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Immigration Enforcement, Sanctuary Cities, and Rising Hispanic Suicide Rates

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Abstract

I estimate the causal impact of the US Secure Communities (SC) program, which expanded deportation risk nationwide, on Hispanic suicide rates. Using the staggered county rollout (2008–2013) and a triple difference-in-differences design, I identify heterogeneous effects relative to non-Hispanic Whites. Among adults 34 and older, SC increases suicides by 2 percent, driven entirely by men, who experience a 12 percent rise, while women see declines. Effects are strongest for men 45 and older. I find that local employment conditions likely drive these effects, as lower unemployment mitigates impacts and deaths of despair among Hispanic men rise substantially.

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1 Introduction

Immigration enforcement policies directly interact with the daily lives of millions of people in the United States. With an estimated 11-12 million undocumented immigrants currently residing in the country, enforcement actions create ripple effects that extend throughout mixed-status families and communities (Passel and Krogstad 2025). These effects reach beyond undocumented individuals to impact Hispanic US citizens and immigrants regardless of their legal status—a significant concern given that Hispanic Americans have become the largest minority group in the United States.[1] A substantial gap persists in the empirical literature examining how enforcement policies shape mental health outcomes, limiting our understanding of the broader social costs of current immigration policies.

This paper estimates the causal relationship between immigration enforcement and suicide rates among Hispanics, focusing on Secure Communities (SC). Implemented between 2008 and 2013, SC transformed how local law enforcement interacted with federal immigration authorities by requiring local police to share fingerprints of all arrestees with Immigration and Customs Enforcement (ICE), regardless of offense severity or immigration status (Cox and Miles 2013). If fingerprints matched immigration databases, ICE could issue detainer requests, creating a direct pathway from routine police encounters to potential deportation. The program generated widespread fear within Hispanic communities, as any law enforcement interaction could lead to deportation (Theodore and Habans 2016; Wang and Kaushal 2019). The gradual rollout across US counties provides a unique quasi-experimental setting to identify causal effects on mental health outcomes.

Prior research documents that immigration enforcement generates substantial unintended consequences. East et al. (2023) find that SC decreased employment and wages among both undocumented immigrants and US-born individuals. Enforcement also creates "chilling effects" that reduce safety net participation: Alsan and Yang (2024) show that SC significantly reduced food stamp participation among Hispanic households, while Vargas and Pirog (2016) and Watson (2014) document reduced WIC and Medicaid participation among mixed-status families. Health consequences include increased low birth weight among infants of foreign-born Hispanic mothers (Amuedo-Dorantes, Churchill, and Song 2022; Vu 2024) and elevated mental health distress among Latino immigrants (Wang and

[1] The 2020 Census counted more than 62 million Hispanics (19 percent of the population), tripling since 1990. Figures are based on the author's analysis (Flood, Ronald, et al., Integrated Public Use Microdata Series, USA).

Kaushal 2019).[2] These findings align with research demonstrating how policy-induced stressors—from natural disasters to community-wide threats—can profoundly affect mental health outcomes (Almond and Currie 2011; Currie and Rossin-Slater 2013; Torche 2011).

I use mortality data from the National Vital Statistics System and detailed records of SC implementation across counties. To identify causal effects, I employ a triple difference-in-differences (DDD) approach using the imputation-based estimation proposed by Borusyak, Jaravel, and Spiess (2024), comparing the differential impact on Hispanic versus non-Hispanic White populations. I find that immigration enforcement produces complex and heterogeneous effects on mental health among Hispanic adults, with stark divergence by gender. For adults aged 34+, SC implementation leads to a significant overall increase in suicide rates that is equal to 0.11 per 100,000 (2%). However, gender-specific analyses reveal opposing patterns: men experience substantial 1.21 per 100,000 (12%) increase, while women show significant -0.88 per 100,000 decrease (-44%). This divergence is most pronounced among adults aged 45+, where men show a large 2.27 increase (26% above baseline) while women exhibit sustained decreases.

Local economic conditions significantly moderate these effects. Counties with low unemployment show protective effects, while economically distressed areas experience harmful impacts. I further explore this mechanism through deaths of despair (drug, alcohol, and suicide deaths), finding that men experience significant increases following SC implementation while women do not. This pattern supports the interpretation that economic disruption serves as a key pathway through which immigration enforcement harms Hispanic men's mental health.

The gender divergence may reflect the intersection of economic disruption and traditional Hispanic cultural norms. Hispanic men, shaped by machismo ideals emphasizing provider responsibilities, may face acute distress when enforcement exacerbates economic hardship (Fragoso and Kashubeck 2000; Mayo 1997). Cultural barriers to help-seeking compound this vulnerability (Cabassa 2007). In contrast, women's protective effects may stem from familism—the cultural emphasis on family interdependence—which provides stronger social support networks (Crist et al. 2009).

This paper makes several contributions. First, it provides the first causal analysis of immigration enforcement effects on completed suicides among Hispanics, moving beyond self-reported distress to study the most severe mental health outcome. Second, it demonstrates how immigration policies generate spillover

[2] See Goldstein and Wilson (2022), Martínez, Ruelas, and Granger (2018), and Pinedo and Valdez (2020) for broader mental and physical health effects.

effects affecting entire demographic communities, not just direct enforcement targets. Third, by leveraging SC's staggered county-level rollout with administrative mortality data, this study provides more granular causal evidence than prior work using aggregated geographic units.[3]

Background: Secure Communities

Secure Communities (SC) was an immigration enforcement program run by Immigration and Customs Enforcement (ICE) that operated from 2008 to 2014, was reactivated in 2017, and then ended in 2021. The program allowed ICE to check the immigration status of anyone arrested by the local police by fingerprint analysis, alerting federal agencies about possible immigration violations.

SC worked as follows: When someone was arrested by local law enforcement, their fingerprints were taken and sent to the FBI for criminal background checks, as was standard practice. However, with the adoption of SC, these fingerprints were also automatically sent to the Department of Homeland Security (DHS), where they were checked against immigration databases. If there was a match indicating that someone could be in the country illegally, ICE would issue a "detainer", which is a request for local authorities to hold that person for up to 48 hours so ICE could take custody and begin deportation proceedings. This was a significant change from previous methods, which relied on labor-intensive interviews conducted by federal officers or local officers of jails and prisons.

The program was gradually implemented across counties starting in October 2008, with most counties participating in mid-2012. Initially, the program required agreements between ICE and state officials, but after some states tried to opt out in 2011, ICE determined that these agreements were not necessary and made participation essentially mandatory in 2013. The program was controversial, with some "sanctuary cities" refusing to comply with detainer requests, arguing that they were unconstitutional and would discourage immigrants from cooperating with local police.

Alsan and Yang (2024) collected records that are available to the public through Freedom of Information Act (FOIA) requests to ICE. The data include the roll-out of secure communities by ICE from 2002 to 2013. I present the histories of the staggered adoption of secure communities by counties in Figure 1a. Since participation became mandatory in early 2013, fundamentally changing the nature of

[3] Alsan and Yang (2024) and East et al. (2023) used Public Use Microdata Area (PUMA) level data, which are larger geographic units containing multiple counties.

adoption decisions, I restricted my analysis to the year ending in 2012 to maintain a control group of counties that had not yet adopted or never adopted the program.

2 Data

I use mortality data from the National Vital Statistics System (NVSS) and Secure Communities (SC) adoption data from Alsan and Yang (2024) for my main analysis, with the sample restricted to 1999-2013. I supplement these with data sources for heterogeneity analyses: sanctuary city status, county-level mental health measures, anti-Hispanic bias indicators, political affiliation, and unemployment rates.

2.1 Mortality and Population Data

To measure suicides among Hispanics, I use NVSS Multiple Cause of Death files covering 1999-2013 (National vital statistics system 2007). These files provide county-level death records with ICD-10 codes identifying suicides (X60-X84, Y87.0), along with decedent characteristics including age, sex, and race/ethnicity.[4] I merge mortality data with SEER U.S. State and County Population estimates to calculate suicide rates per 100,000 by age, sex, and race at the county level (Institute, Survey of Epidemiology and End Results (SEER) U.S. State and County Population Data by Age, Race, Sex, Hispanic (1969–on)). Figure 2 shows the evolution of Hispanic suicide rates by age group, and Tables 1 and 2 present summary statistics and balance tests.

2.2 Secure Communities Activation Data

The SC activation dates come from Alsan and Yang (2024), who compiled records through Freedom of Information Act requests to ICE. The program rolled out gradually across counties starting October 2008, with most counties participating by mid-2012. I restrict the sample to end in 2012 because SC became mandatory in early 2013, fundamentally changing the nature of adoption and eliminating the control group of non-adopting counties. Figure 1 presents the staggered adoption pattern.

[4] ICD-10 codes X60-X69 correspond to intentional self-poisoning; X70-X84 to other methods including firearms (X72-X74), hanging, and drowning.

2.3 Data for Heterogeneity Analyses

I examine several potential moderators of SC's effects. *Sanctuary status* is measured using Alsan and Yang (2024)'s compilation of jurisdictions with policies limiting cooperation with federal immigration enforcement.[5] *Anti-Hispanic bias* is measured using a composite index following Lubotsky and Wittenberg (2006), combining the skin-tone implicit association test (Greenwald, McGhee, and Schwartz 1998), American National Election Studies racial animus questions (American National Election Studies 2021), and Uniform Crime Reports hate crime data (Bureau of Justice Statistics 2023b). *Political affiliation* is measured using county-level Democratic vote share from Amlani and Algara (2021). *Economic conditions* are captured through unemployment rates from both the Current Population Survey (available for larger counties by race and ethnicity) and the Local Area Unemployment Statistics program (available for all counties) (Flood, King, et al., Integrated Public Use Microdata Series, Current Population Survey; U.S. Bureau of Labor Statistics 2025). *Mental health* effects on the general population are assessed using County Health Rankings data on mentally unhealthy days (University of Wisconsin Population Health Institute 2025).

3 Empirical strategy

In this paper, I estimate the dynamic effects of Secure Communities on county-level suicides using the imputation estimator developed by Borusyak, Jaravel, and Spiess (2024). This approach addresses the well-documented biases that arise when using conventional two-way fixed effects (TWFE) estimators in settings with staggered treatment adoption (De Chaisemartin and d'Haultfoeuille 2020, 2023; Goodman-Bacon 2021; Roth et al. 2023; Sun and Abraham 2021). I now discuss the model, identification assumptions, and estimation approach.

I use the staggered county-level adoption of Secure Communities at the county level to causally identify its effects on Hispanic suicide rates. I employ a triple difference-in-differences approach that uses White suicide rates as an additional control group to account for common time-varying factors affecting all demographic groups. Both approaches leverage the quasi-experimental design created by two sources of variation: cross-sectional variation in which counties adopted SC, and temporal variation in when adoption occurred.

[5] Sanctuary policies include "don't ask" (prohibiting inquiries about immigration status), "don't enforce" (limiting local enforcement), and "don't tell" (restricting information sharing with federal authorities) (Kittrie 2006).

The suicide rate per 100,000 population for each demographic group is calculated as follows:

$$y_{crst} = \frac{\text{Total Suicides}_{crst}}{\text{Population}_{crst}} \times 100,000$$

where Total Suicides is the number of suicides for race r in county c, state s, and year t, and Population_{crst} is the corresponding population size.

3.1 Triple Difference-in-Differences Approach

To address potential concerns about unobserved time-varying factors that might affect suicide rates generally, I employ a triple difference-in-differences (DDD) specification that compares the differential impact of SC on Hispanic versus White suicide rates. This approach uses White suicide rates as a comparison group to control for common time-varying factors that affect suicide risk across all demographic groups, such as economic conditions, social trends, or other policies that might coincide with SC implementation. Following Borusyak, Jaravel, and Spiess (2024), I specify the following event study DDD model that allows for unrestricted treatment effect heterogeneity:

$$y_{crst} = \sum_{l=-K}^{L} \beta_l \mathbf{1}\{t - E_c = l\} \times Hispanic_r + \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst} \tag{1}$$

where the outcome variable (y_{crst}) is the suicide rate per 100,000 population for race *r* (Hispanic or White) in county *c*, in state *s*, at time *t*. The population-adjusted rate at the county level ensures that differences in suicide counts are not driven by underlying variation in county population size, allowing for meaningful comparisons of suicide risk across demographic groups and geographic areas. The interaction of the treatment indicators with $Hispanic_r$, an indicator variable equal to 1 for Hispanic observations and 0 for White observations. This specification includes county-race fixed effects (θ_{cr}), race-year fixed effects (λ_{rt}), and county-year fixed effects (γ_{ct}). The county-race fixed effects control for time-invariant differences between Hispanic and White suicide rates within each county. The race-year fixed effects capture national trends that affect Hispanic and White populations differently. The county-year fixed effects absorb any county-specific time-varying shocks that affect both demographic groups equally.

$\mathbf{1}\{t - E_c = l\}$ is an indicator variable equal to 1 when time *t* is *l* years away from the adoption of waiting years in county *c*. For example, if Harris County, TX

adopted SC on January 10th 2008, therefore $t - E_s$ would give you the number of years away from the year 2008. If $t = 2005$, Harris County, TX would be three years away from waiting years, which means that $t - E_s$ would be equal to three.

The coefficients of interest are β_1, which capture the differential treatment effects of SC on Hispanic versus White suicide rates. This specification identifies the causal effect of SC under the assumption that, absent treatment, Hispanic and White suicide rates would have followed parallel trends within counties, no-anticipation, and Stable Unit Treatment Value Assumption (SUTVA).

All regressions are weighted by county population to account for differences in county size and to ensure that larger counties receive appropriate weight in the estimation. Standard errors are clustered at the county level to account for potential serial correlation within counties over time and to allow for arbitrary forms of heteroskedasticity across counties.

