

State Child Health Insurance Policies and Access to Health Care  
for Immigrant Children

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Abstract

Just as access to and utilization of health care among immigrant populations varies across the nations of the European Union (e.g., Stan 2015), nativity-based disparities in health care between the U.S. states are clear. Although recent legal permanent residents and undocumented immigrants are generally barred from accessing public health insurance, some U.S. states cover immigrant children through the Children's Health Insurance Program (CHIP). In this study, we examine the contextual effect of U.S. state health insurance eligibility policy, particularly with respect to immigrant children, on race/ethnic and nativity-based disparities in children's routine health care. Utilizing our original data on state CHIP eligibility policies and child-level data from the Survey of Income and Program Participation, we find that a significant portion of between-state variation in children's routine health care results from diversity in CHIP eligibility rules for poor and foreign-born children. Immigrant-specific disparities are reduced when states do not require five years residency for CHIP participation. Our ongoing research expands upon the results presented here to include children from all U.S. states in the study sample; and the substitution in our models of race/ethnicity by immigrants' global regions of origin; and the addition to our models of alternative contextual explanations for health care inequalities (characteristics of the local medical system infrastructure include the ratio of general practitioners/pediatricians to the population, availability of translation services at local hospitals, and availability of low-cost medical clinics). Findings regarding these additional characteristics will be presented, along with a discussion of their applicability to the EU situation.

## Introduction

While most U.S. children of immigrants are born in the United States, and thus, are American citizens, about 4 percent of U.S. children are born abroad (Borjas 2011). Among foreign-born children, in 2010, there were an estimated one million (primarily Mexican) unauthorized immigrant children under age 18 in the U.S. (Pew Hispanic Center 2013). These children – both recent legal permanent residents and the undocumented – are generally barred from accessing public health care and other welfare benefits (Guendelman, Schauffler, and Pearl 2001; Kaushal and Kaestner 2005), potentially widening immigrant-native health care disparities. In response, some states have extended coverage to these groups of immigrant children with or without federal matching dollars through the Children’s Health Insurance Program (CHIP), originally State Children’s Health Insurance Program (SCHIP).

Whether these policies have reduced race/ethnic and nativity-based disparities in health and health care remains largely untested at the national level (Lave et al. 1998; Kenney 2007; Shone et al. 2005). This study investigates the contextual effect of U.S. state health insurance eligibility criteria with respect to immigrant children on race/ethnic and nativity-based disparities in children’s routine doctor visits. Recent redistribution of the immigrant, particularly Mexican, population from traditional destination states to new and emerging receiving areas (Lichter and Johnson 2009) makes a national approach more important than in the past for informing ongoing debates about the intersection of federal immigration and health care policies.

We began by collecting data on U.S. state-specific CHIP eligibility rules regarding immigrant children. We integrated these data with pooled child-level data from the 1996-2000, 2001-2004, 2004-2007, and 2008-2011 panels of the nationally representative Survey of Income and Program Participation (SIPP). Our three study objectives are:

- 1.To document race/ethnic and nativity-based disparities in children’s health care utilization across states and to determine the relative importance of state health insurance policy eligibility rules in reducing these disparities.
- 2.To assess whether the race/ethnic and nativity-based disparities remain after controlling for child- and family-level characteristics, including parent’s education.
- 3.To determine if the provision of insurance coverage is the mechanism through which these state policies impact routine health care utilization.

### Background

SCHIP, now CHIP, was created under Title XXI of the Balanced Budget Act of 1997 and implemented by all states and the District of Columbia before the turn of the century. It sought to expand health insurance coverage to low-income children who were ineligible for traditional Medicaid (Starfield 2000). Although not specifically designed for immigrant children, CHIP became the primary vehicle for extending health care coverage to vulnerable foreign-born families, who have faced documentation and length-of-residency requirements for federally sponsored assistance since the enactment of welfare reform in 1996 (Borjas 2002; Kullgren 2003). Using state-only funds or through the 2009 Children’s Health Insurance Program Reauthorization Act (CHIPRA), some states have chosen to cover undocumented children and legal permanent residents irrespective of time in country. In addition, CHIP- or other state-funded prenatal care programs have become more inclusive, with 14 states opting to cover unborn children regardless of the mother’s immigration status (Fortuny and Chaudry 2012).

