

DISCUSSION PAPER SERIES

IZA DP No. 12606

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## ABSTRACT

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# Minimum Wages and the Health and Access to Care of Immigrants' Children\*

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 the children of immigrants. Their parents are disproportionately represented in minimum wage jobs, typically have less access to health care and are a growing part of the U.S. labor force. Using a difference-in-differences identification strategy and data drawn from the National Health Interview Survey from the years 2000 - 2015, we examine whether children of low-educated immigrants experience any changes in health or access to care when the minimum wage increases.

**JEL Classification:** J15, I12, I13, I14

**Keywords:** minimum wage, immigrant children, access to care, health insurance, health

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In 2016, immigrants accounted for 13.5 percent of the US. Population and almost 45 percent reported having Hispanic or Latino origins.<sup>1</sup> Children with one or both parents who are immigrants are overwhelmingly US born (88 percent in 2017).<sup>2</sup> The children of immigrants are one of the fastest growing segments of the US population and these children account for 1 in 4 children in the US (Fortuny et al., 2010). The educational profile of immigrants is mixed. Many come to the US with specialized skills such as expertise in the STEM fields. Yet, 29 percent of all immigrant adults lacked a high school diploma or General Educational Development (GED) certificate, compared to 9 percent of their US-born counterparts. According to the National Center for Children in Poverty, the children of immigrants are disproportionately represented among the poor.<sup>3</sup> These children are also more likely to be uninsured (Hudson, 2009). In this paper, we use a difference-in-differences identification strategy and data from the National Health Interview Survey (NHIS) from the years 2000 - 2015 to examine the effects of minimum wage increases on the access to health care and health of the children of working low-educated immigrants.

The minimum wage continues to be one of the most contentious political debates, but nearly all of that debate is regarding poverty and employment effects.<sup>4</sup> In comparison, we have almost no evidence as to how it might affect the health of the children of immigrants --- a group among the most vulnerable in our population.

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<sup>1</sup> Unless otherwise noted, the information in this paragraph is from the Migration Policy Institute: <https://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states#Numbers>. Accessed 2/7/2019/.

<sup>2</sup> This is from the Migration Policy Institute: <https://www.migrationpolicy.org/programs/data-hub/charts/children-immigrant-families> Accessed 2/7/2019/. The term "children of immigrants" (or children in immigrant families) refers to children under 18 with at least one immigrant parent.

<sup>3</sup> [http://www.nccp.org/media/releases/release\\_1.html](http://www.nccp.org/media/releases/release_1.html)

<sup>4</sup> See Belman et al. (2015) and Belman et al. (2014) for discussions of these aspects of minimum wage increases.

Increases in the minimum wage affect many Americans. One recent estimate calculated that an increase in the federal minimum wage to \$12 per hour by 2020 would lift wages for 25.5 percent of all workers either directly or indirectly through so called “ripple effects” where workers who earn just above the minimum wage would also receive raises (Cooper, 2015). Increasing minimum wages may also reduce income inequality which has been growing for the past 30 years (Lehigh, 2016).

Our rationale for examining the effects of the minimum wage on the children of low-skilled immigrants is motivated by the fact that low-skilled immigrants’ children are an at-risk population. While the majority of these children are US citizens, their parents are often minimum wage earners thus limiting the household’s income. They also have poorer health and less access to care than do children with native born parents (Capps et al., 2004). In a more recent study, Ortega et al. (2018) also find worse access to care among Hispanic immigrants compared to Hispanic natives. In particular, they find that undocumented Hispanics use less health care using data from the California Health Interview Survey from 2011-2015.

There is also a large literature that finds that poor childhood health contributes to lower socioeconomic status in adulthood. In addition, low socioeconomic status, which is common among minimum wage earners, contributes to poor childhood health outcomes in the next generation. This cycle can be particularly harmful for vulnerable and low-income populations such as immigrants (Perreira and Orneias, 2011). As Perreira and Pedroza (2019) write, one way to view immigrants is that they are “Americans in waiting” who have the potential to contribute to economic growth by joining the labor force. For these reasons, it is worthwhile investigating how the minimum wage affects the access to care and the health of immigrants’ children.

This paper proceeds as follows. In the next section we review the growing literature on the effects of minimum wages on health. Following that we discuss the mechanism by which higher minimum wages might impact the access to health care and the health outcomes for immigrants' children. We then introduce our data, our model and our results. Following that we offer some concluding comments and suggestions for further research.

## **Literature Review**

### *Minimum wages and health*

While there is a robust literature examining the effects of minimum wages on earnings, poverty and employment, the literature focusing on minimum wages and health is comparatively new yet growing as economists increasingly realize that there may be spillover effects of higher minimum wages that could benefit low-income populations. Most of these studies focus on adults. For example, several authors have examined the health effects of a 1999 national minimum wage increase in the UK. Kronenberg et al. (2015) find no significant health effects while Reeves et al. (2014, 2016) find that the increase led to improved mental health. Lenhart (2017b) reports improved self-reported health.

For the US, Horn et al. (2017) find that employed men have poorer physical health but fewer poor mental health days while unemployed men only experience worsened physical health. They find no effects for women. Lenhart (2018) finds that increases in the minimum wage are associated with less time spent exercising --- an important input to health. Du and Leigh (2018) document that higher minimum wages are associated with lower rates of illness-related absence from work for lower educated workers. Meltzer and Chen (2011) examine the effect of minimum wage changes on rates of obesity in the US as do Cotti and Tefft (2013) finding conflicting results. Lenhart (2017a) uses data from 24 OECD countries over a 31-year period and finds that

higher levels of minimum wages are associated with significant reductions in mortality and in the number of deaths due to diabetes, disease of the circulatory system, and stroke, all of which are more prominent in the low wage population. Dow et al. (2019) examine whether higher minimum wages can reduce the so-called “deaths of despair”. While they report no effect of the minimum wages on drug-related mortality, they do find that higher minimum wages do reduce non-drug suicides.

Some papers focus on adolescent health and health related outcomes. For example, Averett, Smith and Wang (2017) focus on various health outcomes for working teenagers – finding little effect of minimum wages on adolescent health with the exception of white female teens who are less likely to report that their health is fair or poor and Hispanic male teens who are more likely to report that their health is fair or poor. They hypothesized that the poor health outcomes of the Hispanic teenage males could be due to the type of work they do. Bullinger (2017) hypothesizes that higher minimum wages reduce income inequality thus providing an incentive for teens to delay fertility and indeed finds small effects of the minimum wage increases on teenage fertility. Finally, Raissian and Bullinger (2017) find that increasing the minimum wage leads to fewer child maltreatment reports.

