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DISCUSSION PAPER SERIES

IZA DP No. 10916

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ABSTRACT

Minimum Wages and the Health of Hispanic Women[1]

States are increasingly resorting to raising the minimum wage to boost the earnings of those at the bottom of the income distribution. In this paper, we examine the effects of minimum wage increases on the health of low-educated Hispanic women, who constitute a growing part of the U.S. labor force, are disproportionately represented in minimum wage jobs and typically have less access to health care. Using a difference-in-differences identification strategy and data drawn from the Behavior Risk Factor Surveillance Survey and the Current Population Survey from the years 1994–2015, we find little evidence that low-educated Hispanic women likely affected by minimum wage increases experience any changes in health status, access to care, or use of preventive care.

JEL Classification: J15, I12, I13, I14

Keywords: minimum wage, Hispanic women, health outcomes, health insurance, preventive care

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Introduction

Over the last few decades, the Hispanic population of the United States has been rapidly growing.[2] As of 2014, over 55 million people of Hispanic origin lived in the US (Pew Research Center 2016). Hispanics, and Hispanic women in particular, have been increasingly participating in the U.S. labor force. Since 1994, the labor force participation rate of Hispanic women has increased to 56 percent, and is projected to surpass the participation rate of White non-Hispanic women by 2022 (U.S. Bureau of Labor Statistics 2015). Although their labor force participation rates are rising, Hispanic women earn significantly less than both Hispanic men and White non-Hispanic women[3] and make up 9.9 percent of the minimum wage workforce compared to 6.7 percent for all workers (Vogtman and Robbins 2015). Minimum wage laws may particularly affect Hispanic women because of their relatively low average education levels and high rates of limited English proficiency.[4]

In this paper, we examine the effect of minimum wage increases on the health and access to health care of Hispanic women.[5] Specifically, we use a difference-in-differences identification strategy and data drawn from both the Behavior Risk Factor Surveillance Survey (BRFSS) and the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) from the years 1994-2015 to examine the effects of increases in the minimum wage on low-educated Hispanic women's health, access to health care and use of preventive care.

[2] We use the term Hispanic as that is the term used by the BRFSS which is our data source. They do ask respondents if they are Hispanic or Latino/a, thus we adopt their convention recognizing that some Hispanic individuals are actually Latina in our sample.
[3] https://www.dol.gov/wb/media/Hispanic_Women_Infographic_Final_508.pdf.
[4] These assertions come from the authors' calculations from the American Community Survey.
[5] Other scholars have focused on Hispanic women's health-related outcomes when exploring the effects of other policies (e.g. welfare reform, title X funding) see e.g. Slusky (forthcoming), Amuedo-Dorantes, Averett and Bansak (2016).

There are good reasons to believe that the effects may differ by race/ethnicity and why we might expect to see health effects among Hispanic women in particular. For example, it has been established that the minimum wage employment effects differ across race/ethnicity (e.g. (Belman , Wolfson and Nawakitphaitoon 2015); (Even and Macpherson 2011); (Neumark and Wascher 2007a); (Neumark and Wascher 2007b)). Additionally, there are substantial racial and ethnic differences in the types of jobs held by low-income workers (e.g. (Even and Macpherson 2011)). Economic theory suggests that the employment effect of a wage increase will differ across job types depending on, for example, how easily capital can be substituted for labor, the elasticity of demand for the products produced, and the labor-intensity of the production process (Clemens and Michael 2014). There are also marked differences in high school graduation rates across race/ethnicity and gender.[6]

There are also documented racial and ethnic differences in access to insurance and preventive care for women (Sommers and McMurtry forthcoming) and much of that literature has been focused specifically on Hispanic women (e.g. (Rodríguez, Bustamante and Ang 2009) (Bustamante, et al. 2010)). Given the race and gender differences in the employment effects of the minimum wage, the vulnerability of Hispanic women (in income and health), and their increasing share of the labor force, it is important that we pay attention to this group by looking extensively into the health effects of minimum wage changes.

In what follows, we provide some background on the minimum wage, a brief overview of the literature on minimum wages and labor market outcomes, and a review of the growing literature on the minimum wage and health outcomes. We then present our data, the empirical model, and results. We conclude with a discussion of our findings.

[6] See http://nces.ed.gov/pubs2014/2014391.pdf for data on high school graduation rates by race/ethnicity and gender.

Minimum Wage Overview

The U.S. Federal minimum wage has been constant at $7.25 since July 2009, during which time it has lost 11% of its purchasing power. Its real purchasing power is comparable to the early 1980s, and below its late-1960s peak. Over this same period, many states have increased or are discussing increasing their minimum wages. In January 2017, 19 states raised their minimum wages either through a vote or because their minimum wage is indexed to inflation. It is estimated that changes in the minimum wage affect 20 to 30 percent of the work force (Belman and Wolfson 2014), thus, understanding its impacts is important.

Labor activists and many politicians argue that the current federal minimum wage of $7.25 is not enough to support a family.[7] Others have also noted that raising minimum wages could potentially close the gender wage gap since women are more likely to hold minimum wage jobs.[8] Specifically, Hispanic women working full-time only earn 56 cents compared to white non-Hispanic men (Hegewisch and Ellis 2015). Some states have undertaken studies that have shown that raising the minimum wage could be beneficial for the health of the state's residents (e.g. (Bhatia 2014); (Krisberg 2015)). Thus, although raising the minimum wage increases costs for employers who might respond by eliminating jobs, supporters of increases note that the net effect is likely to be positive since higher minimum wages will pull at least some people out of poverty. On the other side are those who argue that minimum wages are not an effective tool for lifting low income families out of poverty and instead advocate for a more generous Earned Income Tax Credit (e.g. (Sabia and Nielson 2015)).

Minimum Wages and Labor Market Outcomes Overview

[7] See the Living Wage Calculator run by MIT professor Amy Glasmeier at http://livingwage.mit.edu/articles/15-minimum-wage-can-an-individual-or-a-family-live-on-it.
[8] The American Association of University Women are among those who have advocated this: http://www.aauw.org/2014/08/07/raise-the-wage/.

There is an extensive literature and debate in labor economics regarding the effects of raising the minimum wage on employment, hours worked, and earnings (e.g. (Allegretto, Dube and Reich 2011); (Addison, Blackburn and Cotti 2013); (Belman , Wolfson and Nawakitphaitoon 2015); (Even and Macpherson 2011)). A recent summary of the evidence with respect to employment suggests a higher minimum wage results in some job loss for the least-skilled workers (D. Neumark 2015). Using data on workers in the retail sector, Sabia (2009) reports modest job loss and fewer hours worked. Others (e.g. (Belman , Wolfson and Nawakitphaitoon 2015)) note that there is general agreement that higher minimum wages are associated with higher wages and earnings for less educated workers.

Two recent papers examine how minimum wage changes affect low-skilled immigrants ((Orrenius and Zavodny 2008) and (Sabia and Churchill 2017)). Orrenius and Zavodny examine the effects of changes in minimum wages on the earnings and employment of Latino teenagers and low-education Latinos using data from 1994-2007. They find that Latino teens have higher hourly earnings but experience negative employment effects. Low-education Latinos also have higher hourly earnings but experience positive employment effects. Overall, it appears that Latinos benefit from higher minimum wages with increased hourly earnings; however, the effects are heterogeneous across nativity status. However, Sabia and Churchill (2017), in an update to Orrenius and Zavodny find much stronger evidence for adverse employment effects.

Increases in minimum wages might impact the health of low-income workers through an income effect.[9] In particular, changes in income could affect health through several pathways.

[9] We also recognize that higher minimum wages could mean lower employment rates (the extensive margin) or fewer hours worked (the intensive margin) for low-income workers. For each hour worked, low-income workers who retain their jobs after a minimum wage increase receive higher wages, which means they could potentially earn higher incomes unless their employer responds by cutting their hours. Here we focus on those who retain their jobs, thus largely leaving those issues for future work.

First, purchasing more material goods and services can have a direct impact on health such as through a better diet. Second, having a low income relative to others can create stress. Third, those with higher incomes are less likely to engage in behaviors that can lead to poor health such as substance abuse (Benzeval, et al. 2014).[10]

Previous Literature on Minimum Wages and Health

There are a growing number of studies that examine the effect of minimum wage increases on health-related outcomes ((Lenhart 2015), (Kronenberg , Jacobs and Zuccheli 2015), (Reeves, McKee, et al. 2017) and (Reeves, McKee, et al. 2014)). These papers all examine the effects on health of the 1999 national minimum wage increase in the United Kingdom. Kronenberg, Jacobs and Zuccheli (2015), using a difference-in-differences framework, find no significant effects while Reeves, McKee, et al. (2017) and (2014) find that the increases led to improved mental health but not other indicators of general health. In contrast, Lenhart (2015) finds that the increase in minimum wage significantly improved a number of health measures, such as self-reported health status and whether individuals suffer from a number of health conditions.

There are several papers that examine the link between minimum wages and whether an individual has health insurance in the United States. Standard economic theory predicts that minimum wage increases could reduce access to health care as employers substitute higher minimum wages for less generous plans or dropping coverage for employees. Simon and Kaestner (2004) explore the possibility that employers also respond to minimum wages by adjusting non-wage components of the job, including health insurance. In their analysis of CPS data spanning the years 1979-2000, they find no discernible effects of the minimum wage on the

[10] It has also been established that income influences health among low-educated U.S. workers (e.g. (Averett & Wang, 2013) and (Evans and Garthwaite 2014).

provision of health insurance (or other fringe benefits) for low-skill workers. On the other hand, the direct income-increasing effect of higher minimum wages may be that workers have more income to afford insurance premiums and/or out-of-pocket medical expenses. McCarrier et al. (2011) use the BRFSS data (1996 – 2007) to examine whether increases in the minimum wage affect un-insurance rates and/or the unmet medical needs of low-wage workers aged 18 to 64 years. Their findings suggest that a higher minimum wage implies fewer unmet medical needs but has no effect on un-insurance rates.