While past research has found that being covered by CHIP increased children’s likelihood of having a preventive care visit, usual source of care, and fewer unmet health care

needs (Dick et al. 2004; Fox et al. 2003; Kenney 2007; Shone et al. 2005), few studies have examined the effect of CHIP on race/ethnic and nativity-based disparities in health care utilization. One exception is Shone and colleagues' 2005 study of racial and ethnic disparities among New York CHIP (Child Health Plus) enrollees. They found that most race/ethnic disparities in access and utilization were attenuated when CHIP coverage was available, although disparities, especially between Hispanic and white children, in preventive care and ratings of health care quality persisted. To our knowledge, however, no multistate study has assessed whether race/ethnic and nativity-based disparities in health care utilization have been reduced through CHIP.

CHIP has reduced the number of uninsured children in most U.S. states (Davis 2009) and is likely to have an effect on race/ethnic and nativity-based health care disparities since children who typically lack access to health insurance coverage tend to be disproportionately race/ethnic minorities and/or non-citizens (Ku and Jewers 2013). Indeed, 16 percent of Hispanic children compared with 11 percent of African American and 7 percent of non-Hispanic white children, were without health coverage in 2011 (Kaiser Commission on Medicaid and the Uninsured 2013). Hispanics, like African Americans, are more likely than non-Hispanic whites to live in families in which no adult holds a full time job or the family head works in a low-wage blue collar job that offers few health insurance benefits. For children whose parents have jobs that do not provide health benefits and that pay above-poverty but low wages that disqualify them from traditional Medicaid, CHIP provides a policy solution to being uninsured.

In states that permit children with higher family incomes to participate in CHIP, race/nativity disparities are expected to be reduced. Where states choose to provide funding to cover low-income immigrant as well as native children, Hispanic children should benefit even

more than in states where immigrant children are barred from public coverage by either their lack of immigration documentation or during their first five legal years in the U.S.

### Data and Methods

Longitudinal data on state-specific CHIP eligibility criteria were collected to reflect CHIP rules in each state for each year from 1996 through 2011. These data were obtained through direct communication with state government health personnel by email survey and telephone confirmation. Responses were validated against several point-in-time reports on state CHIP policies (Hess et al. 2011; Hoag et al. 2011; Fortuny and Chaudry 2012). For this paper, we selected a random sample of half of the states using the first 25 alphabetically (Alabama through Mississippi, including District of Columbia). These states represent a wide range of immigrant and total population sizes, geographic locations, and formal policies and natives' attitudes toward immigrants. Specific eligibility items evaluated in our study include: 1) family income eligibility threshold for participation in CHIP, as a percentage of the federal poverty level (coded as "no program," "<200 percent FPL," and "200 - <300 percent FPL," with "≥300 percent FPL" as the referent); 2) the length of U.S. residency required for immigrant child CHIP eligibility (coded as "1" if fewer than five years residency were required for participation and "0" if five or more years of residency were required; and 3) whether documentation of immigration status was required for CHIP eligibility, i.e., whether undocumented immigrant children could access CHIP (coded as "1" if no documentation was required and "0" if documentation was required).

Figures 1 and 2 map state-level generosity, or leniency, toward immigrant children in 1998 and 2010 based on data from the 25 states included in our study sample (excluded states are

shown in white). For purposes of demonstration, this measure of leniency combines a dichotomous indicator of the state's income threshold (coded as "1" if the income threshold is more than 200 percent FPL and "0" otherwise) with the two immigrant-specific policy variables described above. The 'least generous' category on the map reflects states that had instituted a CHIP program by that year but had not extended coverage to additional groups of immigrant children. Apart from 'least generous,' states could fall into three progressively more generous (darker grey) categories depending on how many of the three variables described above had a value of 1. Overall, between 1998 and 2010, states became more generous toward immigrants, with three states, Illinois, Massachusetts, and District of Columbia, falling into the 'most generous' category in 2010.

[Figures 1 and 2 about here]

These longitudinal measures of CHIP eligibility requirements were combined with child-level, nationally representative data from the 1996, 2001, 2004, and 2008 panels of the Survey of Income and Program Participation (SIPP). Each SIPP panel is a three to five-year longitudinal survey for which all household members are interviewed every four months, providing monthly measures of family socioeconomic and demographic characteristics, including income and benefits, and annual measures of health and well-being. We pooled data from these panels and treated the sample as a cross section representing the period 1996-2011. The study sample includes all children under age 19, with no bound on family income. Although the CHIP program targets children in families with incomes up to (or exceeding) 200 percent of the federal poverty line, we are interested in its impact on health disparities generally.

Our dependent variable is whether the child visited a medical provider in the past year (coded "1" for yes, "0" for no). Regardless of morbidity, pediatricians recommend at least one

routine care visit per year for all children (Bright Futures and American Academy of Pediatrics 2008). Thus, any child who does not have at least one visit with a physician indicates a true access problem (Currie, Decker, and Lin 2008). SIPP collected information on doctor visits at the end of each year (between September and December). To most accurately capture the policy regime at the time of doctor visits, we measured the policy variables in the same calendar year that the doctor visits were recorded. In years when policy changes took place, we applied the new policy to the entire year.

