

Immigration Enforcement and Child Health: Evidence from Secure Communities*

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July, 2026

Abstract

Most Hispanic children in the U.S. are citizens, yet the majority live in mixed-citizenship households. Although immigration enforcement is directed at non-citizens, such policies may have spillover effects on citizens in mixed-citizenship households. We estimate the effects of Secure Communities (SC) on Hispanic children's Medicaid and SNAP participation, health, and health care utilization using a staggered difference-in-differences estimator. We find limited evidence that SC affected Medicaid or SNAP participation among Hispanic children overall. However, SC significantly increased the probability that Hispanic children missed at least one school day due to illness or injury and increased the likelihood of emergency room visits and overnight hospitalizations. The increases in acute-care utilization were concentrated among children in families with at least one non-citizen. Our findings are consistent with SC worsening health among Hispanic children, suggesting that immigration enforcement can generate important spillover effects on children who are not themselves the targets of enforcement.

Keywords: Secure Communities, Immigration Enforcement, Child Health

JEL codes: I13; I14, K37

*We thank Monica Garcia-Perez, Hussain Hadah, and seminar/conference participants at Tulane University and The American Society of Health Economists (ASHEcon) for helpful comments and suggestions. We are grateful to Marcella Alsan and Crystal Yang for generously sharing data on the program's county-level activation dates. This paper uses restricted-access National Health Interview Survey data from the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. NCHS is the original source of the data and is responsible only for the initial data files; the analyses, interpretations, and conclusions are those of the authors and do not necessarily represent the views of NCHS or the Centers for Disease Control and Prevention. Any remaining errors are our own.

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1. Introduction

U.S. immigration enforcement is formally directed at non-citizens, but its consequences may be borne by U.S.-citizen children living in mixed-status households. As of 2023, 18.4 million U.S. children, about a quarter of all children in the country, had at least one foreign-born parent. Additionally, roughly 4.6 million citizen children lived in households with at least one unauthorized immigrant parent (Haley et al., 2025; Passel and Krogstad, 2025). Although these children themselves are not subject to removal, immigration enforcement may still affect them through several channels, including changes in household income, stress, participation in safety net programs, and interactions with public institutions. The literature has documented the potential channels through which immigration enforcement may affect citizens, but there has been limited empirical evidence on whether these channels translate into changes in children’s health.

These potential spillovers became more important as Hispanic and foreign-born populations expanded and immigration enforcement became increasingly connected to local institutions. The Hispanic population grew from 9% of U.S. residents in 1990 to 18.7% in 2020 (U.S. Census Bureau, 2021), while the foreign-born population increased from 31 million (11% of the population) in 2000 to 44.8 million (14%) in 2018 (Pew Research Center, 2020). Over the same period, immigration enforcement became increasingly contested across federal, state, and local governments. These debates often centered on whether immigration enforcement should remain primarily a federal responsibility or be carried out in partnership with local institutions. Secure Communities (SC), which linked federal immigration screening to local jail bookings, became a prominent example of this federal-local cooperation in immigration enforcement. By embedding federal screening in routine local law enforcement, SC extended the reach of interior immigration enforcement and provides a useful setting for studying its spillover effects on Hispanic children.

This paper estimates the effects of SC on participation in Medicaid and the Supplemental Nutrition Assistance Program (SNAP), health, and health care utilization of Hispanic

children, both overall and by the citizenship mix of the family. We estimate the program’s effects using an extended two-way fixed-effects (ETWFE) staggered difference-in-differences (DID) estimator that addresses the biases of conventional designs and accommodates flexible aggregation of group-time treatment effects. We use the restricted-access National Health Interview Survey (NHIS) for survey years 2004 through 2012, which allows us to use each child’s county of residence to identify the exact month of SC adoption.

This paper contributes to the literature in three ways. First, to the best of our knowledge, this is the first paper to examine the effects of SC on a range of outcomes relevant to Hispanic children’s health: Medicaid participation, health, and health care utilization. The literature on SC has investigated several other outcomes, including employment ([East et al., 2023](#)), poverty ([Amuedo-Dorantes et al., 2018](#)), SNAP participation ([Alsan and Yang, 2024](#); [Amuedo-Dorantes et al., 2018](#)), health and mental health of adults ([Wang and Kaushal, 2019](#)), birth weight of infants ([Amuedo-Dorantes et al., 2022](#); [Vu, 2024](#)), and engagement with public institutions including crime reporting ([Gonçalves et al., 2026](#)). Because exposure to immigration enforcement may differ by household citizenship composition, we also separately examine impacts on children living with at least one non-citizen family member and children living in fully citizen families. The existing literature has examined a variety of samples ranging from likely undocumented Hispanic immigrants to Hispanic citizens, but the effects for different Hispanic groups are only sometimes compared in the same paper.

Second, we use the restricted version of the National Health Interview Survey (NHIS), which contains information on county of residence and month of the survey. Given the staggered rollout of SC at the county level by month, datasets missing those two key variables produce a noisy measure of treatment status. Many prominent SC studies use the American Community Survey which only has annual measurement of treatment and geographic information at the Public Use Microdata Areas (PUMA) or commuting zone level ([East et al., 2023](#); [Amuedo-Dorantes et al., 2018](#); [Alsan and Yang, 2024](#)). The only other paper using the NHIS to study SC is [Wang and Kaushal \(2019\)](#), which only examined adult outcomes.

Third, we use staggered adoption DID methods, following the ETWFE framework in [Wooldridge \(2025\)](#), which we adapt by introducing a treatment-cohort definition tailored to the county-level rollout of SC. Most previous studies of SC rely on standard two-way fixed effects (TWFE) specifications, which can produce biased estimates under staggered policy adoption when treatment effects vary across locations or over time. A notable exception to using a TWFE to study SC is the concurrent work of [Deb et al. \(2024\)](#) which develops ETWFE-style estimators for repeated cross-sections dubbed FLEX—“flexible linear model estimated by OLS with covariates (X).” They apply their FLEX framework to study SC using public ACS repeated cross-sections on SNAP enrollment among Hispanic adult citizens. Again, using the ACS subjects their paper to its limitation that the geographic level of variation is the PUMA, leading them to assign the annual treatment of the earliest county in the PUMA to the whole PUMA.

Our analysis yields several key findings. First, we find limited evidence that SC affected Medicaid or SNAP participation among Hispanic children overall. Second, we find evidence consistent with worsening child health. SC significantly increased the probability that Hispanic children missed at least one school day due to illness or injury, visited an emergency room, and experienced an overnight hospitalization. The increases in acute-care utilization were concentrated among children living with at least one non-citizen family member. Finally, complementary estimates for Hispanic adults show worse self-reported health, more hospital visits, and a greater likelihood of delaying or forgoing care due to cost.

The rest of the paper is organized as follows. Section 2 presents the institutional background of SC and reviews the related literature. Section 3 describes the data sources and our analytic sample. Section 4 outlines our empirical strategy. Section 5 presents the main results for Hispanic children and reports complementary results for Hispanic adults. The final section concludes.

2. Background and Literature Review

2.1. Institutional Background

SC was a federal immigration enforcement program administered by U.S. Immigration and Customs Enforcement (ICE) that transformed how local law enforcement interacted with federal immigration authorities. Prior to SC, identifying potentially deportable non-citizens relied on two pre-existing programs: the Criminal Alien Program (CAP) and the 287(g) program ([Miles and Cox, 2014](#)). Under CAP, federal officers screened inmates in correctional facilities, while the 287(g) program allowed the Department of Homeland Security (DHS) to establish formal agreements that deputized state and local law enforcement officers to perform federal immigration enforcement duties. Both required active local cooperation and infrastructure. By contrast, SC operated automatically through biometric data sharing whenever a participating jurisdiction submitted fingerprints to the FBI, dramatically broadening the geographic reach of interior enforcement.

Under the SC program, when local law enforcement arrested an individual for any reason and submitted their fingerprints to the FBI for criminal background checks, the data were automatically routed to the DHS to be checked against its Automated Biometric Identification System. If a match indicated a potential immigration violation, ICE could issue a detainer requesting the local jail to hold the individual for up to 48 hours, facilitating their transfer into federal immigration custody. This automatic sharing of biometric data between police and ICE allowed for a significant increase in immigration enforcement, which directly affected immigrants and created potential spillovers for citizens.

The program was piloted in selected counties in late 2008 under the Bush administration and expanded rapidly over the next five years. Importantly, the program was implemented in a staggered, county-level rollout with the timing of a county’s activation determined by federal authorities. Early activation counties were more likely to have sizable local Hispanic populations, be closer to the U.S.-Mexico border, and have existing 287(g) agreements in

place with ICE ([Miles and Cox, 2014](#)). Later expansions were less correlated with these county characteristics and continued until the policy was implemented nationally in January 2013.

SC officially targeted serious criminal offenders; however, the institutional design led to a much broader reach. ICE categorized deportable individuals into three priority levels based on the severity of their criminal history: Level 1 individuals had been convicted of an aggravated felony or two or more felonies (e.g., murder, rape, kidnapping), Level 2 individuals had any other felony conviction or three or more misdemeanors, and Level 3 individuals had been convicted of one or two misdemeanors. Ultimately, Level 1 offenders comprised only about 28% of all SC detainees, while individuals with no recorded criminal convictions made up nearly a third ([Miles and Cox, 2014](#)). Because the program processed a large share of individuals with minor or no criminal records, the threat of deportation extended beyond the population of serious offenders and into the broader Hispanic community ([Alsan and Yang, 2024](#)).

The scale of the SC program was unprecedented. According to data from the Transactional Records Access Clearinghouse (TRAC), the SC program processed over 46 million fingerprint submissions, issued over 2 million detainers, and resulted in over 450,000 deportations between 2008 and 2014 ([Transactional Records Access Clearinghouse, 2017](#); [Vu, 2024](#)). The demographic burden of the program was also highly concentrated. The authors' calculations from TRAC's public SC removals data show that among the recorded removals from November 2008 through December 2014, 95.7% were male and 95.4% had recorded citizenship in Mexico or Central American countries ([Transactional Records Access Clearinghouse, 2020](#)). This pattern is similar to [East \(2020\)](#)'s summary of SC deportees and consistent with [Alsan and Yang \(2024\)](#)'s evidence that 91% of SC detainers were issued against individuals from Hispanic countries of origin.

Although ICE initially presented the program to local jurisdictions as a partnership governed by Memorandum of Agreement (MOA), the agency later terminated all MOAs by

2011, making the biometric information sharing mandatory and removing any local opt-out provisions ([Alsan and Yang, 2024](#)). Despite the formal end of opt-out provisions, the program faced resistance from some jurisdictions. New York, Massachusetts, and Illinois challenged SC implementation, and a number of sanctuary cities and counties continued to limit their cooperation with ICE detainers ([Alsan and Yang, 2024](#)). Two key court cases in Spring 2014, *Miranda-Olivares v. Clackamas County* and *Galarza v. Szalczyk*, both ruled in favor of plaintiffs who had been held beyond their release dates based on ICE detainers. These court rulings reinforced that ICE detainers were requests rather than mandatory orders. This raised concerns that counties could be liable for unlawful detention if they complied with ICE detainers. There was also growing frustration about local resources being used to honor ICE detainers without federal compensation, along with concerns that cooperation with immigration enforcement would undermine community policing.