Others have focused on infant health at birth. Wehby et al. (2016) find that higher minimum wages are associated with increases in birth weight, and note that changes in health behaviors around pregnancy such as prenatal care and/or smoking during pregnancy could serve as mechanisms explaining the health improvements. Komro et al. (2016) examine the effect of minimum wages on low birthweight and post-neonatal mortality (infant deaths that occur between 28 days to one year after birth) and find that increases in the minimum wage are associated with a lower incidence of low-birth weight and a reduction in post-neonatal mortality.

Some scholars have turned their attention to examining sub-populations likely to be affected by minimum wages. For example, Averett, Smith and Wang (2018) focus on the health of Hispanic women and despite using a wide array of outcomes find no effect of minimum wages on the health of this group. Cloud et al. (2019) examine the effect of state minimum wage laws on newly diagnosed cases of HIV among heterosexual black residents of urban areas finding that areas with higher minimum wage cases had fewer diagnoses of HIV among this group. We are unaware of any studies that focus on the effect of minimum wages on children's health.

#### *Minimum Wages and Access to Care*

We are aware of only two papers that focus on the effect of minimum wages and access to care. McCarrier et al. (2011) 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. Andreyeva and Ukert (2018) find that the minimum wage is associated with higher rates of obesity and a decline in daily fruit and vegetable intake but has no effect on health care access. We are unaware of any papers that examine children's access to health care when their parents earn higher wages.

We aim to contribute to this literature by examining the effects of minimum wage increases on the access to health care and health of the children of immigrants. This is a particularly vulnerable population whose parents are likely to be minimum wage earners. While the literature relating minimum wages to health outcomes is growing, only two of the above papers specifically examined access to care and only for adults. The sparse literature relating child outcomes to minimum wage increases focuses mainly on outcomes at birth. We aim to fill this gap in the literature.



## **How Might Increases in the Minimum Wages Improve Health?**

Our framework for thinking about the effects of increased minimum wages on health is based on the Grossman model. This model posits that one primary mechanism through which increases in the minimum wage may positively influence access to care and health status would be through an income effect. Minimum wage increases, by providing more income to the family, could affect the health of children with low-educated immigrant parents who may have limited English proficiency and are more likely to work minimum wage jobs. Previous research has shown that the health of these children has improved with access to other policies that increase income such as the Earned Income Tax Credit (see e.g. Markowitz et al., 2017).

Several scholars have examined how minimum wage changes affect the labor market outcomes for low-skilled immigrants providing some evidence as to whether there is an income effect for immigrants when minimum wages increase. Using data from the Current Population Survey Outgoing Rotation Groups (CPS-ORG) from 1994 to 2005, Orrenius and Zavodny (2008) find that higher minimum wages increase the earnings of 20-to-54 year-old foreign-born workers without a high school degree, but have no impact on their employment. The authors argue that this finding may be explained by low-skilled immigrants' mobility decisions, wherein they choose to locate in low minimum wage states with more job opportunities. This lack of an employment effect is also found by Boffy-Ramirez (2013), Cadena (2014) and Cadena and Kovak (2016). Cadena and Kovak (2016) attribute this finding to mobility from high unemployment to low unemployment areas. However, Sabia and Churchill (2017), in an update to Orrenius and Zavodny (2008), using data from the CPS Monthly file and data through 2015, find much stronger evidence for adverse employment effects. They do, however, find evidence of increased wages in response to minimum wage increases but only for Hispanics.

The relationship between increased income and health can be complex. For those parents who keep their jobs when the minimum wage increases, they will typically see an increase in their hourly wages and/or their hours worked. This can then have an effect on the families' income and the time that parents have to invest in their children. Hill and Romich (2018) trace out three pathways of influence from minimum wage changes: income increases, changes in parental time and routines and changing parental stress and parenting practices. For example, if parents are working more they may feel additional stress and children may need to spend additional time in child care. When parents' time with children falls and parental stress increases, parenting styles can change which could lead to adverse health issues with children that include illness and injury, effects on child's cognitive development and behaviors. Yet, when family income goes up, parents have access to higher quality food, housing, child care and medical care. As Lehigh (2016) notes, higher wages can improve psychological well-being and job satisfaction, increase the opportunity cost of engaging in unhealthy habits, and expand the ability to delay gratification. For example, Averett and Wang (2013) found that higher income through the Earned Income Tax Credit decreased maternal smoking among low-educated women. These changes can potentially have contradictory effects on the health of children of immigrants.

Higher income from minimum wages can also increase access to medical care but the empirical evidence is mixed (e.g. Andreyeva and Ukert, 2018; McCarrier et al., 2011). In terms of health insurance, low-income families who receive higher wages may find that they are no longer eligible for public insurance programs such as Medicaid and the State Children's Health Insurance Program (SCHIP) and thus may lose insurance coverage. In addition, children in immigrant families may be less likely to use these programs even when they are eligible. On the

other hand, higher wages may allow parents to be able to afford to purchase private health insurance.

Another dimension of access to care is having a regular place to receive such care. Studies have shown that having a usual place for medical care can enhance child health (e.g. Ettner, 1996). For example, one study showed that children experienced fewer ER visits when they had more continuous care (Christakis et al., 2011). If having higher earnings increases the probability that the family has a usual place to receive medical care, this could be another mechanism by which minimum wages could increase health.

### **Data and Estimation Method**

We combine micro-level data from the 2000 through 2015 Household, Person, Family, Sample Adult, and Sample Child Files of the National Health Interview Survey (NHIS), with state-level data on minimum wages and other state policies to estimate the effect of minimum wages on access to health care and health of the children of immigrants.

The NHIS is a nationally representative dataset that provides information on general trends in health, illness, and disability. As such, it is ideal for the assessment of health related issues in response to government public policies. This cross sectional survey covers the non-institutionalized U.S. population and, importantly for our analysis, oversamples blacks, Hispanics and Asians. All adult members of the household ages 18 and above who are present at the time of the interview participate in the survey. Information on children ages 17 and below and persons who are not present at the time of the interview is collected from a responsible adult, 18 years of age or older, residing in the same household. In addition, one adult and one child are randomly selected from each interviewed household to provide more detailed information gathered in the Sample Adult and Sample Child Core files. The NHIS follows a multistage area

probability design. Due to its complex design with stratification, clustering, and multistage sampling, the NHIS provides constructed weights for the analysis at hand.<sup>5</sup> Because of the potential for identifying respondents when merging state-level data to the individual-level NHIS data, all data analysis was conducted at the University of Wisconsin – Madison Research Data Center.