Other health-related work on the minimum wage includes work linking minimum wage increases to obesity and alcohol use. Using BRFSS from 1984 to 2006), Meltzer and Chen (2011) examine the effect of a decrease in the real minimum wage on rates of obesity in the US. Their paper examines all workers, not just low-wage workers, and finds an association between declines in the real minimum wage and increased incidence of obesity. Meltzer and Chen discuss what the causal link may be between declines in the minimum wage and increased obesity; they emphasize that declines in the minimum wage lower the price of fast food and increase its consumption, which leads to greater obesity. Sabia, Pitts and Argys (2014), using 1991 – 2011 CPS Outgoing Rotation Groups, YRBS, and BRFSS data, find no significant effects of minimum wage increases on alcohol consumption among teenagers.

Finally, several papers examine health outcomes directly when minimum wages increase. Strain, Horn and Maclean (2016) examine the effects of increases in minimum wage on both physical and mental health for employed and unemployed men and women, using BRFSS from 1993 to 2014. They limit their sample to those between 21 and 54 years of age, and they exclude those who are self-employed. They find that employed men have poorer physical health but fewer poor mental health days as the minimum wage increases, while unemployed men only

experience worsened physical health. They find no effect of increases in the minimum wage on physical or mental health for women. Wehby, Dave and Kaestner (2016) find that higher minimum wages lead to higher birthweights, increased prenatal care use and declines in smoking during pregnancy. Averett, Smith and Wang (forthcoming) find higher minimum wages lead to better health when examining self-assessed health for certain groups of teenagers using CPS data. More generally, Sabia and Nielson (2015) find no significant effects of raising minimum wages on low income populations in terms of health insurance coverage, doctor's visits, or sufficient resources to purchase food or eat a balanced meal.

Data

We combine data on state level minimum wages and other state level variables with the BRFSS and the CPS ASEC. While the BRFSS has a richer array of outcome variables, the CPS ASEC includes information on citizenship status, actual hourly wages and whether the individual is paid by the hour, allowing us to further refine the sample to those who are *most* likely to be affected by the minimum wage. In the following sub-sections, we first discuss the state level minimum wage data and other state level controls then we turn to our dependent and control variables.

Minimum Wage and Other State Level Controls

To examine associations between changes in the minimum wage and access to health care, health outcomes and preventive care, we gather data on the prevailing minimum wage rate in each state for the years 1994-2015.[11] We calculate the minimum wage as the greater of the state minimum wage (if one exists) and the federal minimum wage. We collect the information on the state minimum wages from the state labor-law changes published annually in the January

[11] Meaningful state variation in minimum wages did not start until the end of the 1980s (Simon and Kaestner 2004).

edition of the Monthly Labor Review. We deflate minimum wages and all the other dollar values used in the analysis using the Consumer Price Index-Urban with the base years of 1982-1984.

Over the period of our sample, the federal minimum wage changed five times due to two legislative changes (1996-1997 and 2007-2009), while the states changed their minimum wages 181 times over this time frame excluding the effects on states whose minimum wage does not differ from the federal minimum wage.[12] Some states have more regular changes in the minimum wage because they index the minimum wage to inflation,[13] but others have had to deliberately introduce legislation or make constitutional changes to increase their minimum wage.[14] In addition, over our sample period there are 15 states whose minimum wage does not differ from the federal minimum wage.

Changes in minimum wages over time vary across states. The largest one year change in the minimum wage was in Iowa, where it increased by $2.10, and the smallest one year changes occurred in Vermont, Hawaii, Delaware and Connecticut which each had a change of $.50. While the nominal minimum wage on average has been rising, the real minimum wage has been fairly constant, hovering under $4 (in 1982-84 dollars).

Many states continue to debate minimum wage increases. Allegretto (2015) emphasizes several characteristics of those states that have raised minimum wage rates higher than the federal minimum. In particular, she finds these states to have relatively liberal voters, relatively volatile business cycles, and fairly high degrees of job polarization. States vary considerably in their average wages and the purchasing power of the minimum wage is partly a function of the state's average wage. Thus, to capture the relative purchasing power of the minimum wage in a

[12] Appendix A1, available from the authors upon request, Details these changes in minimum wages.
[13] See Appendix A, available from the authors upon request, for dates of indexation.
[14] See our appendix for a full list of states that changed their minimum wage as well as other details regarding minimum wage workers.

state, we also include the ratio of the state minimum wage to the state's average wage (expressed a percentage) to capture this aspect of minimum wage changes. Because workers may respond to the ratio of the minimum wage to the state's average wage we include analysis using both the real minimum wage and this ratio.

The minimum wage is only binding for a subset of workers. In 2014, the Bureau of Labor Statistics (BLS) reports that 58.7 percent of all wage and salary workers were paid by the hour and of those 3.9 percent earned the federal minimum or less. Workers who are less than 25 years old, women, blacks and Hispanics are more likely to earn minimum wages. Minimum wage workers are also less educated and predominantly in the South and the Midwest.[15] The Fair Labor Standards Act allows for exemptions from the minimum wage for certain groups.[16]

We combine our individual-level data with state-level data on labor force characteristics and other policies that vary at the state level that may be correlated with both minimum wages and health. In particular, we control for the percent of the state's workforce that is covered by a collective bargaining agreement, the percent that is a member of a union, the state unemployment rate, the percent of the state's population that is below the poverty line, and state cigarette taxes to capture the economic and labor market conditions in each state. Given that low-educated Hispanic women are disproportionately likely to be immigrants, we also control for whether the state passed an employment verification law (commonly referred to as e-verify laws) as this could affect their employment and earnings. We also control for the cutoff for Medicaid eligibility for pregnant women (expressed as a percentage of the poverty level), whether a state adopted a mental health parity law, whether a state expanded dependent health insurance coverage prior to the 2010 implementation of the Affordable Care Act and whether a state

[15] Appendix B, available from authors upon request, details characteristics of minimum wage workers.
[16] See https://webapps.dol.gov/elaws/whd/flsa/screen75.asp for discussion of exemptions to the minimum wage.

expanded Medicaid after the implementation of the Affordable Care Act to control for access to health insurance for low-income workers. We further control for the maximum AFDC/TANF benefits for a family of three to account for differences in the state-level generosity of public transfer programs.

Dependent Variables: BRFSS

The BRFSS is a telephone survey of adults aged 18 to 99. When weighted, the BRFSS data are designed to be representative of the U.S. population. From the BRFSS we construct a dataset consisting of pooled cross-sectional observations of Hispanic women. To avoid the potential job loss effects of the minimum wage, we focus our attention on those who are working for pay (and not self-employed) at the time of the survey. We also focus on those with a high school education or less as they are more likely to be affected by changes in the minimum wage.

We examine a wide array of dependent variables. The first set measures access to care: a binary variable equal to one if the respondent reports having any type of health insurance in that year (e.g. Medicaid, Private Insurance, Medicare), and a binary variable equal to one if the respondent reported that they needed to see doctor in past year but could not afford to. We then have several variables that capture general physical and mental health. These include a binary variable equal to one if the self-reported health is excellent, zero otherwise, a binary variable equal to one if self-reported health is fair or poor, zero otherwise,[17] the number of days in the past month the respondent reported poor mental health, and a binary indicator equal to one if the respondent did not report any days of bad mental health in the past 30 days.[18] Our last set of

[17] Both of these are created from the respondent's self-report of their own health measured on a Likert scale where 1=excellent, 2=very good, 3=good, 4= fair, and 5=poor.

[18] Mental health is an important consideration because of the prevalence and high costs of mental health problems. About 25 percent of adults in the US suffer from a mental health disorder in a given year, with about six percent suffering from a serious mental illness. Mental health disorders were also one of the five most costly conditions in the US in 2006, with care expenditures rising from $35.2 billion in 1996 to $57.5 billion in 2006. Despite the prevalence and the high costs of mental health disorders, access to mental health care is still problematic. For

variables captures preventive health measures and includes whether the individual reported having a checkup in the past year, whether they had a flu shot in the past year, whether they have had their blood pressure taken in the past year (only asked in our sample for the years 1995-2000), whether they had a breast exam in the past year, and whether they had a Pap smear in the past year.

Dependent Variables: CPS

The BRFSS has the advantage of having a rich array of health measures. However, by focusing on low-educated Hispanic women, we recognize that some of our state/year cells are small which lowers the precision of our estimates. In addition, the BRFSS does not allow us to control for citizenship status or to narrow down our sample to those who are paid hourly and whose earnings are at or near the minimum wage. Thus, we turn to the CPS ASEC. The CPS ASEC provides annual estimates based on a survey of more than 75,000 households. It contains detailed information on selected social and economic characteristics of each household member as of the interview date.[19] Importantly for our purposes, respondents are asked about their self-rated health and their health insurance status. Unfortunately, no questions regarding preventive care are available. As we do with the BRFSS, we focus on Hispanic women who are working and not self-employed with high school education or less.