In response to the legal and political backlash facing SC, the Obama administration replaced SC with the Priority Enforcement Program in November 2014 ([The White House, Office of the Press Secretary, 2014](#)). This program continued fingerprint sharing, but focused more narrowly on individuals with serious criminal convictions and shifted from detainer requests toward requests that ICE be notified before individuals were released. In January 2017, the Trump administration reinstated the broader SC approach, although enforcement was more constrained than in 2013 because many localities had already adopted policies restricting compliance with ICE detainers following the growing legal challenges surrounding them. The Biden administration again discontinued SC in January 2021.

2.2. Related Literature Review

As mentioned earlier, a large body of work finds that SC worsened various outcomes for Hispanic immigrants (adults and infants). This literature varies in how it defines the sample of interest, from Hispanic citizens to various definitions of likely undocumented Hispanic immigrants. The methodologies also vary, with some papers focusing specifically on SC

and others using broader immigration-enforcement indices. The broad literature overview is that SC decreased employment of likely undocumented workers (East et al., 2023), increased the likelihood of poverty among likely undocumented-headed households (Amuedo-Dorantes et al., 2018), decreased participation in safety net programs among Hispanic citizens (Alsan and Yang, 2024), worsened self-reported health and mental health among foreign-born Latino adults (Wang and Kaushal, 2019), and increased the incidence of Hispanic infants being born with low birth weight (Amuedo-Dorantes et al., 2022; Vu, 2024).

The first strand of relevant literature indicates that SC generated economic hardships for Hispanic immigrant families. East et al. (2023) find SC reduced employment among likely undocumented immigrants, defined as foreign-born individuals who are 20-64 years old with a high school degree or less. The number of likely undocumented immigrants working as a share of baseline population fell by a significant 5.7%, which was caused both by a decrease in likely undocumented immigrants in the area and decreased employment among those remaining. Wages also fell around 1.4%, although this was insignificant.

Amuedo-Dorantes et al. (2018) create an immigration enforcement index summing whether the locality was exposed to SC, 287(g), E-Verify, or an Arizona omnibus immigration law. They find that among children in families with a likely unauthorized parent (defined as a Hispanic, non-citizen parent), the probability that the child lived in poverty significantly increased by roughly 4% for a one standard deviation increase in the immigration enforcement index. Additional models indicate that almost all the increase in poverty is explained by police-based enforcement such as SC. Among a sample of children with naturalized Hispanic parents and another sample of children with U.S.-born Hispanic parents, there was no significant increase in the likelihood of living in poverty. Additionally, this paper finds that a one standard deviation increase in enforcement significantly increases receiving SNAP by 7% among children with likely undocumented parents but there was no significant effect among the two samples of Hispanic citizen parents.

Other studies highlight how increased fear among immigrant communities may create a

“chilling effect” which results in *less* use of social safety net programs, particularly among citizens who are more likely to be eligible for these programs. One example of a chilling effect of SC comes from [Alsan and Yang \(2024\)](#), who use a triple-difference methodology to compare the impacts of SC rollout on Hispanic citizens relative to non-Hispanic White citizens. They find SC reduced SNAP participation by 10% and Supplemental Security Income (SSI) participation by 30%. The authors provide evidence that reduced participation is driven by fear, showing reductions were larger in areas where more deportations were the result of misdemeanor crimes and in areas with more reported deportation fear according to a Pew survey. Sanctuary cities and places with higher shares of Hispanics from Puerto Rico or Cuba had smaller reductions in participation.

Using staggered DID methods, [Deb et al. \(2024\)](#) revisit the effect of SC on SNAP participation. Their sample is similar to [Alsan and Yang \(2024\)](#) in several ways. [Deb et al. \(2024\)](#) use repeated ACS cross-sections and assign each PUMA the earliest SC implementation date among its constituent counties. They focus on Hispanic citizens who did not move between states and who were household heads or spouses, and exclude Illinois, Massachusetts, and New York. Unlike [Alsan and Yang \(2024\)](#), however, they include individuals with a high school diploma or GED, exclude those with education beyond high school, and restrict the analysis to 682 PUMAs observed in every year from 2005 through 2016.

[Deb et al. \(2024\)](#) generally find that SC reduces SNAP enrollment among Hispanic citizens. Moreover, the magnitude and statistical significance of the estimates depend on how flexibly the model allows treatment effects to vary. In their preferred FLEX specifications, which allow cohort-by-year treatment effects to vary and include individual covariates, region indicators, cohort and year fixed effects, and additive PUMA indicators, the estimated effects are closer to a 10% decline in SNAP participation.

The findings on SNAP participation differ across [Amuedo-Dorantes et al. \(2018\)](#), [Alsan and Yang \(2024\)](#), and [Deb et al. \(2024\)](#). [Amuedo-Dorantes et al. \(2018\)](#) find *increases* in participation among likely undocumented household heads and no significant impacts among

Hispanic citizen heads, whereas [Alsan and Yang \(2024\)](#) and [Deb et al. \(2024\)](#) find *decreases* in participation among Hispanic citizens. Together, these studies highlight two different mechanisms (i.e., reduced income and increased fear), which may work in opposite directions depending on the household’s citizenship status. Our paper revisits SNAP participation and compares the effects for Hispanic children in fully citizen and mixed citizen households.

Another important safety net program related to children’s health is Medicaid. All the SC papers highlighted so far ([Alsan and Yang, 2024](#); [Amuedo-Dorantes et al., 2018](#); [East et al., 2023](#); [Deb et al., 2024](#)) use the American Community Survey, which does not include health insurance information during this period. To the best of our knowledge, our paper is the first to address the impacts of SC on children’s Medicaid participation. Still, previous studies have examined the impacts of other immigration enforcement policies on insurance. Using the Current Population Survey during a period that pre-dates SC, [Watson \(2014\)](#) finds a 1 log point increase in immigration apprehensions *reduced* Medicaid participation by 8.7 percentage points among children of non-citizen mothers with no significant impact among children of citizen mothers.

Two other papers study the impact of state omnibus immigration laws on Medicaid enrollment for Hispanic children. The first, [Allen and McNeely \(2017\)](#), finds an *increase* in Medicaid among children of citizen parents, which they attribute to additional outreach to Hispanic communities during this time. The paper finds no significant change in enrollment among children whose parents are both non-citizens. However, [Allen \(2018\)](#) finds that Medicaid enrollment *fell* among Hispanic children with non-citizen parents in areas where a higher share of the population is Hispanic, which would be consistent with a chilling effect.

Turning to E-Verify, an employment verification program that helps employers identify unauthorized workers, [Churchill \(2021\)](#) finds E-Verify mandates only temporarily reduce employer-sponsored insurance, likely explained by out-migration of unauthorized immigrants. Among the children of likely unauthorized parents there was a small decrease in private insurance and no significant impacts on public insurance such as Medicaid. The

mixed findings of these papers suggest immigration enforcement has no consistent impact on children’s Medicaid participation, highlighting potential differences by the parents’ citizenship, with Medicaid participation tending to decrease or not change among children of non-citizens.

Although no prior work has examined SC’s effects on children’s health, a related literature studies health impacts for other age groups and generally finds adverse effects. Similar to our paper, [Wang and Kaushal \(2019\)](#) study the health impacts of SC using the NHIS, but unlike our paper their focus is on adult health using standard DID methods. Focusing on adults born in Latin America where at least one family member is a non-citizen relative to a sample of U.S.-born non-Hispanic whites, the authors find some evidence SC increased the likelihood of being in fair or poor health but no significant change in excellent or very good health. However, SC did significantly increase mental health distress by 2.2 to 3.2 percentage points (14.7% to 21.3%). Their findings speak to the health consequences of SC for adults. Our focus on children makes public insurance especially relevant because eligibility is limited for many non-citizen adults while many Hispanic children in mixed-status families remain eligible.

Two papers have examined the impact of SC on the birth outcomes of Hispanic infants and find significant increases in the incidence of low birth weight ([Amuedo-Dorantes et al., 2022](#); [Vu, 2024](#)). The papers differ in their methods and the resulting magnitudes of their estimated effects. [Amuedo-Dorantes et al. \(2022\)](#) use an immigration enforcement index which includes SC and is interacted with the trimester of pregnancy. The results indicate that immigration enforcement in the third trimester, particularly police-based enforcement, significantly increases low birth weight incidence by 6%. [Vu \(2024\)](#) exclusively analyzes SC and finds it increases the incidence of low birth weight by 11.8%. To reconcile the differences in magnitudes, [Vu \(2024\)](#) ran additional analysis to show that the impacts of SC are more pronounced in magnitude and statistical significance than the other immigration enforcement measures in [Amuedo-Dorantes et al. \(2022\)](#)’s index. Both papers attribute the

primary mechanism for these findings to maternal stress. Indeed, stress among Hispanic communities due to immigration enforcement has been widely documented ([Cardoso et al., 2021](#)).

Finally, [Watson \(2014\)](#) studies how immigration enforcement causally impacts children’s self-reported health and finds that an increase in immigration apprehensions (prior to SC) significantly worsened the self-reported health of Hispanic children. However, as mentioned previously, Watson studies apprehensions that pre-date SC, whereas our paper is the first to examine the effect of SC on child health.

3. Data

The primary data source for this paper is the National Health Interview Survey, which is a nationally representative survey administered annually that contains detailed information on demographics, interview month, insurance coverage, health care utilization, and self-reported health ([National Center for Health Statistics, 2012](#)). The restricted-use files also contain data about the county of residence, allowing us to match individuals to the staggered county-level rollout of SC. We use survey years 2004 through 2012, covering several pre-treatment years prior to the launch of SC in late 2008 and multiple years during the staggered county-level rollout of the program. Because SC reached nationwide coverage in early 2013, 2012 is the last year in which untreated areas remain available for identification.

The NHIS has multiple questionnaire sections. Everyone in the household is asked a set of questions, and another set of questions is asked for one child randomly sampled within the household. From the household questions, we construct indicators for (i) Medicaid enrollment, (ii) family SNAP participation, (iii) whether the child’s self-reported health is excellent, (iv) any overnight hospital stay in the prior 12 months, and (v) delayed or forgone medical care because of cost in the prior 12 months. From the sample child questions, we examine whether the child had (i) at least one school absence because of illness or injury, (ii)

a well-child checkup, and (iii) an emergency room visit during the prior 12 months. Across years, the analytic sample contains approximately 67,000 Hispanic children in the full child sample and roughly 29,000 Hispanic children in the sample child file.

The NHIS data is then merged with a policy dataset which identifies when SC was implemented in a location.¹ Our policy dataset also identifies whether a location had a statewide 287(g) policy in place at the time of SC implementation. The file also contains information on the share of the population identified as Hispanic from the Census Bureau ([U.S. Census Bureau, 2011](#)). Because SC was implemented at the county level, we require county identifiers in the restricted-use NHIS data, which are only available in a Federal Statistical Research Data Center, to merge in the policy file. For our analysis, the smallest level of geography is an aggregation of counties that activated SC in the same month within the same state. Section 4 provides a detailed discussion of the treatment unit.