Because immigrants in the US are a heterogeneous group, we limit our sample to those who are less educated and therefore are most likely to be affected by the minimum wage. We identify the children of immigrants by using the nativity status of the head of their household.<sup>6</sup> In particular, a child is defined as having immigrant parents if the head of his/her household reports being foreign born. We then divide the foreign born population into two sub-groups: those who are naturalized citizens and those who are not citizens. For comparison, we also run our models on the group of children whose household head is native born. In all cases, we focus on children whose parents have less than a high school education. In addition, because Hispanics are a large part of the low-skilled immigrant population in the US, we also examine the children of Hispanics using the same groupings as above.<sup>7</sup> Because female-headed households are more likely to be single parent families and are more likely to be low-income (and hence minimum wage earners), we also run our models for children living in female-headed households. We combine both native and foreign born children in immigrant families as previous research has

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<sup>5</sup> In particular, we use the `svy` commands in Stata to analyze these data. For further information on the NHIS, please visit: [http://www.cdc.gov/nchs/nhis/about\\_nhis.htm](http://www.cdc.gov/nchs/nhis/about_nhis.htm).

<sup>6</sup> A child is defined as having immigrant parents if the household head reports being born outside the US. For most (over 90 percent) of the children in our sample, the household head is their parent. In the majority of the remaining cases, the household head is a grandparent. We thus refer to the household head as a parent but recognize that in some cases this is not the case. Our procedure for identifying the children of immigrants based on the household head has precedence in the literature (e.g. Buchmueller et al., 2008).

<sup>7</sup> Hanson et al. (2017) trace the evolution of low skilled immigration in the US from 1970s to about 2010 and note that most low-skilled immigration to the US comes from Mexico and other parts of Latin America.

found that policies that affect immigrant families are felt by both foreign born and US-born children in immigrant families perhaps in part because the acculturation of the immigrant parents can affect the children (Reardon-Anderson et al., 2002). We limit our analysis to those families where the head of the household is employed to distinguish the potential dis-employment effects of minimum wage increases on health.

Over the period of our sample, the federal minimum wage changed 5 times while the states changed their minimum wages numerous times and such changes are more frequent during the most recent years of our sample. For some states, the state minimum wage does not differ from the federal minimum wage. Other states have more regular changes in the minimum wage because they index the minimum wage to inflation, but others have to deliberately introduce legislation or make constitutional changes to increase their minimum wage. While the nominal minimum wage on average has been rising over our sample period, the real minimum wage has been fairly constant, hovering under \$4 (in 1982-84 dollars).

Using these data, we estimate the following equation:

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

where  $y_{ist}$  is our dependent variable for individual  $i$ , residing in state  $s$  at year  $t$ ;  $MW_{st}$  is the minimum wage;  $Z_{it}$  is a vector of individual controls including age, gender, marital status of the household head, family size, race/ethnicity, and citizenship status and insurance status;  $X_{st}$  is a vector of state-specific time-varying economic and policy controls that may be correlated with minimum wages and health. Specifically, 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 below the poverty line, and state

cigarette taxes to capture the economic and labor market conditions in each state. Our sample spans the period of the Great Recession making it particularly important to control for these factors. The Great Recession itself may have had adverse health effects (e.g. Tekin et al., 2013) and it has been shown that there were adverse employment effects on low-skilled immigrants during this time frame (e.g. Hanson et al., 2017) making our focus on employed immigrant families important.

Additional state-level controls are used to control for access to health insurance. We 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, expanded dependent health insurance coverage prior to the 2010 implementation of the Affordable Care Act, and 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. However, amid growing concern about the burden that immigrants might place on the social safety net, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (commonly known as welfare reform) banned recent legal immigrants from federal Medicaid coverage until they have been in the US for at least 5 years. In the years that followed, many states used their own funds to restore eligibility for such programs to recent immigrant children. Then, in 2009, the reauthorization of the State Children's Health Insurance Program restored the ability of states to use federal funds to cover recent legal immigrants.<sup>8</sup> To account for this changing policy environment that affects access to health care for immigrant children, we control for whether the state provided TANF

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<sup>8</sup> See Bronchetti (2014) or Saloner et al. (2014) for a fuller discussion of the changes in state laws regarding immigrant access to public health care.

benefits to recent immigrants in the post-welfare reform period, provided food assistance to the children of legal permanent residents as well as to adults, provided access to public health insurance for unauthorized immigrant children or adults, provided access to public health insurance for legal permanent residents for adults and/or children. Post-welfare reform access to public welfare and health care programs has varied widely across states.

Finally, we control for whether the state has passed an employment verification law (commonly referred to as e-verify laws) as this could affect the employment and earnings of immigrants and has a secure communities law which could affect how immigrants view their risk of deportation based on immigration status and be reflected in choices that they make which may affect their health and that of their children.<sup>9</sup> Wang and Kaushal (2018) focus on intensified immigration enforcement laws and the health of adult immigrants finding that more stringent enforcement laws do lead to lower self-assessed health for adults using the same data as us over a similar time.

We also control for state fixed effects,  $\theta_s$  and year fixed effects,  $\tau_t$ . Finally,  $\varepsilon_{ist}$  is an error term. We do not include state-specific time trends as they substantially reduce identifying variation (Sabia and Nielsen 2015). Equation (1) identifies the effect of minimum wages on health outcomes from within-state variation in minimum wages from year to year.

The NHIS asks participants a variety of questions regarding their access to health care and their health. We select our outcome variables so that they are measured contemporaneously with changes in the minimum wage. In order to gain as complete a picture as possible as to what access to care might be for children of immigrants, we focus on the following outcome variables: does the child have health insurance? Does the child have a usual place for medical care? Has the

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<sup>9</sup> See <https://www.ice.gov/secure-communities> for details about the secure communities program.

child had a checkup in the past year? Did the child see a doctor for behavioral and mental health problems in the past year? Finally, we also look at whether the child had more than one doctor visit in the past year on the assumption that most children would have one checkup per year.<sup>10</sup>

We then examine the child's health. We start with parental assessment of the child's health on a five point scale. We dichotomize this into two variables: whether the parent rates the child's health as excellent or very good and then whether the parent rates the child's health as fair or poor. In addition, we look at some parental reports of actual health outcomes-unless otherwise stated, these were in the past year to correspond as closely as possible to the minimum wage faced by the parent. In particular, we look at the number of times the child has been to the ER, the number of times they have 3 or more ear infections, frequent or severe headaches, frequent diarrhea, having had a cold in the past two weeks and having had stomach problems or diarrhea in the past two weeks.