I also estimate heterogeneous effects by sanctuary status, county-level number of removals, White and Hispanic county-level unemployment rate, county-level unemployment rate, anti-Hispanic bias, county-level political leaning (Democratic versus Republican), and density within the triple difference-in-differences framework. The heterogeneity analysis will allow me to examine whether sanctuary policies or anti-Hispanic bias moderate the differential impact of SC on Hispanic versus White suicide rates. This will also allow me to test whether local protective policies buffer Hispanic communities from the adverse effects of federal immigration enforcement while controlling for any general effects of SC on suicide rates across all demographic groups. Additionally, examining heterogeneity by unemployment rates will enable me to assess whether local economic conditions worsen the mental health consequences of immigration enforcement, capturing potential pathways through which economic shocks and labor market disruptions affect suicide risk differentially across Hispanic and White populations.

3.2 Causal Identification Assumptions

My identification strategy leverages the staggered roll-out of Secure Communities across counties between 2008 and 2013. The model in equation (1) is generated from three main assumptions on potential outcomes and causal effects. First, the parallel trends assumption requires that in the absence of Secure Communities, suicides would have evolved similarly between counties. Second, I assume no anticipation effects—that Secure Communities did not affect suicides before the program's actual implementation in each county. This assumption is plausible given that the timing of county-level implementation was largely determined by

federal administrative capacity and technical infrastructure rather than local conditions that might affect my outcomes. Finally, I impose a model of unrestricted causal effects, referred to as the "null model" in Borusyak, Jaravel, and Spiess (2024). In this case, the target estimand (parameter of interest) is the dynamic average treatment effect on the treated (ATT) h periods (horizons) since the treatment for a given $h \geqslant 0$:

$$\tau_h = \sum_{\{c,r,s,t\}:K_{cst}=h} w_{crst}\tau_{crst} \tag{2}$$

where weight is given by $w_{crst} = \frac{\mathbf{1}(K_{cst}=h)}{|\{c,r,s,t\}:K_{cst}=h|}$ and sums one within each event time h. Borusyak, Jaravel, and Spiess (2024) proposes an imputation estimator that uses untreated observations to predict what would have happened to treated units in the absence of treatment. The estimator proceeds in three steps:

1. Using only the untreated units only (i.e., observations with $D_{cst} = 0$) and ordinary least squares (OLS), I obtain $\hat{\theta}_{cr}$, $\hat{\lambda}_{rt}$, and $\hat{\gamma}_{ct}$ from

$$y_{crst} = \theta_{cr} + \lambda_{rt} + \gamma_{ct} + \varepsilon_{crst}.$$

2. For each treated observation $\{c, r, s, t\}$ with $D_{crst} = 1$, I construct untreated potential outcome (counterfactual outcome) as $\hat{y}_{crst}(0) = \hat{\theta}_{cr} + \hat{\lambda}_{rt} + \hat{\gamma}_{ct}$ and estimate the individual-specific treatment effect as $\hat{\tau}_{crst} = y_{crst} - \hat{y}_{crst}(0)$.

3. Estimate the event-time coefficients as weighted averages:

$$\hat{\tau}_h = \sum_{\{c,r,s,t\}:K_{cst}=h} w_{crst}\hat{\tau}_{crst}.$$

Although the maintained assumptions of the differences-in-differences design are untestable in the post-treatment period, I can perform a robust test of the identifying assumptions in the pre-treatment period (pre-trends test). Unlike the conventional pre-trends test using standard event studies, the imputation-based method affords the opportunity to test for parallel pre-trends and no-anticipation assumptions using only the untreated observations. To proceed with the pre-trends test, one needs to choose an alternative model for the outcome y_{crst} for the untreated observations. Specifically, for an observable vector W_{crst}, the alternative model may be written as $y_{crst} = \theta_{cr} + \lambda_{rt} + \gamma_{ct} + W_{crst}\zeta + \varepsilon_{crst}$, where W_{crst}

may represent a set of binary indicators for $1, \ldots, k$ periods prior to the start of the treatment for some chosen k. Next, using the untreated observations only, obtain the OLS estimate of ζ and test the hypothesis $\zeta = 0$. I present all my main results using graphically, combining these pre-trend estimates with the horizon-specific ATTs from equation (2). As discussed in Borusyak, Jaravel, and Spiess (2024), this robust OLS-based pre-trends test avoids the pre-testing concerns in Roth (2022). Specifically, regression-based tests use the full sample, including the treated observations, thereby imposing restrictions on treatment effect heterogeneity. Moreover, conducting inference using the imputation estimates of the ATT remains valid even if I condition on passing the pre-trends, avoiding the issue of inflated variances and overly conservative inference that often arises with standard pre-trend tests Roth (2022).

4 Results

In this section, I present results from the triple difference-in-differences (DDD) specification that compares the differential impact of SC on Hispanic versus non-Hispanic White populations. This approach helps control for common time-varying factors that may differentially affect these groups.

In the DDD analysis for Hispanic adults aged 34 and older, the event study estimates (Figure 3) show pre-treatment point estimates that violate parallel trends. For the overall 34+ group, there was a significant decrease in suicides in year 0 of -1.1 per 100,000 and year 1 of -1.6 per 100,000, followed by -0.6 in year 2, 1.2 in year 3, and 2.5 in year 4. The ATT for Hispanic adults 34+ is 0.11 suicides per 100,000 (p-value = 0.0004), indicating a significant overall treatment effect that is equivalent to 1.7% increase from the baseline mean.

Breaking down the analysis by gender (Figure 4), for Hispanic men aged 34+, the pre-treatment estimates are statistically insignificant indicating that the parallel trends assumption probably holds. Post-treatment estimates show a decrease in year 0 of -1.2 per 100,000 and year 1 of -1.7, followed by increases of 0.5 in year 2, 2.8 in year 3, and 5.7 in year 4. The ATT for Hispanic men 34+ is 1.21 suicides per 100,000, indicating a significant treatment effect. The increase in suicides as a result of SC is equal to an 12% from the baseline mean for Hispanic men. For Hispanic women aged 34+, the pre-treatment estimates are statistically insignificant indicating that the parallel trends assumption is probably satisfied. Post-treatment, there was a significant decrease in year 0 of -0.8 per 100,000, year 1 of -1.3, and year 2 of -1.4, followed by -0.2 in year 3 and -0.7 in year 4. The ATT for

Hispanic women 34+ is -0.88 (44%) suicides per 100,000. Overall, Hispanic men aged 34+ experienced initial decreases followed by substantial and significant increases in later years, while Hispanic women in the same age group saw sustained and significant decreases, resulting in a stark divergence in outcomes by gender.

Age Heterogeneity

To further explore how the effects of SC vary across the life course, I present DDD results separately for ages 25–34, 35–44, 45+, and the full 25+ sample, as well as disaggregated by gender within each age group.

Ages 25–34. For Hispanic adults aged 25–34, the event study estimates (Figure 5a) show pre-treatment estimates that are statistically insignificant, providing evidence that the parallel trends and no-anticipation assumptions hold. In the post-treatment period, there was a decrease of approximately -1.4 per 100,000 in year 0, followed by 0.6 in year 1, -0.5 in year 2, 1.4 in year 3, and 2.6 in year 4. None of the individual post-treatment estimates are statistically significant. The ATT for Hispanic adults 25–34 is 0.55 suicides per 100,000, representing a significant overall treatment effect that is equal to an increase of 7% from baseline.

Breaking down the analysis by gender, for Hispanic men aged 25–34 (Figure 6a), the pre-treatment estimates satisfy the parallel trends assumption. Post-treatment estimates show -1.9 in year 0, 0.9 in year 1, -0.6 in year 2, 1.8 in year 3, and 5.0 in year 4. The ATT is 1.03 suicides per 100,000, indicating a significant effect. This represents an 8% increase from the baseline suicide rate. For Hispanic women aged 25–34 (Figure 7a), the post-treatment estimates show -0.7 in year 0, 0.6 in year 1, -0.03 in year 2, 1.6 in year 3, and 0.8 in year 4, with none individually significant. The ATT is 0.44 suicides per 100,000, indicating no significant overall treatment effect. This represents an 18% increase from the baseline mean suicide rate among women.

Ages 35–44. For Hispanic adults aged 35–44, the event study estimates (Figure 5b) show pre-treatment point estimates that are mostly statistically insignificant. In the post-treatment period, there was a decrease of approximately -1.6 per 100,000 in year 0 and -1.3 in year 1, followed by -1.5 in year 2, -0.8 in year 3, and -0.2 in year 4. None of the individual estimates are statistically significant. The ATT for Hispanic adults 35–44 is -1.09 suicides per 100,000 and is insignificant overall treatment effect.

Breaking down the analysis by gender, for Hispanic men aged 35–44 (Figure 6b), the pre-treatment estimates are statistically insignificant indicating that the parallel trends assumption probably holds. Post-treatment estimates are -1.6 in year 0, -1.1 in year 1, 0.02 in year 2, -0.9 in year 3, and 2.4 in year 4. The ATT is a statistically insignificant -0.22 suicides per 100,000. For Hispanic women aged 35–44 (Figure 7b), post-treatment estimates are consistently negative: -1.3 in year 0, -1.3 in year 1, -3.1 in year 2, -0.4 in year 3, and -2.4 in year 4. The ATT is -1.68 suicides per 100,000. In this age group, women show larger negative point estimates throughout the post-treatment period, though neither gender reaches statistical significance.

Ages 45+. For Hispanic adults aged 45 and older, the event study estimates (Figure 5c) show pre-treatment point estimates that are mostly statistically insignificant. In the post-treatment period, there was a decrease of approximately -0.7 per 100,000 in year 0 and -1.4 in year 1, followed by 0.1 in year 2, 2.4 in year 3, and 3.0 in year 4, with the later increases being statistically significant. The ATT for Hispanic adults 45+ is 0.69 suicides per 100,000, indicating a significant overall treatment effect. This represents a 13% increase from the baseline suicide suicide rate.

Breaking down the analysis by gender, for Hispanic men aged 45+ (Figure 6c), the pre-treatment estimates are statistically insignificant. Post-treatment estimates show -0.5 in year 0, -1.5 in year 1, 1.5 in year 2, 5.2 in year 3, and 6.7 in year 4. The ATT is 2.27 suicides per 100,000, indicating a significant treatment effect driven by large increases in later years. This represents a 26% increase from the baseline mean suicide rate of 8.77 per 100,000. For Hispanic women aged 45+ (Figure 7c), the pre-treatment estimates are statistically insignificant. Post-treatment estimates are consistently negative: -0.7 in year 0, -1.3 in year 1, -1.2 in year 2, -0.4 in year 3, and -0.8 in year 4. The ATT is -0.89 suicides per 100,000, a 52% decrease from the baseline mean. In this age group, men show substantial and significant increases in suicide as a result of SC, while women exhibit sustained decreases.

Ages 25+. For Hispanic adults aged 25 and older, the event study estimates (Figure 5d) show pre-treatment point estimates that are mostly statistically insignificant. In the post-treatment period, there was a significant decrease of -1.1 per 100,000 in year 0 and -1.2 in year 1, followed by an insignificant -0.5 in year 2, and then increases of 1.2 in year 3 and 2.3 in year 4. The ATT for Hispanic adults 25+ is 0.14 suicides per 100,000.

Breaking down the analysis by gender, for Hispanic men aged 25+ (Figure 6d), the pre-treatment estimates are mostly statistically insignificant. Post-treatment estimates show -1.3 in year 0, -1.2 in year 1, 0.3 in year 2, 2.4 in year 3, and 5.2 in year 4. The ATT for Hispanic men 25+ is 1.08 suicides per 100,000, indicating a significant 10% increase from the baseline suicide rate of 11.03 per 100,000. For Hispanic women aged 25+ (Figure 7d), the pre-treatment estimates are statistically insignificant. Post-treatment estimates show significant decreases in years 0 through 2: -0.8 in year 0, -1.0 in year 1, and -1.3 in year 2, followed by insignificant estimates of 0.1 in year 3 and -0.4 in year 4. The ATT for Hispanic women 25+ is -0.67 suicides per 100,000, indicating a significant overall decrease. In this age group, men show initial decreases that reverse into substantial increases in suicide rates following SC implementation, while women exhibit sustained and significant decreases through the first three post-treatment years, resulting in a stark gender divergence.

Mechanisms and Heterogeneity Analysis

I test multiple mechanisms that could lead to an increase in Hispanic suicide rates after a change in immigration enforcement. These mechanisms are fear of deportation, racial or ethnic bias toward Hispanics, political leaning of a county, the economic conditions in the area, and density.

Other potential mechanisms, such as economic conditions, access to welfare programs, and the effect of SC on health outcomes, have been documented in the literature. Alsan and Yang (2024), East et al. (2023), and Vu (2024) find that SC implementation leads to a significant reduction in employment, food stamp participation among Hispanic families, and worse health outcomes respectively. These mechanisms could also contribute to the deterioration of mental health, especially among adult Hispanics, and thus contribute to an increase in suicides.

To test for economic conditions, I conduct two complementary heterogeneity analyses by unemployment rates. First, using CPS data, I examine the differential effects between counties with low versus high Hispanic-white unemployment gaps, though this analysis is limited to a smaller set of large counties where CPS data are available. I then supplement this with a broader analysis using LAUS data, which provides overall county unemployment rates for all counties in the sample. I present the results in Figure 8 for the CPS analysis and Figures A.3–A.4 for the LAUS analysis . I present the results broken down by different age groups and sex.[6]

[6]For the CPS analysis, the age-by-gender grids are shown in Appendix Figure A.2.

The CPS analysis reveals marked heterogeneity. For adults aged 34+, both county types exhibit increasing suicide rates following SC implementation, with a steeper decline in year 3 for low-gap counties. The broader LAUS analysis, which uses overall county unemployment rates for the full sample, shows less pronounced heterogeneity for adults aged 34+ relative to CPS.[7] Gender-specific analyses show that men drive most of the heterogeneity in both datasets, with women exhibiting more muted differential effects across unemployment contexts. These patterns are consistent across age groups.

The economic conditions analysis reveals that Hispanic men are the primary drivers of the observed heterogeneity, showing heightened sensitivity to labor market shocks. To corroborate the role of this economic mechanism, I use 'deaths of despair'—outcomes explicitly theorized to stem from economic hopelessness. Tracking these specific causes of death allows us to verify that the observed labor market fragility is indeed the channel driving broader fatal outcomes.