Our analysis focuses on Hispanic children ages 0 to 17. While our main analysis focuses on all Hispanic children, we are also interested in whether SC differentially affected children based on the immigration-related composition of their household. To do this, we stratify Hispanic children into two groups: those living in fully U.S.-citizen households and those living in households with at least one non-citizen family member. Children in mixed-citizenship households may face greater stress related to a family member’s deportation risk, distrust of public institutions, and chilling effects in the use of public programs despite often being citizens themselves. Citizenship is a clean classification measure for understanding legal status and eligibility for safety net programs, but there can be potential concerns about accurate reporting especially in light of immigration enforcement policy. Encouragingly, we find SC implementation had no significant impact on missing citizenship information (Table A.1).

The first sub-sample consists of children in families where everyone is a citizen, “Fully Citizen.” The second sub-sample of children consists of those with at least one non-citizen family member, which we will sometimes shorten to “Any Foreign.” The Any Foreign group

¹We created this policy dataset with publicly available information and data from the authors of [Alsan and Yang \(2024\)](#).

combines U.S.-citizen children living with at least one non-citizen family member and children who are themselves non-citizens. In the 2004–2012 Hispanic child analytic sample, 84% of the Any Foreign group are U.S.-citizen children with at least one non-citizen family member, while 16% are non-citizen children. Because the non-citizen-child group is relatively small, we do not separately estimate effects by the child’s own citizenship.

As a robustness check, we also classify children based on the birthplace of family members into analogous sub-samples: children in fully U.S.-born families and children in families with at least one foreign-born family member. The citizenship- and nativity-based classifications are highly similar, with 86% of Hispanic children falling into the same corresponding group under both approaches. Differences between the two measures stem from naturalized foreign-born family members. Appendix Tables A.2 and A.3 report estimates using both citizenship and birthplace-based partitions.²

Finally, we conduct additional analysis for adults, where we restrict the NHIS person sample to Hispanic adults under age 65 who live in families with at least one Hispanic child. Essentially, these are the non-elderly adults in the families of the children in our main sample. We apply the same family-citizenship classification to these adults: “Any Foreign” includes Hispanic adults who are themselves non-citizens or who live with at least one non-citizen family member, while “Fully Citizen” includes Hispanic adults in families where all observed members are U.S. citizens.

Table 1 reports summary statistics for the Hispanic child sample overall and by family citizenship mix using 2004-2008 years of our NHIS data. A little more than half of the Hispanic children live in households with at least one non-citizen family member. Children living with non-citizens tend to be more disadvantaged, as they are less likely to live with an adult who has at least a high school education, more likely to have Medicaid coverage, less likely to be in excellent health, and generally have lower health care utilization with the

²Prior immigration enforcement studies have used a variety of sample constructions, including Hispanics broadly (Amuedo-Dorantes et al., 2022; Vu, 2024), citizenship-based classifications (Watson, 2014; Allen and McNeely, 2017; Allen, 2018; Amuedo-Dorantes et al., 2018; Alsan and Yang, 2024), and birthplace-based proxies for immigration exposure (Churchill, 2021; Wang and Kaushal, 2019; East et al., 2023).

exception of hospitalizations.

4. Methodology

4.1. Specification of the ETWFE Model

We estimate a staggered difference-in-difference model that exploits the county-level roll-out of SC to estimate its causal effects on our outcomes of interest. Recent work has shown that two-way fixed effects DID models can be biased in a staggered adoption context because the overall effect includes comparisons between newly treated groups and control groups that include already treated units ([Goodman-Bacon, 2021](#); [Roth et al., 2023](#); [de Chaisemartin and D’Haultfoeuille, 2023](#)). This bias can be substantial when treatment effects vary over time. While many solutions have been proposed to handle staggered DID settings, we follow the extended two-way fixed effects estimator laid out in [Wooldridge \(2025\)](#), which is a flexible TWFE regression model estimated using pooled Ordinary Least Squares (OLS), allowing us to explicitly specify which post-period comparisons are made.

The staggered adoption DID literature typically proceeds by defining treated *cohorts* based on when they adopt the policy. However, in our context, doing so would group counties in different states that adopted at the same time, preventing us from examining geographic heterogeneity in the impacts of SC. Alternatively, cohort groups could simply be counties, but this would lead to a curse of dimensionality given the number of counties and post-period months we would be interacting in the model. As a middle ground that allows for reasonable heterogeneity across space while fully addressing the staggered adoption literature’s concerns about time, we aggregate counties that implemented SC in the same month and same state as our treatment cohorts, and refer to them as *policy cohorts* throughout the paper. This yields 273 policy cohorts.

The ETWFE model interacts each policy cohort with an indicator for each month of that policy cohort’s post implementation date. More explicitly, we estimate the following

regression model using pooled OLS:

$$Y_{it} = \alpha + \sum_{r=g}^T \beta_r d_r + \sum_{s=2}^T \lambda_s f s_t + \sum_{r=g}^T \sum_{s=r}^T \tau_{rs} (w_{it} d_{ir} f s_t) + \theta \mathbf{X}_i + \varepsilon_{it}, \quad (1)$$

where Y_{it} is the outcome for person i at time t . The first single summation over d_{ir} provides policy-cohort fixed effects for each policy cohort r . The next single summation provides time fixed effects at the month-by-year level.

Key to ETWFE’s added flexibility over a standard TWFE is the comprehensive set of interaction terms contained in the double summation, which interacts each policy cohort d_{ir} with each of that cohort’s post-period months $f s_t$. This ensures that outcomes of a policy-cohort in each time period are being compared to not-yet-treated policy-cohorts in the same time period. The w_{it} term is defined as 1 when a policy-cohort is treated, and 0 otherwise.³

A vector of individual control variables which should be unaffected by policy adoption is denoted by $\mathbf{X}_i$ which includes child’s age, an indicator for whether the household has an adult with at least a high school education, the number of adult family members, and the number of children in the household. Finally, ε_{it} is the idiosyncratic error term. Standard errors are clustered by policy cohort. The regression uses the sample weights from the NHIS survey, which differ for questions in the household questionnaire and the sample child questionnaire.

Our ETWFE model specification is in the spirit of the FLEX framework of [Deb et al. \(2024\)](#) for repeated cross-sections. In the terminology of [Deb et al. \(2024\)](#), lags-only FLEX specifications estimate treatment effects only in post-treatment periods, imposing that lead coefficients are zero. Applied to our setting, this means interacting treatment status with policy-cohort indicators and post-treatment month indicators, while controlling for policy-cohort fixed effects, month-year fixed effects, and predetermined individual controls.

³We note that w_{it} is redundant in equation (1) because $w_{it} d_{ir} f s_t = d_{ir} f s_t$, but this term becomes useful when using Stata’s *margins* command to aggregate various τ_{rs} terms to provide overall and other aggregated treatment effects, which we will explain shortly.

4.2. Aggregation and Interpretation of Model Parameters

The most disaggregated coefficients estimating the impact of SC in the model are τ_{rs} , which represent the treatment effect for cohort r in that cohort’s post-period month s . After limiting the interactions to policy cohort-time cells that contain observations in the restricted data, we obtain 2,854 group-time interactions. Individually, these terms are too granular to be of direct policy interest and are instead combined into various aggregated treatment effects of interest.

First, we estimate an overall treatment effect by aggregating all estimates of τ_{rs} in all post-treatment periods, correctly estimating the standard error. This estimate of the overall effect is similar to the unconditional ATT parameter estimated via TWFE in the non-staggered DID design but properly accounts for staggered treatment adoption and allows for heterogeneous impacts over time. To compare outcomes by the citizenship mix of families, we run the model separately for the two sub-samples (Any Foreign and Fully Citizen) and then do the same aggregation procedure to get overall effects for those two groups.

For additional heterogeneity analysis by time and policy cohort characteristics, we can return to the main regression with the full sample of Hispanic children and aggregate to the appropriate levels of interest. For time heterogeneity, we estimate the aggregated effects for periods within 1 year of implementation, 1-2 years after implementation, and more than 2 years after policy implementation. We are also interested in how treatment effects of SC differ by location. The literature has pointed out that while SC implementation was mostly random, early implementation locations were arguably more targeted, as they were more likely to occur near the Mexican border, in areas where a larger share of the population is Hispanic, and in places that had existing 287(g) policies.

First, we aggregate the treatment effect separately for states that border Mexico (Arizona, California, New Mexico, and Texas) and those in states that do not. We also aggregate our results by whether a policy cohort was in the top tercile of Hispanic density (share of the policy cohort that is Hispanic) and aggregate by whether the policy cohort was an early

implementer (those that implemented in 2008, the first year of the program). Additionally, we aggregate results by whether the policy cohort had a statewide 287(g) policy at the time of SC implementation. On the one hand, these locations may have amplified impacts of SC because immigration enforcement is more relevant in these areas, but on the other hand, these areas may have more concerns about policy endogeneity. In either case, understanding how the estimates differ based on these characteristics is useful.

5. Results

This section presents our results, starting with overall aggregated effects for the primary sample of Hispanic children, covering participation in safety net programs, health, and health care utilization. Next, we report estimates by the citizenship mix of the family (Any Foreign vs. Fully Citizen). Third, we report additional heterogeneous effects by length of exposure to SC, being in a state on the Mexican border, and the presence of a statewide 287(g) policy. Finally, we examine the results for adults in the households of these children.

5.1. Overall Aggregated Effects for Hispanic Children Sample

Table 2 reports the estimated effects of SC on safety net program participation and health for the primary sample of Hispanic children. The impact of SC on both Medicaid and SNAP participation is small and statistically insignificant. Specifically, SC increased Medicaid participation by 0.6 percentage points and decreased SNAP participation by 0.6 percentage points, corresponding to changes of 1.4% and -2.9%, respectively. Regarding health outcomes, we find evidence consistent with worsening child health as measured by self-reported health and school absence due to illness or injury. At baseline, 43.8% of Hispanic children are reported to be in excellent health, and SC implementation decreases this by 1 percentage point, although the decrease is not statistically significant. In addition, the implementation of SC significantly increased the share of children who missed at least one

school day due to illness or injury by 5.23 percentage points (8.17%).

Table 3 turns to health care utilization. We find a marginally significant increase (p -value = 0.073) in well-child checkups of 2.4 percentage points (3.6%). We also find that SC increased the probability of an emergency room (ER) visit by 2.7 percentage points (13.5%) and the probability of an overnight hospital visit by 0.7 percentage points (11.5%). Finally, we find a statistically insignificant effect on delaying or forgoing care because of cost. We view an increase in preventative care use as a favorable outcome, suggesting any chilling effects are not reducing preventative care. The increases in ER and hospital visits admit multiple interpretations. While it is encouraging that there is no evidence of chilling effects impeding these more serious visit types, these results are consistent with worsening underlying health of these children, as seen in Table 2. Across the four outcomes in Table 3, there is a consistent pattern suggesting that, on average, SC is not causing Hispanic children to forgo medical care.

5.2. Overall Aggregated Effects for Citizenship Mix Samples of Hispanic Children

We now revisit the outcomes of Table 2 and Table 3, partitioning the sample of Hispanic children by whether they live in Fully Citizen families (no non-citizen family members) or Any Foreign families (at least one non-citizen family member). The Any Foreign group is more directly exposed to the threat of deportation and the chilling effects documented in prior work, while the Fully Citizen group is largely insulated from direct immigration consequences but may still be impacted by spillover chilling effects.