The first dependent variable we use from the CPS ASEC is whether the respondent has any health insurance in the last calendar year. We focus on survey years 1994 to 2013 because the CPS ASEC made a major change in how it asked the health insurance questions in 2014 from health coverage in the previous year to current health coverage (Klerman, et al. 2009). Given that

example, four percent of young adults, who self-reported mental health needs, did not seek mental health care in the past year (AHRQ 2009). Mental health disorders are also particularly prevalent among low-income households (Sareen, et al. 2011)

[19] See https://www.census.gov/programs-surveys/cps.html for a detailed description of the survey.

our primary interest is in whether an individual is insured (the question that is closest to the BRFSS) and there is no clear method to combine the two insurance measures, we limit our sample to the years 1994-2013 for this analysis.[20] Given that the CPS ASEC from 1994-2013 asked individuals whether they were insured in the past calendar year rather than currently insured (as the BRFSS does), we adjust our minimum wage measure to fit the timing of this question so that we are capturing the contemporaneous effect of minimum wages on health insurance. We also examine the effects of minimum wages on two measures of self-assessed health (self-assessed health is asked starting in 1996): a binary variable equal to one if self-reported health is excellent, zero otherwise, and a binary variable equal to one if self-reported health is fair or poor, zero otherwise, consistent with how we dichotomize the self-rated health variable in the BRFSS.[21]

Individual Covariates

For both the BRFSS and the CPS ASEC, we control for age, marital status, education, whether the respondent has any children (although the child question is slightly different in each survey), and number of adults in the household. While there are some disparities in how these questions are asked across the two surveys, we strive to make the definitions as close as possible.

Summary Statistics: BRFSS

Table 1 presents weighted sample means from the BRFSS sample. About 66 percent of our sample reported having health insurance, 15 percent said they were in excellent health and 23 percent said their health was fair or poor. Around half of the women in our sample reported having had a Pap smear or breast exam in the past year while 54 percent had had their blood

[20] See Pascale, Boudreaux and King (2016) for a discussion of the new health insurance question.
[21] Both of these are created from the respondent's self-report of their own health measured on a Likert scale where 1=excellent, 2=very good, 3=good, 4= fair, and 5=poor.

pressure taken and 16 percent had a flu shot in the past year.[22] The mean age of the sample respondent is 37 years. Of our low-educated sample of Hispanic women, about 40 percent have less than a high school education.

Summary Statistics: CPS ASEC

Our weighted sample means are presented in Table 2. In the CPS ASEC sample, 62 percent of low-educated Hispanic women reported having health insurance in the past year (years 1994-2013) but using the new measure of insurance (2014-2015), 68 percent said they have insurance. While only 15 percent said their health was excellent in the BRFSS, that percent jumps to 24 in the CPS ASEC while the reverse pattern is present for fair/poor health. Different sampling methods as well as the change in insurance questions by the CPS ASEC discussed above may account for these differences. For example, the BRFSS samples telephone numbers by using random digit dialing while the CPS ASEC samples households from an address-listing file. These differences lead to differences in who is surveyed. Hence, it is not unexpected that we might find differences in the sample means.[23] The samples also differ on child status which is likely due to how the questions are phrased as detailed on Tables 1 and 2. There are some important similarities: 40 percent of this sample also have less than a high-school diploma and the average minimum wage is $3.18 for this sample compared to $3.08 for the BRFSS. In both data sets, the minimum wage is about 35 percent of the state's average wage.

Empirical Model

[22] While it is difficult to compare these numbers to those of other studies given our sample restrictions, it is well documented in the literature that Hispanic women are less likely to be insured, to use preventive care and tend to report higher rates of fair/poor health (e.g. (Rodríguez, Bustamante and Ang 2009) (Bustamante, et al. 2010)). When we compare these numbers to non-Hispanic women in the BRFSS we do find that Hispanic women are more likely to report fair/poor health and less likely to report blood pressure checks or having received a flu shot.

[23] See Nelson et al. (2003) for further discussion of these differences.

We estimate the following equation to examine the effects of increases in minimum wages on health-related outcomes for low-educated Hispanic women:

$$(1) \quad y_{imst} = \alpha + \gamma_1 MW_{st} + \gamma_2 Z_{imt} + \gamma_3 X_{st} + \theta_s + \tau_t + \nu_m + \varepsilon_{imst}$$

where y_{imst} is an indicator for a health outcome/insurance for individual *i*, interviewed in month *m*, residing in state *s* at year *t*; MW_{st} is the minimum wage (the greater of either the state or the federal minimum in real terms) or the ratio of the minimum wage to the state's average wage; Z_{imt} and X_{st} are vectors of individual controls and state-specific time-varying economic and policy controls, respectively, as described in the Data section; θ_s is the time-invariant state effect; τ_t is the time-invariant year effect; ν_m are month fixed effects (only for the BRFSS, the CPS ASEC respondents are all interviewed in March), and ε_{imst} is an error term.[24] For most of our outcomes, the estimates are obtained using OLS except for the days of poor mental health outcome which is estimated using a negative binomial model.

Equation (1) identifies the effect of minimum wages on health outcomes from within state variation in minimum wages from year to year. Federal variation in minimum wages is largely subsumed by the year fixed effects. We cluster our standard errors by state to allow for any type of correlation structure among the error terms for a given state.

Results

[24] Sabia and Nielson (2015) note that although many scholars use state-specific linear time trends to eliminate sources of bias due to state-specific unobservable time trends when examining the effect of minimum wages on labor market outcomes, the inclusion of such trends reduces available identifying variation by over 60 percent. Thus, we do not include these in our models.

Before discussing the health outcomes we briefly examine the effects of increasing minimum wages on the earnings of low-educated working Hispanic women to gain insight into the possible mechanism for improved health.

Minimum Wages and Earnings

As described earlier, one primary mechanism through which increases in the minimum wage may positively impact health insurance status, health outcomes, and preventive care would be through an income effect. Therefore, before undertaking our empirical analysis of the health outcomes, we test to see if changes in the minimum wage increase the hourly earnings of low-educated working Hispanic women. As the BRFSS does not have earnings data and collects income only categorically, following the literature (e.g. (Sabia, Pitts and Argys 2014) (Wehby, Dave and Kaestner 2016)) we use the CPS Merged Outgoing Rotation Groups survey from 1994 to 2015 and use equation 1 to estimate the effect of minimum wages on the hourly earnings for those who are employed and paid by the hour.[25] We find positive and significant income effects, indicating that low-educated working Hispanic women are likely to see higher hourly wages as a result of an increase in the minimum wage.[26] These increased wages provide a mechanism by which Hispanic women may improve their health.

Minimum Wages and Health Measures: BRFSS

We now turn to our dependent variables of interest, health outcomes. Table 3 presents our baseline regression results using the BRFSS with no covariates. Panel A uses the real minimum wage as the independent variable, Panel B uses the ratio of the state's minimum wage to the average wage in the state, Panel C uses the lagged minimum wage considering the possibility

[25] We use the log of the nominal hourly wage as our dependent variable. We follow Wehby, Dave, & Kaestner (2016) and clean the data by excluding those who earn less than the state's minimum wage as those wages are likely due to reporting errors.
[26] These results are available upon request.

that it may take people some time to adjust their behavior/purchases in response to their increased income, and Panel D uses the lagged ratio.

With respect to access to care (columns (1) and (2)), with only two exceptions for the effects of the ratio on affordability of care, we find no statistically significant effects for any measure, which is consistent with the findings of McCarrier et al. (2011) and Simon and Kaestner (2004) who also find no effect of higher minimum wages on health insurance coverage. Turning to overall health outcomes (columns (3)-(6)), we again find no significant results except that those in higher (contemporaneous or lagged) minimum wage states are less likely to report good mental health. The last few columns of the table show results for preventive care and we see that with the lagged minimum wage specification, higher lagged minimum wages are positively correlated with having a flu shot but are negatively correlated with having a Pap smear or breast exam, and a higher lagged ratio is negatively correlated with having your blood pressure taken in the past year.[27]

The results in Table 3 are unadjusted for the covariates, so we only provide a brief summary. First, we do not see any impact on health insurance status; we actually see that certain measures of increases in minimum wages are positively correlated with the non-affordability of care, which is inconsistent with some politicians' claim that they support increases in minimum wages because such increases improve access to care. Second, the overall picture reveals little correlation between the minimum wage and our health measures, as out of the 44 regressions, only eight coefficients on the minimum wage/ratio are significant.

We now present the results with our full set of covariates in the next set of tables (Tables 4 – 8), where only selected coefficients on the control variables are shown. Starting with panel A

[27] The sample sizes for the lagged models are naturally smaller since we lose a year of data.

on Tables 4 and 5 (contemporaneous minimum wage), we find low-educated Hispanic women are less likely to be able to afford care but also less likely to report that their health is fair or poor. Turning to panel B of tables 4 and 5 (contemporaneous ratio of minimum wage to state's average wage), low-educated Hispanic women are now more likely to have health insurance. In addition, we find that affording care and having had a checkup in the past year are negatively related to minimum wage increase while higher minimum wages are associated with a greater likelihood of having a flu shot. In a separate regression not shown here, we add insurance as a control variable in the model where having had a checkup in the past year is the dependent variable and find that the minimum wage is no longer predictive of having had a checkup but the health insurance variable is a positive and significant predictor of having had a checkup in the past year.

The results from the contemporaneous minimum wage and the contemporaneous ratio are not always consistent, this is possible because the ratio can increase with higher state minimum wages as well as lower state average wages. Thus, we do not necessarily expect the same results from these two sets of specifications.

Turning to Tables 6 and 7, where we focus on the lagged minimum wage (panel A) and on the lagged ratio of the minimum wage to the state's average wage (panel B), we see that when the minimum wage is lagged, our respondents are more likely to report having health insurance, and still less likely to afford care and more likely to report their mental health is not good, are less likely to report poor/fair health and more likely to report having had a checkup in the past year. While the negative effect on mental health may seem surprising, it may stem from stress induced by having to work harder when minimum wages increase, and finding a negative effect of minimum wage increases on health is not unprecedented in the literature (e.g. (Averett, Smith

and Wang forthcoming)). We see no effect of the lagged minimum wage on our measures of preventive care. With the lagged ratio, we see, similar to the lagged minimum wage, a positive effect on having health insurance and a negative effect on the ability to afford care but no other results are significant.