An important outcome is whether the child of immigrants has health insurance. There are several ways in which this can happen and for low-income families in the US, many receive their insurance through public programs, either Medicaid or SCHIP. There is a great deal of literature surrounding the take-up of benefits including public health insurance in immigrant families (e.g. Bronchetti, 2014; Saloner et al., 2014; Seiber, 2013; Hudson, 2009; Buchmueller et al., 2008).

As noted above, most of the children of immigrants are indeed born in the US and hence are

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<sup>10</sup> These questions regarding well-child check-ups and number of doctor visits are worded as follows:

DURING THE PAST 12 MONTHS, HOW MANY TIMES has [child] seen a doctor or other health care professional about [his/her] health at A DOCTOR'S OFFICE, A CLINIC, OR SOME OTHER PLACE? Do not include times [child] was hospitalized overnight, visits to hospital emergency rooms, home visits, dental visits or telephone calls.

DURING THE PAST 12 MONTHS, did [child] receive a well-child check-up, that is a general check-up, when [child] was not sick or injured?



eligible for these programs. However, there are a variety of reasons that take-up of public insurance might be low. For example, Bronchetti (2014) notes that there was an upward trend in enrollments for children in immigrant families in public health insurance after 2000. Prior to this enrollment in SCHIP was low even among the citizen children of immigrants, consistent with what has been termed post-welfare reform chilling effects (Watson, 2014). The increase in take-up after 2000 is consistent with improved outreach efforts in SCHIP programs (Aizer, 2007). Hudson (2009) examines mixed-eligibility families (families where some children are eligible for either Medicaid or SCHIP and others are ineligible) and finds that 59% of families with a non-citizen parent had a mix of children who were eligible and ineligible for either Medicaid or SCHIP. Children in mixed eligibility families are five percentage points more likely to be uninsured. Our concern in this paper is whether the children of immigrants are covered by any type of health insurance at all-whether it be a private plan, SCHIP or Medicaid. We recognize the complexities surrounding the eligibility for these particular programs and how such eligibility may have changed over time for immigrant families.

Seeing a health care provider is also an important aspect of health care access. We focus on two variables here: whether the child had a check-up in the past year and whether there was more than one doctor/office visits in the past year. The American Academy of Pediatrics recommends that children have annual well-visits that include monitoring height and weight, reviewing health history, blood pressure screening and as children get older depression, and alcohol and drug use screening.<sup>11</sup> In the next section, we present the empirical results from estimating equation (1) for our various parental nativity status groups.

## **Results**

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<sup>11</sup> See <https://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/AAP-Updates-Well-Child-Visit-Schedule.aspx> for a complete list of recommendations by age.

Table 1 presents our sample means. Each column represents a different sub-sample but keep in mind that we are focusing on children living in households with low-educated immigrant parents who are working.<sup>12</sup> The first column is for children with a native born parent. The second column is for children whose parent is foreign born. The last two columns are subsets of foreign born. The means for children with a parent who is foreign born but a naturalized citizen are in column 3 and those with a foreign born parent who is not a citizen are in column 4. Recall that nativity and parental status are based on the household head and that it is possible that a child has both an immigrant and a native born parent. In what follows, for simplicity, we refer to the household head as the parent and to the household head's nativity status as the nativity status of the child's parents.

The top panel presents the means of our outcome variables. As expected, those with native born parents have the highest rate of health insurance coverage at 85.2 percent while those with non-citizen parents have the lowest at 71.5 percent. Nearly all (95 percent) children with native born parents have a usual place for medical care compared to those with non-citizen parents of whom only 86 percent have a usual place for medical care. With respect to having an annual checkup, 73.1 percent of children with native born parents have had such while only 64.9 percent of those with non-citizen parents have had a checkup in the past year. Interestingly, over 80 percent of the children in our sample, regardless of parental nativity status, saw a physician more than once in the past year. While these numbers are puzzling they may be a result of the possible interpretation by the parent of the wording of each question (see footnote 10 for wording). One possible explanation is that parents are taking their children to a health care

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<sup>12</sup> Because of these sample criteria, we test whether minimum wages affect the probability of being in our sample by regressing the probability of sample inclusion on the minimum wage and the covariates described later. We find no evidence of such conditional on positive (COP) bias.

practitioner when the child is ill but they do not follow the recommended check-up schedule. Not surprisingly, among our population of low-educated immigrants, children of non-citizen parents fare the worst across all of our access to care measures particularly compared to children with a native born parent.

With respect to health outcomes, native born parents are far more likely to report their child has excellent or very good health compared to non-citizen parents and the opposite is true for fair or poor health. Our other health outcomes (measured in the past year or past two weeks) indicate that children with naturalized citizen parents have better health than children in the other groups.

The children's living circumstances differ by parental nativity status as well. The average age of the native born children in the sample is 8.9 years while those with naturalized immigrant parents are slightly older at 9.3 years on average. Children with immigrant parents live in somewhat larger families and nearly 75 percent of those who lived with a naturalized citizen parent are in a two-parent household whereas the same is true for only 68 percent of those children with a parent who is a non-citizen. About 61 percent of children with native born parents live in two-parent families. As noted in our introduction, even children with immigrant parents are often citizens and this is born out in our data. Nearly all the children with native parents are citizens (99.8 percent), while 85.8 percent of those with foreign born parents are citizens. As for the children of non-citizen immigrants, 80.5 percent of whom are citizens compared to the 96.8 percent of children of naturalized citizen parents. The proportion of children who are black and Hispanic born to native born parents is in line with what we would expect given that our population is low-educated. With respect to children with parents who are foreign born regardless of citizenship status, the share of Hispanic rises.

Table 2 presents the means of the state-level control variables. The mean of the real minimum wage is around \$3.25 (in 1982-84 dollars) per hour for all groups except the children of native born parents for whom is lower at about 3.07 dollars. Natives live in states with lower poverty and unemployment rates. Children with naturalized citizen parents live in states with higher unionization rates. Children of parents who are not citizens live in states with AFDC/TANF benefits of about \$492 per month while those with native born parents live in states where benefits are slightly lower. Of particular interest is whether the state extends health insurance to either lawful permanent residents or unauthorized immigrant children. We see that children of foreign born parents live in states that are more likely to offer such insurance than are children of native born parents.