One concern regarding the citizenship partition is that SC could induce systematic mis-measurement or non-response of citizenship information due to increased fear about divulging citizenship information. Birthplace information is potentially less sensitive relative to citizenship, and indeed, citizenship is missing more frequently than birthplace in the NHIS data prior to SC. We test whether SC affected missingness in the citizenship and birthplace

variables by estimating our main specification using indicators for missing citizenship and missing birthplace as outcomes. As reported in Table A.1, SC appears to reduce missing birthplace information in a statistically significant way. However, SC did not have a statistically significant effect on missing citizenship information. Given that there is no significant relationship between SC and missing citizenship information, and that citizenship is a cleaner measure of a family’s sensitivity to immigration enforcement, our preferred partition of Hispanic children is based on citizenship of all the family members. Nonetheless, the estimates are qualitatively similar under the citizenship- and birthplace-based partitions (Appendix Tables A.2 and A.3).

We present the family type partition results graphically in Figure 1. In this figure and all subsequent figures of this kind, the regression coefficients are reported as percentage changes relative to the pre-treatment mean of the outcome. Standard errors of the percent changes are computed via the delta method, from which we construct 95% confidence intervals. The safety net and health outcomes from Table 2 are in the top panel of Figure 1 and the utilization outcomes from Table 3 are in the bottom panel. Corresponding regression estimates are reported in Panel A of Tables A.2 and A.3.

First, the results for Medicaid participation, which were insignificant for Hispanic children overall, remain insignificant for both family subgroups, providing no evidence of a chilling effect. More surprisingly, SNAP participation, which was insignificant for Hispanic children overall, increased significantly among children in Fully Citizen families. This finding differs from [Amuedo-Dorantes et al. \(2018\)](#), who find insignificant impacts of SC on SNAP among children with citizen parents and significant *increases* in SNAP participation for children with likely unauthorized parents.

Next, the health impacts—reporting being in excellent health or missing at least one school day due to illness or injury—are remarkably similar across children in Any Foreign and Fully Citizen families. Both groups of children experience a significant increase in missing at least one day of school, both in percentage point and percent terms (4.9 percentage points

and 8.39% for Any Foreign families and 5.4 percentage points and 7.71% for Fully Citizen families).

In the bottom panel, well-child checkups are similar across the family types, but the change in ER visits is starkly different by family type. While the incidence of having an ER visit increased among Hispanic children overall, this is driven by a significant increase among children in Any Foreign households whereas the children in Fully Citizen households had a significant *reduction* in ER visits. Somewhat similar but less pronounced, the increase in the incidence of a hospital visit among Hispanic children is driven by those in Any Foreign families rather than those in Fully Citizen families, though the results are insignificant for both subgroups. The impacts of SC on delaying or forgoing care due to cost are insignificant for Hispanic children overall and within each family subgroup. Overall, the citizenship-mix results suggest a nuanced interpretation of the effects of SC on Hispanic children. The increase in missing at least one school day appears in both family types, while the increase in acute care utilization is concentrated among children in families with at least one non-citizen member.

5.3. Aggregated Effects by Length of Exposure, Location, and 287(g) Status

This section presents aggregated effects by the number of years since SC implementation, whether the policy cohort is in a state that borders Mexico, and whether the policy cohort had a statewide 287(g) agreement with ICE at the time of SC implementation. Figure 2 presents these aggregated estimates for safety net program participation and self-reported health for the primary Hispanic children sample. Table A.4 reports the corresponding regression estimates.

Consistent with the overall results, we find little evidence that SC affected Medicaid, SNAP, or self-reported health across these aggregated comparisons. The estimates for these outcomes do not reveal a consistent pattern by exposure length, Mexican-border status, or

287(g) status. Thus, the null overall effects for safety net participation do not appear to mask large offsetting effects across these dimensions.

The results for the school-absence outcome are more consistent across these dimensions. We find that SC increased the probability of missing at least one school day across most of the aggregated comparisons, and the effects remain positive after splitting the estimates by exposure length, location, and 287(g) status. The effects are similar by the length of exposure time after implementation. We do not find evidence that SC had a larger impact for states on the Mexican border; the estimate for that group is only marginally significant (p -value = 0.063). Instead, the effect of SC on missed school days is larger and more statistically significant for states not on the Mexican border. This pattern is consistent with the idea that SC represented a more salient expansion of immigration enforcement in the interior, where routine exposure to federal immigration enforcement was less common than in border areas. At the same time, policy cohorts with an active 287(g) agreement at the time of SC implementation experienced larger increases in missed school days, suggesting that SC's effects were amplified in places where local immigration enforcement capacity or enforcement salience was already higher.

The results for policy cohorts in states on the Mexican border are very similar to those aggregated effects by Hispanic population density and early implementation status, which is not too surprising because those three characteristics are correlated. Figure A.1 reports these additional splits, and Table A.7 reports the corresponding regression estimates.

Figure 3 reports the analogous aggregated effects for health care utilization. The heterogeneous effects are mostly statistically insignificant, but two patterns stand out. First, well-child checkups increase in Mexican-border states and decrease in non-border states, while the differences by exposure length are not practically large. Second, emergency room visits follow a similar location pattern, with increases concentrated in Mexican-border states and some evidence of larger effects after more than two years of exposure. Given the citizenship-mix results in Figure 1, this pattern is consistent with stronger utilization responses among chil-

dren in families more directly exposed to immigration enforcement in enforcement-intensive locations. We do not find meaningful heterogeneity in hospital visits. For delayed or forgone care due to cost, the estimates are largely consistent with the overall null results, except for a statistically significant decrease for children with three or more years of SC exposure and a similar reduction in non-border states. Table A.5 reports the corresponding regression estimates.

Figure A.2 reports additional aggregated effects by Hispanic population density and early implementation status for the health care utilization outcomes, and Table A.8 reports the corresponding regression estimates. As with the safety net and health outcomes, these additional aggregations broadly mirror the Mexican-border split.

5.4. Results for Hispanic Adults with Children

Up to this point, we have focused on the effects of SC on Hispanic children, which is our primary population of interest. To connect with the prior literature on immigration enforcement and to better situate the children’s results, we also estimate effects for the non-elderly Hispanic adult family members of our Hispanic child sample. Using the same NHIS data and identification strategy, our set of outcomes here is a subset of those for children. We only address questions from the individual questionnaire (not the sample adult questionnaire). Table 4 reports estimates for the overall Hispanic adult sample, and Figure 4 displays the estimates by citizenship mix. Panel A of Table A.6 reports the corresponding citizenship-mix estimates, and Panel B reports estimates using the analogous birthplace-based partition.

Consistent with our findings for children, we do not find evidence of a chilling effect of SC on safety net participation among Hispanic adults. We find a positive and statistically significant effect of 2.9 percentage points (21.5%) on Medicaid enrollment, which is difficult to reconcile with any chilling-effect interpretation. The estimated effect on SNAP participation is negative but not statistically significant. Figure 4 further shows a statistically

significant increase in SNAP participation among adults in Fully Citizen families, mirroring the positive estimate for children of Fully Citizen families documented in Section 5.2. This similarity between the adult results and the earlier children’s findings is reassuring since SNAP eligibility is determined at the household level.

The adult health and utilization results show clearer evidence of adverse effects. SC reduced the probability that Hispanic adults report excellent health by 3.4 percentage points (11.4%). It also increased the probability of a hospital visit by 1.5 percentage points and increased the share of people who reported delaying or forgoing care due to cost by 2.1 percentage points, corresponding to increases of 20.6% and 19.2%, respectively.

Figure 4 shows that the adult results differ by family citizenship mix. The safety net estimates do not reveal a consistent response. The increase in Medicaid participation is driven by adults in Any Foreign families while there is a significant increase in SNAP among adults in Fully Citizen families. The estimate for excellent health is negative but insignificant for both subsets of adults. The increases in hospital visits and delayed or forgone care appear larger for adults in Fully Citizen families.

Overall, the adult results reinforce the finding that SC had adverse health-related consequences for Hispanic families, with some differences. For adults, SC is associated with worse self-reported health and more cost-related access barriers. For children, the evidence is strongest for missing at least one school day and acute care utilization, especially among children in Any Foreign families.

6. Discussion

This paper estimates the effects of SC on the safety net program participation, health, and health care utilization of Hispanic children, using the restricted-access National Health Interview Survey from 2004 through 2012. We apply an extended two-way fixed-effects staggered difference-in-differences estimator with policy cohorts based on aggregations of counties

which implemented SC at the same time within the same state. This paper provides new evidence on the impacts of SC on a broad range of outcomes for Hispanic children and connects them to the related literature. The literature on SC points to three broad channels through which immigration enforcement affected Hispanic communities: reduced employment and income, fear-based avoidance of public institutions and safety-net programs, and worsening health among adults and infants. This paper extends that evidence to Hispanic children, who are mostly U.S. citizens and represent an important margin for measuring spillovers of immigration enforcement onto children.

First, despite concerns about chilling effects documented in prior work, we do not find significant effects of SC on Medicaid or SNAP participation among Hispanic children overall. However, we find a significant increase in SNAP participation among Hispanic children in Fully Citizen families.

Turning to health outcomes, we find evidence consistent with worsening health among Hispanic children, as measured by significant increases in school absences due to illness or injury, emergency room visits, and overnight hospitalizations. The increases in acute care utilization were concentrated among children in families with at least one non-citizen member. Complementary estimates for Hispanic adults show worse self-reported health, more hospital visits, and more delaying or forgoing of care due to cost.

In our first set of outcomes, we revisited how SC affected safety net participation, which may either increase due to worsening economic conditions or decrease due to fear-based chilling effects. [Watson \(2014\)](#) identifies chilling effects for Medicaid by finding that increased immigration apprehensions pre-dating SC reduced Medicaid participation among Hispanic children with non-citizen mothers. We do not find evidence of a chilling effect of SC on Medicaid participation for Hispanic children overall or for any family subgroup.

Prior work has produced mixed evidence on the effects of immigration enforcement on SNAP participation. [Amuedo-Dorantes et al. \(2018\)](#) find that increased immigration enforcement increased SNAP participation among children with likely unauthorized parents,

whereas [Alsan and Yang \(2024\)](#) and [Deb et al. \(2024\)](#) find that SC reduced SNAP participation among Hispanic adult citizens. Our results add to this mixed picture. We find no significant effect of SC on SNAP participation among Hispanic children overall, but we estimate a significant increase in participation among children in Fully Citizen families. The adult SNAP results are similar in that the overall estimate is insignificant and participation increases significantly among adults in Fully Citizen families. However, unlike the child estimates, SNAP participation decreases significantly among adults with non-citizen family members. Taken together with prior work, these findings suggest that immigration enforcement may generate both economic and chilling-effect responses, with the net effect on program participation varying across populations and settings.

Other work has documented that SC worsened the health of Hispanic adults ([Wang and Kaushal, 2019](#)) and increased the incidence of low birth weight Hispanic babies ([Amuedo-Dorantes et al., 2022](#); [Vu, 2024](#)), and our paper extends this literature to a broad range of health outcomes for Hispanic children. While we estimate a decrease in the likelihood that Hispanic children report being in excellent health, this result is statistically insignificant across all groups. Stronger evidence of worsening child health comes from our finding that SC implementation increased the likelihood of missing at least one day of school due to illness or injury of around 8%, and this finding was similar across family types.