The composite measure of deaths of despair—encompassing suicides, alcohol-related deaths, and drug-related deaths—provides insight into the broader mental health and substance abuse consequences of SC implementation. For Hispanic adults aged 25–34, the death-of-despair event study (Figure 9a) shows flat pre-trends followed by post-activation increases that peak around year 3. The post-period average effect is 2.04 deaths per 100,000, driven by a large and significant rise among men (5.57 per 100,000; Figure 10a), while women exhibit no clear change (–1.03 per 100,000; Figure A.5a). These age-specific patterns aggregate into substantial effects for broader male groups. Hispanic men aged 25+ show a significant post-period average of 2.20 per 100,000 (Figure 10), and men aged 45+ experience a sizable increase of 3.57 per 100,000 (Figure 10), both consistent with the strong male-driven impacts observed in younger cohorts. Collectively, these results demonstrate that deaths of despair among Hispanic men increase substantially following SC implementation, driven primarily by alcohol- and drug-related mortality concentrated in the 25–34 age group.

Among Hispanic adults aged 25–34, alcohol-related mortality rises significantly following SC activation, with an average post-period effect of 0.64 per 100,000 (Figure A.6a). This overall increase is driven almost entirely by men, who show a significant rise of 1.35 per 100,000 (Figure A.7a). In contrast, women exhibit no significant response (–0.10 per 100,000; Figure A.8a).

For adults aged 35–44, alcohol mortality averages –0.35 per 100,000 (Figure

[7] Using the CPS, I can compute county-level unemployment rates separately for Hispanics and non-Hispanic Whites, but coverage is limited to larger counties and about half the sample. LAUS provides full county coverage but only overall unemployment rates, not race-specific measures.

A.6b), with divergent gender patterns. Men show non-significant declines (–1.15 per 100,000; Figure A.7b), whereas women exhibit significant increases (0.52 per 100,000; Figure A.8b). This gender reversal in the 35–44 age group contrasts sharply with the male-driven effects observed among younger adults.

Drug mortality among Hispanic adults aged 25–34 shows a modest, imprecise increase overall (0.85 per 100,000; Figure A.9a). Breaking down by gender reveals that this pattern is concentrated among men, who experience a significant rise of 3.19 per 100,000 (Figure A.10a), while women show a non-significant decline (–1.36 per 100,000; Figure A.11a).

Among adults aged 35–44, drug mortality effects are close to zero overall (0.11 per 100,000; Figure A.9b), with imprecise increases for men (1.78 per 100,000; Figure A.10b) and declines for women (–1.54 per 100,000; Figure A.11b). Neither gender shows statistically significant effects in this age band.

Among adults aged 35–44, death-of-despair effects (Figure 9b) average –1.33 per 100,000 with declining point estimates through year 3. Men show a small, imprecise increase (0.41 per 100,000; Figure 10b), while women experience a larger but only marginally significant decline (–2.70 per 100,000; Figure A.5b).

I explore sanctuary policies as a potential protective mechanism through which fear of deportation might be mitigated, examining how these local policies interact with SC implementation to affect Hispanic suicide rates. Sanctuary policies were designed to limit local cooperation with federal immigration enforcement, potentially buffering Hispanic communities from the psychological stress and fear associated with aggressive enforcement programs like SC. I present the results for Hispanic individuals aged 34+ in Figure 11 and other results by age and gender in Figures A.12–A.13. The analysis compares suicide rates between sanctuary and non-sanctuary jurisdictions following SC implementation. I find consistent evidence across all age groups and both sexes that sanctuary policies do not significantly moderate the effects of SC on Hispanic suicide rates. The point estimates and confidence intervals for sanctuary versus non-sanctuary counties largely overlap throughout the post-treatment period, with no statistically significant differential effects emerging in any specification.[8]

This null finding is notable for several reasons. First, it suggests that while sanctuary policies may buffer against some consequences of immigration enforcement—such as reduced program participation—they do not appear to protect against the

[8]As an additional robustness check, I re-estimate the specifications controlling for removals. I present these results in Figure A.14 and Appendix Figure A.15. The results are unchanged from the main specification, the estimated effects and confidence intervals closely mirror those from the baseline analysis.

mental health impacts that manifest as suicide. This divergence may reflect that sanctuary policies primarily affect interactions with local law enforcement and public institutions, whereas the psychological toll of immigration enforcement operates through broader community-level fear and stress that sanctuary status does not fully alleviate. Second, the null effect persists across different demographic subgroups, suggesting it is not driven by heterogeneous responses among specific populations. Finally, this finding highlights that local protective policies, while potentially beneficial in other domains, may be insufficient to counteract the profound psychological distress caused by federal immigration enforcement programs when examining the most extreme mental health outcome.

To explore the role of anti-Hispanic bias in amplifying the effects of immigration enforcement on suicide rates, I examine whether counties with above-median versus below-median levels of state-level bias exhibit differential responses to Secure Communities implementation.[9] I show the results in Figure A.16–A.17.

I find no consistent differential effects between high and low bias counties. Both high and low bias counties show similar patterns in suicide rates following SC implementation. Across different age groups and both men and women, the differences between high and low bias counties remain statistically insignificant, indicating that the level of anti-Hispanic bias in a county does not significantly moderate the impact of Secure Communities on Hispanic suicide rates. These null findings suggest that anti-Hispanic bias, as measured by the composite index of implicit attitudes, explicit prejudice, and hate crimes, is not a primary mechanism through which Secure Communities affects Hispanic suicide rates.

I examine whether local political climates moderate the impact of Secure Communities on Hispanic suicide rates by comparing effects across Republican-leaning counties (below median Democratic vote share) and Democratic-leaning counties (above median Democratic vote share). Results for the main analysis are shown in Figure 12, with additional heterogeneity in Figure A.18. I find that political leaning does not significantly moderate the effects for men across age groups. However, I observe statistically significant differences for young women aged 25–34, where Democratic-leaning counties show significantly higher suicide rates compared to Republican-leaning counties following SC implementation. This gender-specific and age-specific pattern suggests that local political climate may moderate the mental health consequences of immigration enforcement selectively, affecting

[9] I use state-level measures of bias rather than more granular geographic units due to data limitations. County-level data are unavailable for key sources such as the ANES, and the GSS is not representative below the state level. Additionally, crime data are typically more reliable and complete at the state level.

young Hispanic women but not men.

To examine whether urbanization moderates the policy's mental health effects, I conduct a heterogeneity analysis by county-level population density, comparing low-density (bottom 10%) versus high-density (top 90%) counties, as shown in Figures A.19–A.20. Gender-specific analyses reveal important differences in how population density moderates the policy's effects. Among men aged 34+, I find no statistically significant differences between low-density and high-density counties, with overlapping confidence intervals throughout the post-treatment period. However, among women aged 34+, the difference between low-density and high-density counties is statistically significant. These findings suggest that population density does not significantly moderate the impact of Secure Communities on Hispanic suicide rates.

To assess whether the timing of Secure Communities activation mattered for general population mental health, I present the ATT for the two cohorts that adopted the SC in 2011 and 2012. I chose 2011 and 2012 because they are the only years for which county-level mentally unhealthy days data and SC implementation dates overlap before becoming a nationwide policy. Figure A.21 presents the cohort-specific ATT estimates with 95 percent confidence intervals.

For the 2011 cohort, the ATT is equal to –0.08 mentally unhealthy days per adult, and the 2012 cohort's ATT is equal to –0.10 days. Averaging across both cohorts yields an ATT equal to –0.09 days. In all cases, no estimate is statistically significant. These null cohort-specific effects reinforce the conclusion that SC implementation may not meaningfully change average mentally unhealthy days at the county level, regardless of activation year. Since Hispanics may be affected more by the policy than other groups, it is important to examine mental health data specifically for Hispanic residents to see if SC had different effects on this population that are not captured in the overall county-level results.

The particularly pronounced increases in suicide rates among adult Hispanic men may reflect the intersection of economic disruption and cultural expectations rooted in traditional Hispanic gender role norms. The concept of machismo, which encompasses ideals of masculine strength, stoicism, and the provider role, creates particular vulnerabilities for Hispanic men facing economic hardship (Fragoso and Kashubeck 2000; Mayo 1997). When immigration enforcement compounds labor market disruptions that I explore in this paper and is documented by East et al. (2023), Hispanic men who strongly identify with their role as family providers may experience acute psychological distress from their inability to fulfill these culturally prescribed responsibilities. This gender role conflict becomes especially damaging when combined with cultural barriers to help-seeking behavior, as His-

panic men often view seeking mental health support as incompatible with masculine ideals of self-reliance and emotional control (Cabassa 2007).

The protective effects observed among Hispanic women, in contrast, may reflect the strength of familism—the cultural emphasis on family interdependence, mutual support, and collective problem-solving—which operates differently across genders (Crist et al. 2009). Women's traditional roles as family caregivers and social network maintainers may provide greater access to emotional support and coping resources during times of community stress, buffering against the mental health impacts of immigration enforcement. The gender differentials suggest that community protective mechanisms and social support networks operate differently for men and women, with women showing more muted effects across various economic and political contexts (Johnson and Rogers 2020; Velez and Moradi 2016). While data limitations prevent direct testing of all potential psychological mechanisms underlying these gender patterns, the heterogeneity analyses I present here examine all observable moderators available at the county level, including economic conditions, political climate, population density, and anti-Hispanic bias, providing the most comprehensive assessment possible given existing data constraints.

5 Robustness Checks and Discussions

The Stable Unit Treatment Value Assumption (SUTVA) requires that treatment assignment of one unit does not affect the potential outcomes of other units. In the context of Secure Communities implementation, this assumption may be violated if the policy creates spillover effects across county boundaries. For instance, the adoption of SC in one county might lead to changes in suicides in neighboring counties, affecting suicide rates in both treated and untreated areas.

While SUTVA cannot be directly tested, I can provide evidence that it is not substantially violated by examining spillover effects. I examine spillover effects by analyzing whether Secure Communities implementation in neighboring counties affects suicide rates in non-treated counties across multiple age groups and demographic outcomes. Table 3 presents results from two specifications that test for geographic spillover effects on Hispanic suicide rates across different age groups: children (ages 5–14), adolescents and young adults (ages 15-24), and adults (ages 34+). The first specification includes an indicator for whether a county borders a treated county but has not yet adopted Secure Communities itself. The second specification measures the intensity of treatment by counting the number of

neighboring counties that have implemented the program.

The results show small and statistically insignificant spillover effects across all age groups examined. For adults aged 34+ and the aggregate population, the coefficients on both the border indicator and neighboring intensity measures remain close to zero and lack statistical significance. These negligible spillover effects suggest that SUTVA is not substantially violated in this context, supporting the validity of the identification strategy. The lack of significant spillover effects across multiple age groups and specifications indicates that the observed changes in Hispanic suicide rates are primarily driven by direct treatment effects within counties rather than cross-border displacement or contagion effects.

To further validate the causal relationship between Secure Communities implementation and Hispanic suicide rates, I conduct a placebo test examining the impact of SC on Black versus White suicide rates. Since SC primarily targeted undocumented Hispanic immigrants, we should not expect to see similar effects on Black populations, who were not directly targeted by the policy. This placebo test serves as a critical falsification check: finding similar effects for Black populations would cast serious doubt on the causal interpretation of my main results. Figure 13 presents the results of this placebo triple difference-in-differences analysis, which mirrors the main specification but substitutes Black for Hispanic as the treated racial group while retaining the actual SC activation dates. The outcome is the Black-White suicide rate differential for adults aged 34+. I present the results broken down by different age groups and sex in Figure A.22.

The placebo results support the causal interpretation of my main findings. Unlike the Hispanic-White analysis, the Black-White suicide gap shows no consistent or statistically significant response to SC implementation among adults aged 34+. The Black-White suicide gap exhibits fluctuating point estimates with wide confidence intervals and no clear directional trend comparable to the substantial increases observed for Hispanic adults.

The contrast between the main and placebo results substantially reduces concern about several alternative explanations: they suggest that the documented effects are not driven by (1) broader trends affecting all minority populations during this period, (2) general deterioration in minority mental health unrelated to immigration policy, or (3) other confounding factors that coincided with SC implementation. Instead, the specificity of effects to Hispanic populations—the group explicitly targeted by the policy—strengthens the conclusion that SC immigration enforcement causally impacted Hispanic suicide rates through mechanisms directly linked to the policy's focus on Hispanic communities.

The estimated effects of Secure Communities on Hispanic suicide rates should

be interpreted as likely lower-bound estimates of the true causal impact. Hispanic ethnicity is often underreported or misclassified in vital statistics records, with some Hispanic suicides potentially being recorded as non-Hispanic white deaths due to inconsistencies in data collection practices, incomplete information, or administrative errors in death certificates. Consequently, the significant effects observed on Hispanic suicide rates likely represent conservative estimates of the true policy impact. The actual harm to Hispanic communities may be substantially larger than the results suggest.

6 Conclusion

This paper provides a causal analysis of how immigration enforcement affects suicide rates among Hispanic adults in the United States. Using the staggered implementation of Secure Communities across counties between 2008 and 2013, I find robust evidence that immigration enforcement produces complex and heterogeneous mental health effects within Hispanic communities, with stark divergence by gender and age.

The adoption of SC produced a significant overall increase in suicide rates among Hispanic adults aged 34+, with an average treatment effect of 0.11 suicides per 100,000 relative to non-Hispanic Whites. Gender-specific analyses reveal opposing patterns: Hispanic men aged 34+ experience substantial and significant increases in suicide rates by 1.21 per 100,000 (12%), while Hispanic women in the same age group show significant decrease equal to -0.88 per 100,000 (44%). This gender divergence is particularly pronounced among adults aged 45+, where men show large and statistically significant increase equal to 2.27 per 100,000—representing a 26% increase from baseline—while women exhibit sustained decreases. I find no evidence that sanctuary policies moderate the impact of SC on Hispanic suicide rates.