Race and ethnicity were determined by combining individual indicators for race and Hispanic origin. Nativity was determined using information on the child's citizenship and date of birth as well as the mother's nativity and date of immigration. Race/ethnicity and nativity were combined to create the dummy indicators "non-Hispanic white native-born" (the referent in statistical models), "non-Hispanic black native-born," "Hispanic native-born," "Asian native-born," "non-Hispanic white foreign-born," "non-Hispanic black foreign-born," "Hispanic foreign-born," and "Asian foreign-born."

An important explanation for accessing adequate health care is whether or not the child is covered by some form of health insurance, and this coverage is precisely what CHIP is designed to provide for children without access to the private market. Therefore, we included a measure of the child's health insurance coverage during the previous year in which the physician's visit was to have taken place (coded as "always uninsured," "sometimes uninsured," and the referent "always insured"). Inclusion of this item in the full model is expected to mediate any positive effects of CHIP policy. To control for measurement error in the case where a child is missing health coverage information in some month, we also included a dummy indicator for having incomplete (less than 12 months of) data for the year in question.



Full models control for family income as a percentage of the federal poverty line, parent's educational attainment (using the highest reported attainment of either parent), having married parents (versus single-parent family), and whether at least one parent is a U.S. citizen (yes versus no). Family income was dummy coded as "<100 percent FPL," "100 - <200 percent FPL," "200 - <300 percent FPL," and "300 - <400 percent FPL," with "≥400 percent FPL" as the referent. Parent's educational attainment was categorized as "less than high school," "high school diploma or some college," and "college degree" (referent). We also controlled for the parent-reported child's health status as a strategy to ensure our results are not driven by morbidity. Health status was dummy coded "1" if the child was reportedly in fair or poor health during the year in which the physician visit was measured. Sex and age of the child were included as statistical controls, as younger children tend to routinely see a physician more frequently than older children and teenagers and because boys and girls may have differing needs for medical care or may be treated differently by parents. Year of observation was included to control for period effects and to evaluate change over time between 1996, when CHIP or similar programs were beginning, and 2011.

In order to account for the multilevel structure of our data, we use the Glimmix procedure in SAS® 9.3 to generate multilevel logistic regression models in which children are nested within states. This method permits us to evaluate the presence and potential explanations for variation that occurs across states. All analyses were weighted by the child's longitudinal person weight provided by SIPP. Because some children contribute more than one observation per panel (n=118,822 observations of children 0-18 years old with non-missing data on the health care utilization variable), we randomly chose a single observation per child for our multi-level models

(n=47,528 children from 25 states).<sup>i</sup> Table 1 shows the weighted descriptive statistics for the variables used in our analysis of this sample.

To answer our first research question, we determined how much variation in routine health care across the states is due to race/nativity-related disparities. First, we regressed the dependent variable on only year of observation in the level-1 model, with random intercepts for state (level 2), to determine the variance in routine health care across states. We compared this model with the same model to which we added a fixed effect for race/ethnicity in the level-1 model to evaluate the amount of between-state variation that is explained by race/nativity.

To address the second part of our first research question regarding the role of CHIP policies in explaining variation in health care disparities, we added our three CHIP eligibility variables – income eligibility threshold, immigration documentation requirement, and immigrant length-of-residency requirement. The extent to which these variables attenuate any race/nativity effects will indicate how well policy reduces race/nativity disparities, with any additional reduction of the variance across states (i.e., reduction of the variance component estimated for the state-level random intercept) indicating reduction of between-state disparities due to factors other than race/nativity. The interactions of these policy indicators with race/nativity further indicate the degree to which disparities are changed by policy for each group compared with U.S.-born non-Hispanic white children.

We then added family- and individual-level control indicators to the level-1 model to evaluate the extent to which these personal factors attenuate, or explain, the relationship between race/nativity and health care utilization. The inclusion of family SES indicators (i.e., parent's education and family income) and child's health status as control variables also addresses potential state variation in these characteristics which may co-occur with particular state policies.

To answer our fourth research question regarding insurance coverage as the mechanism through which immigrant child CHIP eligibility policy operates, we added measures of the child's actual insurance coverage to the level-1 model. This is an important question because if insurance coverage does not mediate policy indicators, it would provide evidence that some unmeasured correlate of state policy is responsible for variation in health care disparities. If insurance coverage does mediate policy indicators, it would strengthen the evidence for state policy making the difference.