In all of our results, the coefficients on the other covariates are as expected. For example, those who are older are more likely to be in poor health as are those who are unmarried or have lower education.

While we find some statistically significant correlations between increases in minimum wages and our health measures, we caution against drawing the conclusion that changes in minimum wages have any significant impact on low-educated Hispanic women's access to care, health outcomes, or preventive care for the following two reasons. First, we note that out of the 44 regressions whose results are presented in Tables 4 to 7 (11 health outcomes*four specifications (contemporaneous real minimum wage, contemporaneous ratio, lagged real minimum wage, lagged ratio)), only 13 of them show a statistically significant (mostly at the 5% level) impact of changes in some measure of minimum wage. Given the large sample size and the large number of regressions, it is not impossible that these few significant results could be purely by chance (Type I error). We therefore conduct a Bonferroni-style test (Bland 2015) and the result indicates that we cannot reject the null hypothesis that those significant results are indeed by chance. Second, we are concerned that with the BRFSS data, although we have made important sample limitations in order to reduce our sample to a group for whom the minimum wage is binding, it is possible that some observations in our sample are not earning the minimum wage and hence are less likely to be affected by minimum wage changes. That is, the lack of significant results could be a function of our ability to limit our sample to those who earn

minimum wages. We turn to the CPS ASEC in order to focus on a sample of Hispanic women who are more likely to be affected by minimum wage changes and to conduct analysis with a larger sample but a specification similar to the BRFSS which allow us to examine whether the same effects exist in the CPS ASEC.

Minimum Wage and Health Outcomes: CPS ASEC

We first show the results using the CPS ASEC without covariates in Table 8. Even with a sample more likely to be affected by changes in minimum wages with a sample size that is about three times larger than the BRFSS, we do not see any significant effects of any measure of the minimum wage on the three health measures available in the CPS ASEC, similar to what we presented in Table 3.

We present the rest of our CPS ASEC results in a series of seven tables, the first three on the effects of the contemporaneous minimum wage, the next three on the effects of the contemporaneous ratio of the minimum wage to the state's average wage, and the last one on the effects of the lagged minimum wage and the lagged ratio. In these tables, we show in column (1) the BRFSS result for that specific health measure (copied from the relevant BRFSS tables to facilitate comparisons across the two datasets) and in column (2) the CPS results for that health measure using the same specification as that shown in column (1). The following columns each adds more controls/sample restrictions to the previous one: We add citizenship and naturalization status in column (3), add industry dummies in column (4), focus only on the sample who report being paid by the hour in column (5), further limit to those who are paid by the hour and report earning within 200 percent of their state's minimum wage in column (6), and finally, narrow our sample to those who work in the two largest industries in which our sample respondents reported in table 2 (retail trade and professional services) in column (7).

With respect to the effect of the contemporaneous minimum wage on health insurance (Table 9), we find that the point estimate from the BRFSS is larger and statistically significant compared to the one from the CPS ASEC with the same specification. At first, this result may seem surprising; however, the CPS ASEC's question on insurance coverage in the last calendar year tended to underreport insurance rates (Klerman, et al. 2009) so finding an insignificant coefficient may be more likely. As we move across columns, additional controls and further sample refinements lower the magnitude of the coefficient on the minimum wage (even turning it negative in one specification). In none of our specifications is the minimum wage a statistically significant determinant of having health insurance. Understandably, as we further refine our sample, we have smaller sample sizes, raising concerns over both the precision of our estimates and which states might be driving our results. We view these with caution, although a closer look shows that even if the standard errors did not increase due to the notable drop in sample size the coefficients on minimum wage would not be statistically significant for most of the more parsimonious specifications. Remarkably similar patterns are found in Tables 10 and 11 --- namely there is no effect of minimum wages on self-assessed health either whether it is measured as excellent health or fair/poor health. The effects of other covariates are as expected. For example, those who are immigrants and not citizens are less likely to have health insurance as are the unmarried and those with less than a high school education.

Turning to tables 12-14 showing the results using the ratio of the minimum wage to the state's average wage, we find no statistically significant effect of this ratio on the three health measures in the CPS ASEC. Finally, Table 15 shows that higher one-year lagged minimum wages or corresponding ratios have no statistically significant impacts on insurance or the probability of reporting excellent health but we do find several positive effects of lagged

minimum wages on the probability of reporting fair or poor health. It is possible that this increased probability of reporting fair or poor health when minimum wages increase is a result of having to work harder on the job, perhaps because other workers were laid off due to higher minimum wages, or because workers have less time to invest in their health because the opportunity cost of doing so has risen. As noted above, such a finding is not unprecedented in the literature (e.g. (Averett, Smith and Wang forthcoming)); unfortunately, our data do not allow us to investigate this finding further so we leave it for future research.

Alternative Explanations

Although we have few significant effects of the minimum wage on our health outcomes, we want to briefly address two potential threats to our identification strategy. First, it is important that changes in the minimum wage are not driven by the health status and access to care for low-educated working Hispanic women. Otherwise, our estimates will over- or understate the true effects of minimum wages on health. To test this possibility, we aggregate our data to the state/year level (the unit of observation is now a state in a year) and run a regression of state real minimum wage on lagged health outcomes controlling for our full set of covariates. These results (not shown here but available upon request) indicate that there is no evidence that state minimum wages changes are a function of health observed in that state. This finding holds for both the CPS ASEC and the BRFSS data. In other words, the results show that none of the lagged health outcome variables we study statistically significantly predict the state minimum wages in the following year. We conclude that minimum wage changes are unlikely to be driven by the health outcomes of working low-educated Hispanic women.

Second, any finding of a positive effect of the minimum wage on health could potentially be driven by healthier individuals (who are presumably more able to work) migrating to states

with higher minimum wages (e.g. (Boffy-Ramirez 2013) (Giulietti 2014)). Whether healthier low-educated Hispanic women migrate to states with higher minimum wages has not been investigated in the literature to the best of our knowledge. In regressions not shown here but available upon request, using the CPS ASEC data we regress the share of low-educated Hispanic women who reported excellent health as a share of the state's total population on the lag of the minimum wage and our full set of covariates. We find no evidence that higher minimum wage states attract healthier low-educated Hispanic women. Thus, it is certainly not the case that any of the positive results we have found are due to the choice of healthier women to locate in high minimum wage states.

Conclusions

Policymakers are increasingly calling for higher minimum wages, citing the potential positive effects of higher minimum wages on both mental and physical health. While there is a large economics literature linking income to health, we know little about how minimum wage increases might affect health. Our work adds to a growing literature that has examined the effect of minimum wages on heath by looking at an important yet often ignored population --- Hispanic women.

We find scant evidence that minimum wage increases have improved the health of Hispanic women or their access to care or use of preventive care. Indeed, in some specifications, it appears that they might actually worsen health. Our results also indicate that the measure of the minimum wage is important (e.g. ratio of minimum wage to state average wage or minimum wage) and that changes in the minimum wage likely operate with a lag with respect to health changes.

These results suggest that while increases in minimum wages increase the earnings of at least some Hispanic women, expecting higher minimum wages to spill-over into health is not realistic and policy makers who wish to address disparities in access to health care for Hispanic women cannot count on minimum wages changes to facilitate that goal.

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Current Population Survey-Merged Outgoing Rotation Groups

Table 1: BRFSS Sample Means 1994-2015

	Mean	Standard deviation
has health insurance	0.66	(0.47)
needed to see Dr. but couldn't afford to past 12m	0.23	(0.42)
health is excellent	0.15	(0.36)
health is fair or poor	0.23	(0.42)
has good mental health	0.60	(0.49)
days in past month with bad mental health	3.96	(7.78)
had checkup in past year	0.72	(0.45)
had flu shot in past year	0.16	(0.36)
had blood pressure taken in past year	0.54	(0.50)
breast exam in past year	0.43	(0.50)
had pap smear in past year	0.50	(0.50)
state real minimum wage	3.08	(0.28)
ratio of state avg. wage to state min wage	35.31	(3.95)
age in years	36.57	(11.39)
never married	0.21	(0.40)
separated/divorced/widowed	0.21	(0.41)
has no children under 17 in household	0.78	(0.42)
less than a high school education	0.40	(0.49)
state unemployment rate	5.53	(1.42)
percent of workforce member of union	13.60	(6.30)
percent of state workforce represented by unions	15.18	(6.33)
no e-verify law	0.98	(0.15)
state AFDC/TANF benefits, family of 3	457.61	(191.90)
state Medicaid eligibility cutoff pregnant women	196.66	(42.13)
state cigarette tax	61.85	(48.59)
state mandates dependent coverage health insurance	0.08	(0.26)
state mandates mental health parity, health insurance	0.08	(0.27)
state expanded Medicaid under ACA	0.02	(0.12)
Observations	16,670	

Table 2: CPS ASEC Sample Means-1994-2015

	Mean	Standard deviation
has health insurance in past calendar year[#]	0.62	(0.49)
Insured now[*]	0.68	(0.46)
health is excellent	0.24	(0.43)
health is fair or poor	0.09	(0.29)
state real minimum wage	3.18	(0.35)
ratio state avg. wage to state min wage	34.84	(3.69)
real minimum wage	3.18	(0.35)
foreign born-not citizen	0.40	(0.49)
foreign born-naturalized citizen	0.15	(0.35)
age in years	36.82	(11.66)
never married	0.29	(0.46)
separated/divorced/widowed	0.20	(0.40)
has no own children present in household	0.34	(0.47)
less than high school education	0.40	(0.49)
state unemployment rate	6.34	(1.96)
percent of workforce member of union	12.44	(6.44)
percent of state workforce represented by unions	13.81	(6.47)
no e-verify law	0.87	(0.34)
state AFDC/TANF benefits, family of 3	467.76	(206.77)
state Medicaid eligibility cutoff pregnant women	197.40	(35.80)
state cigarette tax	100.94	(76.98)
state mandates dependent coverage, health insurance	0.46	(0.50)
state mandates mental health parity, health insurance	0.33	(0.47)
state expanded Medicaid under ACA	0.14	(0.35)
industry ag/forestry/fishing	0.02	(0.14)
construction	0.01	(0.11)
food production	0.04	(0.19)
textile production	0.05	(0.21)
chemical production	0.02	(0.13)
other manufacturing	0.08	(0.27)
trans/communications public utilities	0.04	(0.19)
wholesale trade	0.03	(0.17)
retail trade	0.29	(0.45)
finance/real estate	0.06	(0.23)
business/repair services	0.09	(0.28)
personal services	0.08	(0.27)
entertainment services	0.01	(0.12)
professional services	0.20	(0.40)
public administration	0.00	(0.00)
military	0.00	(0.00)
paid by the hour	0.35	(0.74)
Observations	50,414	

[#] This variable is available from 1994-2013 in our sample.