The heterogeneity analyses reveal that local economic conditions and political climate are the primary moderators of Secure Communities' impact on Hispanic suicide rates, while population density and measured anti-Hispanic bias show limited explanatory power. The most consistent pattern emerges with economic conditions: counties with low unemployment rates experience protective effects (substantial declines in suicide rates) following SC implementation, while high unemployment counties show harmful effects (stable or increasing rates), suggesting that economic security buffers against the psychological stress of immigration enforcement while economic distress amplifies its negative mental health conse-

quences. The economic mechanism is further supported by analyses of deaths of despair—deaths attributable to drugs, alcohol, and suicide combined—which show significant increases among Hispanic men following SC implementation while women experience no such effect. This broader mortality pattern reinforces the interpretation that economic disruption serves as a key pathway through which immigration enforcement harms Hispanic men. Political context also matters, particularly for adults aged 34 and older, where Democratic-leaning counties experience significant increases in suicide rates while Republican-leaning counties show more variable patterns. The null effects on general population mental health, as measured by county-level mentally unhealthy days, further underscore that the mental health burden of immigration enforcement falls disproportionately on Hispanic communities in ways not captured by aggregate population-level metrics. These findings suggest that the mental health consequences of federal immigration policy are not uniform but are fundamentally shaped by the local economic and political environments in which Hispanic families live, with vulnerable populations in economically distressed areas bearing the greatest harm.

Several factors suggest that my findings represent conservative estimates of the true impact. Vital statistics records systematically suffer from Hispanic ethnicity underreporting and misclassification, meaning a portion of Hispanic suicide deaths are incorrectly categorized as non-Hispanic white fatalities. Such errors stem from inconsistent reporting practices across jurisdictions, missing information on death certificates, and clerical mistakes during administrative processing. Because this measurement error affects both treatment and comparison groups, it attenuates the estimated treatment effects by artificially lowering observed Hispanic suicide counts throughout the sample period. Given that I still detect significant effects among Hispanic individuals aged 34+, particularly among men, the genuine consequences of immigration enforcement on Hispanic mental health outcomes are plausibly much larger than what I reported here. These results therefore capture only a fraction of the actual public health burden, especially for adult Hispanic men who bear the greatest harm.

Beyond sanctuary policies, I find that local economic conditions and political climate serve as key moderators of enforcement impacts. Counties with stronger economic foundations experience less harmful effects for adults following SC implementation. This suggests that economic security serves as an important buffer against enforcement-related stress. Political context also matters significantly, with Democratic-leaning counties experiencing larger increases in adult Hispanic suicide rates compared to Republican-leaning areas. I find that population density and measured anti-Hispanic bias show limited explanatory power further under-

scores that economic and political factors may be the primary drivers of heterogeneous responses to immigration enforcement. Unfortunately, the lack of Hispanic-specific mental health data at the county level prevents me from directly investigating differential effects on psychological distress between Hispanic and White populations, highlighting an important avenue for future research. These patterns suggest that the mental health consequences of federal immigration policy are fundamentally shaped by the local socioeconomic and political environments in which Hispanic communities are embedded.

The gender divergence in suicide outcomes reflects how traditional cultural frameworks shape responses to immigration enforcement stress. Hispanic men's increased suicide risk appears driven by the collision between machismo cultural norms—which emphasize masculine strength, provider responsibilities, and emotional restraint—and the economic disruption caused by immigration enforcement (Fragoso and Kashubeck 2000; Mayo 1997). When men cannot fulfill their culturally prescribed role as family providers due to labor market disruptions (East et al. 2023), they experience severe psychological distress compounded by cultural prohibitions against help-seeking behavior (Cabassa 2007). The significant increase in deaths of despair among Hispanic men—but not women—following SC implementation provides additional empirical support for this interpretation, as deaths of despair are commonly understood as responses to economic dislocation and loss of social standing. Conversely, Hispanic women's protective outcomes may reflect the resilience provided by familism, where cultural emphases on family interdependence, collective problem-solving, and women's roles as emotional caregivers create robust social support networks that buffer against enforcement-related stressors (Crist et al. 2009). This cultural explanation aligns with the heterogeneity analysis showing that economic conditions moderate these effects: areas with stronger labor markets may preserve men's provider roles, reducing gender role conflict, while economically distressed counties intensify the psychological burden of unfulfilled cultural expectations. Understanding these culturally rooted gender differences is essential for designing interventions that address the distinct mental health vulnerabilities within Hispanic communities facing immigration enforcement.

This analysis provides only an initial examination of the complex interplay between federal enforcement and local policies. Different types of sanctuary policies, which vary considerably in scope and implementation, may differentially affect mental health outcomes. This paper provides potential future topics to be researched, including examining the specific mechanisms through which sanctuary policies provide protection, investigating whether certain policy designs are

more effective than others, and assessing how the interaction between federal enforcement intensity and local sanctuary strength influences community mental health. Furthermore, research exploring the long-term effects of sanctuary policies on broader community trust, social cohesion, and access to public services would provide valuable insights to policymakers seeking to design comprehensive approaches to immigrant integration and community well-being.

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Table 1: Summary Statistics for County-Year Data

Variable	Mean	SD
Total Population	1,064,632	1,878,899
Hispanic Population	837,728	1,312,636
% Female	50.90	1.27
% White	74.00	16.97
% College Degree or Higher	7.70	9.00
Median Household Income ($)	21,148	22,684
% Below Poverty Line	6.00	7.16
Hispanic Suicide Rate: Age 25-34	8.33	23.55
Hispanic Suicide Rate: Age 35-44	7.91	26.72
Hispanic Suicide Rate: Age 34+	6.46	13.60
Hispanic Suicide Rate: Age 25+	6.97	12.08
Hispanic Suicide Rate: All Ages	6.51	9.10
Hispanic Suicide Rate: Age 25-34 (Men)	13.23	39.36
Hispanic Suicide Rate: Age 35-44 (Men)	12.74	43.64
Hispanic Suicide Rate: Age 45+ (Men)	9.65	29.38
Hispanic Suicide Rate: Age 34+ (Men)	10.68	24.85
Hispanic Suicide Rate: Age 25+ (Men)	11.41	22.00
Hispanic Suicide Rate: Age 25-34 (Women)	2.79	17.49
Hispanic Suicide Rate: Age 35-44 (Women)	2.79	18.18
Hispanic Suicide Rate: Age 45+ (Women)	2.06	9.49
Hispanic Suicide Rate: Age 34+ (Women)	2.29	8.71
Hispanic Suicide Rate: Age 25+ (Women)	2.42	7.96

[1] Data source is the National Vital Statistics System (NVSS) covering 1959-2013 for mortality data and Manson et al. (IPUMS National Historical Geographic Information System: Version 17.0) for the demographic data from the US Census. Sample includes county-year observations. Suicide data uses ICD-10 codes X60-X84 and Y87.0 to identify deaths by intentional self-harm among Hispanic populations. Suicide rates are calculated per 100,000 population using SEER population denominators.

Table 2: Comparison of Treated and Control Groups

Variable	Control Mean	Control SD	Treated Mean	Treated SD
Total Population	541,370	488,376	1,068,484	1,884,799
Hispanic Population	250,507	387,657	840,490	1,314,831
% Female	49.40	1.58	50.90	1.26
% White	42.30	24.92	74.20	16.68
% College Degree or Higher	8.30	8.45	7.70	9.00
Median Household Income ($)	24,585	24,761	21,122	22,666
% Below Poverty Line	5.50	6.36	6.00	7.17
Hispanic Suicide Rate: Age 25-34	22.65	74.01	8.30	23.31
Hispanic Suicide Rate: Age 35-44	24.60	222.14	7.88	24.87
Hispanic Suicide Rate: Age 45+	14.33	127.21	5.76	14.91
Hispanic Suicide Rate: Age 34+	17.60	87.70	6.44	13.04
Hispanic Suicide Rate: Age 25+	19.09	64.47	6.95	11.73
Hispanic Suicide Rate: All Ages	10.92	28.63	6.49	8.90
Hispanic Suicide Rate: Age 25-34 (Men)	33.64	130.94	13.19	38.90
Hispanic Suicide Rate: Age 35-44 (Men)	37.35	93.85	12.69	43.46
Hispanic Suicide Rate: Age 45+ (Men)	24.23	200.65	9.62	27.96
Hispanic Suicide Rate: Age 34+ (Men)	28.82	161.43	10.64	23.77
Hispanic Suicide Rate: Age 25+ (Men)	30.30	111.16	11.37	21.41
Hispanic Suicide Rate: Age 25-34 (Women)	9.37	34.01	2.77	17.44
Hispanic Suicide Rate: Age 35-44 (Women)	8.97	40.41	2.78	18.11
Hispanic Suicide Rate: Age 45+ (Women)	3.99	15.25	2.06	9.47
Hispanic Suicide Rate: Age 34+ (Women)	5.53	15.80	2.28	8.69
Hispanic Suicide Rate: Age 25+ (Women)	6.61	15.86	2.41	7.93

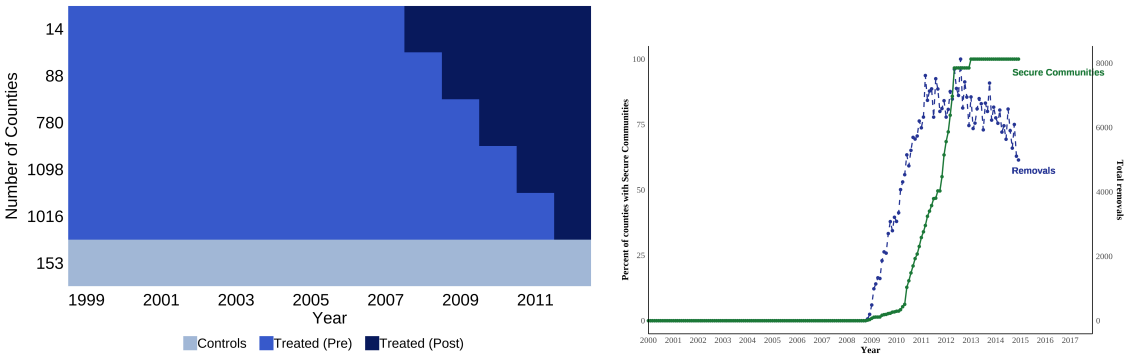
[1] Data source is the National Vital Statistics System (NVSS) covering 1959-2013 for mortality data and Secure Communities adoption data from Alsan et al. (2024). Control group represents county-year observations before Secure Communities implementation; treated group represents observations after implementation. Secure Communities was an ICE immigration enforcement program operating 2008-2014, with staggered county adoption beginning October 2008. Suicide rates shown per 100,000 population for Hispanic adults aged 34 and over in respective demographic groups.

Table 3: Spillover Effects of Secure Communities on Hispanic Suicide Rates

	Ages 34+	Ages 34+ (Intensity)
Direct Treatment	-0.04	-0.05
	(0.05)	(0.06)
Neighboring Counties	-0.04	
	(0.05)	
Neighboring Counties Intensity		0.01
		(0.01)
Observations	43,782	43,782
County FE	X	X
Year FE	X	X

[1] This table examines spillover effects on Hispanic suicide rates using two-way fixed effects regressions with county and year fixed effects. 'Direct Treatment' indicates counties that adopted Secure Communities. 'Neighboring Counties' is an indicator equal to 1 if a county borders a treated county in a given year but has not yet adopted the program itself. 'Neighboring Counties Intensity' counts the number of neighboring counties that have adopted Secure Communities by year t. Standard errors are clustered at the county level.
[2] Standard errors are clustered on the county level.

Figure 1: Staggered Adoption of Secure Communities Across US Counties

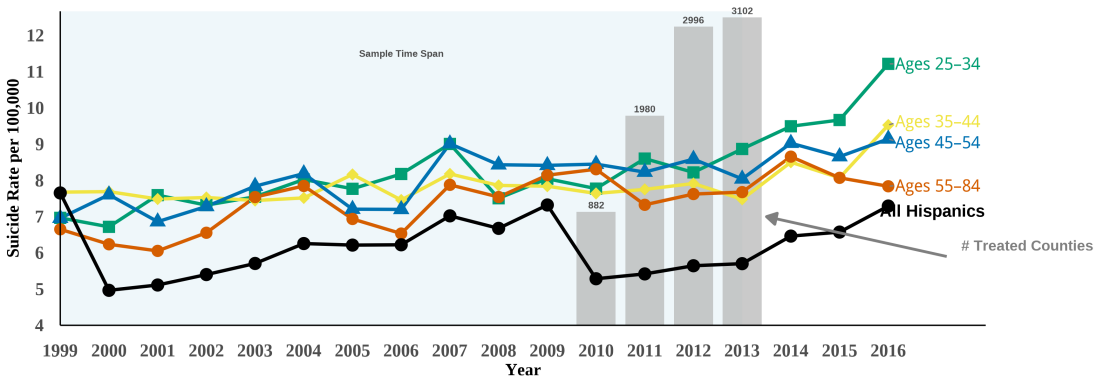


(a) County-Level Panel View

(b) Share of Counties and Removals

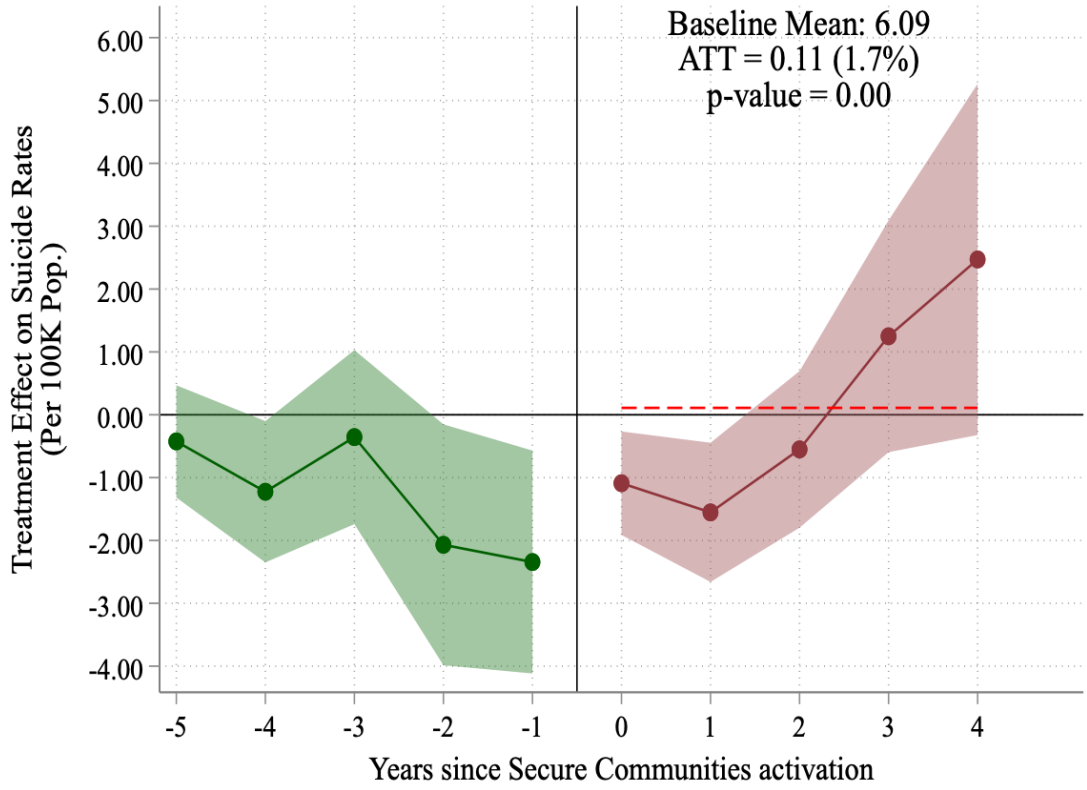
Notes: Panel (a) illustrates the temporal and geographic variation in Secure Communities (SC) implementation across U.S. counties from 1999-2019. Panel (b) shows the share of counties with Secure Communities and the monthly number of removals (2008-2013).
Source: Alsan and Yang (2024) collected records available through FOIA requests to ICE.