We also revisit self-reported health of Hispanic adults. [Wang and Kaushal \(2019\)](#) found SC decreased reporting “very good or excellent” health in the NHIS, though the reduction was insignificant. In our analysis of Hispanic adults with children, we similarly find a significant reduction in reporting excellent health overall. The corresponding estimates for adults in Any Foreign and Fully Citizen families are also negative, although neither subgroup estimate is statistically significant.

Finally, we examine how SC affected health care utilization for children and adults. For Hispanic children overall, health care utilization increased. The increase in well-child check-ups was marginally significant and about 3.6%. There was also a 13.5% increase in having

an ER visit and an 11.5% increase in being hospitalized, both of which were significant. On a positive note, these increases in utilization are difficult to reconcile with a strong chilling-effect interpretation in which families avoid interacting with public institutions or the health care system. However, the increases in ER visits and hospitalizations are consistent with our other evidence of worsening health among Hispanic children. For Hispanic adults overall, the likelihood of a hospital visit increased by 20.6%. While both children and adults in Hispanic families showed a significant increase in hospital visits overall, this was driven by *Any Foreign* households for children and *Fully Citizen* households for adults. Another difference between children and adults is that adults in our sample experienced an increase in forgoing care due to cost-related barriers, while children in the same households did not.

Taken together, our findings are consistent with SC worsening health among Hispanic children. While we find limited evidence that SC reduced Medicaid or SNAP participation among Hispanic children overall, we find consistent evidence that SC increased school absences due to illness or injury and acute-care utilization. These effects are found among Hispanic children overall, a sample which includes those living in Fully Citizen families who are not directly targeted by immigration enforcement. With the exception of the increase in ER visits, which is driven by children living with non-citizen family members, most results are similar for children with and without non-citizens in their families. Consequently, our results contribute to a growing literature showing that immigration enforcement policies can generate important spillover effects on the well-being of family members who are not themselves subject to removal, suggesting that evaluations of such policies should account for their broader consequences for children and families.

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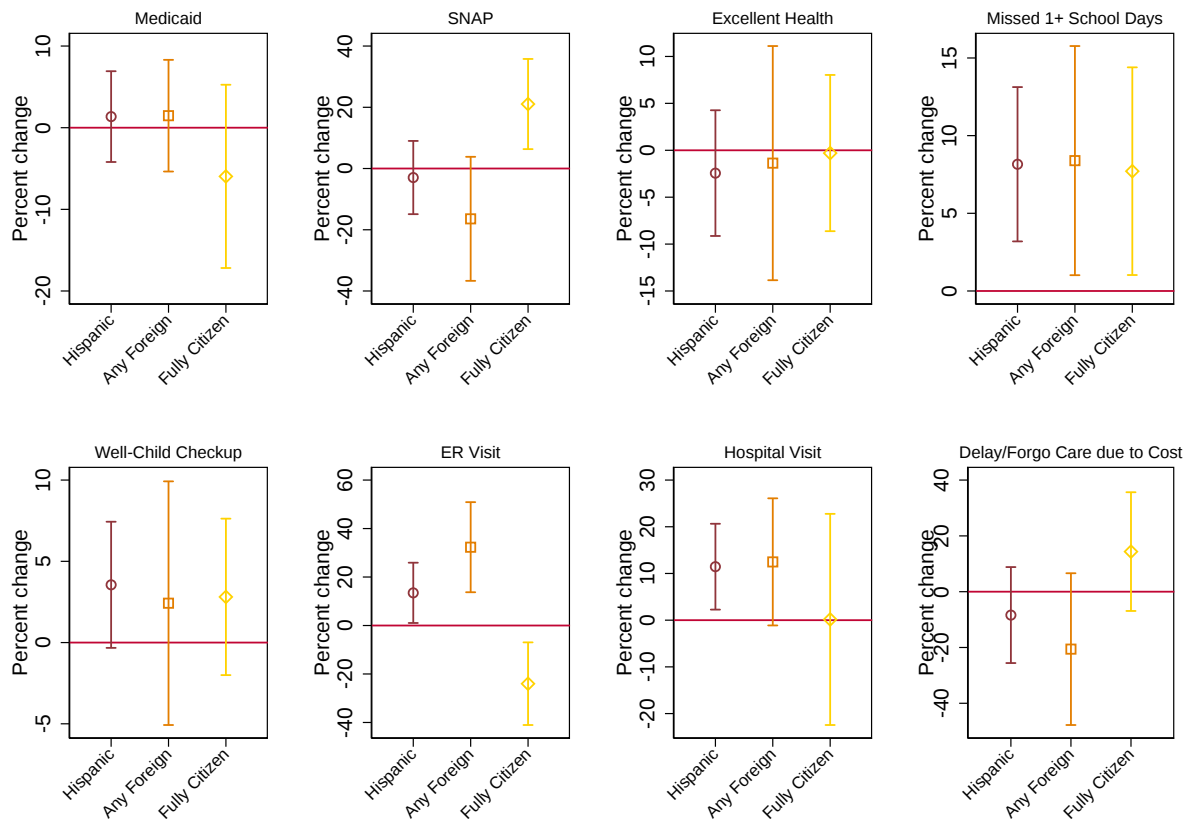
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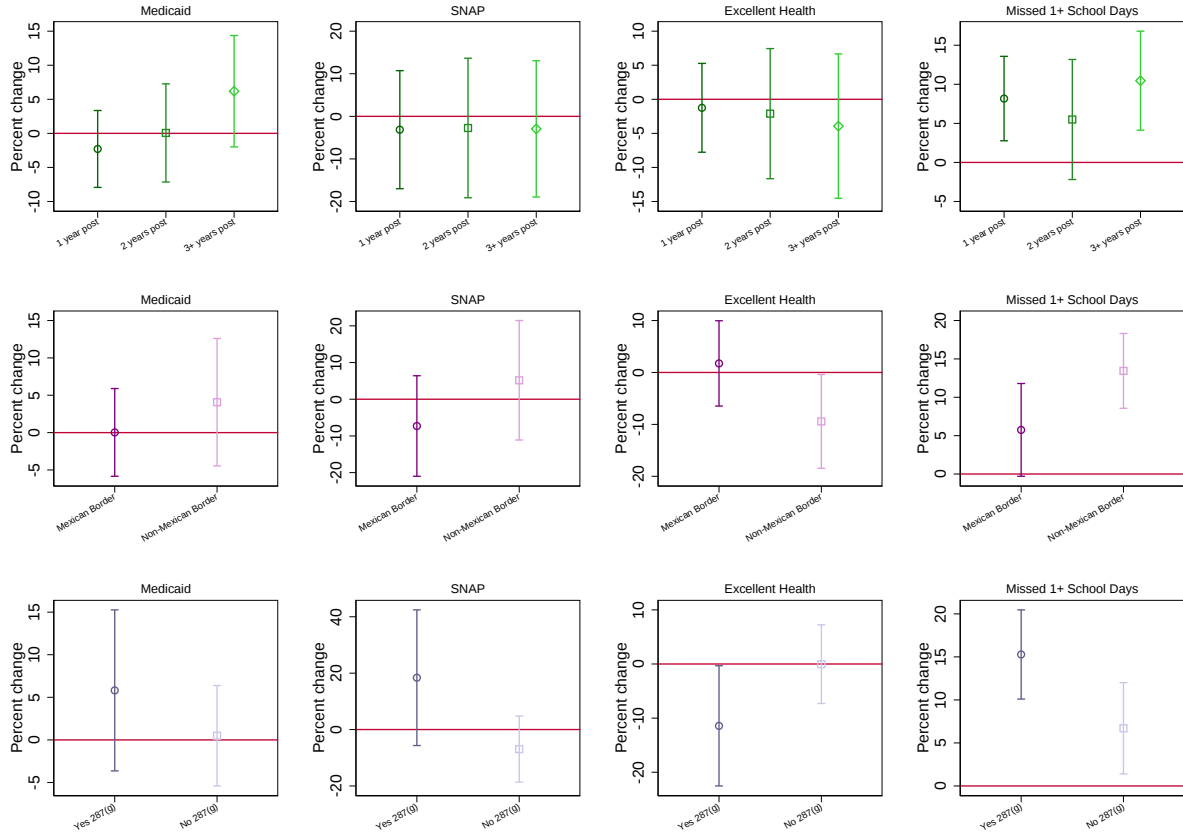
Figures

Figure 1: The Effect of SC on Safety Net Program Participation, Health, and Health Care Utilization by Citizenship Mix of Hispanic Children



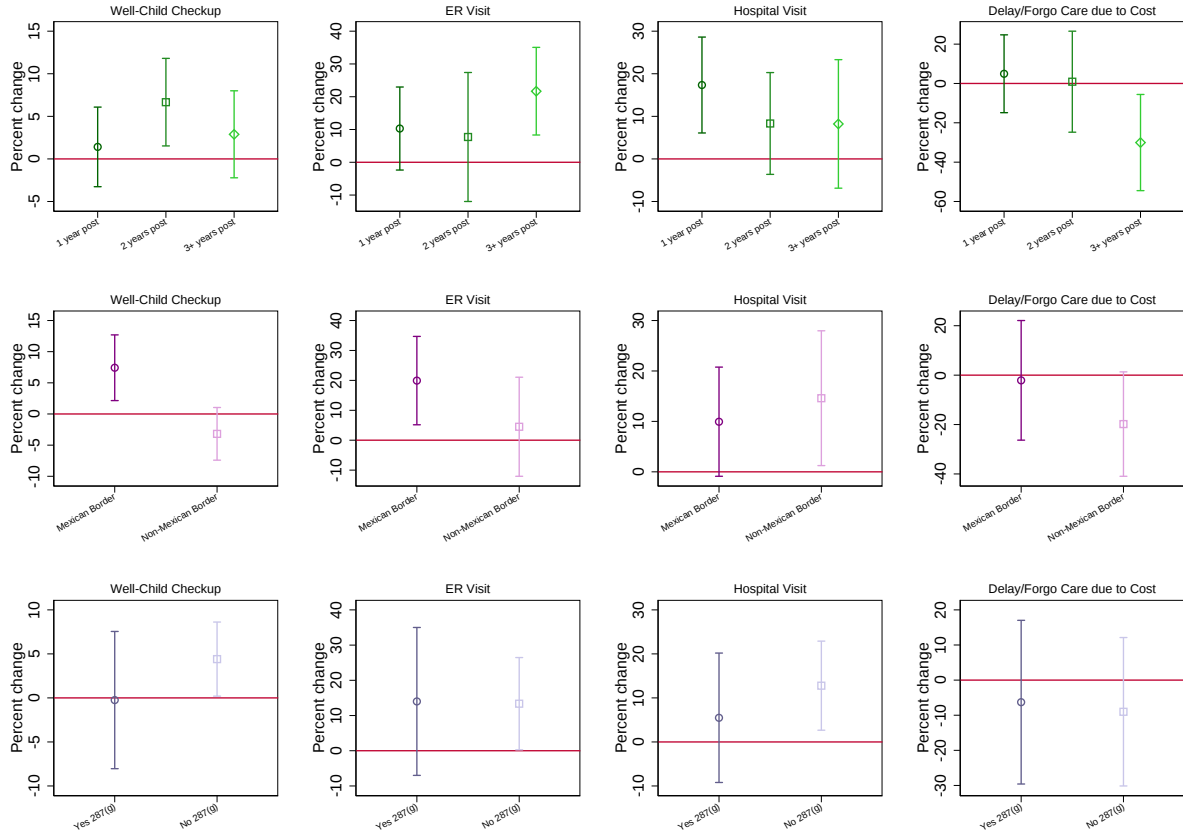
Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Family citizenship mix separates children in fully U.S.-citizen families from children in families with at least one non-citizen family member. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. The models use survey weights, policy cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Figure 2: Heterogeneous Effects of SC on Safety Net Program Participation and Health Outcomes (Primary Hispanic Children Sample)