[*] This question refers to currently having health insurance and was asked in 2014-2015.

Table 3: BRFSS results with no covariates and no state fixed effects and year fixed effects

Panel A: BRFSS: Contemporaneous minimum wage (no covariates and no state and year fixed effects)

VARIABLES	(1) Health insurance	(2) Can't Afford care	(3) Exc. hlth	(4) Fair/poor hlth	(5) Good mental hlth.	(6) Days poor mental hlth	(7) Checkup in past year	(8) Flu shot past year	(9) BP taken past year	(10) Breast exam past year	(11) Pap test past year
Real min wage	0.067	0.003	0.028	-0.014	-0.054*	0.0776	0.024	0.033	0.491	-0.155	-0.158
	(0.051)	(0.024)	(0.018)	(0.029)	(0.020)	(0.1259)	(0.052)	(0.028)	(0.312)	(0.088)	(0.107)
Constant	0.458*	0.226*	0.068	0.268*	0.767**	1.1370**	0.643**	0.054	-0.968	0.909**	0.987**
	(0.177)	(0.085)	(0.061)	(0.102)	(0.069)	(0.3911)	(0.163)	(0.098)	(0.940)	(0.280)	(0.336)
Observations	16,623	15,760	16,624	16,624	16,051	16,051	12,432	15,749	4,914	16,618	16,608
R-squared	0.002	0.000	0.000	0.000	0.001		0.000	0.001	0.033	0.008	0.008
Panel B: BRFSS: Contemporaneous ratio (no covariates and no state and year fixed effects)											
Ratio	-0.003	0.006**	0.001	-0.002	0.000	-0.0008	-0.006	-0.000	-0.011	0.006	0.010
	(0.004)	(0.002)	(0.002)	(0.004)	(0.002)	(0.0042)	(0.004)	(0.004)	(0.008)	(0.004)	(0.005)
Constant	0.767**	0.008	0.120	0.295*	0.599**	1.4030**	0.928**	0.171	0.952**	0.226	0.155
	(0.126)	(0.063)	(0.080)	(0.125)	(0.057)	(0.1516)	(0.140)	(0.133)	(0.265)	(0.160)	(0.201)
Observations	16,623	15,760	16,624	16,624	16,051	16,051	12,432	15,749	4,914	16,618	16,608
R-squared	0.001	0.004	0.000	0.000	0.000		0.003	0.000	0.008	0.002	0.006
Panel C: BRFSS: Lagged minimum wage (no covariates and no state and year fixed effects)											
VARIABLES	Health insurance	Can't Afford care	Exc. hlth	Fair/poor hlth	Good mental hlth.	Days poor mental hlth	Checkup in past year	Flu shot past year	BP taken past year	Breast exam past year	Pap test past year
Real min wage	0.049	0.005	0.017	-0.017	-0.079**	0.0429	0.053	0.030*	-0.000	-0.216**	-0.245*
	(0.048)	(0.030)	(0.015)	(0.023)	(0.017)	(0.1429)	(0.055)	(0.012)	(0.065)	(0.081)	(0.103)
Constant	0.515**	0.220*	0.100	0.281**	0.843**	1.2524**	0.562**	0.072	0.655**	1.083**	1.244**
	(0.170)	(0.105)	(0.053)	(0.089)	(0.059)	(0.4379)	(0.169)	(0.039)	(0.187)	(0.258)	(0.325)
Observations	15,935	15,072	15,937	15,937	15,377	15,377	11,765	15,059	4,223	15,930	15,919
R-squared	0.001	0.000	0.000	0.000	0.002		0.001	0.001	0.000	0.016	0.020
Panel D: BRFSS: Lagged ratio (no covariates and no state and year fixed effects)											
Ratio	-0.004	0.006**	0.000	-0.003	-0.000	-0.0079	-0.004	-0.004	-0.023**	0.005	0.009
	(0.005)	(0.002)	(0.003)	(0.005)	(0.002)	(0.0074)	(0.004)	(0.002)	(0.006)	(0.005)	(0.007)
Constant	0.793**	0.014	0.144	0.341*	0.608**	1.6630**	0.880**	0.315**	1.490**	0.257	0.187
	(0.153)	(0.058)	(0.088)	(0.167)	(0.062)	(0.2586)	(0.126)	(0.085)	(0.240)	(0.187)	(0.254)
Observations	15,935	15,072	15,937	15,937	15,377	15,377	11,765	15,059	4,223	15,930	15,919
R-squared	0.001	0.004	0.000	0.001	0.000		0.002	0.002	0.044	0.001	0.005

Robust standard errors in parentheses. Blood pressure only asked until 2000. All models estimated with OLS except for days of poor mental health estimated with a negative binomial model. Affording care refers to needing to see Dr. in past year but not able to afford to. Ratio refers to (state min wage/state average wage)*100, ** p<0.01, * p<0.05

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Table 4: BRFSS: Access to health care and Health outcomes

Panel A: BRFSS: Contemporaneous minimum wage

VARIABLES	(1) Health insurance	(2) Can't Afford care	(3) Exc. hlth	(4) Fair/poor hlth	(5) Good mental hlth.	(6) Days poor mental hlth
Real min wage	0.051*	0.090*	0.052	-0.064*	-0.064	-0.1107
	(0.025)	(0.042)	(0.028)	(0.029)	(0.044)	(0.1487)
Age	0.004**	-0.001*	-0.000	0.004**	0.005**	-0.0117**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.0027)
Never married	-0.096**	0.018	0.022	0.024	0.005	0.2105**
	(0.019)	(0.017)	(0.015)	(0.013)	(0.021)	(0.0815)
Separated/divorced/widowed	-0.056**	0.067**	0.000	0.030	-0.057**	0.4694**
	(0.015)	(0.013)	(0.009)	(0.017)	(0.012)	(0.0947)
No children	-0.032*	-0.025	-0.030	0.002	0.013	-0.0391
	(0.014)	(0.027)	(0.018)	(0.013)	(0.037)	(0.1413)
No E-verify	0.066	-0.005	0.004	-0.086**	0.068	-0.1489
	(0.048)	(0.040)	(0.030)	(0.025)	(0.051)	(0.1682)
Less than HS	-0.201**	0.089**	-0.086**	0.174**	-0.004	0.1327*
	(0.020)	(0.018)	(0.027)	(0.023)	(0.015)	(0.0566)
Constant	0.404**	-0.086	0.068	0.231*	0.290	2.3169*
	(0.144)	(0.147)	(0.117)	(0.097)	(0.192)	(0.9189)
Observations	16,570	15,708	16,571	16,571	15,999	15,999
R-squared	0.109	0.045	0.032	0.094	0.035	

Panel B: BRFSS: Contemporaneous ratio

Ratio	0.004*	0.008*	0.003	-0.001	-0.004	0.0009
	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.0101)
Age	0.004**	-0.001*	-0.000	0.004**	0.005**	-0.0117**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.0027)
Never married	-0.096**	0.018	0.022	0.024	0.005	0.2105**
	(0.019)	(0.017)	(0.015)	(0.013)	(0.021)	(0.0814)
Separated/divorced/widowed	-0.056**	0.066**	0.000	0.031	-0.057**	0.4699**
	(0.015)	(0.013)	(0.009)	(0.017)	(0.012)	(0.0941)
No children	-0.033*	-0.025	-0.030	0.002	0.014	-0.0363
	(0.014)	(0.027)	(0.019)	(0.014)	(0.037)	(0.1402)
No E-verify	0.061	-0.002	0.002	-0.078**	0.071	-0.1324
	(0.049)	(0.038)	(0.031)	(0.027)	(0.052)	(0.1627)
Less than HS	-0.202**	0.089**	-0.086**	0.175**	-0.004	0.1327*
	(0.020)	(0.018)	(0.027)	(0.023)	(0.015)	(0.0575)
Constant	0.161	-0.048	0.024	0.133	0.284	2.1596**
	(0.162)	(0.154)	(0.115)	(0.076)	(0.157)	(0.6407)
Observations	16,570	15,708	16,571	16,571	15,999	15,999
R-squared	0.108	0.045	0.032	0.093	0.035	

All models include other controls variables show in Table 1 and state, year and month of interview fixed effects. All regressions estimated by OLS except days of poor mental health which uses a negative binomial regression. Affording care refers to needing to see Dr. in past year but not able to afford to. Robust standard errors in parentheses. Ratio refers to (state min wage/state average wage)*100, ** p<0.01, * p<0.05