Figure 2: Suicides: By Age Groups



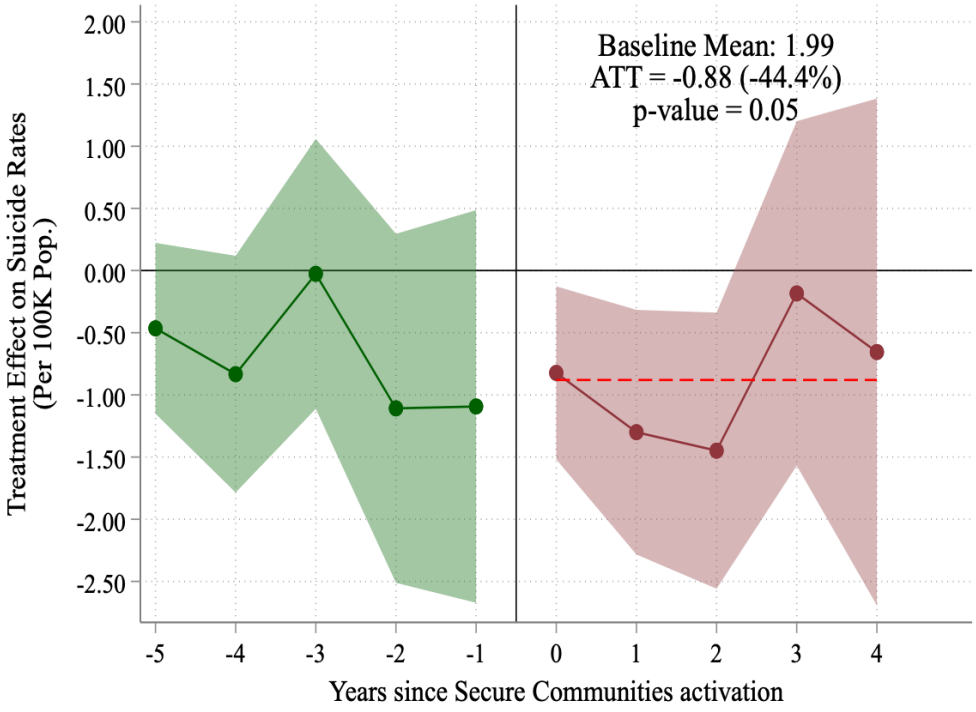
Notes: This descriptive figure shows the evolution of suicide rates among Hispanic adults aged 24–34, 35–44, 45–54, 55–84, and among all Hispanics over the study period. The shaded area is the study period from 1999 to 2013. I also include a histogram of the cumulative number of treated counties. For example, the total number of treated counties in 2011 was 882.
Source: National Vital Statistics System (NVSS) covering the years 1959 to 2019 (National vital statistics system 2007).

Figure 3: Triple Difference-in-Differences: Effect of Secure Communities on Hispanic vs White Suicide Rates Among Adults Aged 34 and Older

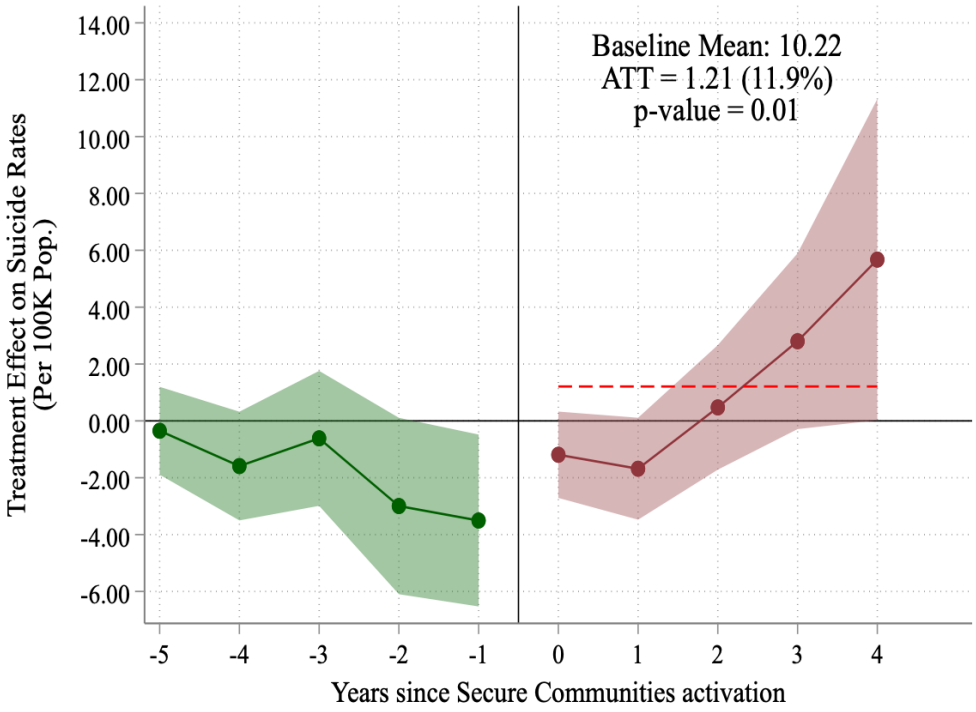


Notes: This figure estimates a triple difference-in-differences model comparing the differential impact of Secure Communities on Hispanic versus White suicide rates among adults aged 34 and older. The outcome variable is the suicide rate per 100,000 population. The specification includes county-race, county-year, and race-year fixed effects, using White suicide rates as a comparison group to control for common time-varying factors affecting suicide risk. Pre-treatment coefficients (β_l for $l < 0$) test the parallel trends assumption between Hispanic and White adults. Post-treatment coefficients (β_l for $l \geqslant 0$) capture the differential treatment effects of Secure Communities implementation on Hispanic versus White adults' suicide rates. The standard errors are clustered at the county level and the county population is used to weight the estimates. *Source:* Alsan and Yang (2024) collected records that are available to the public through FOIA requests to US Immigration and Customs Enforcement (ICE). National Vital Statistics System (NVSS) covering the years 1959 to 2019 (National vital statistics system 2007).

Figure 4: Triple Difference-in-Differences: Effect of Secure Communities on Hispanic vs White Suicide Rates by Gender (Ages 34+)



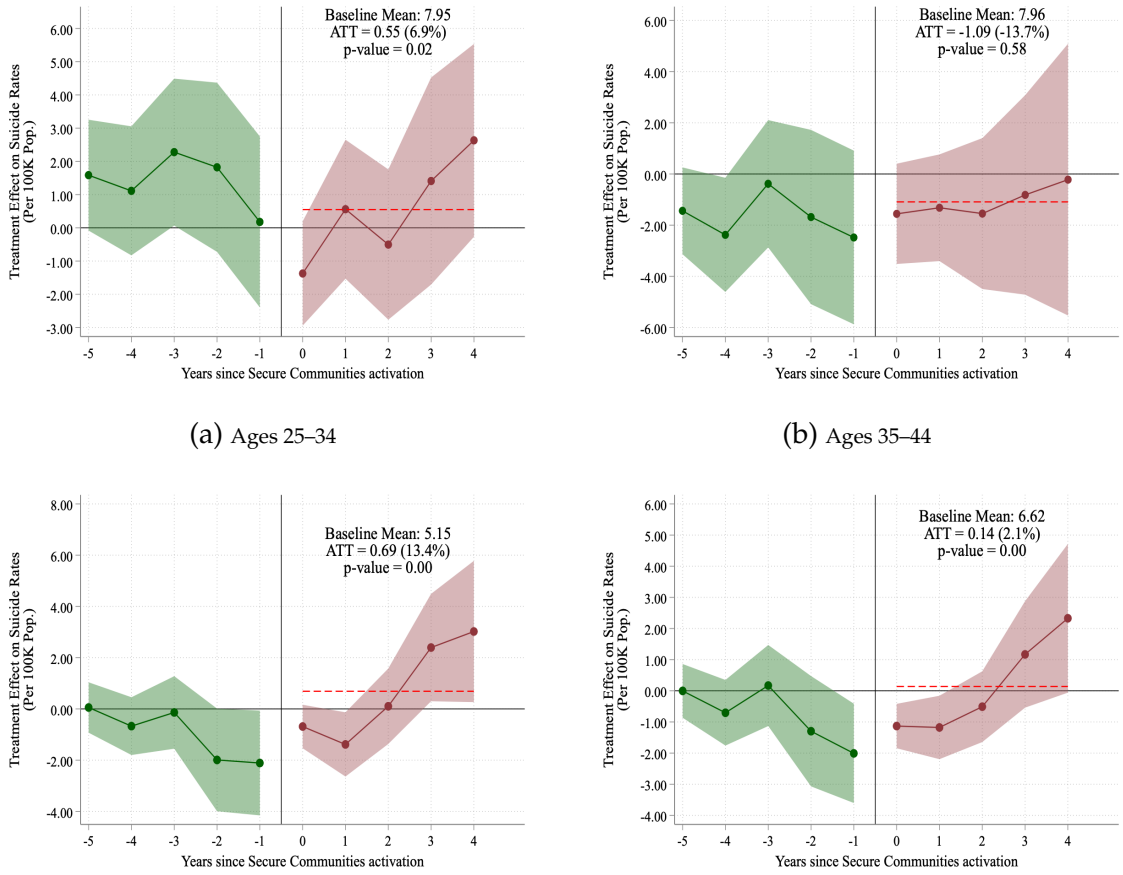
(a) Women



(b) Men

Notes: See Figure 3 for details. Suicide rates per 100,000 among adults aged 34+ by gender.

Figure 5: Heterogeneous Effects of Secure Communities on Hispanic vs Non-Hispanic White Suicide Rates by Age (Men and Women)



(a) Ages 25–34

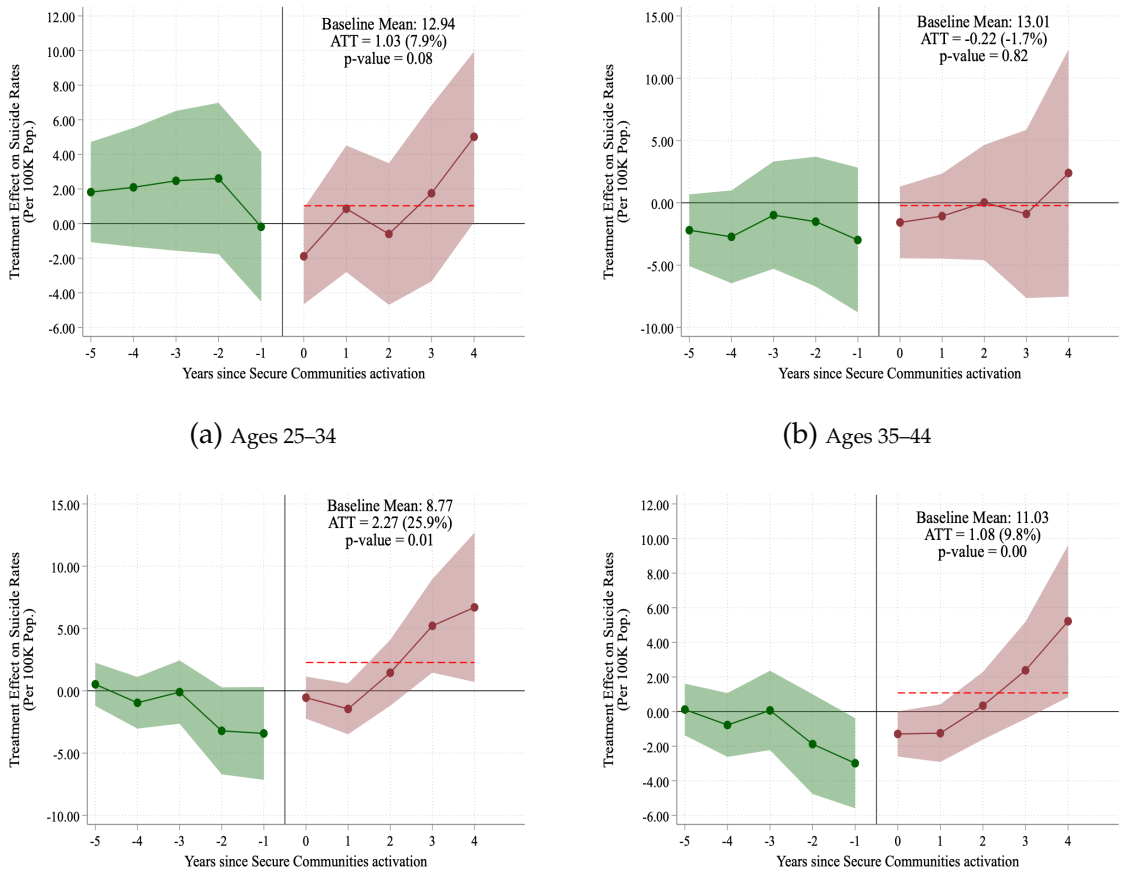
(b) Ages 35–44

(c) Ages 45+

(d) Ages 25+

Notes: Each panel shows triple difference-in-differences event-study estimates comparing Hispanic versus non-Hispanic White suicide rates per 100,000 for the pooled sample. See Figure 3 for specification details including fixed effects and clustering.