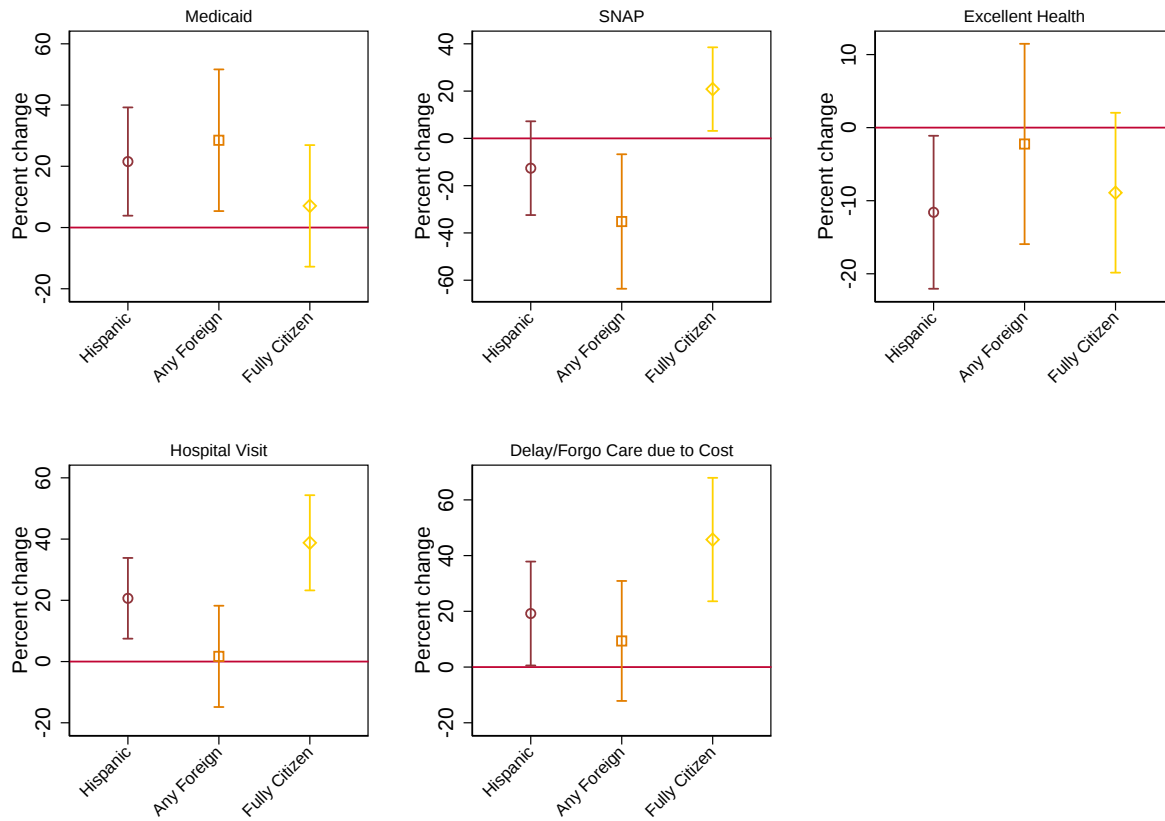
Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. Estimates are aggregated by time since Secure Communities implementation, Mexican-border-state status, and whether the policy cohort had a statewide 287(g) agreement at the time of implementation. The models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Figure 3: Heterogeneous Effects of SC on Health Care Utilization Outcomes (Primary Hispanic Children Sample)



Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. Estimates are aggregated by time since Secure Communities implementation, Mexican-border-state status, and whether the policy cohort had a statewide 287(g) agreement at the time of implementation. The models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Figure 4: The Effect of SC on Safety Net Program Participation, Health, and Health Care Utilization by Citizenship Mix of Hispanic Adults



Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for non-elderly Hispanic adults in families with at least one Hispanic child. Family citizenship mix separates adults in fully U.S.-citizen families from adults in families with at least one non-citizen family member. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. The models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Tables

Table 1: Descriptive Statistics for Hispanic Children by Family Citizenship Mix (2004–2008)

	Overall Hispanic children		Any non-citizen family member		Fully U.S.-citizen family	
	Mean	N	Mean	N	Mean	N
<i>Panel A. Demographics and controls</i>						
Age	8.07	35,317	7.74	18,888	8.40	15,427
Male	51.2%	35,317	51.9%	18,888	50.3%	15,427
Family has adult with high school degree	68.1%	34,830	53.3%	18,743	84.3%	15,309
Number of adults in family	2.23	35,317	2.42	18,888	2.02	15,427
Number of children in family	2.63	35,317	2.72	18,888	2.52	15,427
<i>Panel B. Safety net participation and health</i>						
Medicaid	46.0%	35,096	52.7%	18,810	39.3%	15,322
SNAP	20.6%	34,606	19.3%	18,594	22.4%	15,182
Excellent health	43.8%	35,294	39.9%	18,887	48.7%	15,417
Missed 1+ school days	63.7%	9,983	57.5%	4,960	70.1%	4,828
<i>Panel C. Utilization outcomes</i>						
Well-child checkup	67.6%	14,989	61.7%	7,792	74.3%	6,909
ER visit	19.6%	7,953	18.2%	4,166	21.3%	3,691
Hospital stay	5.7%	35,251	6.0%	18,877	5.5%	15,400
Delay/forgo care due to cost	5.6%	35,216	6.1%	18,854	5.1%	15,385

Notes: This table reports descriptive statistics for Hispanic children aged 0–17 years using the National Health Interview Survey, restricted to survey years 2004–2008 (pre-treatment period). Cells report survey-weighted means. Binary variable means are shown as percentages. The N columns report unweighted nonmissing observations for each row. The all-child analysis sample contains 35,317 Hispanic children overall, including 18,888 (53.5%) in families with any non-citizen family member and 15,427 (43.7%) in fully U.S.-citizen families. The sample-child sample contains 15,124 Hispanic children overall, including 7,856 (51.9%) in families with any non-citizen family member and 6,967 (46.1%) in fully U.S.-citizen families. Family-type columns do not sum exactly to the overall sample because some observations have missing family-citizenship classification.

Table 2: The Effect of SC on Safety Net Program Participation and Health (Primary Hispanic Children Sample)

	Medicaid	SNAP	Excellent health	Missed 1+ school days
Estimated SC effect	0.0062 (0.0130)	-0.0061 (0.0125)	-0.0107 (0.0149)	0.0523** (0.0162)
Pre-treatment mean	0.4597	0.2056	0.4380	0.6404
Percent change	1.35%	-2.92%	-2.28%	8.17%
Observations	66,885	66,115	67,250	20,076

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table 3: The Effect of SC on Health Care Utilization (Primary Hispanic Children Sample)

	Well-child checkup	ER visit	Hospital visit	Delay or forgo care
Estimated SC effect	0.0239+ (0.0133)	0.0266* (0.0125)	0.0066* (0.0027)	-0.0047 (0.0049)
Pre-treatment mean	0.6717	0.1971	0.0574	0.0559
Percent change	3.56%	13.50%	11.50%	-7.16%
Observations	28,893	21,955	67,224	67,173

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

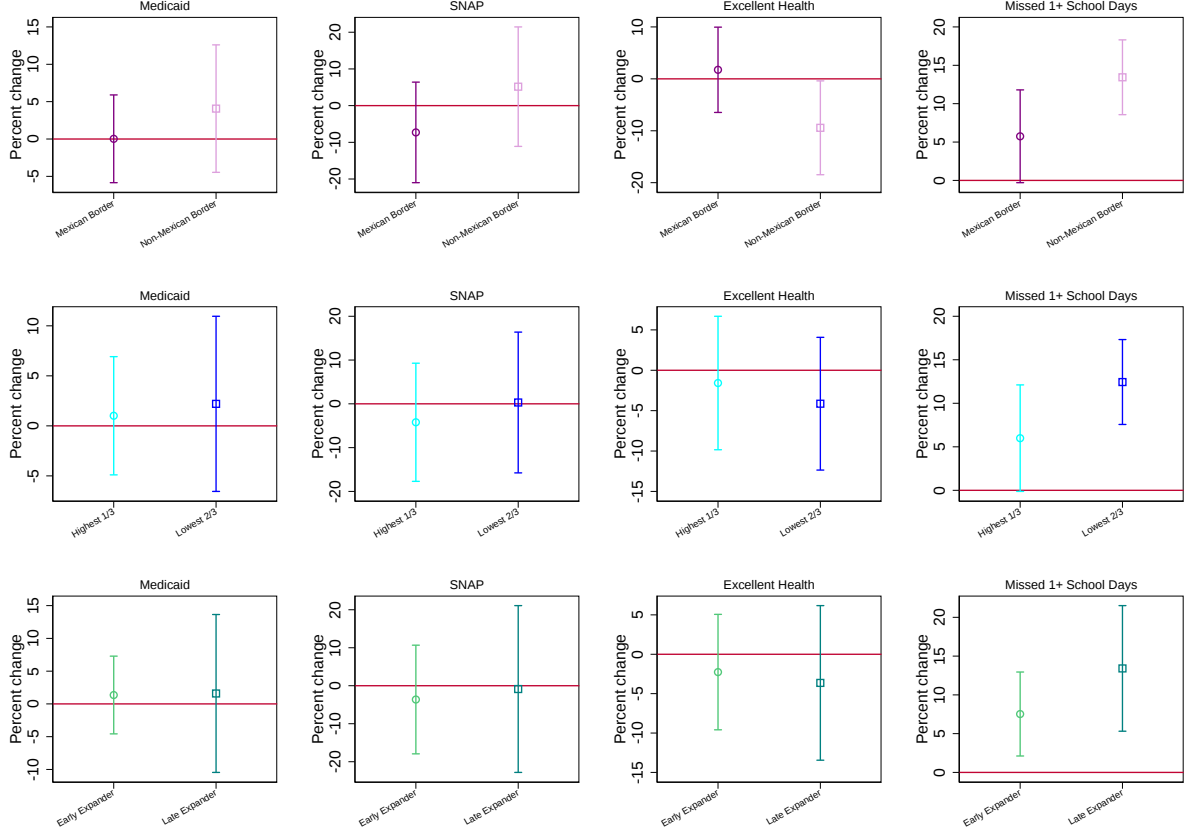
Table 4: The Effect of SC on Safety Net Program Participation, Health, and Health Care Utilization (Primary Hispanic Adult Sample)