Table 5: Preventive care

Panel A: BRFSS: Contemporaneous minimum wage

VARIABLES	(1) Checkup in past year	(2) Flu shot past year	(3) BP taken past year	(4) Breast exam past year	(5) Pap test past year
Real min wage	-0.021	0.042	-0.027	-0.049	-0.051
	(0.042)	(0.036)	(0.250)	(0.038)	(0.044)
Age	0.002**	0.003**	-0.001	0.001*	-0.001
	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)
Never married	-0.023	0.034**	-0.041	-0.061**	-0.109**
	(0.015)	(0.010)	(0.021)	(0.022)	(0.029)
Sep./div./widowed	-0.058**	-0.002	-0.014	-0.012	-0.038**
	(0.015)	(0.011)	(0.027)	(0.021)	(0.009)
No children	0.026	0.033*	0.008	-0.002	0.000
	(0.015)	(0.014)	(0.015)	(0.013)	(0.013)
No E-verify	0.016	0.038		0.006	0.031
	(0.046)	(0.042)		(0.046)	(0.039)
Less than HS	-0.008	-0.022**	-0.011	-0.061**	-0.040*
	(0.035)	(0.008)	(0.014)	(0.008)	(0.018)
Constant	0.244	-0.085	0.657	0.988**	1.089**
	(0.167)	(0.173)	(0.564)	(0.238)	(0.181)
Observations	12,394	15,707	4,902	16,563	16,554
R-squared	0.042	0.075	0.494	0.183	0.248

Panel B: Contemporaneous ratio

Ratio	-0.004	0.005*	-0.021	-0.004	-0.003
	(0.002)	(0.002)	(0.016)	(0.002)	(0.002)
Age	0.002**	0.003**	-0.000	0.001*	-0.001
	(0.000)	(0.000)	(0.001)	(0.000)	(0.001)
Never married	-0.023	0.034**	-0.035	-0.061**	-0.109**
	(0.015)	(0.010)	(0.020)	(0.022)	(0.029)
Sep./div./widowed	-0.059**	-0.002	-0.011	-0.012	-0.038**
	(0.015)	(0.011)	(0.028)	(0.021)	(0.009)
No children	0.027	0.033*	0.007	-0.002	0.000
	(0.015)	(0.014)	(0.014)	(0.013)	(0.013)
No E-verify	0.018	0.042		0.003	0.030
	(0.047)	(0.042)		(0.041)	(0.035)
Less than HS	-0.008	-0.022**	-0.013	-0.061**	-0.040*
	(0.035)	(0.008)	(0.015)	(0.008)	(0.018)
Constant	0.458**	-0.216	0.369	0.882**	0.957**
	(0.137)	(0.152)	(0.564)	(0.145)	(0.106)
Observations	12,394	15,707	4,902	16,563	16,554
R-squared	0.042	0.076	0.490	0.183	0.248

All models include other controls variables shown in Table 1 and state, year and month of interview fixed effects. All regressions estimated by OLS. Robust standard errors in parentheses. Ratio refers to (state min wage/state average wage)*100. Blood pressure was measured before E-verify laws had been enacted. ** p<0.01, * p<0.05

Table 6: BRFSS: Access to health care and Health outcomes

Panel A: Lagged minimum wage

VARIABLES	(1) Health insurance	(2) Can't Afford care	(3) Exc. hlth	(4) Fair/poor hlth	(5) Good mental hlth.	(6) Days poor mental hlth
Lagged real min wage	0.045*	0.080*	-0.011	-0.080*	-0.106*	0.0226
	(0.018)	(0.035)	(0.037)	(0.038)	(0.041)	(0.1366)
Age	0.004**	-0.002*	-0.000	0.004**	0.005**	-0.0132**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.0029)
Never married	-0.095**	0.022	0.020	0.040*	-0.008	0.2359**
	(0.023)	(0.017)	(0.018)	(0.017)	(0.021)	(0.0807)
Separated/divorced/widowed	-0.060**	0.080**	-0.002	0.040*	-0.056**	0.4920**
	(0.016)	(0.011)	(0.009)	(0.018)	(0.017)	(0.1137)
No children	-0.026	-0.029	-0.033	0.003	0.013	0.0091
	(0.017)	(0.031)	(0.019)	(0.014)	(0.038)	(0.1306)
No E-verify	0.066	-0.011	-0.003	-0.086**	0.075	-0.1370
	(0.048)	(0.037)	(0.031)	(0.027)	(0.050)	(0.1596)
Less than HS	-0.198**	0.089**	-0.086**	0.174**	-0.004	0.1175
	(0.019)	(0.020)	(0.025)	(0.024)	(0.019)	(0.0616)
Constant	0.201	0.111	0.159	0.317**	0.287*	2.3109**
	(0.135)	(0.148)	(0.113)	(0.110)	(0.142)	(0.6500)
Observations	15,884	15,022	15,886	15,886	15,327	15,327
R-squared	0.110	0.051	0.032	0.096	0.035	

Panel B: Lagged ratio

Lagged ratio	0.005*	0.006*	-0.000	-0.003	-0.004	-0.0107
	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.0156)
Age	0.004**	-0.002*	-0.000	0.004**	0.005**	-0.0132**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.0029)
Never married	-0.095**	0.022	0.020	0.040*	-0.008	0.2349**
	(0.023)	(0.017)	(0.018)	(0.017)	(0.021)	(0.0796)
Separated/divorced/widowed	-0.060**	0.079**	-0.002	0.040*	-0.055**	0.4905**
	(0.016)	(0.011)	(0.009)	(0.018)	(0.017)	(0.1140)
No children	-0.026	-0.029	-0.033	0.003	0.013	0.0055
	(0.017)	(0.031)	(0.019)	(0.015)	(0.039)	(0.1318)
No E-verify	0.064	-0.013	-0.002	-0.081**	0.083	-0.1405
	(0.048)	(0.036)	(0.031)	(0.028)	(0.051)	(0.1594)
Less than HS	-0.198**	0.089**	-0.086**	0.175**	-0.004	0.1203
	(0.019)	(0.020)	(0.025)	(0.024)	(0.019)	(0.0647)
Constant	0.039	0.078	0.150	0.262**	0.262	2.7678**
	(0.157)	(0.128)	(0.104)	(0.083)	(0.143)	(0.7847)
Observations	15,884	15,022	15,886	15,886	15,327	15,327
R-squared	0.110	0.051	0.032	0.096	0.035	

All models include other controls variables show in Table 1 and state, year and month of interview fixed effects. All regressions estimated by OLS except days of poor mental health which uses a negative binomial regression. Affording care refers to needing to see doctor in past year but not able to afford to. Ratio refers to (state min wage/state average wage)*100. Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 7: BRFSS: Preventive care

Panel A: Lagged minimum wage

VARIABLES	(1) Checkup in past year	(2) Flu shot past year	(3) BP taken past year	(4) Breast exam past year	(5) Pap test past year
Lagged real min wage	0.101*	0.049	0.214	-0.079	-0.030
	(0.047)	(0.036)	(0.500)	(0.051)	(0.036)
Age	0.001*	0.004**	-0.000	0.001*	-0.001
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Never married	-0.028*	0.033**	-0.051*	-0.054*	-0.100**
	(0.013)	(0.010)	(0.024)	(0.021)	(0.025)
Sep./div./widowed	-0.059**	-0.012	-0.018	-0.011	-0.030**
	(0.015)	(0.013)	(0.033)	(0.022)	(0.010)
No children	0.032	0.029	0.020	-0.008	-0.003
	(0.017)	(0.016)	(0.014)	(0.014)	(0.016)
No E-verify	0.013	0.040		0.008	0.038
	(0.046)	(0.040)		(0.045)	(0.038)
Less than HS	0.000	-0.021*	-0.008	-0.057**	-0.034
	(0.034)	(0.009)	(0.017)	(0.008)	(0.019)
Constant	0.025	-0.114	-1.217	1.078**	1.092**
	(0.248)	(0.143)	(1.769)	(0.259)	(0.170)
Observations	11,729	15,019	4,213	15,877	15,867
R-squared	0.043	0.073	0.362	0.194	0.266

Panel B: Lagged ratio

Lagged ratio	0.003	-0.000	-0.015	-0.004	-0.000
	(0.003)	(0.003)	(0.016)	(0.002)	(0.003)
Age	0.001*	0.004**	-0.000	0.001*	-0.001
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Never married	-0.028*	0.033**	-0.054*	-0.054*	-0.100**
	(0.014)	(0.010)	(0.025)	(0.021)	(0.025)
Sep./div./widowed	-0.059**	-0.012	-0.018	-0.011	-0.029**
	(0.015)	(0.013)	(0.033)	(0.022)	(0.010)
No children	0.033	0.029	0.019	-0.007	-0.002
	(0.017)	(0.016)	(0.014)	(0.014)	(0.016)
No E-verify	0.020	0.036		0.010	0.038
	(0.046)	(0.039)		(0.043)	(0.034)
Less than HS	-0.000	-0.022*	-0.010	-0.057**	-0.034
	(0.033)	(0.009)	(0.017)	(0.008)	(0.019)
Constant	0.295	0.006	0.338	0.964**	0.925**
	(0.207)	(0.153)	(0.881)	(0.165)	(0.127)
Observations	11,729	15,019	4,213	15,877	15,867
R-squared	0.042	0.072	0.363	0.194	0.265

All models include other controls variables show in Table 1 and state, year and month of interview fixed effects. All regressions estimated by OLS. Robust standard errors in parentheses. Ratio refers to (state min wage/state average wage)*100. Blood pressure was measured before E-verify laws had been enacted. ** p<0.01, * p<0.05

Table 8: CPS ASEC outcomes with no covariates, state fixed effects and year fixed effects

Panel A: CPS ASEC: Contemporaneous minimum wage (no covariates and no state and year fixed effects)