Figure 6: Heterogeneous Effects of Secure Communities on Hispanic vs Non-Hispanic White Suicide Rates by Age (Men)



(a) Ages 25–34

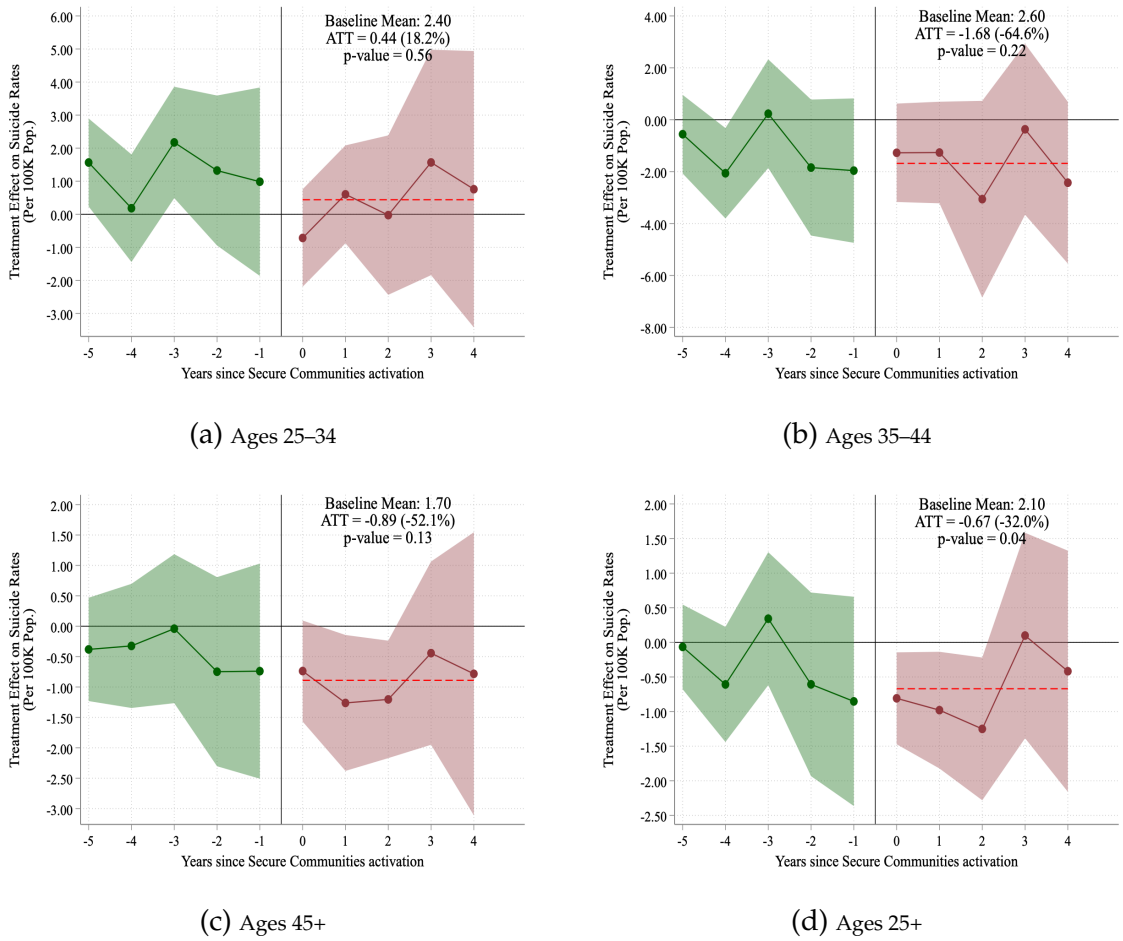
(b) Ages 35–44

(c) Ages 45+

(d) Ages 25+

Notes: Each panel shows triple difference-in-differences event-study estimates comparing Hispanic versus non-Hispanic White suicide rates per 100,000 for men. See Figure 3 for specification details including fixed effects and clustering.

Figure 7: Heterogeneous Effects of Secure Communities on Hispanic vs Non-Hispanic White Suicide Rates by Age (Women)



(a) Ages 25–34

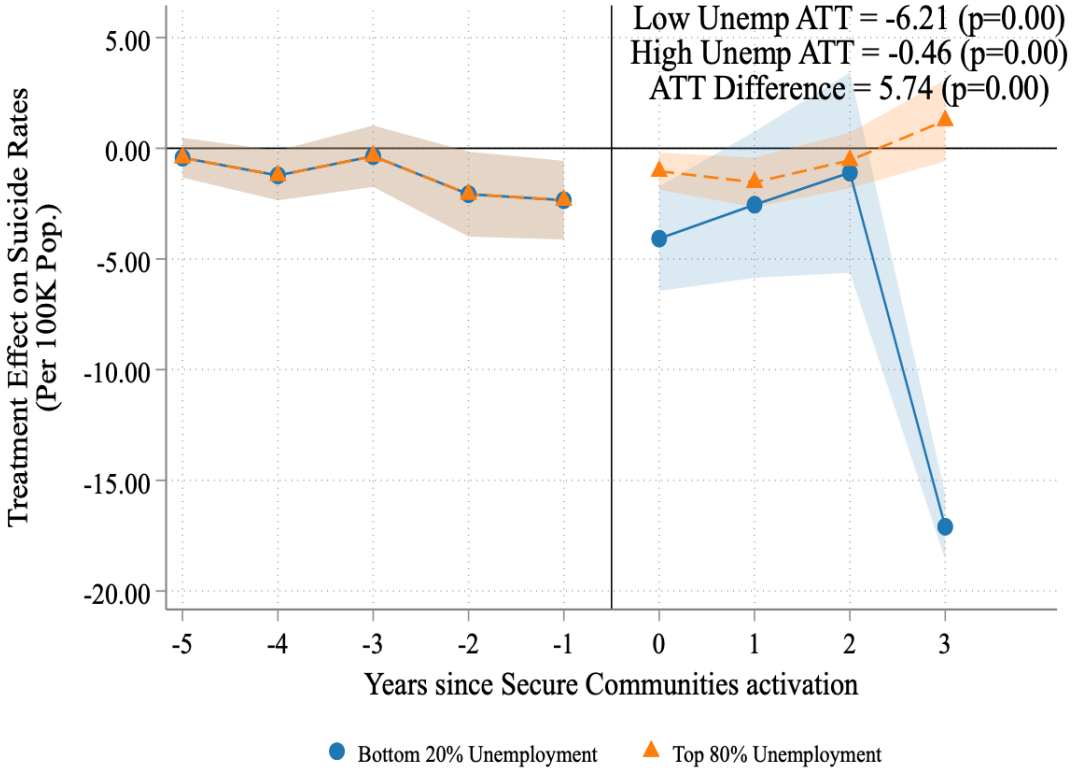
(b) Ages 35–44

(c) Ages 45+

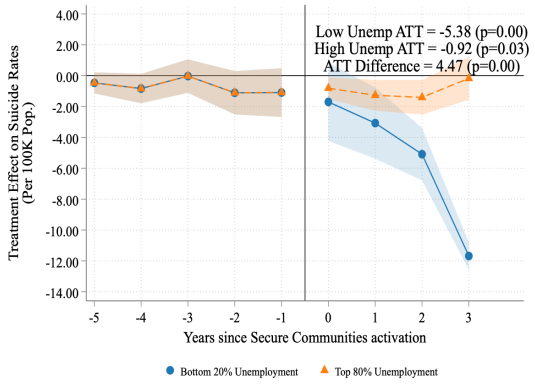
(d) Ages 25+

Notes: Each panel shows triple difference-in-differences event-study estimates comparing Hispanic versus non-Hispanic White suicide rates per 100,000 for women. See Figure 3 for specification details including fixed effects and clustering.

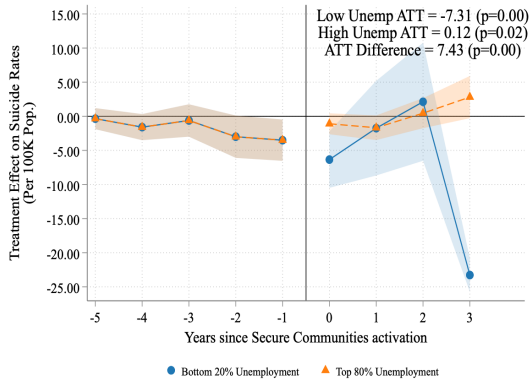
Figure 8: Heterogeneous Effects by County-level Unemployment Rate (CPS), Ages 34+



(a) Men + Women



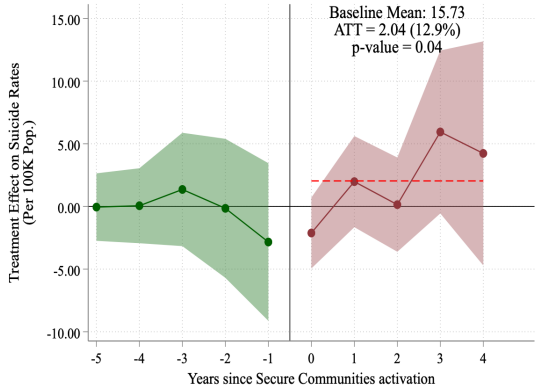
(b) Women



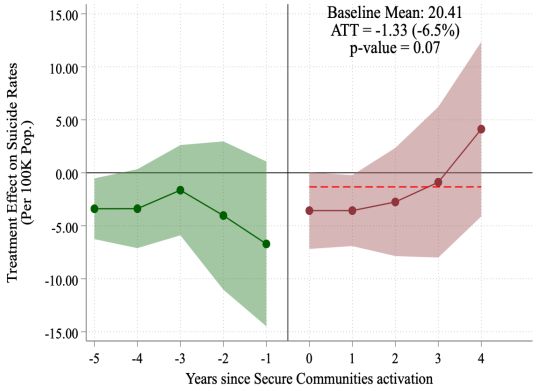
(c) Men

Notes: This figure estimates event study models for Hispanic suicide rates, comparing counties with bottom 20% ("Low Unemployment") versus top 80% ("High Unemployment") unemployment rates. The outcome variable y_{cst} is the suicide rate per 100,000 among Hispanics in county c, state s, at time t. Counties are classified by the unemployment rate percentile, with bottom 20% representing low unemployment areas and top 80% representing high unemployment areas. Pre-treatment coefficients (β_l for $l < 0$) test the parallel trends assumption for each unemployment group. Post-treatment coefficients (β_l for $l \geqslant 0$) capture how the mental health impact of Secure Communities varies by county-level unemployment conditions. All results are for Hispanic populations only; no comparison to White or other characteristics is made in these plots. Estimates are population-weighted and standard errors are clustered at the county level.

Figure 9: Effect of Secure Communities on Deaths of Despair by Age Group



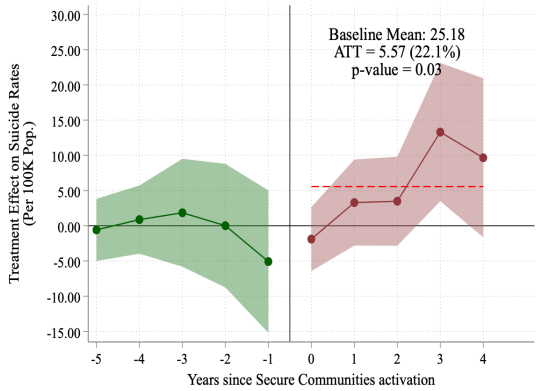
(a) Ages 25-34



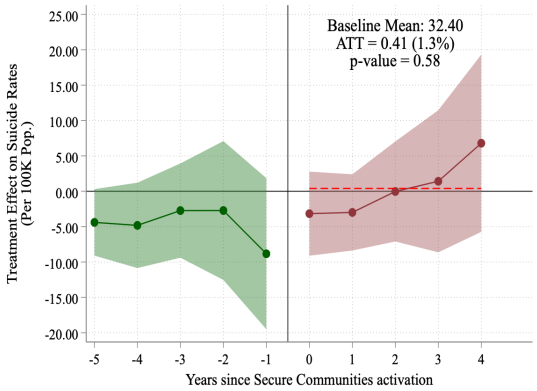
(b) Ages 35-44

Notes: This figure displays event study estimates for deaths of despair (suicides, alcohol-related deaths, and drug-related deaths combined) across different age groups.