## Results

Table 1 presents the weighted descriptive statistics for our sample of children, 33 percent of whom had not visited the doctor in the past year despite national guidelines recommending at least one well-child visit each year through late adolescence. Most of the children in our sample are native-born, with a little over 2 percent (960 cases) born in another country. More than 40 percent of the sample is some race or ethnicity other than non-Hispanic white and about 20 percent is Hispanic. Among the foreign-born categories, only Hispanics make up at least 1 percent of the total sample. Small numbers of children in the sample are foreign-born Asian and non-Hispanic black (76 and 81 cases, respectively), making estimates for these groups less certain than for foreign-born Hispanics. Nevertheless, different social and cultural experiences of these race/ethnic groups suggest the need to evaluate their outcomes separately in our models.

[Table 1 about here]

As is expected for young children, only 2 percent of parents reported their children as being in poor or fair health while nearly 35 percent of children lacked health insurance coverage for at least one month of the previous year.

Multi-level logistic regression results appear in Table 2. Model 1 is a one-way ANOVA with random effects, or the intercept model, that tests how much variation exists between states in their mean proportion with a regular doctor visit (Singer 1998). Controlling for year, 11.4 percent of the total variance is between states.

Model 2 confirms race/ethnic and nativity disparities in routine doctor visits. Compared to native-born non-Hispanic whites, all other groups had lower odds of visiting the doctor in the past year. The lowest, or most severe, coefficients are for foreign-born Hispanics (logit = -1.22) and foreign-born blacks (logit = -1.14). Important for our first research question, this model shows that nearly 15 percent ( $((0.1287-0.1110)/0.1287)*100=13.8$ ) of the variance across states is explained by race/ethnicity and nativity. This finding means that race/nativity disparities in access to health care were partially responsible for differences across states in children's routine medical visits during the first decade and a half of CHIP; i.e., CHIP did not completely eliminate race/nativity health care utilization disparities across states. Thus, we turn to the question of whether the policies initiated by some, but not other, states played a role in reducing these disparities.

[Table 2 about here]

Of the three eligibility criteria, whether or not a state requires legal permanent residents to reside in the U.S. for five years before accessing CHIP benefits is the only criterion significantly directly related to routine doctor visits (Model 3). All children who resided in more generous states were more likely to visit the doctor each year than their counterparts in less generous states (logit = 0.26). Thus, some unmeasured factor that is related to providing this policy characterizes the generous states, which is likely to be responsible for better access to routine care in more generous states. Interactions between the policy variables and race/nativity

tell a more complex story, however, and indicate the positive influence of residency policy above and beyond the shared influence with this unmeasured characteristic. Foreign-born Hispanic children who live in states with no residency requirement appear not to benefit more than their U.S.-born non-Hispanic white counterparts in these same states even though this is the goal of the immigrant-specific policy, although as we see in the next model (discussed below), controlling for family characteristics reveals a positive effect for these children. Unexpectedly, U.S.-born Asian children seem to benefit from state policies that do not require immigration documentation. These children have higher odds of visiting the doctor annually than non-Hispanic white children, which suggests the importance of lenient policies toward immigrants for mixed status families in which only one parent has legal documentation. Finally, U.S.-born Asians and U.S.-born Hispanics, and to a lesser extent, U.S.-born blacks and foreign-born Hispanics, who live in states with higher CHIP income thresholds have higher odds of visiting the doctor regularly than U.S.-born non-Hispanic whites in the same states. That is, where states permit near-poor as well as poor children to participate in CHIP, minority children are more likely to receive routine medical care.

This model also shows that these CHIP policies explain an additional 21 percent of the between-state variation in children's health care access ( $(((0.1287-0.0844)/0.1287)*100) - 13.8 = 20.7$ ).

In the presence of controls (Model 4), having no residency requirement remains significantly positively related to visiting the doctor annually. Interestingly, interactions between the policy variables and race/nativity are stronger in the presence of controls. That is, by controlling for characteristics that are associated with whether or not a specific policy applies to

a child, the CHIP policies of interest stand out as important promoters of visiting the doctor for some minority-race and nativity groups.

As far as the direct relationships of the controls to regularly visiting the doctor, all work in the expected direction except for the net effect of having married parents. Being younger, female, in poor or fair health, having parents with more education, higher income and at least one citizen parent is associated with higher odds of visiting the doctor at least once per year. The curious finding that children with married parents have lower odds of regular doctor visits, net of the other characteristics in the model, should be further explored given the preponderance of evidence that having married parents is beneficial to children's well-being. Individual and family characteristics explain 10 percent more of the variation between states than was explained by the race/nativity and policy variables ( $(((0.1287-0.0715)/0.1287)*100) - 13.8 - 20.7 = 10.0$ ), and they completely mediate the direct negative relationships between being foreign-born Asian and non-Hispanic black and visiting the doctor regularly.

