

State Immigration Enforcement Policies and Infant Health*

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In the absence of comprehensive federal directives regulating immigration enforcement, states have become the central arenas for the construction and enforcement of immigration laws. This decentralized, federalist approach to immigration policy has created substantial temporal and geographic variation in the social conditions faced by undocumented immigrants and their children as opportunities for employment and access to goods and services can vary widely depending on where they reside in a given year. As many state immigration laws are relatively new, their consequences for the health and wellbeing of undocumented immigrants and their children are poorly understood.

This project investigates how two centerpieces of state immigration policy—E-Verify mandates and driver’s license restrictions—impact maternal and infant health as measured through infants’ birth weights. Since 2006, 20 states have adopted mandates that require all or some employers to verify a prospective employee’s work authorization using the national electronic system known as “E-Verify.” Since 2002, four states passed laws that explicitly granted and seven states amended their statutes or regulations to explicitly deny driver’s licenses to undocumented immigrants. Using a quasi-experimental research design and 2000-2011 U.S. birth certificate data, this project investigates how these state policies have affected maternal and infant health among a population that is likely to contain a large share of undocumented immigrants: Mexican-born mothers with a high school degree or less giving birth in the U.S. Specifically, our project addresses two questions:

- (1) Does the enactment of E-Verify mandates and/or driver’s license restriction in a given state negatively impact the birth weights of babies born to Mexican immigrant mother living in the state?
- (2) Is the relationship between the enactment of these state policies and the birth weights of babies born to Mexican immigrant mothers contingent on the size of the Mexican immigrant population in the counties where mothers reside?

Interest in the unintended health effects of immigration policy is growing. However, most existing studies focus on adult health and are based on state or regional samples that cover short time frames (e.g., Hacker et al. 2012, Hardy et al. 2012). Our analysis using national-level data over an 11 year time series will help fill this gap in the literature. As such, our analysis will provide new information on how the legal context within which immigrants live affects their health and the health of their families.

Immigration policy as a determinant of early-life health

As a measure of health at the start of life, birth weight is a general indicator of a baby’s in-utero environment. According to standard medical guidelines, an infant born weighing less than 5.5 pounds is considered to be “low birth weight,” and evidence suggests that these smaller infants are at heightened risk for negative outcomes across the life course, including increased infant mortality and poor childhood health, and lower educational attainment and earnings (Behrman and Rosenzweig 2004; Bennett 1997). A large body of evidence shows that in utero *biological* environments are affected by the larger *social* environment: mothers who experience financial hardship and psychosocial stressors during pregnancy are more likely to have low-birth-weight babies (Catalano and Serxner 1992; Paneth 1995).

In our study, we will test the proposition that pregnant Mexican immigrant women living in states with E-Verify mandates and/or driver’s license restriction laws are likely to experience worse financial circumstances and heightened psychosocial stressors that may harm fetal development and infant health. Since E-Verify is designed to restrict undocumented workers’ access to jobs and wages, it is likely to increase financial hardship which may increase psychosocial strain and reduce access to

health resources (e.g., healthy diets, safe neighborhoods, etc.). Recent evidence suggest that undocumented workers living in states with more extensive E-Verify programs have lower employment rates than their counterparts living in states without E-Verify mandates (Amuedo-Dorantes & Bansak 2012). Fewer job options because of E-Verify mandates may also push some undocumented pregnant women into less healthy and unsafe working environments.

Laws that restrict driver's licenses for undocumented immigrants may impact birth weight through multiple pathways. In many areas in the U.S., driver's licenses are a necessity for working, accessing health resources, and generally participating in social life. Undocumented immigrants who cannot drive because of restrictive driver's license laws may face very significant barriers to securing and maintaining employment. An inability to drive legally may also make it difficult for undocumented immigrants to shop for healthy foods, get to health care appointments, and participate in social and leisure activities. Additionally, not having a driver's license as a form of state-issued identification can make it very difficult for undocumented immigrants to rent apartments and open bank accounts. A recent study of immigrants in Utah found that undocumented women's prenatal care utilization was enhanced among those using the state's integrative driver privilege program (Korinek and Smith 2011).

In addition to examining the main effects of these policies on birth outcomes, we also examine whether the infant health consequences of these policies may be attenuated if pregnant women live in counties with a large community of Mexican immigrants. Drawing on a substantial body of literature showing that information and resource sharing among co-ethnics is an important determinant of immigrants' wellbeing (Kao 2004), we expect that punitive immigration enforcement laws may be less detrimental to undocumented pregnant women residing in close proximity to other immigrants, as their co-ethnic social networks may provide alternatives to secure employment and other crucial resources.

Data

The data for this paper come from two sources: individual-level natality data files maintained by the National Association for Public Health Statistics and Information Systems (NAPHSIS) and state-level policy data that we compiled to answer our two research questions. The individual-level data come from 2000-2011 Detailed Natality Data Files that contain records for virtually every birth occurring in the U.S. during the specified time period. While these data do not provide all of the background information that is available in many national surveys (e.g., income, years in the U.S., etc.), vital statistics are the only data that provide an adequate number of births in each state and year, as well as a sufficiently long time series. We will merge the natality files with our own state-level dataset that documents yearly state variation in E-Verify mandates, driver's license laws, as well as other relevant state policies and conditions that will serve as control variables in our analysis.