Figure 10: Effect of Secure Communities on Deaths of Despair by Age Group Men



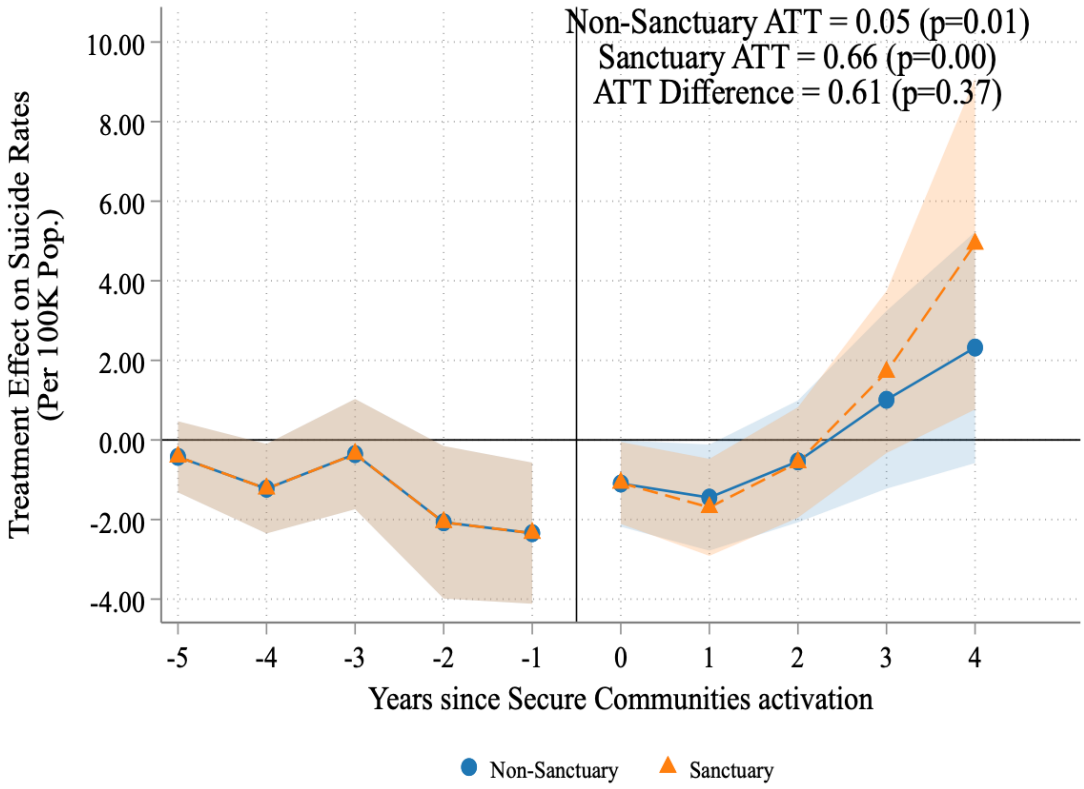
(a) Ages 25-34



(b) Ages 35-44

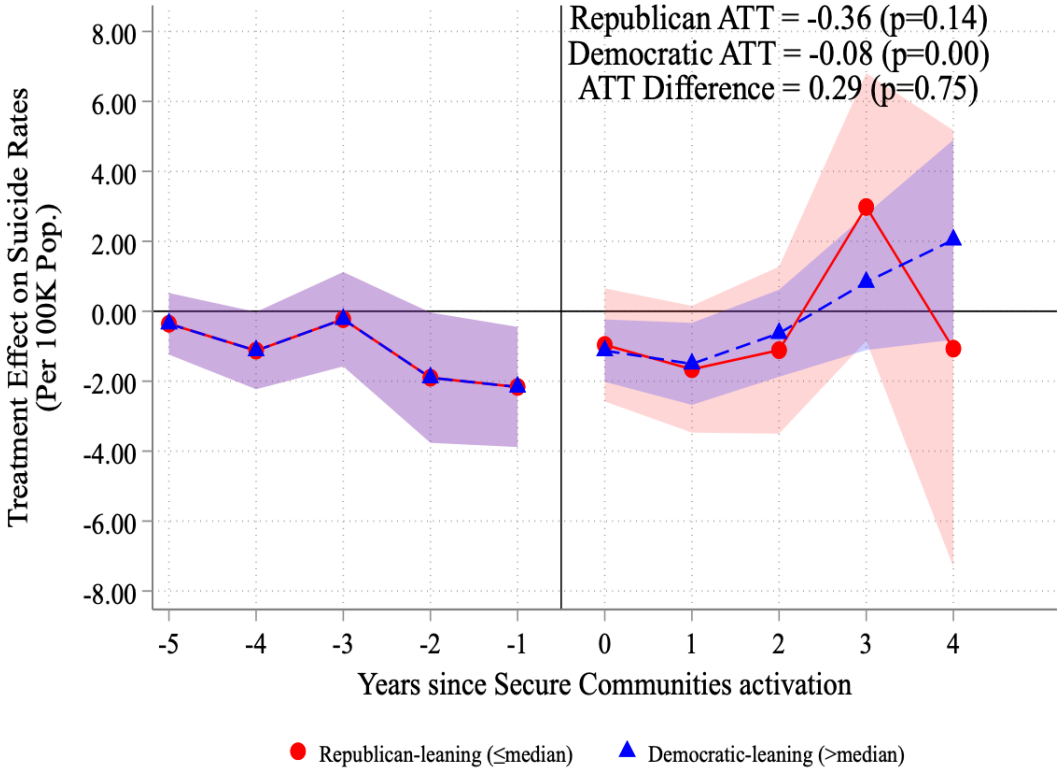
Notes: This figure displays event study estimates for deaths of despair (suicides, alcohol-related deaths, and drug-related deaths combined) among men across different age groups. See Figure 3 for specification details including fixed effects and clustering.

Figure 11: Triple Difference-in-Differences with Sanctuary Heterogeneity: Effect of Secure Communities on Hispanic vs White Suicide Rates Among Adults Aged 34 and Older

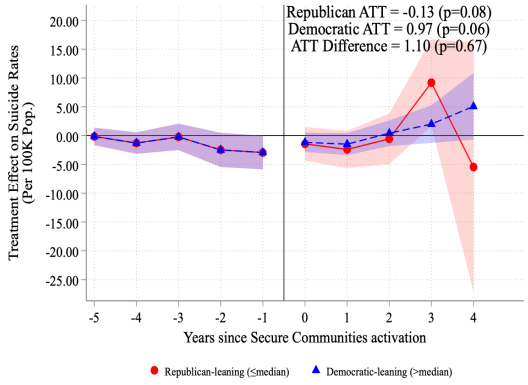


Notes: This figure estimates a triple difference-in-differences model with heterogeneous effects by sanctuary status, comparing the differential impact of Secure Communities on Hispanic versus White suicide rates among adults 34 and older. The outcome variable is the suicide rate per 100,000 population. The specification includes county-race, county-year, and race-year fixed effects, with separate treatment effects estimated for sanctuary and non-sanctuary counties. Pre-treatment coefficients test the parallel trends assumption between Hispanic and White adults in both county types. Post-treatment coefficients capture how sanctuary policies moderate the differential treatment effects of federal immigration enforcement. Sanctuary counties have local policies that limit cooperation with federal immigration enforcement, potentially buffering the psychological stress from immigration policy changes. The standard errors are clustered at the county level and the county population is used to weight the estimates.
Source: Alsan and Yang (2024) collected records that are available to the public through FOIA requests to US Immigration and Customs Enforcement (ICE). National Vital Statistics System (NVSS) covering the years 1959 to 2019 (National vital statistics system 2007).

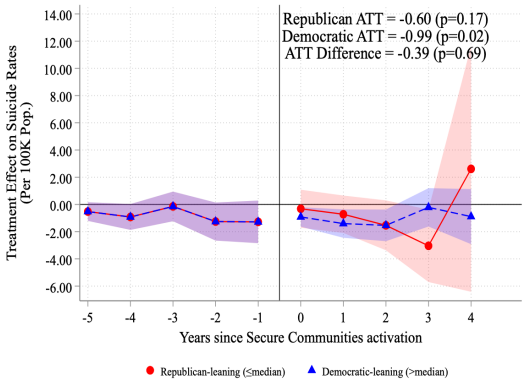
Figure 12: Political Affiliation Heterogeneity: Effect on Hispanic Suicide Rates (Ages 34+)



(a) Men + Women



(b) Men

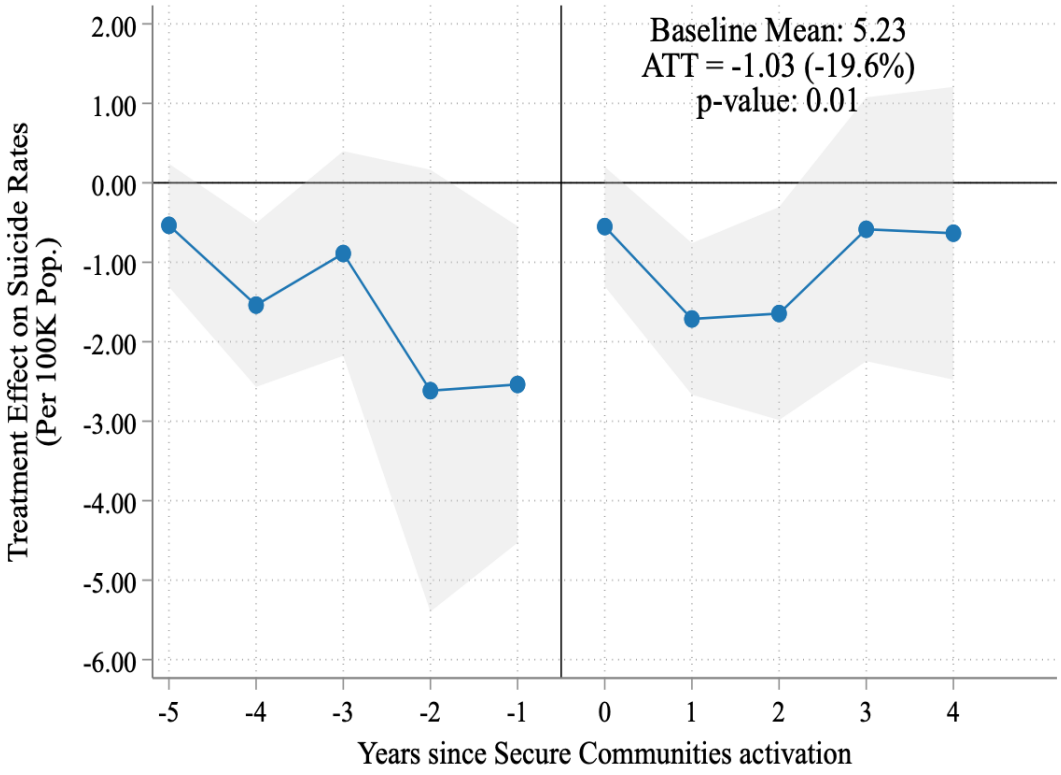


(c) Women

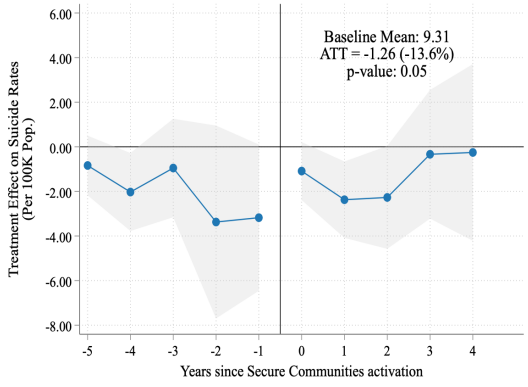
Notes: These figures estimate event study models for Hispanic suicide rates per 100,000 among adults aged 34+, comparing counties with Republican-leaning (below median Democratic vote share) versus Democratic-leaning (above median Democratic vote share) political affiliation. Counties are classified by Democratic vote share in presidential elections. Pre-treatment coefficients test the parallel trends assumption; post-treatment coefficients capture how the mental health impact of Secure Communities varies by county-level political affiliation. Standard errors are clustered at the county level and weighted by county population.

Source: Voting data from Amlani and Algara (2021).

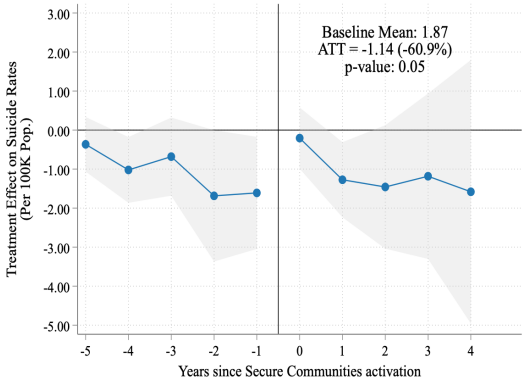
Figure 13: Placebo Triple Difference-in-Differences: Effect on Black vs White Suicide Rates (Ages 34+)



(a) Men + Women



(b) Men



(c) Women

Notes: These placebo triple-difference event-study estimates mirror the baseline specification but substitute Black for Hispanic as the treated racial group, retaining the actual Secure Communities activation dates. The outcome variable is the difference in suicide rates per 100,000 between Black and White residents. Because SC primarily targeted Hispanic immigrants, we should not observe significant effects on the Black-White differential. See Figure 3 for specification details.