Tables 3a and 3b presents our results regarding the effect of minimum wages on access to health care and health outcomes, again presented by parental nativity status. We present results where insurance is a control variable but we also use it as an outcome in one of our regressions.<sup>13</sup> There are several patterns in our results. First, we find no effect of minimum wages on access to care for children with native born parents. Children of foreign born parents, on the other hand, have better access to medical practitioners as measured by a binary variable indicating that they have seen a doctor more than once in the past 12 months. However, they are less likely to have had a checkup in the past year. Given that the wording of the questions indicates that a checkup is a well visit while doctor visits are for illness, these questions seem to be measuring differing aspects of access to care. It appears that when children are sick, parents take them to the doctor but they neglect the well visits for reasons that we cannot investigate with our current data. Given that the foreign born category includes both naturalized and non-citizen parents, we

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<sup>13</sup> We also ran all of our models without controlling for health insurance status. The results are qualitatively the same as those we present here.

disaggregate our foreign born population into these two categories. This reveals that the results are driven by children with non-citizen parents. Interestingly, children with naturalized parents are similar to children with native born parents.

The effect sizes are not trivial. For children with non-citizen parents, we find that they are 5.8 percentage points (7.2 percent) more likely to report having more than one doctor visit in the past year. Perhaps paradoxically, we also find that these children are less likely to report having had a checkup in the past year (8.94 percentage points or 13.8 percent less likely). Interestingly, children with naturalized citizen parents see no effects of increases in minimum wage on their access to care, similar to children with native born parents. Finally, note that having health insurance significantly improves access to care for all groups and essentially all measures of access which is what we would expect. Turning to table 3b, we present the results of the effect of the minimum wage on various health outcomes. There appears to be no effect of the minimum wage on these health outcomes. Interestingly, only occasionally is the health insurance variable significant.

In the regressions presented in tables 3a and 3b, we include our full set of state-level control variables. We also run our models with a smaller set of control variables removing unemployment rate and poverty rate as they are potentially endogenous. We find results similar to what we have reported here. Those results are available upon request.

In table 4, we present a falsification test of our access to care results. Focusing on those results that were statistically significant, we re-estimate our models on a sample of children with more educated working parents using the same nativity categories as before. This group, because of their higher education (some college or more), is less likely to be affected by minimum wages. Indeed, this is what our results in table 4 demonstrate. In particular, there is no longer a

significant effect of the minimum wage on having a check-up on the past year, or the probability of having had more than one doctor visit in the past year.<sup>14</sup>

Because Hispanics are more likely to be low-wage workers we further refine our sample to focus on the children of working, low-educated Hispanic immigrants (Cooper, 2018). Previous work has not shown any effect of minimum wages on the health of Hispanic women (regardless of immigration status-see Averett et al., 2018) but has not focused on the children of low-educated working Hispanics. The regression results are in tables 5a and 5b. We find a very similar pattern of results-higher minimum wages make it more likely that the children of Hispanic immigrant parents are less likely to have had a check-up in the past year. We do not, however, find any significant impact for this group on having had more than one doctor visit in the past year.<sup>15</sup> Table 5b does indicate that children of non-citizen Hispanic parents are more likely to have had 3 or more ear infections in the past year. Other than this outcome, there is again no effect of minimum wages on the health of this group.

### **Alternative Explanations**

It is possible that low-educated immigrant parents are attracted to states with higher minimum wages. For example, it might be easier to afford care if one has a higher paying job. If this is the case, it would suggest that one explanation for our results on access to care is that they are driven by the migration of low-educated immigrants to these states. This would call into question whether our results represent a causal effect as location could be endogenous. To test this possibility, we collapse our data to the state/year level and create three new outcome variables: the share of immigrants with children living in the state (column A), the share of

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<sup>14</sup> We also ran triple difference specifications where the third difference is highly educated individuals in the same immigrant category. These results support those from this falsification test.

<sup>15</sup> We find similar results when we refine the sample to focus on children who live in female headed households where the household head is a low-educated working immigrant.

working immigrants with children and living in the state (column B) and the share of low-educated working immigrants with children and living in the state (column C). We then regress these outcomes on the one-year lag of the real minimum wage controlling for our full set of control variables as well as state and year fixed-effects. The results are presented in table 6. We find no evidence that higher minimum wages attract more working immigrants.

One final concern is the potential for reverse causality. In particular, state policymakers may respond to perceived poor health of their constituents by raising minimum wages. To see if this is the case, we again collapse our data to the state-year level and regress the minimum wage on the lag of our health outcomes. We do this separately by nativity status. These results are presented in table 7 where each cell represents a separate regression. Although there are some significant results for the children with native born parents, we find no evidence of reverse causality for the immigrant households in our sample.

## **Conclusion**

In this paper, we have examined the effects of higher minimum wages on the access to health care and health of the children of immigrants. To our knowledge, we are the first to examine this population. Yet, it is a group of great interest as they comprise a fast growing segment of the US population, most are citizens and their health is important for the future productivity of the US labor force.

We find some evidence that some dimensions of access to health care are improved for those children living in states with higher minimum wages. These results are concentrated among children with non-citizen immigrant parents and are conditional on controlling for having health insurance. In particular, children with non-citizen parents are more likely to visit a physician more than once during the past year. However, they are less likely to have had a checkup in the

past year. Despite examining a variety of different health outcomes, we find no evidence that health is affected by higher minimum wages for any of our groups and this is consistent with some of the literature on adult health and minimum wages (e.g. Averett et al., 2018). Hence, we conclude that the minimum wage is not an effective policy tool for improving the health of immigrant's children.

While the popular press often seems convinced that minimum wages are an important policy lever for improving the health of the working poor, our research does not suggest that raising the minimum wage is an effective way to improve the health of immigrant children. Plenty of examples abound in the popular press. For example, then-commissioner of public health for the state of Minnesota, Edward Ehlinger argued in an op-ed that minimum wage increases were particularly important for the health of children (Ehlinger, 2014); the state of California commissioned a report from a consulting firm that concluded “This health analysis finds that raising the state's current minimum wage to \$13 by 2017 would significantly benefit health and well-being.” (Health Impact Partners, 2014) and New York Times Magazine published a recent article devoted to the topic of minimum wages and health (Desmond, 2019) concluding that raising the minimum wage was imperative for public health. Economic research, including this paper, has not consistently drawn the same conclusion. As Lehigh et al. (2019) in their review of minimum wage and health studies note, aside from fairly convincing evidence that the minimum wage reduces smoking, the evidence about the effect of the minimum wage on other health outcomes seems inconsistent at best.