While natality data offer important strengths for this project, they do not contain information on mothers' legal status. Since these data are being collected in a health care setting, there are obvious ethical reasons why such information cannot be queried. To identify a population that is likely to contain a large share of undocumented immigrants we use information available on birth certificates to identify Mexican-origin mothers born in Mexico with less than a college degree.¹ There is no nationally

¹ The majority of the undocumented population – approximately 62 percent – entered the country across the U.S. border from Mexico (Hoefer, Rytina, & Baker, 2010). Further, of all immigrant groups, Mexican immigrants are the

representative individual-level data set with cross-time and cross-state variation that both identifies undocumented respondents with certainty and measures their health. Therefore, indirect methods such as the one we employ are the only available approach to investigate the health impacts of these policies.

Methods

To address our research questions, we use the quasi-experimental method of a difference-in-difference (DD) model. The implementation of immigration laws at different times in different states provides a source of exogenous variation that we will exploit to assess potential changes in birth outcomes among Mexican immigrants. The logic of the DD model involves identifying a “treatment” group that should be impacted by relevant policies and a “control” group that is comparable to the treatment group, but should not be impacted by relevant policies, and then testing whether differences between the treatment and control groups varies before and after the enactment of a relevant policy. In this study, the primary treatment group is Mexican-born mothers with a high school degree or less and the control group is native-born, non-Hispanic white mothers with comparable levels of education.

After adjusting for any other systematic changes in states that could substantially alter aggregate patterns of infant health, the difference in birth outcomes, η , between comparable Mexican immigrants and native-born non-Hispanic whites can be attributed directly to the law itself. To estimate η we take the difference between immigrant-native birth outcomes after the policy is enacted and subtract it from the difference between immigrant-native birth outcomes before the policy was enacted (hence, the name difference-in-difference). This can be written as follows, where \mathbf{H} signifies good infant health (i.e., higher birth weights):

$$\mathbf{H} (PRE-LAW_{IMMIGRANT-NATIVE}) - \mathbf{H} (POST-LAW_{IMMIGRANT-NATIVE}) = \eta \quad (1)$$

On average, Mexican immigrants have better birth outcomes than the native-born population (Collins and Shay 1994), regardless of the laws in effect. Therefore, irrespective of the legislative environment, the difference in rates of good infant health (\mathbf{H}) of the Mexican-born population (*IMMIGRANT*) and the native-born population (*NATIVE*) should be greater than zero. The resulting difference, η , then assesses whether the birth weight advantage of immigrants attenuates once restrictive laws are passed. If the birth outcomes of the native-born population are comparable before and after the law is enacted and $\eta > 0$, we will have strong evidence that restrictive laws negatively impact birth outcomes of immigrants.

In order for η to accurately reflect the effect of an immigration policy, we adjust for potential individual-level and state-level confounders using a multivariate regression model of the following form:

$$Y_t = \alpha + \beta_1 * treatment\ group_t + \beta_2 * state\ policy_{t-1} + \eta * treatment\ group_t * state\ policy_{t-1} + \beta_3 * individual\ controls_t + \beta_4 * state\ controls_{t-1} + \beta_5 * state_t + \beta_6 * year_t + \varepsilon \quad (2).$$

In this model, Y_t is infant birth weight measured in grams. β_1 captures the main effect of being in the treatment groups (i.e., a Mexican-born mother), relative to being in the control group (i.e., a native-born, non-Hispanic white mother) in the years before the policy was enacted. β_2 captures the main effect of living in a state with one of our policies of interest (i.e., either E-Verify mandates or restrictive

least likely to be naturalized (Gryn & Larsen, 2010). Additionally, the majority of undocumented immigrants have only a high school diploma or less (Pew Hispanic Center, 2009).

driver's license laws) in effect in a given year for those in the control condition. The coefficient η is of the greatest interest as it measures whether birth weight differences between the treatment and control groups change with the enactment of the policy of interest. In order to capture women's policy exposures during pregnancy, all the state-level variables are lagged by one year (e.g., state policies in 2009 are predicting the weights of infants born in 2010). We include in our model several individual-level control variables taken from the detailed natality data including the baby's sex, the mother's age, number of previous live births, and whether she has a high school degree. Our model also includes fixed effects for state and year (i.e., dummy variables for the mother's state of residence and year of the infant's birth). The year fixed effects hold constant national time trends that affect the entire population. The state fixed effects hold constant unmeasured time-invariant differences across states. Since our model includes state and year fixed effects, the largest threat to the validity of our DD estimate is state-specific time trends that coincide with the enactment of one of our policies of interest and differentially impact the health of the treatment and control groups. With this threat in mind we have developed a comprehensive set of annual state-level control variables that include (but are not limited to): economic conditions in the state (e.g., unemployment rate, the sizes of industries—like agriculture and service—that tend to employ more undocumented workers), the generosity of social programs (e.g., Medicaid, Food Stamps, etc.), the political environment (e.g., the percentage of republican/democrat representatives in local government), and estimates of the size of the undocumented Mexican immigrant population. To test our second research questions about whether policy effects are moderated by co-ethnic support we will include in our model a three-way interaction of *treatment group*state policy*co-ethnic population*.

Development of the Paper for the PAA Conference

This paper is part of a new project developed by the authors that will explore a range of immigration enforcement policies on multiple dimensions of immigrant health. This first paper will explore the effects of a subset of these policies on birth weight – one of the most critical measures of child health. To date we have compiled the state-level data set and are awaiting the natality files from the NAPHSIS. We have previously worked with natality files and with difference-in-difference approaches for other projects, and anticipate a complete analysis in time before the March 24, 2014 deadline. Given reports of the recent increase in the number of undocumented immigrants entering the U.S. (despite overall declines in immigration) and current policy debates regarding immigration enforcement, we believe that our assessment of the E-Verify and driver's license restrictions will be of broad appeal to PAA attendees interested in immigrant policy and immigrant health.

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