td>
<td>0.51(1.63)</td>
<td>0.49(1.70)</td>
<td>0.45(1.69)</td>
<td>0.40(1.57)</td>
</tr>
<tr>
<td>Female (percent)</td>
<td>50.60(64.91)</td>
<td>50.63(66.85)</td>
<td>50.09(61.83)</td>
<td>51.11(63.17)</td>
</tr>
<tr>
<td>Hispanic (percent)</td>
<td>16.99(42.20)</td>
<td>20.07(49.04)</td>
<td>18.96(44.27)</td>
<td>20.38(48.45)</td>
</tr>
<tr>
<td>Non-Hispanic White (percent)</td>
<td>63.46(59.17)</td>
<td>59.25(63.72)</td>
<td>61.30(58.06)</td>
<td>59.71(60.32)</td>
</tr>
<tr>
<td>Non-Hispanic Black (percent)</td>
<td>14.08(40.85)</td>
<td>14.55(44.63)</td>
<td>13.52(39.06)</td>
<td>12.36(38.77)</td>
</tr>
<tr>
<td>Non-Hispanic other (percent)</td>
<td>5.47(28.25)</td>
<td>6.13(28.24)</td>
<td>6.22(27.61)</td>
<td>7.55(29.52)</td>
</tr>
<tr>
<td>Less than HS plus GED (percent)</td>
<td>16.73(47.53)</td>
<td>14.60(45.79)</td>
<td>16.77(44.31)</td>
<td>15.76(45.55)</td>
</tr>
<tr>
<td>High School diploma (percent)</td>
<td>25.44(56.70)</td>
<td>24.59(58.33)</td>
<td>20.58(51.55)</td>
<td>18.54(49.54)</td>
</tr>
<tr>
<td>Some college (percent)</td>
<td>45.77(64.65)</td>
<td>48.29(66.80)</td>
<td>29.74(55.95)</td>
<td>31.37(58.83)</td>
</tr>
<tr>
<td>College and above (percent)</td>
<td>12.06(42.52)</td>
<td>12.52(43.00)</td>
<td>32.91(58.52)</td>
<td>34.33(59.56)</td>
</tr>
<tr>
<td>Married (percent)</td>
<td>15.65(45.40)</td>
<td>11.92(40.47)</td>
<td>53.98(61.39)</td>
<td>50.00(63.06)</td>
</tr>
<tr>
<td>Widowed (percent)</td>
<td>0.05(2.34)</td>
<td>0.03(1.49)</td>
<td>0.14(3.56)</td>
<td>0.20(4.98)</td>
</tr>
<tr>
<td>Divorced (percent)</td>
<td>1.00(12.62)</td>
<td>0.90(11.84)</td>
<td>5.90(29.35)</td>
<td>5.22(25.12)</td>
</tr>
<tr>
<td>Separated (percent)</td>
<td>0.83(9.52)</td>
<td>0.64(8.15)</td>
<td>2.85(17.56)</td>
<td>2.53(18.20)</td>
</tr>
<tr>
<td>Never married (percent)</td>
<td>82.47(47.36)</td>
<td>86.51(42.49)</td>
<td>37.13(59.20)</td>
<td>42.06(61.88)</td>
</tr>
</tbody>
</table>
Table 2
Effect of ACA Dependent Care Coverage on Young Adults

<table>
<thead>
<tr>
<th>Model</th>
<th>(1) Has medical insurance (0/1)</th>
<th>(2) Number of doctor visits in past 2 weeks</th>
<th>(3) Number of ER visits in past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy 19 to 25</td>
<td>-0.0158** (0.00798)</td>
<td>-0.0304*** (0.00954)</td>
<td>0.0244 (0.0239)</td>
</tr>
<tr>
<td>Dummy After 2010</td>
<td>-0.00464 (0.00673)</td>
<td>-0.00165 (0.0101)</td>
<td>-0.0329 (0.0205)</td>
</tr>
<tr>
<td>After2010 X Age1925</td>
<td>0.0738*** (0.0112)</td>
<td>0.0298** (0.0146)</td>
<td>0.00929 (0.0323)</td>
</tr>
<tr>
<td>Female</td>
<td>0.0379*** (0.00553)</td>
<td>0.125*** (0.00735)</td>
<td>0.211*** (0.0160)</td>
</tr>
<tr>
<td>Widowed</td>
<td>-0.0819 (0.0872)</td>
<td>-0.0563 (0.0709)</td>
<td>0.196 (0.177)</td>
</tr>
<tr>
<td>Divorced</td>
<td>-0.0958*** (0.0176)</td>
<td>0.00511 (0.0205)</td>
<td>0.159*** (0.0560)</td>
</tr>
<tr>
<td>Separated</td>
<td>-0.0924*** (0.0215)</td>
<td>0.107* (0.0561)</td>
<td>0.333*** (0.106)</td>
</tr>
<tr>
<td>Never married</td>
<td>-0.0867*** (0.00628)</td>
<td>-0.0285*** (0.00841)</td>
<td>-0.0109 (0.0187)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-0.170*** (0.00796)</td>
<td>-0.0513*** (0.0101)</td>
<td>-0.167*** (0.0201)</td>
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<tr>
<td>Non-Hispanic Black</td>
<td>-0.0511*** (0.00876)</td>
<td>-0.0454*** (0.00959)</td>
<td>0.0644** (0.0256)</td>
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<tr>
<td>Non-Hispanic other</td>
<td>-0.0471*** (0.0104)</td>
<td>-0.0697*** (0.0108)</td>
<td>-0.152*** (0.0217)</td>
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<tr>
<td>High School diploma</td>
<td>0.155*** (0.0117)</td>
<td>-0.00987 (0.0124)</td>
<td>-0.204*** (0.0330)</td>
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<tr>
<td>Some college</td>
<td>0.261*** (0.0107)</td>
<td>0.0285** (0.0123)</td>
<td>-0.233*** (0.0325)</td>
</tr>
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<td>College and above</td>
<td>0.359*** (0.0107)</td>
<td>0.0359*** (0.0135)</td>
<td>-0.441*** (0.0319)</td>
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<td>Constant</td>
<td>0.590*** (0.0113)</td>
<td>0.136*** (0.0133)</td>
<td>0.575*** (0.0338)</td>
</tr>
<tr>
<td>Observations</td>
<td>36054</td>
<td>36186</td>
<td>35854</td>
</tr>
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</table>

Estimated standard errors in parentheses and robust to heteroscedasticity.
All models are estimated via ordinary least squares.
* p<0.1  ** p<0.05  *** p<0.01