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**Table 1: Weighted Sample Means, Outcome variables and Child level variables, Low-educated parents by nativity status**

	Parent native		Parent foreign born		Parent Naturalized		Parent noncitizen	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Outcome variables: Access to Care</i>								
Has Health insurance	.852	(.003)	.744	(.004)	.804	(.007)	.715	(.005)
Has usual place for medical care	.946	(.002)	.882	(.003)	.917	(.005)	.863	(.004)
Had checkup in past year	.731	(.004)	.674	(.005)	.722	(.008)	.649	(.006)
Saw Dr. in past year	.791	(.003)	.709	(.004)	.725	(.008)	.702	(.005)
Saw Dr. for behavioral/mental health problems	.049	(.002)	.031	(.002)	.034	(.004)	.029	(.002)
Had more than 1 Dr. visits in part 12 months	.882	(.002)	.815	(.004)	.842	(.006)	.801	(.005)
<i>Outcome variables: Health outcomes</i>								
Health is very good/excellent	.809	(.003)	.741	(.005)	.775	(.007)	.725	(.006)
Health is fair/poor	.018	(.001)	.023	(.001)	.017	(.002)	.026	(.002)
# of times in ER past year	.147	(.003)	.109	(.003)	.093	(.005)	.117	(.004)
Had three or more ear infections	.060	(.002)	.048	(.002)	.039	(.003)	.052	(.003)
Frequent or severe headaches	.069	(.002)	.045	(.002)	.042	(.003)	.046	(.003)
Had frequent diarrhea last year	.014	(.001)	.011	(.001)	.008	(.001)	.013	(.001)
Had a cold last two weeks	.173	(.003)	.137	(.003)	.127	(.006)	.143	(.004)
Had stomach problems/diarrhea last two weeks	.056	(.002)	.041	(.002)	.040	(.003)	.042	(.002)
<i>Child control variables</i>								
Age years	8.94	(.032)	8.609	(.037)	9.348	(.065)	8.252	(.044)
Household head married	.606	(.004)	.701	(.005)	.748	(.008)	.679	(.006)
Family size	4.375	(.017)	5.027	(.023)	4.919	(.037)	5.079	(.027)
Male	.509	(.002)	.514	(.003)	.518	(.006)	.511	(.003)
Black	.199	(.005)	.065	(.003)	.099	(.006)	.047	(.003)
Hispanic	.146	(.003)	.779	(.006)	.611	(.010)	.860	(.005)
Citizen	.998	(.000)	.858	(.003)	.968	(.002)	.805	(.003)
Sample Size	55363		34409		10451		23958	

Notes: Nativity status refers to the household head, who is usually a parent.

**Table 2: Weighted Means of State level Control variables**

	Parent native		Parent foreign born		Parent naturalized		Parent noncitizen	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>State Policy variables</i>								
Real minimum wage	3.071	(.004)	3.261	(.008)	3.270	(.008)	3.256	(.010)
poverty rate	13.505	(.033)	13.899	(.049)	13.729	(.059)	13.982	(.059)
unemployment rate	6.364	(.017)	6.793	(.032)	6.830	(.044)	6.776	(.039)
union membership	11.280	(.068)	12.615	(.129)	13.362	(.151)	12.254	(.154)
represented by unions	12.529	(.068)	13.862	(.129)	14.618	(.150)	13.497	(.153)
AFDC/TANF benefit family of three (\$)	402.028	(1.861)	499.708	(3.776)	516.120	(4.516)	491.777	(4.521)
Medicaid (cutoff for eligibility)	190.477	(.327)	198.199	(.534)	198.145	(.713)	198.225	(.623)
Mental health parity law	.373	(.005)	.398	(.007)	.400	(.010)	.397	(.009)
State cigarette tax (cents)	100.748	(.871)	117.999	(1.678)	123.621	(2.068)	115.283	(2.043)
Dependent coverage mandate	.474	(.005)	.558	(.008)	.556	(.011)	.559	(.009)
E-verify law	.249	(.005)	.215	(.010)	.182	(.010)	.231	(.012)
Public health insurance for unauthorized immigrant adults	.001	(.001)	.001	(.000)	.001	(.000)	.001	(.000)
State provided TANF post PRWOA	.325	(.006)	.492	(.010)	.506	(.011)	.485	(.012)
State food assistance for lawful permanent resident children during five-year bar	.924	(.002)	.960	(.002)	.956	(.004)	.962	(.002)
Public health insurance for lawful permanent resident	.216	(.004)	.416	(.009)	.450	(.011)	.339	(.010)
Secure communities law	.351	(.004)	.401	(.006)	.403	(.099)	.401	(.008)
Food assistance for lawful permanent resident adults during five-year bar	.136	(.004)	.343	.010	.344	(.010)	.342	(.012)
Public health insurance for unauthorized immigrant children	.102	(.003)	.147	.009	.168	(.009)	.136	(.109)
State expanded Medicaid after 2010	.078	(.002)	.164	.006	.176	(.007)	.158	(.007)
Sample Size	55363		34409		10451		23958	

Notes: Nativity status refers to the household head, who is usually a parent.

**Table 3a: Effects of Contemporaneous Minimum Wage on Access to Health Care in past 12 months for Children ages 0-17 Parent has HS or less education**

Parent nativity		Has Health Insurance	Has usual place for medical care	had checkup in past year	saw Dr in past year	saw Dr for behavioral/mental health problems	Had more than 1 Dr visits in past 12 mo.
Native N=55363	<b>Real min. wage</b>	<b>-0.00985</b>	<b>0.00464</b>	<b>0.00429</b>	<b>0.0195</b>	<b>0.0139</b>	<b>-0.0114</b>
		(-0.57)	(0.41)	(0.21)	(0.95)	(1.22)	(-0.69)
	Has health insurance		0.125***	0.143***	0.134***	0.00619	0.123***
			(18.24)	(14.87)	(13.81)	(1.23)	(15.20)
Foreign born N=34409	<b>Real min. wage</b>	<b>-0.00345</b>	<b>0.0268</b>	<b>-0.0889**</b>	<b>0.0274</b>	<b>0.00243</b>	<b>0.0539*</b>
		(-0.12)	(1.19)	(-2.83)	(0.93)	(0.16)	(2.29)
	Has health insurance		0.229***	0.146***	0.142***	0.00834	0.136***
			(22.90)	(13.49)	(13.08)	(1.79)	(14.55)
Naturalized N=10451	<b>Real min. wage</b>	<b>0.0278</b>	<b>-0.0137</b>	<b>-0.0988</b>	<b>0.0391</b>	<b>0.000140</b>	<b>0.0423</b>
		(0.55)	(-0.45)	(-1.81)	(0.79)	(0.01)	(1.08)
	Has health insurance		0.221***	0.145***	0.138***	0.0230**	0.137***
			(13.83)	(7.57)	(7.13)	(3.29)	(8.13)
Noncitizen N=23958	<b>Real min. wage</b>	<b>-0.0175</b>	<b>0.0431</b>	<b>-0.0894*</b>	<b>0.00677</b>	<b>0.00651</b>	<b>0.0588*</b>
		(-0.54)	(1.52)	(-2.33)	(0.20)	(0.36)	(2.08)
	Has health insurance		0.231***	0.145***	0.145***	0.000747	0.134***
			(20.31)	(11.04)	(11.00)	(0.12)	(12.00)

T-statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Observations refer to the full unweighted sample size. Actual observations may vary by outcome.