	Medicaid	SNAP	Excellent health	Hospital visit	Delay or forgo care
Estimated SC effect	0.0289*	-0.0190	-0.0336*	0.0149**	0.0211*
	(0.0121)	(0.0152)	(0.0155)	(0.0048)	(0.0104)
Pre-treatment mean	0.1342	0.1508	0.2904	0.0723	0.1097
Percent change	21.54%	-12.60%	-11.36%	20.61%	19.23%
Observations	67,712	67,180	68,381	68,374	68,319

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for non-elderly Hispanic adults in families with at least one Hispanic child. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

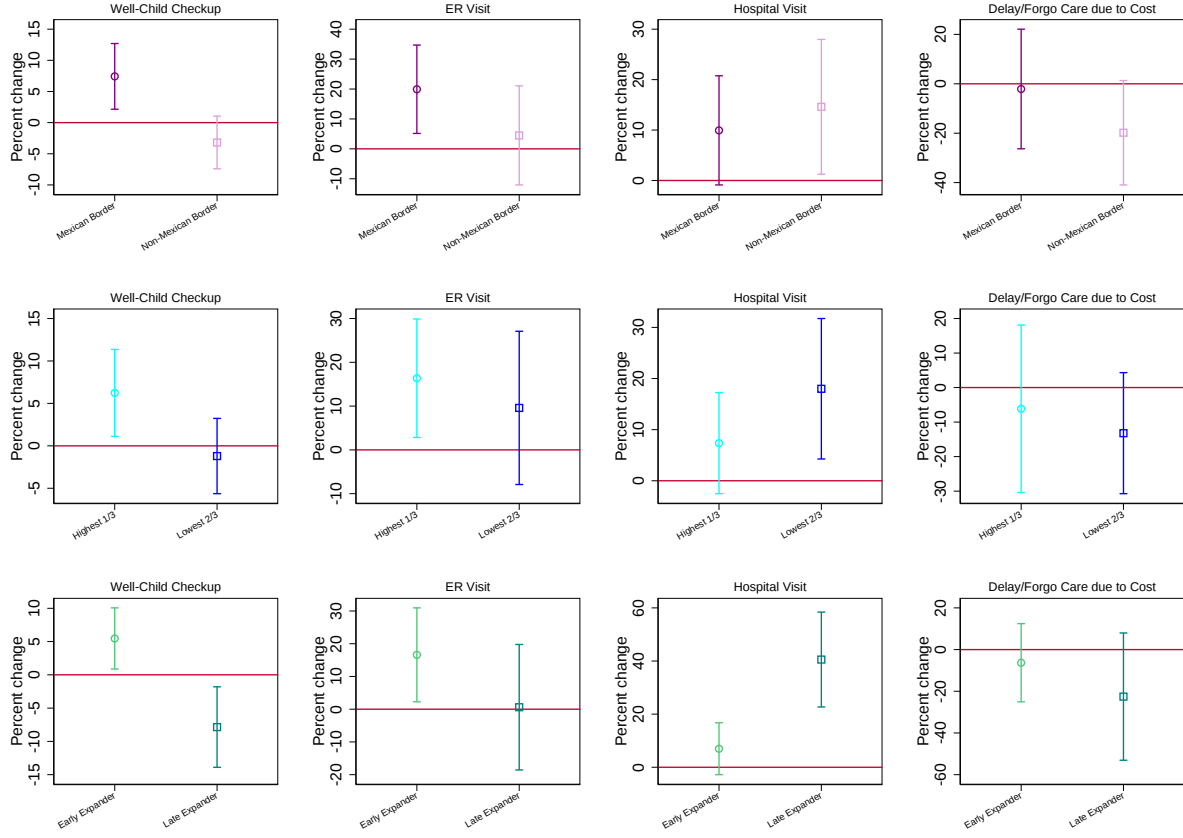
A. Additional Estimates and Figures

Figure A.1: Additional Heterogeneous Effects of SC on Safety Net Program Participation and Health Outcomes (Primary Hispanic Children Sample)



Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. Estimates are aggregated by Hispanic population density and early implementation status. The models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Figure A.2: Additional Heterogeneous Effects of SC on Health Care Utilization (Primary Hispanic Children Sample)



Notes: This figure uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Each point reports an aggregated DID estimate from the extended two-way fixed effects specification described in Section 4, expressed as a percent change relative to the pre-treatment mean of the outcome. Estimates are aggregated by Hispanic population density and early implementation status. The models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort, and vertical bars report 95 percent confidence intervals computed using the delta method.

Table A.1: The Effect of SC on Missing Birthplace and Citizenship Variables

	Missing birthplace	Missing citizenship
Estimated SC effect	-0.0064*** (0.0017)	-0.0015 (0.0035)
Pre-treatment mean	0.0083	0.0258
Percent change	-77.16%	-5.77%
Observations	67,263	67,263

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Outcomes indicate whether birthplace or citizenship information is missing. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.2: The Effect of Secure Communities on Safety Net Program Participation and Health by Citizenship and Birthplace Family Partition (Primary Hispanic Children Sample)

Family type		Outcome			
		Medicaid	SNAP	Excellent health	Missed 1+ school days
<i>Panel A. Citizenship partition</i>					
Any non-citizen family member	Estimated SC effect	0.0078	-0.0317	-0.0055	0.0489*
		(0.0184)	(0.0199)	(0.0253)	(0.0219)
	Pre-treatment mean	0.5273	0.1930	0.3987	0.5827
	Percent change	1.47%	-16.43%	-1.37%	8.39%
	Observations	36,210	35,838	36,394	10,190
Fully U.S.-citizen family	Estimated SC effect	-0.0234	0.0471**	-0.0014	0.0542*
		(0.0224)	(0.0167)	(0.0206)	(0.0239)
	Pre-treatment mean	0.3926	0.2236	0.4868	0.7023
	Percent change	-5.96%	21.06%	-0.30%	7.71%
	Observations	29,599	29,259	29,763	9,634
<i>Panel B. Birthplace partition</i>					
Any foreign-born family member	Estimated SC effect	0.0005	-0.0274	-0.0020	0.0583**
		(0.0137)	(0.0194)	(0.0200)	(0.0205)
	Pre-treatment mean	0.4831	0.1740	0.4169	0.5942
	Percent change	0.11%	-15.78%	-0.49%	9.81%
	Observations	46,136	45,611	46,380	13,701
Fully U.S.-born family	Estimated SC effect	0.0008	0.0896***	-0.0512+	0.0525+
		(0.0212)	(0.0180)	(0.0272)	(0.0310)
	Pre-treatment mean	0.4171	0.2691	0.4830	0.7363
	Percent change	0.18%	33.28%	-10.60%	7.13%
	Observations	20,542	20,318	20,659	6,342

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Panel A reports estimates using the preferred family citizenship partition, which separates children in fully U.S.-citizen families from children in families with at least one non-citizen family member. Panel B reports estimates using the analogous birthplace partition, which separates children in fully U.S.-born families from children in families with at least one foreign-born family member. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.3: The Effect of Secure Communities on Health Care Utilization by Citizenship and Birthplace Family Partition (Primary Hispanic Children Sample)

Family type		Outcome			
		Well-child checkup	ER visit	Hospital visit	Delay or forgo care
<i>Panel A. Citizenship partition</i>					
Any non-citizen family member	Estimated SC effect	0.0149	0.0594***	0.0075+	-0.0125
		(0.0234)	(0.0172)	(0.0042)	(0.0084)
	Pre-treatment mean	0.6141	0.1837	0.0601	0.0608
	Percent change	2.42%	32.31%	12.48%	-20.59%
	Observations	15,062	11,470	36,380	36,361
Fully U.S.-citizen family	Estimated SC effect	0.0208	-0.0514**	0.0001	0.0073
		(0.0181)	(0.0185)	(0.0064)	(0.0055)
	Pre-treatment mean	0.7394	0.2141	0.0552	0.0505
	Percent change	2.81%	-24.00%	0.16%	14.37%
	Observations	13,479	10,309	29,748	29,727
<i>Panel B. Birthplace partition</i>					
Any foreign-born family member	Estimated SC effect	0.0243	0.0584***	0.0082*	-0.0035
		(0.0186)	(0.0136)	(0.0033)	(0.0064)
	Pre-treatment mean	0.6350	0.1794	0.0563	0.0571
	Percent change	3.82%	32.52%	14.56%	-6.21%
	Observations	19,579	14,908	46,362	46,320
Fully U.S.-born family	Estimated SC effect	0.0121	-0.0647**	-0.0164+	0.0019
		(0.0177)	(0.0244)	(0.0086)	(0.0067)
	Pre-treatment mean	0.7490	0.2345	0.0603	0.0545
	Percent change	1.61%	-27.57%	-27.20%	3.51%
	Observations	9,266	7,017	20,647	20,636

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. Panel A reports estimates using the preferred family citizenship partition, which separates children in fully U.S.-citizen families from children in families with at least one non-citizen family member. Panel B reports estimates using the analogous birthplace partition, which separates children in fully U.S.-born families from children in families with at least one foreign-born family member. The table reports estimated SC effects from the extended two-way fixed effects specification described in Section 4. The treatment is Secure Communities implementation at the policy-cohort level. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.4. The Effect of Secure Communities on Safety Net Program Participation and Health by Aggregation Dimension (Primary Hispanic Children Sample)

Aggregation		Outcome			
		Medicaid	SNAP	Excellent health	Missed 1+ school days
<i>Panel A: Years since Secure Communities implementation</i>					
1 year post	Estimated SC effect	-0.0105 (0.0132)	-0.0064 (0.0145)	-0.0055 (0.0145)	0.0524** (0.0176)
	Pre-treatment mean	0.4597	0.2056	0.4380	0.6404
	Percent change	-2.29%	-3.14%	-1.25%	8.17%
	Treated Obs	7,413	7,274	7,452	2,231
2 years post	Estimated SC effect	0.0003 (0.0169)	-0.0056 (0.0172)	-0.0092 (0.0213)	0.0352 (0.0250)
	Pre-treatment mean	0.4597	0.2056	0.4380	0.6404
	Percent change	0.07%	-2.73%	-2.10%	5.50%
	Treated Obs	6,605	6,482	6,649	2,022
3+ years post	Estimated SC effect	0.0285 (0.0191)	-0.0061 (0.0167)	-0.0172 (0.0236)	0.0670** (0.0206)
	Pre-treatment mean	0.4597	0.2056	0.4380	0.6404
	Percent change	6.19%	-2.94%	-3.93%	10.46%
	Treated Obs	7,329	7,269	7,379	2,304
<i>Panel B: Mexican-border-state status</i>					
Mexican border state	Estimated SC effect	0.0001 (0.0140)	-0.0148 (0.0141)	0.0070 (0.0167)	0.0367+ (0.0197)
	Pre-treatment mean	0.4678	0.2021	0.4001	0.6393
	Percent change	0.02%	-7.30%	1.74%	5.75%
	Treated Obs	14,758	14,480	14,857	4,478
Non-Mexican border state	Estimated SC effect	0.0183 (0.0196)	0.0108 (0.0174)	-0.0455* (0.0222)	0.0863*** (0.0159)
	Pre-treatment mean	0.4502	0.2097	0.4823	0.6418
	Percent change	4.07%	5.17%	-9.43%	13.44%
	Treated Obs	6,589	6,545	6,623	2,079
<i>Panel C: Statewide 287(g) agreement at Secure Communities start</i>					
Yes 287(g)	Estimated SC effect	0.0242 (0.0200)	0.0326 (0.0216)	-0.0589* (0.0291)	0.0938*** (0.0160)
	Pre-treatment mean	0.4167	0.1774	0.5156	0.6138
	Percent change	5.81%	18.39%	-11.42%	15.28%
	Treated Obs	3,591	3,566	3,600	1,215
No 287(g)	Estimated SC effect	0.0023 (0.0140)	-0.0146 (0.0126)	-0.0001 (0.0156)	0.0433* (0.0174)
	Pre-treatment mean	0.4680	0.2110	0.4230	0.6456
	Percent change	0.49%	-6.93%	-0.03%	6.71%
	Treated Obs	17,756	17,459	17,880	5,342