VARIABLES	(1) Health insurance	(2) Exc. hlth	(3) Fair/poor hlth
Real min wage	0.034	-0.015	-0.000
	(0.024)	(0.013)	(0.009)
Constant	0.512**	0.286**	0.092**
	(0.086)	(0.045)	(0.032)
Observations	43,595	47,396	47,396
R-squared	0.001	0.000	0.000

Panel B: CPS ASEC: Contemporaneous ratio (no covariates and no state and year fixed effects)

	(1) Health insurance	(2) Exc. hlth	(3) Fair/poor hlth
Ratio	-0.000	-0.002*	-0.000
	(0.002)	(0.001)	(0.001)
Constant	0.633**	0.309**	0.092**
	(0.074)	(0.041)	(0.021)
Observations	43,595	47,396	47,396
R-squared	0.000	0.000	0.000

Panel C: CPS ASEC: Lagged minimum wage (no covariates and no state and year fixed effects)

VARIABLES	(1) Health insurance	(2) Exc. hlth	(3) Fair/poor hlth
Real min wage	0.039	-0.014	0.001
	(0.024)	(0.012)	(0.009)
Constant	0.497***	0.282***	0.086***
	(0.088)	(0.038)	(0.032)
Observations	42,080	47,396	47,396
R-squared	0.001	0.000	0.000

Panel D: CPS ASEC: Lagged ratio (no covariates and no state and year fixed effects

	(1) Health insurance	(2) Exc. hlth	(3) Fair/poor hlth
Ratio	0.001	-0.002	0.000
	(0.002)	(0.001)	(0.000)
Constant	0.594**	0.301**	0.075**
	(0.065)	(0.037)	(0.017)
Observations	42,080	47,396	47,396
R-squared	0.000	0.000	0.000

Robust standard errors in parentheses. Ratio refers to (state min wage/state average wage)*100. ** p<0.01, * p<0.05

Table 9: CPS ASEC: Insurance outcome: contemporaneous minimum wage

VARIABLES	(1) BRFSS BRFSS from Table 4A	(2) CPS Same specification as BRFSS	(3) CPS Baseline CPS	(4) CPS Baseline and industry dummies	(5) CPS Baseline, industry dummies and paid by the hour	(6) CPS Baseline, industry dummies and earn within 200% of minimum wage	(7) CPS Baseline, paid by the hour, earn within 200% and 2 largest industries
Real min wage	0.051*	0.013	0.008	0.011	0.011	-0.029	-0.066
	(0.025)	(0.023)	(0.022)	(0.020)	(0.048)	(0.049)	(0.060)
Foreign born: not citizen			-0.247**	-0.235**	-0.192**	-0.173**	-0.193**
			(0.006)	(0.006)	(0.017)	(0.022)	(0.038)
Foreign born: naturalized			-0.061**	-0.060**	-0.020	-0.010	-0.005
			(0.006)	(0.007)	(0.024)	(0.023)	(0.039)
Age	0.004**	0.004**	0.004**	0.004**	0.003*	0.002*	0.003
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)
Never married	-0.096**	-0.074**	-0.093**	-0.088**	-0.111**	-0.092**	-0.079**
	(0.019)	(0.010)	(0.008)	(0.009)	(0.020)	(0.016)	(0.018)
Separated/divorced/widowed	-0.056**	-0.071**	-0.092**	-0.089**	-0.079**	-0.086**	-0.044
	(0.015)	(0.011)	(0.012)	(0.011)	(0.016)	(0.013)	(0.030)
No children	-0.032*	-0.033*	-0.043**	-0.040**	-0.017	-0.009	0.010
	(0.014)	(0.016)	(0.015)	(0.014)	(0.017)	(0.023)	(0.033)
No E-verify	0.066	0.037*	0.026	0.025	0.039	0.067	0.112
	(0.048)	(0.017)	(0.013)	(0.013)	(0.034)	(0.035)	(0.071)
Less than HS	-0.201**	-0.167**	-0.095**	-0.086**	-0.099**	-0.095**	-0.130**
	(0.020)	(0.008)	(0.009)	(0.010)	(0.018)	(0.014)	(0.018)
Constant	0.404**	0.316**	0.521**	0.514**	0.345*	0.279	-0.091
	(0.144)	(0.086)	(0.084)	(0.092)	(0.168)	(0.210)	(0.302)
Observations	16,570	43,595	43,595	43,595	6,441	4,279	2,115
R-squared	0.109	0.071	0.118	0.132	0.122	0.127	0.138

All models include state and year fixed effects. All regressions estimated by OLS. Data from 1994-2013 due to change in insurance question.
Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 10: CPS ASEC: Excellent Self Assessed Health: contemporaneous minimum wage

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	BRFSS BRFSS from Table 4A	CPS Same specification as BRFSS	CPS Baseline CPS	CPS Baseline and industry dummies	CPS Baseline, industry dummies and paid by the hour	CPS Baseline, industry dummies and earn within 200% of minimum wage	CPS Baseline, paid by the hour, earn within 200% and 2 largest industries
Real min wage	0.052	0.001	-0.002	-0.001	-0.027	-0.026	0.062
	(0.028)	(0.016)	(0.016)	(0.016)	(0.045)	(0.056)	(0.093)
Foreign born: not citizen			-0.024*	-0.020	-0.007	-0.005	-0.034
			(0.011)	(0.010)	(0.015)	(0.019)	(0.025)
Foreign born: naturalized			-0.004	-0.002	0.007	0.011	0.034
			(0.009)	(0.008)	(0.023)	(0.025)	(0.038)
Age	-0.000	-0.005**	-0.005**	-0.005**	-0.005**	-0.005**	-0.005**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Never married	0.022	-0.012	-0.014*	-0.015*	-0.023	-0.006	0.000
	(0.015)	(0.007)	(0.006)	(0.006)	(0.017)	(0.027)	(0.038)
Separated/divorced/widowed	0.000	-0.009	-0.011*	-0.011*	-0.010	-0.005	-0.004
	(0.009)	(0.005)	(0.005)	(0.005)	(0.014)	(0.019)	(0.025)
No children	-0.030	0.017**	0.015**	0.014**	0.018	0.007	0.011
	(0.018)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.021)
No E-verify	0.004	0.008	0.000	-0.000	-0.053*	-0.068	-0.029
	(0.030)	(0.011)	(0.012)	(0.012)	(0.026)	(0.040)	(0.061)
Less than HS	-0.086**	-0.034**	-0.027**	-0.024**	-0.018	-0.021*	0.002
	(0.027)	(0.005)	(0.004)	(0.004)	(0.010)	(0.009)	(0.021)
Constant	0.068	0.556**	0.591**	0.590**	0.665**	0.641**	0.162
	(0.117)	(0.090)	(0.088)	(0.088)	(0.142)	(0.178)	(0.292)
Observations	16,571	47,396	47,396	47,396	7,260	4,643	2,347
R-squared	0.032	0.024	0.025	0.026	0.041	0.051	0.064

All models include state and year fixed effects. All regressions estimated by OLS. Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 11: CPS ASEC: Fair/poor Self Assessed Health: contemporaneous minimum wage

VARIABLES	(1) BRFSS	(2) CPS	(3) CPS	(4) CPS	(5) CPS	(6) CPS	(7) CPS
	BRFSS from Table 4A	Same specification as BRFSS	Baseline CPS	Baseline and industry dummies	Baseline, industry dummies and paid by the hour	Baseline, industry dummies and earn within 200% of minimum wage	Baseline, paid by the hour, earn within 200% and 2 largest industries
Real min wage	-0.064*	-0.003	-0.002	-0.002	0.010	-0.011	-0.008
	(0.029)	(0.010)	(0.010)	(0.010)	(0.015)	(0.019)	(0.030)
Foreign born: not citizen			-0.013	-0.010	-0.026**	-0.028*	-0.013
			(0.008)	(0.008)	(0.009)	(0.014)	(0.020)
Foreign born: naturalized			-0.013*	-0.012*	-0.027*	-0.032	-0.019
			(0.006)	(0.006)	(0.011)	(0.024)	(0.031)
Age	0.004**	0.004**	0.004**	0.004**	0.004**	0.005**	0.005**
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)
Never married	0.024	0.014*	0.012*	0.012*	-0.012	0.005	0.026
	(0.013)	(0.006)	(0.005)	(0.006)	(0.014)	(0.014)	(0.023)
Separated/divorced/widowed	0.030	0.014**	0.013**	0.012**	0.010	0.022	0.053
	(0.017)	(0.004)	(0.003)	(0.003)	(0.011)	(0.017)	(0.027)
No children	0.002	0.003	0.002	0.002	0.001	0.004	0.013
	(0.013)	(0.003)	(0.003)	(0.003)	(0.009)	(0.013)	(0.020)
No E-verify	-0.086**	-0.014*	-0.002	-0.002	0.036**	0.009	-0.002
	(0.025)	(0.006)	(0.007)	(0.007)	(0.012)	(0.020)	(0.029)
Less than HS	0.174**	0.033**	0.036**	0.037**	0.023**	0.017*	0.023
	(0.023)	(0.002)	(0.003)	(0.004)	(0.006)	(0.007)	(0.013)
Constant	0.231*	-0.149**	-0.175**	-0.158**	-0.135	-0.147	-0.175
	(0.097)	(0.030)	(0.030)	(0.031)	(0.089)	(0.103)	(0.188)
Observations	16,571	47,396	47,396	47,396	7,260	4,643	2,347
R-squared	0.094	0.029	0.030	0.031	0.044	0.056	0.082

All models include state and year fixed effects. All regressions estimated by OLS. Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 12: CPS ASEC: Insurance outcome: contemporaneous ratio