**Table 3b: Effects of Contemporaneous Minimum Wage on Health Outcomes in past 12 months for Children ages 0-17 of Parents with HS or less education**

Parent nativity		Health=1 if exc/vg	Health=1 if fair/poor	# times ER last year	had 3 or more ear infections	frequent or severe headaches	had freq diarrhea last year	had a cold	stomach problem/diarrhea past two weeks
Native N=55363	<b>Real min. wage</b>	<b>-0.0178</b>	<b>0.00285</b>	<b>-0.0200</b>	<b>-0.0147</b>	<b>0.00556</b>	<b>-0.00268</b>	<b>0.0312</b>	<b>0.000548</b>
		(-0.90)	(0.50)	(-1.14)	(-1.25)	(0.37)	(-0.54)	(1.59)	(0.05)
	Has health insurance	0.0208**	-0.00244	0.00554	0.00290	-0.00771	-0.000587	-0.0164*	-0.00354
		(2.72)	(-1.06)	(0.76)	(0.64)	(-1.37)	(-0.24)	(-2.07)	(-0.72)
Foreign born N=34409	<b>Real min. wage</b>	<b>-0.0383</b>	<b>0.0108</b>	<b>0.0209</b>	<b>0.0156</b>	<b>0.0132</b>	<b>-0.00638</b>	<b>0.0258</b>	<b>0.0101</b>
		(-1.28)	(1.00)	(0.99)	(1.15)	(0.79)	(-1.10)	(1.19)	(0.76)
	Has health insurance	0.00962	-0.00156	0.0226***	0.00382	0.00620	0.00320	-0.00939	0.00262
		(1.07)	(-0.55)	(3.44)	(0.78)	(1.20)	(1.48)	(-1.16)	(0.60)
Naturalized N=10451	<b>Real min. wage</b>	<b>-0.0108</b>	<b>0.00986</b>	<b>0.0414</b>	<b>-0.0130</b>	<b>0.0225</b>	<b>0.00272</b>	<b>0.00641</b>	<b>0.00781</b>
		(-0.22)	(0.58)	(1.23)	(-0.61)	(0.88)	(0.38)	(0.16)	(0.35)
	Has health insurance	0.00200	-0.00759	0.00910	0.000321	0.0108	0.00681*	0.00134	0.00387
		(0.13)	(-1.21)	(0.81)	(0.04)	(1.28)	(2.17)	(0.10)	(0.44)
Noncitizen N=23958	<b>Real min. wage</b>	<b>-0.0591</b>	<b>0.0110</b>	<b>0.0155</b>	<b>0.0331*</b>	<b>0.0113</b>	<b>-0.0108</b>	<b>0.0404</b>	<b>0.0105</b>
		(-1.62)	(0.80)	(0.57)	(2.03)	(0.54)	(-1.34)	(1.49)	(0.65)
	Has health insurance	0.0106	0.00128	0.0288***	0.00628	0.00185	0.00194	-0.0133	0.00190
		(1.02)	(0.36)	(3.49)	(1.06)	(0.30)	(0.69)	(-1.43)	(0.40)

T-statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design\*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Observations refer to the full unweighted sample size. Actual observations may vary by outcome.

**Table 4. Falsification Tests for Access to Care. Sample consists of Parents with more than a HS education**

Parent nativity		had checkup in past year	Had more than 1 Dr visit in past 12 mo.
Native	<b>Real min. wage</b>	<b>0.0159</b>	<b>0.00787</b>
N=106342		(1.22)	(0.88)
	Has health insurance	0.111***	0.0777***
		(14.27)	(12.23)
Foreign born	<b>Real min. wage</b>	<b>-0.0189</b>	<b>-0.0198</b>
N=23511		(-0.68)	(-0.89)
	Has health insurance	0.169***	0.125***
		(12.07)	(11.42)
Naturalized	<b>Real min. wage</b>	<b>0.0183</b>	<b>-0.0341</b>
N=14574		(0.52)	(-1.32)
	Has health insurance	0.156***	0.127***
		(8.37)	(8.30)
Noncitizen	<b>Real min. wage</b>	<b>-0.0771</b>	<b>0.00799</b>
N=8937		(-1.65)	(0.20)
	Has health insurance	0.183***	0.126***
		(8.79)	(7.71)

T statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Observations refer to the full unweighted sample size. Actual observations may vary by outcome.

**Table 5a: Effects of Contemporaneous Minimum Wage on Access to Health Care in past 12 months for Children ages 0-17 of Hispanic Immigrant Parents with HS or less education**

Parent nativity		Has Health Insurance	Has usual place for medical care	had checkup in past year	saw Dr in past year	saw Dr for behavioral/mental health problems	Had more than 1 Dr visits in past 12 mo.
Native N=12,294	<b>Real min. wage</b>	<b>-0.0209</b>	<b>-0.0463</b>	<b>-0.0331</b>	<b>-0.0211</b>	<b>0.0354</b>	<b>0.00585</b>
		(-0.51)	(-1.62)	(-0.79)	(-0.46)	(1.39)	(0.15)
	Has health insurance		0.155***	0.146***	0.123***	-0.0179	0.136***
			(10.67)	(7.95)	(7.37)	(-1.61)	(8.38)
Foreign born N=9,000	<b>Real min. wage</b>	<b>-0.00306</b>	<b>0.0444</b>	<b>-0.131***</b>	<b>-0.0166</b>	<b>-0.000268</b>	<b>0.0446</b>
		(-0.09)	(1.79)	(-3.81)	(-0.53)	(-0.02)	(1.69)
	Has health insurance		0.239***	0.154***	0.156***	0.00835	0.140***
			(21.09)	(12.64)	(12.96)	(1.82)	(13.20)
Naturalized N=7,287	<b>Real min. wage</b>	<b>0.0102</b>	<b>-0.00758</b>	<b>-0.128*</b>	<b>-0.0423</b>	<b>-0.0397</b>	<b>0.0375</b>
		(0.17)	(-0.19)	(-2.02)	(-0.67)	(-1.51)	(0.71)
	Has health insurance		0.257***	0.164***	0.161***	0.0267***	0.127***
			(12.55)	(6.85)	(7.11)	(3.43)	(6.40)
Noncitizen N=21,521	<b>Real min. wage</b>	<b>-0.00832</b>	<b>0.0550</b>	<b>-0.130**</b>	<b>-0.0203</b>	<b>0.00646</b>	<b>0.0427</b>
		(-0.23)	(1.81)	(-3.20)	(-0.58)	(0.33)	(1.41)
	Has health insurance		0.233***	0.150***	0.156***	0.00252	0.145***
			(18.48)	(10.63)	(11.15)	(0.44)	(12.11)

T statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Observations refer to the full unweighted sample size. Actual observations may vary by outcome.