Adding health insurance coverage in Model 5, we see some mediation of the logit for foreign-born Hispanics and of the interaction terms, but the direct positive relationship between living in a state with no residency requirement and visiting the doctor regularly remains significant. As expected from previous research, health insurance promotes regular doctor visits, with more unstable insurance coverage being associated with lower odds of visiting the doctor each year.

### Conclusion and Discussion

Despite improvements in access to care brought by state CHIP programs, minority race and foreign-born children remain at greatest risk for lack of routine health care, measured as not

having seen a physician in the past year. If all states were as generous toward immigrant children in their CHIP policies as the most lenient states, most of the nativity-based between-state health care access disparities would decline because foreign-born children would have health insurance coverage.

The first goal of this research was to document the race- and nativity-based disparities in health care utilization across 25 U.S. states for the period 1996 through 2011, the time just preceding enactment of the Patient Protection and Affordable Care Act (ACA) of 2010, and to evaluate the contribution of state health policy for providing child health insurance coverage to reducing these disparities. Race/nativity accounts for nearly 15 percent of explainable between-state variation in children's health care access. State variation in CHIP eligibility policy accounts for another 21 percent of between-state variation apart from race/nativity. In answer to our second research question, this finding that race/nativity differences in health care utilization help to explain across-state disparities is robust when family socioeconomic status and child health and demographic characteristics are included. Furthermore, as we hypothesized with our third research question, CHIP policy operates to some extent through the provision of health insurance coverage to effect health care utilization.

The income eligibility thresholds that states adhere to influence nativity-based disparities, including for Hispanic children. Moreover, while our findings for policy and race/nativity are robust to the addition of family socioeconomic status, parent citizenship, and child demographic and health characteristics, these characteristics do further explain across-state disparities, increasing the proportion of between-state variation explained by 10 percent. Extending health insurance coverage to even more children under ACA should further improve their access to

care. For Asian immigrant children, lenient documentation and residency requirements reduce health care utilization disparities even more.

An important mechanism through which state policy works is the provision of health insurance coverage. Insurance coverage patterns do explain some of the relationship between health care access and being foreign born and Hispanic, but reduces the across-state variance in disparity very little beyond the contributions of policy and individual health and demographic (including race and nativity) and family socioeconomic characteristics. This latter finding implies that the policies do operate through health insurance coverage.

It is important to note that states with more lenient length-of-residency requirements for immigrant children are states where Hispanic immigrant children are more likely to obtain routine medical care than other children. However, these states also generally tend to be states where all children are more likely to receive routine medical attention than those who apply stringent residency requirements. This observation implies that these more generous states promote routine pediatric medical care in other ways apart from their CHIP eligibility rules, but what accounts for this unmeasured heterogeneity across states is not clear from our analysis. The conceptual framework developed by Mejia et al. (2008) to explain Hispanic oral health care utilization provides possible explanations, such as geography (population density, accessibility, etc.) and health care system characteristics (doctor-patient race/ethnic concordance and pediatrician ratios to total population). It is also possible that parents who are more likely to obtain health care for their children will move to states with greater benefits or, as implied by the authors' previous work regarding migration and welfare assistance, to move from states with fewer benefits (De Jong, Graefe, and St. Pierre 2005).



Also important is that native-born black, Asian and Hispanic children remain at greatest disadvantage for receiving routine health care, even when all of the policy, demographic, health status, and socioeconomic factors are taken into consideration. While insurance provision through ACA would be expected to improve this access, controlling for insurance coverage patterns did not change the relationship between being native-born minority and receiving care in the past year. This finding suggests that future research should explore the potential role of discrimination at the health system level, among medical providers and those responsible for health care outreach, to ensure adequate health care utilization of native-born black and other minority children (Flores, Olson, and Tomany-Korman 2005; Zuvekas and Taliaferro 2003).