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	BRFSS	CPS BRFSS from Table 4B	CPS Same specification as BRFSS	CPS Baseline CPS	CPS Baseline and industry dummies	CPS Baseline, industry dummies and paid by the hour	CPS Baseline, industry dummies and earn within 200% of minimum wage	CPS Baseline, paid by the hour, earn within 200% and 2 largest industries
Ratio	0.004*	0.001	0.000	0.000	-0.003	-0.004	-0.007	
	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.003)	(0.005)	
Foreign born: not citizen			-0.247**	-0.235**	-0.192**	-0.172**	-0.193**	
			(0.006)	(0.006)	(0.017)	(0.022)	(0.038)	
Foreign born: naturalized			-0.061**	-0.060**	-0.020	-0.010	-0.006	
			(0.006)	(0.007)	(0.024)	(0.023)	(0.039)	
Age	0.004**	0.004**	0.004**	0.004**	0.003*	0.002	0.003	
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)	
Never married	-0.096**	-0.074**	-0.093**	-0.088**	-0.111**	-0.093**	-0.080**	
	(0.019)	(0.010)	(0.008)	(0.009)	(0.020)	(0.016)	(0.018)	
Separated/divorced/widowed	-0.056**	-0.071**	-0.092**	-0.089**	-0.079**	-0.086**	-0.044	
	(0.015)	(0.011)	(0.012)	(0.011)	(0.016)	(0.013)	(0.030)	
No children	-0.033*	-0.033*	-0.043**	-0.040**	-0.017	-0.009	0.009	
	(0.014)	(0.016)	(0.015)	(0.014)	(0.017)	(0.023)	(0.033)	
No E-verify	0.061	0.036*	0.026	0.024	0.033	0.063	0.108	
	(0.049)	(0.017)	(0.013)	(0.013)	(0.034)	(0.035)	(0.075)	
Less than HS	-0.202**	-0.167**	-0.095**	-0.086**	-0.099**	-0.096**	-0.130**	
	(0.020)	(0.008)	(0.009)	(0.010)	(0.019)	(0.014)	(0.018)	
Constant	0.161	0.320**	0.534**	0.520**	0.500*	0.377	0.022	
	(0.162)	(0.099)	(0.091)	(0.100)	(0.191)	(0.238)	(0.326)	
Observations	16,570	43,595	43,595	43,595	6,441	4,279	2,115	
R-squared	0.108	0.071	0.118	0.132	0.123	0.128	0.138	

All models state and year fixed effects. Ratio refers to (state min wage/state average wage)*100. Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 13: CPS ASEC: Excellent Self Assessed Health: contemporaneous ratio

VARIABLES	(1) BRFSS	(2) CPS	(3) CPS	(4) CPS	(5) CPS	(6) CPS	(7) CPS
	BRFSS from Table 4B	Same specification as BRFSS	Baseline CPS	Baseline and industry dummies	Baseline, industry dummies and paid by the hour	Baseline, industry dummies and earn within 200% of minimum wage	Baseline, paid by the hour, earn within 200% and 2 largest industries
Ratio	0.003	-0.001	-0.001	-0.001	-0.003	-0.003	-0.001
	(0.003)	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)	(0.005)
Foreign born: not citizen			-0.024*	-0.020	-0.006	-0.004	-0.034
			(0.011)	(0.010)	(0.015)	(0.018)	(0.024)
Foreign born: naturalized			-0.004	-0.002	0.007	0.012	0.034
			(0.009)	(0.008)	(0.023)	(0.025)	(0.038)
Age	-0.000	-0.005**	-0.005**	-0.005**	-0.005**	-0.005**	-0.005**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)
Never married	0.022	-0.012	-0.014*	-0.015*	-0.023	-0.006	0.000
	(0.015)	(0.007)	(0.006)	(0.006)	(0.017)	(0.027)	(0.039)
Separated/divorced/widowed	0.000	-0.009	-0.011*	-0.011*	-0.010	-0.005	-0.005
	(0.009)	(0.005)	(0.005)	(0.005)	(0.014)	(0.019)	(0.024)
No children	-0.030	0.017**	0.015**	0.014**	0.018	0.007	0.011
	(0.019)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.020)
No E-verify	0.002	0.008	-0.001	-0.001	-0.054*	-0.069	-0.032
	(0.031)	(0.011)	(0.012)	(0.012)	(0.026)	(0.039)	(0.064)
Less than HS	-0.086**	-0.034**	-0.027**	-0.024**	-0.018	-0.021*	0.001
	(0.027)	(0.005)	(0.004)	(0.004)	(0.010)	(0.009)	(0.021)
Constant	0.024	0.599**	0.642**	0.642**	0.703**	0.699**	0.318
	(0.115)	(0.093)	(0.091)	(0.089)	(0.146)	(0.171)	(0.249)
Observations	16,571	47,396	47,396	47,396	7,260	4,643	2,347
R-squared	0.032	0.024	0.025	0.027	0.041	0.051	0.063

All models include state and year fixed effects. All regressions estimated by OLS. Ratio refers to (state min wage/state average wage)*100.
Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 14: CPS ASEC: Fair/poor SAH: contemporaneous ratio

VARIABLES	(1) BRFSS BRFSS from Table 4B	(2) CPS Same specification as BRFSS	(3) CPS Baseline CPS	(4) CPS Baseline and industry dummies	(5) CPS Baseline, industry dummies and paid by the hour	(6) CPS Baseline, industry dummies and earn within 200% of minimum wage	(7) CPS Baseline, paid by the hour, earn within 200% and 2 largest industries
Ratio	-0.001	-0.000	-0.000	-0.000	-0.001	-0.003	-0.003
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)
Foreign born: not citizen			-0.013	-0.010	-0.026**	-0.028*	-0.013
			(0.008)	(0.008)	(0.009)	(0.014)	(0.020)
Foreign born: naturalized			-0.013*	-0.012*	-0.027*	-0.032	-0.020
			(0.006)	(0.006)	(0.011)	(0.024)	(0.031)
Age	0.004**	0.004**	0.004**	0.004**	0.004**	0.005**	0.005**
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)
Never married	0.024	0.014*	0.012*	0.012*	-0.012	0.005	0.026
	(0.013)	(0.006)	(0.005)	(0.006)	(0.014)	(0.014)	(0.023)
Separated/divorced/widowed	0.031	0.014**	0.013**	0.012**	0.010	0.022	0.052
	(0.017)	(0.004)	(0.003)	(0.003)	(0.010)	(0.017)	(0.027)
No children	0.002	0.003	0.002	0.002	0.001	0.004	0.013
	(0.014)	(0.003)	(0.003)	(0.003)	(0.009)	(0.013)	(0.020)
No E-verify	-0.078**	-0.014*	-0.002	-0.002	0.035**	0.008	-0.003
	(0.027)	(0.006)	(0.007)	(0.007)	(0.012)	(0.021)	(0.030)
Less than HS	0.175**	0.033**	0.036**	0.037**	0.023**	0.017*	0.023
	(0.023)	(0.002)	(0.003)	(0.004)	(0.006)	(0.007)	(0.014)
Constant	0.133	-0.142**	-0.175**	-0.157**	-0.062	-0.070	-0.083
	(0.076)	(0.029)	(0.028)	(0.028)	(0.083)	(0.106)	(0.199)
Observations	16,571	47,396	47,396	47,396	7,260	4,643	2,347
R-squared	0.093	0.029	0.030	0.031	0.044	0.057	0.082

All models include state and year fixed effects. All regressions estimated by OLS. Ratio refers to (state min wage/state average wage)*100
Robust standard errors in parentheses. ** p<0.01, * p<0.05

Table 15: Lagged minimum wage and ratio results by outcome

VARIABLES	(1) BRFSS BRFSS from Table 6	(2) CPS Same specification as BRFSS	(3) CPS Baseline CPS (adds foreign born)	(4) CPS Baseline and industry dummies	(5) CPS Baseline, industry dummies and paid by the hour	(6) CPS Baseline, industry dummies and earn within 200% of minimum wage	(7) CPS Baseline, paid by the hour, earn within 200% and 2 largest industries
Outcome: Insurance							
Lagged min wage	0.045*	0.016	0.002	0.006	0.030	-0.022	-0.110
	(0.018)	(0.022)	(0.020)	(0.019)	(0.047)	(0.044)	(0.064)
Observations	15,884	42,080	42,080	42,080	6,268	4,117	2,045
Lagged ratio	0.005*	0.001	-0.000	0.000	-0.000	-0.003	-0.005
	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.003)	(0.004)
	15,884	42,080	42,080	42,080	6,268	4,117	2,045
Outcome: Exc. SAH							
Lagged min wage	-0.011	-0.006	-0.006	-0.006	-0.058	-0.105*	0.019
	(0.037)	(0.017)	(0.017)	(0.017)	(0.038)	(0.047)	(0.081)
Observations	15,886	47,396	47,396	47,396	7,260	4,643	2,347
Lagged ratio	-0.000	-0.001	-0.001	-0.001	-0.007*	-0.005	-0.003
	(0.003)	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)	(0.005)
Observations	15,886	47,396	47,396	47,396	7,260	4,643	2,347
Outcome: Poor/fair SAH							
Lagged min wage	-0.080*	0.018*	0.016*	0.016*	0.035*	0.026	0.052
	(0.038)	(0.007)	(0.007)	(0.007)	(0.015)	(0.018)	(0.039)
Observations	15,886	47,396	47,396	47,396	7,260	4,643	2,347
Lagged ratio	-0.003	0.001	0.001	0.001	0.001	-0.000	0.003
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Observations	15,886	47,396	47,396	47,396	7,260	4,643	2,347

All models include state and year fixed effects. All regressions estimated by OLS. Ratio refers to (state min wage/state average wage)*100.
Robust standard errors in parentheses. ** p<0.01, * p<0.05