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports the regression estimates corresponding to Figure 2. Estimates are aggregated by years since Secure Communities implementation, Mexican-border-state status, and whether the policy cohort had a statewide 287(g) agreement with ICE when Secure Communities began. Treated Obs reports the number of observations in the treated post-period aggregation cell used for each estimate. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.5. The Effect of Secure Communities on Health Care Utilization by Aggregation Dimension (Primary Hispanic Children Sample)

Aggregation		Outcome			
		Well-child checkup	ER visit	Hospital visit	Delay or forgo care
<i>Panel A: Years since Secure Communities implementation</i>					
1 year post	Estimated SC effect	0.0095 (0.0160)	0.0203 (0.0127)	0.0100** (0.0033)	0.0028 (0.0056)
	Pre-treatment mean	0.6717	0.1971	0.0574	0.0559
	Percent change	1.41%	10.30%	17.36%	4.93%
	Treated Obs	3,183	3,195	7,453	7,450
2 years post	Estimated SC effect	0.0448* (0.0176)	0.0152 (0.0198)	0.0048 (0.0035)	0.0005 (0.0073)
	Pre-treatment mean	0.6717	0.1971	0.0574	0.0559
	Percent change	6.67%	7.72%	8.33%	0.90%
	Treated Obs	2,864	2,869	6,647	6,644
3+ years post	Estimated SC effect	0.0194 (0.0175)	0.0427** (0.0134)	0.0047 (0.0044)	-0.0168* (0.0069)
	Pre-treatment mean	0.6717	0.1971	0.0574	0.0559
	Percent change	2.89%	21.69%	8.22%	-30.04%
	Treated Obs	3,222	3,234	7,380	7,376
<i>Panel B: Mexican-border-state status</i>					
Mexican border state	Estimated SC effect	0.0461** (0.0167)	0.0343** (0.0129)	0.0054+ (0.0030)	-0.0011 (0.0065)
	Pre-treatment mean	0.6212	0.1720	0.0539	0.0531
	Percent change	7.42%	19.92%	9.94%	-2.11%
	Treated Obs	6,227	6,249	14,857	14,856
Non-Mexican border state	Estimated SC effect	-0.0233 (0.0158)	0.0102 (0.0192)	0.0090* (0.0042)	-0.0117+ (0.0064)
	Pre-treatment mean	0.7323	0.2275	0.0615	0.0593
	Percent change	-3.19%	4.49%	14.60%	-19.81%
	Treated Obs	3,042	3,049	6,623	6,614
<i>Panel C: Statewide 287(g) agreement at Secure Communities start</i>					
Yes 287(g)	Estimated SC effect	-0.0017 (0.0278)	0.0281 (0.0214)	0.0032 (0.0044)	-0.0051 (0.0097)
	Pre-treatment mean	0.7000	0.2010	0.0585	0.0816
	Percent change	-0.24%	14.00%	5.49%	-6.28%
	Treated Obs	1,710	1,715	3,600	3,600
No 287(g)	Estimated SC effect	0.0294* (0.0143)	0.0262* (0.0131)	0.0073* (0.0029)	-0.0046 (0.0055)
	Pre-treatment mean	0.6661	0.1964	0.0572	0.0510
	Percent change	4.41%	13.36%	12.78%	-9.01%
	Treated Obs	7,559	7,583	17,880	17,870

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports the regression estimates corresponding to Figure 3. Estimates are aggregated by years since Secure Communities implementation, Mexican-border-state status, and whether the policy cohort had a statewide 287(g) agreement with ICE when Secure Communities began. Treated Obs reports the number of observations in the treated post-period aggregation cell used for each estimate. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.6. The Effect of Secure Communities on Safety Net Program Participation, Health, and Health Care Utilization by Citizenship- and Birthplace-Based Family Partitions of Hispanic Adults

Family type		Outcome				
		Medicaid	SNAP	Excellent health	Hospital visit	Delay or forgo care
<i>Panel A. Citizenship partition</i>						
Any non-citizen family member	Estimated SC effect	0.0375*	-0.0524*	-0.0061	0.0011	0.0109
		(0.0154)	(0.0215)	(0.0191)	(0.0057)	(0.0127)
	Pre-treatment mean	0.1314	0.1489	0.2730	0.0674	0.1161
	Percent change	28.50%	-35.17%	-2.24%	1.69%	9.37%
	Observations	39,136	38,858	39,475	39,467	39,448
Fully U.S.-citizen family	Estimated SC effect	0.0099	0.0329*	-0.0281	0.0313***	0.0471***
		(0.0142)	(0.0142)	(0.0175)	(0.0063)	(0.0115)
	Pre-treatment mean	0.1404	0.1577	0.3152	0.0808	0.1029
	Percent change	7.07%	20.84%	-8.91%	38.79%	45.75%
	Observations	27,105	26,862	27,360	27,350	27,337
<i>Panel B. Birthplace partition</i>						
Any foreign-born family member	Estimated SC effect	0.0212+	-0.0451*	-0.0336+	0.0107+	0.0188
		(0.0125)	(0.0208)	(0.0193)	(0.0062)	(0.0131)
	Pre-treatment mean	0.1244	0.1342	0.2835	0.0655	0.1100
	Percent change	17.04%	-33.60%	-11.86%	16.37%	17.07%
	Observations	50,510	50,144	51,029	51,020	50,969
Fully U.S.-born family	Estimated SC effect	0.0193	0.0665***	-0.0053	0.0166*	0.0319***
		(0.0149)	(0.0178)	(0.0210)	(0.0079)	(0.0095)
	Pre-treatment mean	0.1621	0.1963	0.3107	0.0911	0.1105
	Percent change	11.89%	33.86%	-1.70%	18.27%	28.84%
	Observations	16,973	16,822	17,109	17,100	17,099

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for non-elderly Hispanic adults in families with at least one Hispanic child. Panel A reports the regression estimates corresponding to the citizenship-mix estimates in Figure 4; the overall Hispanic adult estimates are reported in Table 4. Panel B reports estimates using the analogous birthplace partition, which separates adults in fully U.S.-born families from adults in families with at least one foreign-born family member. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.7. The Effect of Secure Communities on Safety Net Program Participation and Health by Additional Aggregation Dimension (Primary Hispanic Children Sample)

Aggregation		Outcome			
		Medicaid	SNAP	Excellent health	Missed 1+ school days
<i>Panel A: Hispanic population density</i>					
Highest 1/3	Estimated SC effect	0.0048 (0.0144)	-0.0089 (0.0146)	-0.0065 (0.0174)	0.0378+ (0.0196)
	Pre-treatment mean	0.4785	0.2121	0.4135	0.6300
	Percent change	1.01%	-4.21%	-1.58%	5.99%
	Treated Obs	14,848	14,585	14,945	4,515
Lowest 2/3	Estimated SC effect	0.0094 (0.0189)	0.0006 (0.0159)	-0.0199 (0.0201)	0.0821*** (0.0163)
	Pre-treatment mean	0.4249	0.1945	0.4802	0.6597
	Percent change	2.20%	0.31%	-4.14%	12.44%
	Treated Obs	6,313	6,254	6,349	1,987
<i>Panel B: Early Secure Communities implementation</i>					
Early expander	Estimated SC effect	0.0060 (0.0133)	-0.0067 (0.0134)	-0.0098 (0.0162)	0.0475** (0.0174)
	Pre-treatment mean	0.4393	0.1837	0.4344	0.6306
	Percent change	1.36%	-3.62%	-2.26%	7.53%
	Treated Obs	18,745	18,441	18,867	5,785
Late expander	Estimated SC effect	0.0080 (0.0310)	-0.0022 (0.0285)	-0.0162 (0.0223)	0.0889** (0.0273)
	Pre-treatment mean	0.5050	0.2546	0.4460	0.6626
	Percent change	1.59%	-0.86%	-3.64%	13.41%
	Treated Obs	2,602	2,584	2,613	772

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports the regression estimates corresponding to Appendix Figure A.1. Estimates are aggregated by Hispanic population density and early Secure Communities implementation status. Treated Obs reports the number of observations in the treated post-period aggregation cell used for each estimate. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.

Table A.8. The Effect of Secure Communities on Health Care Utilization by Additional Aggregation Dimension (Primary Hispanic Children Sample)

Aggregation		Outcome			
		Well-child checkup	ER visit	Hospital visit	Delay or forgo care
<i>Panel A: Hispanic population density</i>					
Highest 1/3	Estimated SC effect	0.0402* (0.0168)	0.0304* (0.0127)	0.0041 (0.0028)	-0.0033 (0.0067)
	Pre-treatment mean	0.6449	0.1858	0.0551	0.0539
	Percent change	6.24%	16.37%	7.37%	-6.15%
	Treated Obs	6,287	6,309	14,945	14,944
Lowest 2/3	Estimated SC effect	-0.0086 (0.0162)	0.0205 (0.0190)	0.0111* (0.0043)	-0.0079 (0.0053)
	Pre-treatment mean	0.7162	0.2135	0.0616	0.0597
	Percent change	-1.20%	9.59%	18.00%	-13.21%
	Treated Obs	2,898	2,905	6,349	6,340
<i>Panel B: Early Secure Communities implementation</i>					
Early expander	Estimated SC effect	0.0351* (0.0150)	0.0300* (0.0132)	0.0040 (0.0028)	-0.0037 (0.0056)
	Pre-treatment mean	0.6420	0.1807	0.0567	0.0590
	Percent change	5.46%	16.61%	6.98%	-6.31%
	Treated Obs	8,121	8,149	18,867	18,861
Late expander	Estimated SC effect	-0.0580* (0.0228)	0.0014 (0.0230)	0.0239*** (0.0052)	-0.0111 (0.0076)
	Pre-treatment mean	0.7392	0.2355	0.0589	0.0491
	Percent change	-7.85%	0.61%	40.55%	-22.55%
	Treated Obs	1,148	1,149	2,613	2,609

Notes: This table uses restricted National Health Interview Survey data from 2004–2012 for Hispanic children ages 0–17. The table reports the regression estimates corresponding to Appendix Figure A.2. Estimates are aggregated by Hispanic population density and early Secure Communities implementation status. Treated Obs reports the number of observations in the treated post-period aggregation cell used for each estimate. All models use survey weights, policy-cohort fixed effects, month-by-year fixed effects, and the control variables described in Section 4. Standard errors are clustered by policy cohort and reported in parentheses. Percent changes are calculated by dividing the estimated SC effect by the pre-treatment mean. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$.