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## References

- Bright Futures, and American Academy of Pediatrics. 2008. "Recommendations for Preventive Pediatric Health Care." Accessed 23 February 2015. [http://www.aap.org/en-us/professional-resources/practice-support/periodicity/periodicity schedule\\_FINAL.pdf](http://www.aap.org/en-us/professional-resources/practice-support/periodicity/periodicity%20schedule_FINAL.pdf).
- Davis, Karen. 2009. *Changing Course: Trends in Health Insurance Coverage, 2000-2008: Hearing on Income, Poverty, and Health Insurance Coverage; Assessing Key Census Indicators of Family Well-Being in 2008 Before the Joint Economic Committee*, 111th Cong. Accessed 22 February 2015. [http://www.commonwealthfund.org/~media/files/publications/testimony/2009/sep/davis\\_jec-testimony\\_91109.pdf](http://www.commonwealthfund.org/~media/files/publications/testimony/2009/sep/davis_jec-testimony_91109.pdf).
- Fortuny, Karina, and Ajay Chaudry. 2012. "Overview of Immigrants' Eligibility for SNAP, TANF, Medicaid, and CHIP." *Office of the Assistant Secretary for Planning and Evaluation Issue Brief*. Accessed 22 February 2015. <http://aspe.hhs.gov/hsp/11/ImmigrantAccess/Eligibility/ib.pdf>.
- Kaiser Commission on Medicaid and the Uninsured. 2013. "Health Coverage for the Hispanic Population Today and Under the Affordable Care Act." *Kaiser Family Foundation Publication #8432*. Accessed 23 February 2015. <http://kaiserfamilyfoundation.files.wordpress.com/2013/04/84321.pdf>.
- Ku, Leighton, and Mariellen Jewers. 2013. "Health Care for Immigrant Families: Current Policies and Issues." *Migration Policy Institute*. Accessed 23 February 2015. <http://www.migrationpolicy.org/pubs/COI-HealthCare.pdf>.
- Pew Hispanic Center. 2013. "A Nation of Immigrants: A Portrait of the 40 Million, Including 11 Million Unauthorized." *Pew Research Center*. Accessed 23 February 2015. [http://www.pewhispanic.org/files/2013/01/statistical\\_portrait\\_final\\_jan\\_29.pdf](http://www.pewhispanic.org/files/2013/01/statistical_portrait_final_jan_29.pdf).
- Borjas, George J. 2002. "Welfare Reform and Immigrant Participation in Welfare Programs." *International Migration Review* 36 (4): 1093–1123.
- . 2011. "Poverty and Program Participation among Immigrant Children." *The Future of Children* 21 (1): 247–66.
- Bright Futures, and American Academy of Pediatrics. 2008. "Recommendations for Preventive Pediatric Health Care." [http://www.aap.org/en-us/professional-resources/practice-support/periodicity/periodicity schedule\\_FINAL.pdf](http://www.aap.org/en-us/professional-resources/practice-support/periodicity/periodicity%20schedule_FINAL.pdf).
- Currie, Janet, Sandra Decker, and Wanchuan Lin. 2008. "Has Public Health Insurance for Older Children Reduced Disparities in Access to Care and Health Outcomes?" *Journal of Health Economics* 27 (6): 1567–81.
- Davis, Karen. 2009. *Changing Course: Trends in Health Insurance Coverage, 2000-2008*. New York, NY. <http://www.commonwealthfund.org/Publications/Testimonies/2009/Sep/Changing-Course-Trends-in-Health-Insurance-Coverage-2000-2008.aspx>.
- De Jong, Gordon F., Deborah Roempke Graefe, and Tanja St. Pierre. 2005. "Welfare Reform and Interstate Migration of Poor Families." *Demography* 42 (3): 469–96.
- Dick, Andrew W., Cindy Brach, R. Andrew Allison, Elizabeth Shenkman, Laura P. Shone, Peter G. Szilagyi, Jonathan D. Klein, and Eugene M. Lewit. 2004. "SCHIP's Impact in Three States: How Do the Most Vulnerable Children Fare?" *Health Affairs* 23 (5): 63–75.