**Table 5b: Effects of Contemporaneous Minimum Wage on Access to Health Care in past 12 months for Children ages 0-17 of Hispanic Immigrant Parents with HS or less education**

Parent nativity		Health=1 if exc/vg	Health=1 if fair/poor	# times ER last year	had 3 or more ear infections	frequent or severe headaches	had freq diarrhea last year	had a cold	stomach problem/diarrhea past two weeks
Native N=12,294	<b>Real min. wage</b>	<b>0.00980</b>	<b>0.0118</b>	<b>-0.0268</b>	<b>-0.0364</b>	<b>0.000657</b>	<b>-0.0103</b>	<b>0.00434</b>	<b>0.00490</b>
		(0.22)	(0.74)	(-0.66)	(-1.42)	(0.03)	(-1.01)	(0.10)	(0.22)
	Has health insurance	0.0280	0.00321	-0.0100	0.00184	-0.0164	0.0125***	-0.00854	0.00527
		(1.69)	(0.72)	(-0.70)	(0.18)	(-1.41)	(3.93)	(-0.54)	(0.61)
Foreign born N=28,808	<b>Real min. wage</b>	<b>-0.0593</b>	<b>0.0284*</b>	<b>0.0375</b>	<b>0.0263</b>	<b>0.0133</b>	<b>-0.00645</b>	<b>0.0261</b>	<b>0.00881</b>
		(-1.77)	(2.13)	(1.64)	(1.63)	(0.68)	(-0.89)	(1.03)	(0.53)
	Has health insurance	0.00830	-0.00314	0.0339***	0.00340	0.0107	0.00376	-0.00174	0.00338
		(0.84)	(-0.85)	(4.69)	(0.62)	(1.88)	(1.47)	(-0.20)	(0.74)
Naturalized N=7,287	<b>Real min. wage</b>	<b>-0.00302</b>	<b>0.0315</b>	<b>0.0688</b>	<b>-0.0304</b>	<b>0.00379</b>	<b>0.0106</b>	<b>-0.0205</b>	<b>-0.0320</b>
		(-0.04)	(1.13)	(1.53)	(-1.05)	(0.10)	(1.17)	(-0.43)	(-1.01)
	Has health insurance	-0.00225	-0.00966	0.0259*	-0.00497	0.0154	0.00218	0.0286	0.0127
		(-0.12)	(-1.03)	(1.97)	(-0.47)	(1.43)	(0.53)	(1.87)	(1.41)
Noncitizen N=21,521	<b>Real min. wage</b>	<b>-0.0791*</b>	<b>0.0288</b>	<b>0.0317</b>	<b>0.0471**</b>	<b>0.0189</b>	<b>-0.0112</b>	<b>0.0392</b>	<b>0.0188</b>
		(-1.97)	(1.85)	(1.15)	(2.62)	(0.79)	(-1.23)	(1.30)	(1.03)
	Has health insurance	0.00828	-0.000469	0.0368***	0.00692	0.00724	0.00390	-0.0124	-0.000617
		(0.75)	(-0.12)	(4.26)	(1.09)	(1.07)	(1.25)	(-1.26)	(-0.12)

T statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Observations refer to the full unweighted sample size. Actual observations may vary by outcome.

**Table 6: Endogeneity of Location**

	A	B	C
Lagged Real minimum wage	0.00552	0.00249	-0.000278
	(1.67)	(1.01)	(-0.15)
N	816	816	816

Outcome is the share of immigrants with children living in the state (A), the share of immigrants with children and working living in the state (B) and the share of immigrants with children and working and low educated living in the state (C). Unit of observation is a state in year. T statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design. \*\*\* p<0.001, \*\* p<0.01, \* p<0.05.

**Table 7: Reverse Causality**

	Native	Foreign-born	Naturalized	Non-citizens
Lagged				
Has health insurance	0.000463 (0.01)	-0.00780 (-0.22)	0.0330 (0.93)	-0.0168 (-0.50)
Has usual place for medical care	-0.0571 (-0.63)	-0.0689 (-1.38)	0.0133 (0.27)	-0.0543 (-1.20)
Had checkup in past year saw Dr in past year	-0.0229 (-0.47)	-0.0181 (-0.50)	0.0155 (0.47)	-0.0129 (-0.37)
saw Dr for behavioral/mental health problems	0.0421 (0.88)	-0.0328 (-1.00)	-0.0403 (-1.27)	-0.0403 (-1.20)
Had more than 1 Dr visits in past 12 mo.	0.0794 (1.08)	-0.0940 (-0.89)	0.0178 (0.22)	-0.0201 (-0.22)
Health=1 if exc/vg	-0.0539 (-0.90)	-0.0629 (-1.65)	-0.0309 (-0.81)	-0.0547 (-1.49)
Health=1 if fair/poor	-0.178*** (-3.42)	0.0554 (1.49)	0.0483 (1.36)	0.0165 (0.47)
# times ER last year	-0.0494 (-0.20)	-0.0144 (-0.14)	-0.163 (-0.92)	0.0214 (0.25)
had 3 or more ear infections	-0.221*** (-3.60)	-0.0488 (-0.96)	-0.0376 (-0.78)	-0.0294 (-0.67)
frequent or severe headaches	-0.197* (-2.16)	-0.0717 (-1.07)	0.0115 (0.16)	-0.0537 (-0.80)
had freq diarrhea last year	-0.0127 (-0.14)	0.0646 (1.14)	0.0188 (0.36)	0.0541 (0.98)
had a cold	-0.236 (-1.00)	-0.144 (-1.13)	-0.0716 (-0.66)	-0.166 (-1.33)
stomach problem/diarrhea past two weeks	0.151* (2.38)	-0.0132 (-0.26)	0.000900 (0.02)	-0.0186 (-0.44)
	-0.0338 (-0.33)	-0.0104 (-0.12)	-0.0495 (-0.78)	-0.0712 (-0.79)
N	661	542	418	489

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05. Each cell is a separate regression where the outcome is the real minimum wage which is regressed on a lag of the health outcome indicated. T statistics are in parentheses. All models include the full set of covariates and state and year fixed effects. All models are estimated using OLS and Stata's svy program to account for complex survey design.