- Flores, Glenn, Lynn Olson, and Sandra C. Tomany-Korman. 2005. "Racial and Ethnic Disparities in Early Childhood Health and Health Care." *Pediatrics* 115 (2): e183–93.
- Fortuny, Karina, and Ajay Chaudry. 2012. *Overview of Immigrants' Eligibility for SNAP, TANF, Medicaid, and CHIP. ASPE Issue Brief*. Washington, DC.  
<http://aspe.hhs.gov/hsp/11/ImmigrantAccess/Eligibility/ib.pdf>.
- Fox, Michael H., Janice Moore, Raymond Davis, and Robert Heintzelman. 2003. "Changes in Reported Health Status and Unmet Need for Children Enrolling in the Kansas Children's Health Insurance Program." *American Journal of Public Health* 93 (4): 579–82.
- Guendelman, Sylvia, Helen Halpin Schauffler, and Michelle Pearl. 2001. "Unfriendly Shore: How Immigrant Children Fare in the U.S. Health System." *Health Affairs* 20 (1): 257–66.
- Kaiser Commission on Medicaid and the Uninsured. 2013. *Health Coverage for the Hispanic Population Today and Under the Affordable Care Act*. Washington, DC.  
<http://kaiserfamilyfoundation.files.wordpress.com/2013/04/84321.pdf>.
- Kaushal, Neeraj, and Robert Kaestner. 2005. "Welfare Reform and Health Insurance of Immigrants." *Health Services Research* 40 (3): 697–722.
- Kenney, Genevieve. 2007. "The Impacts of the State Children's Health Insurance Program on Children Who Enroll: Findings From Ten States." *Health Services Research* 42 (4): 1520–43.
- Ku, Leighton, and Mariellen Jewers. 2013. *Health Care for Immigrant Families: Current Policies and Issues*. Washington, DC.
- Kullgren, Jeffrey T. 2003. "Restrictions on Undocumented Immigrants' Access to Health Services: The Public Health Implications of Welfare Reform." *American Journal of Public Health* 93 (10): 1630–33.
- Lave, Judith R., Christopher R. Keane, Chyongchiou J. Lin, Edmund M. Ricci, Gabriele Amersbach, and Charles P. LaVallee. 1998. "Impact of a Children's Health Insurance Program on Newly Enrolled Children." *Journal of the American Medical Association* 279 (22): 1820–25.
- Lichter, Daniel T., and Kenneth M. Johnson. 2009. "Immigrant Gateways and Hispanic Migration to New Destinations." *International Migration Review* 43 (3): 496–518.
- Mejia, Gloria C., Jay S. Kaufman, Giselle Corbie-Smith, R. Gary Rozier, Daniel J. Caplan, and Chirayath M. Suchindran. 2008. "A Conceptual Framework for Hispanic Oral Health Care." *Journal of Public Health Dentistry* 68 (1): 1–6.
- Pew Hispanic Center. 2013. *A Nation of Immigrants: A Portrait of the 40 Million, Including 11 Million Unauthorized*. Vol. 57. Washington, DC.  
[http://www.pewhispanic.org/files/2013/01/statistical\\_portrait\\_final\\_jan\\_29.pdf](http://www.pewhispanic.org/files/2013/01/statistical_portrait_final_jan_29.pdf).
- Shone, Laura P., Andrew W. Dick, Jonathan D. Klein, Jack. Zwanziger, and Peter G. Szilagyi. 2005. "Reduction in Racial and Ethnic Disparities After Enrollment in the State Children's Health Insurance Program." *Pediatrics* 115 (6): e697–705.
- Singer, Judith D. 1998. "Using SAS PROC MIXED to Fit Multilevel Models, Hierarchical Models, and Individual Growth Models." *Journal of Educational and Behavioral Statistics* 24 (4): 323–55.

- Stam, Sabina. 2015. "Transnational healthcare practices of Romanian migrants in Ireland: Inequalities of access and the privatisation of healthcare services in Europe." *Social Science and Medicine* 124: 346-355.
- Starfield, Barbara. 2000. "Evaluating the State Children's Health Insurance Program: Critical Considerations." *Annual Review of Public Health* 21: 569-85.
- Zuvekas, Samuel H., and Gregg S. Taliaferro. 2003. "Pathways To Access: Health Insurance, The Health Care Delivery System, And Racial/Ethnic Disparities, 1996-1999." *Health Affairs* 22 (2): 139-53.

Figures

**Figure 1. State CHIP Immigrant Generosity Scale, 1998 (N=24 states plus the District of Columbia (DC))**



Data are not available for states in white.

*Source:* Authors' compilation.

**Figure 2. State CHIP Immigrant Generosity Scale, 2010 (N=25 states, including DC)**



Data are not available for states in white.  
*Source:* Authors' compilation.

## Tables

**Table 1. Child sample characteristics**

Variable	%
unweighted N=47,528	
Doctor visit during past year	67.23
Race/ethnicity & nativity	
U.S.-born non-Hispanic white	58.93
Foreign-born non-Hispanic white	0.48
U.S.-born non-Hispanic black	14.93
Foreign-born non-Hispanic black	0.17
U.S.-born Hispanic	19.78
Foreign-born Hispanic	1.22
U.S.-born Asian	4.33
Foreign-born Asian	0.16
Mean age	8.85
(standard error)	(.03)
Female	49.05
Fair/poor health status	2.09
Parent's education	
Less than high school	14.89
High school or some college	60.50
Bachelor's degree or more	24.61
Household income to poverty ratio	
At or under the poverty line	20.54
100-200% FPL	21.82
200-300% FPL	18.19
300-400% FPL	13.82
More than 400% FPL	25.62
Married family	72.05
Citizen parent	94.26
Insurance status	
Always insured	66.25
Sometimes uninsured	27.89
Always uninsured	5.86
Incomplete insurance data	22.16

Source: Survey of Income and Program Participation.

Table 2. Logit coefficients predicting children's routine doctor visits

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Year	-0.004†	0.001	-0.003	-0.011***	-0.02***
<b>Race/nativity (vs. U.S.-born non-Hispanic white)</b>					
Foreign-born non-Hispanic white		-0.57***	0.36	0.55	0.58
U.S.-born non-Hispanic black		-0.49***	-0.68***	-0.63***	-0.58***
Foreign-born non-Hispanic black		-1.14***	-1.63†	-0.75	-0.85
U.S.-born Asian		-0.22***	-0.70***	-0.58***	-0.57***
Foreign-born Asian		-0.56*	-0.77	-0.74	-0.90
U.S.-born Hispanic		-0.61***	-0.74***	-0.45***	-0.37***
Foreign-born Hispanic		-1.22***	-2.58***	-1.82**	-1.46*
<i>CHIP eligibility rules</i>					
<b>Income threshold (vs. Less than 200% FPL)</b>					
No program			0.03	0.03	0.02
200-300% FPL			-0.04	-0.01	0.01
300% FPL or more			-0.07	-0.02	-0.05
<b>No documentation required (vs. documentation required)</b>			-0.11	-0.06	-0.08
<b>No residency length required (vs. five-year residency required)</b>			0.26***	0.21***	0.23***
<i>Significant interactions by race/nativity (referent= native-born non-Hispanic white)</i>					
<b>Income threshold (vs. Less than 200% FPL)</b>					
300% FPL or more*FB NHW			ns	-1.96†	ns
200-300% FPL*USB NHB			0.26*	0.32**	0.24*
No program*USB Asian			0.51*	0.58**	0.58**
200-300% FPL*USB Asian			0.68***	0.62***	0.59***
300% FPL or more*USB Asian			0.42†	0.41†	0.43†
200-300% FPL*USB Hispanic			0.20†	ns	ns
300% FPL or more*USB Hispanic			0.47**	0.36*	0.31†
No program*FB Hispanic			1.49*	1.63**	1.53*
200-300% FPL*FB Hispanic			1.21*	ns	ns



<b>No documentation required</b>					
No documentation*USB Asian			0.48†	0.58*	0.54†
<b>No residency length required</b>					
No residency*FB NHW			ns	0.60†	ns
No residency*FB Hispanic			ns	0.52*	0.39†
<b>Age</b>					
Age				-0.02***	-0.02***
<b>Female</b>					
Female				0.09***	0.09***
<b>Poor/fair parent-reported health status</b>					
Poor/fair parent-reported health status				1.05***	1.04***
<b>Parent's education (vs. bachelor's degree or more)</b>					
Less than high school				-0.60***	-0.53***
High school or some college				-0.25***	-0.23***
<b>Income to poverty ratio (vs. more than 400% FPL)</b>					
100% FPL or less				-0.57***	-0.46***
100-200% FPL				-0.50***	-0.39***
200-300% FPL				-0.32***	-0.28***
300-400% FPL				-0.11**	-0.10**
<b>Married family</b>					
Married family				-0.24***	-0.25***
<b>Citizen parent</b>					
Citizen parent				0.38***	0.30***
<b>Insurance status (vs. Always insured)</b>					
Sometimes uninsured					-0.39***
Always uninsured					-1.14***
Incomplete insurance data					0.28***
<b>Covariance Parameter Estimates (s.e.)</b>					
State	.1287 (.0391)	.1110 (.0341)	.0844 (.0279)	.0715 (.0240)	.0704 (.0236)
Residual	.9992 (.0065)	.9992 (.0065)	1.000 (.0065)	1.000 (.0065)	1.002 (.0065)

\* p<.05; \*\* p<.01; \*\*\* p<.001

<sup>i</sup> An alternative was to model all observations provided by each child with control for clustering within child. This modeling strategy was not possible using the multi-level approach with PROC GLIMMIX; our three-level models did not converge. However, models were also fit using PROC SURVEYLOGISTIC, a method permitting control for within-child clustering but not providing both between- and within-state variation estimates. This strategy also permitted us to take into consideration the complex survey design effects inherent with SIPP data, an issue that

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potentially results in Type I statistical error. Importantly, the findings from these two modeling strategies were substantively identical, increasing our confidence that the two-level models obtained with PROC GLIMMIX provide rigorous statistical tests of our hypotheses. Model comparisons are not shown here but are available upon request.