ONLINE APPENDIX

Immigration Enforcement, Sanctuary Cities, and Rising Hispanic Suicide Rates

Hussain Hadah

A Tables

Table A.1: Sanctuary Jurisdictions Used in the Analysis

State	Jurisdiction	Level
CA	Alameda, Amador, Butte, Calaveras, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Imperial, Inyo, Kings, Los Angeles, Mendocino, Merced, Mono, Napa, Orange, Placer, San Bernardino, San Francisco (City/County), San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Sutter, Yolo, Yuba	Local
CA	*Trust Act*[3]	Statewide
CO	Archuleta, Delta	Local
CO	*All jails: detainers require judicial warrant*[3]	Statewide
CT	Hartford, New Haven	Local
CT	*Trust Act*[3]	Statewide
DC	Washington, D.C.	Local
FL	Alachua, Hernando	Local
GA	Clayton, DeKalb	Local
IA	Benton, Iowa, Jefferson, Sioux, Story, Union	Local
IL	Chicago (City)	Local
KS	Butler, Finney, Harvey, Sedgwick, Shawnee	Local
LA	Orleans Parish (New Orleans)	Local
MD	Montgomery, Prince George's	Local
MA	Boston (City), Hampshire (County), Middlesex (County), Northampton (City)	Local
MN	Hennepin	Local
NE	Hall, Sarpy	Local
NV	Clark, Washoe	Local

Continued on next page

Table A.1: Sanctuary Jurisdictions Used in the Analysis (continued)

State	Jurisdiction	Level
NJ	Burlington, Camden, Essex, Middlesex	Local
NM	Bernalillo, Doña Ana, Rio Arriba, Santa Fe, Taos	Local
NM	*All county jails*[3]	Statewide
NY	New York City (NYC), Franklin, Onondaga, St. Lawrence, Wayne	Local
OR	Baker, Clackamas, Clatsop, Coos, Deschutes, Douglas, Grant, Jackson, Jefferson, Josephine, Lane, Lincoln, Malheur, Marion, Multnomah, Polk, Tillamook, Union, Wallowa, Washington, Yamhill	Local
PA	Bradford, Bucks, Butler, Chester, Delaware, Erie, Lebanon, Lehigh, Lycoming, Montgomery, Montour, Perry, Philadelphia (City/County), Pike, Westmoreland	Local
RI	Providence	Local
RI	*DOC policy*[3]	Statewide
VA	Arlington, Chesterfield	Local
VT	Montpelier (City)	Local

Continued on next page

Table A.1: Sanctuary Jurisdictions Used in the Analysis (continued)

State	Jurisdiction	Level
WA	Clallam, Clark, Cowlitz, Jefferson, King, San Juan, Skagit, Snohomish, Thurston, Walla Walla, Whatcom	Local
WI	Milwaukee	Local

[1] Data from ICE Declined Detainer Outcome Report (DDOR), January 28–February 3, 2017.

[2] Local jurisdictions consolidated by state; individual counties/cities separated by commas.

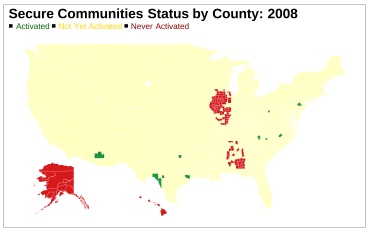
[3] Statewide policies apply to all jurisdictions within the state and may coexist with additional local measures.

[4] Sanctuary policies vary in scope: some limit ICE detainer cooperation, others have broader non-cooperation policies.

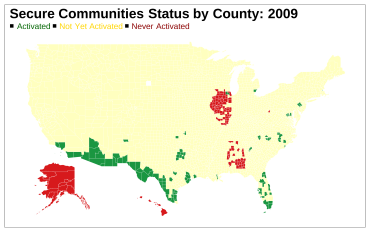
[5] List may not include all sanctuary jurisdictions nationwide; policies subject to change since data collection.

B Figures

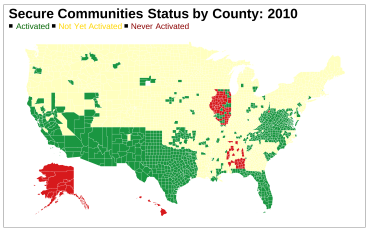
Figure A.1: Secure Communities Status by County



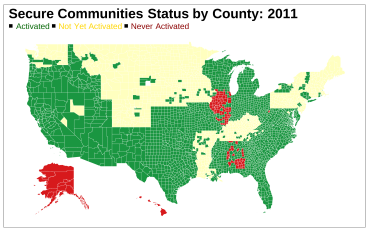
(a) 2008



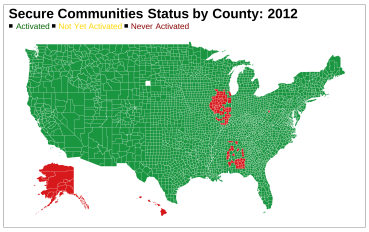
(b) 2009



(c) 2010



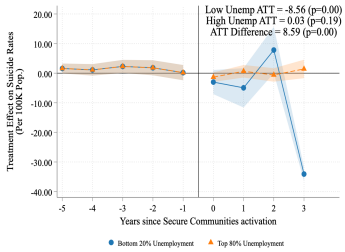
(d) 2011



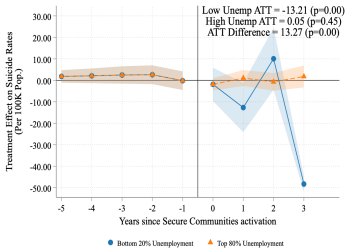
(e) 2012

Notes: These maps illustrate the rollout of Secure Communities by county in selected years. Green counties had Secure Communities activated by that year, yellow counties not yet activated, and red counties never activated.

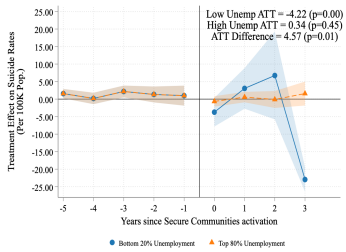
Figure A.2: Unemployment Heterogeneity (CPS): Adult Age Bands by Gender



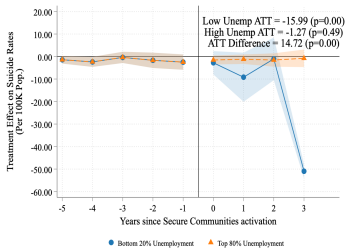
(a) Men + Women: Ages 25–34



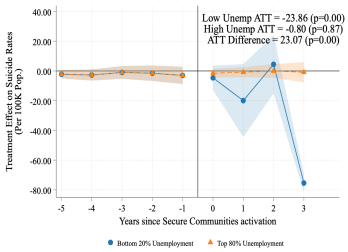
(b) Men: Ages 25–34



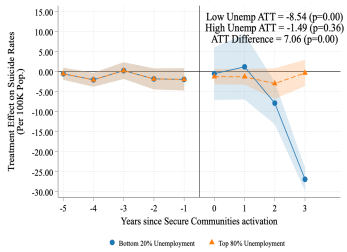
(c) Women: Ages 25–34



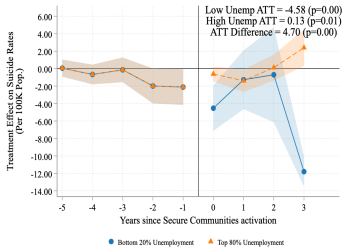
(d) Men + Women: Ages 35–44



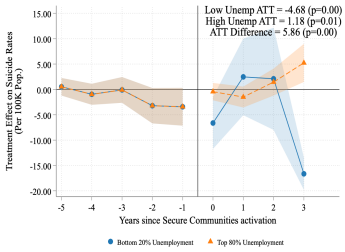
(e) Men: Ages 35–44



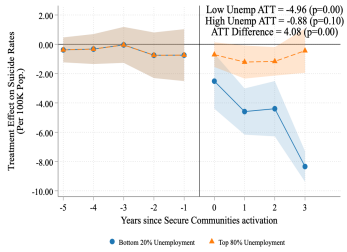
(f) Women: Ages 35–44



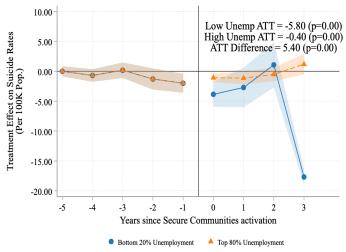
(g) Men + Women: Ages 45+



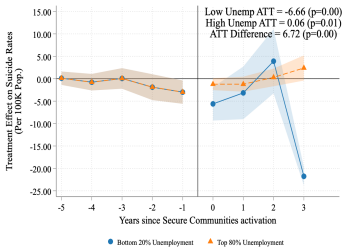
(h) Men: Ages 45+



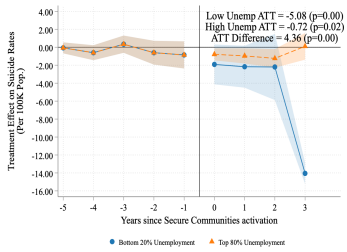
(i) Women: Ages 45+



(j) Men + Women: Ages 25+



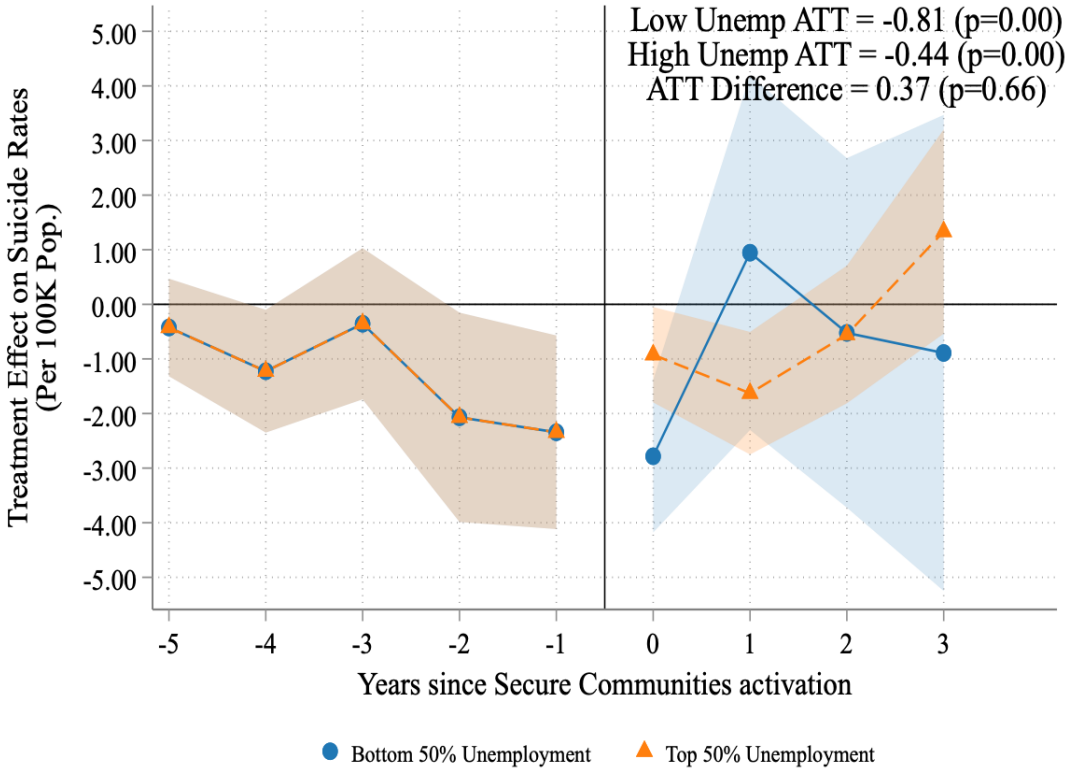
(k) Men: Ages 25+



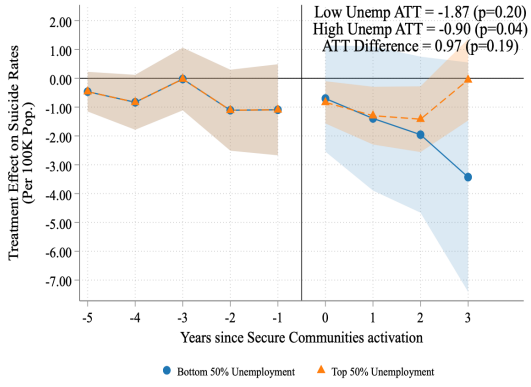
(l) Women: Ages 25+

Notes: Counties split into bottom 20% (low unemployment) vs. top 80% (high unemployment) using CPS data. See Figure 8 for specification details.

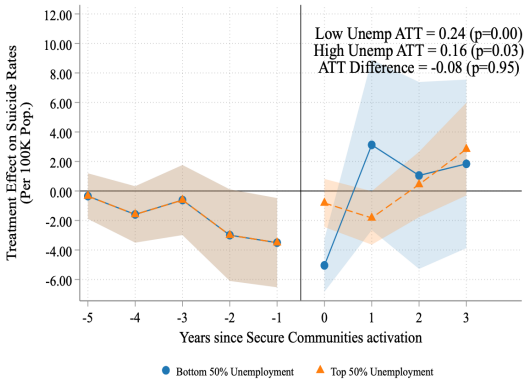
Figure A.3: Heterogeneous Effects by County-level Unemployment Rate (LAUS), Ages 34+



(a) Men and Women: Ages 34+



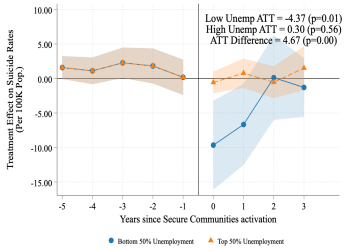
(b) Women: Ages 34+



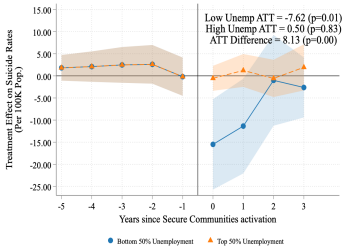
(c) Men: Ages 34+

Notes: This figure reports event study estimates of the effects of Secure Communities on Hispanic suicide rates per 100,000 among adults aged 34+, stratified by county unemployment. Counties are split at the median LAUS unemployment rate (low vs high); this is the overall county rate, not Hispanic-specific. Pre-treatment coefficients (β_l for $l < 0$) test parallel trends, and post-treatment coefficients (β_l for $l \geqslant 0$) show differential impacts by unemployment group. Estimates are population-weighted and standard errors are clustered at the county level.
Source: County-level unemployment rate is from the Local Area Unemployment Statistics (LAUS) (U.S. Bureau of Labor Statistics 2025).

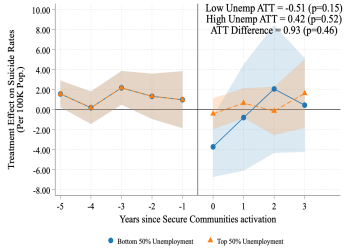
Figure A.4: Unemployment Heterogeneity (LAUS): Adult Age Bands by Gender



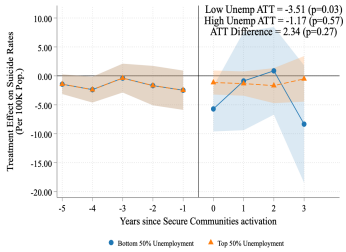
(a) Men + Women: Ages 25–34



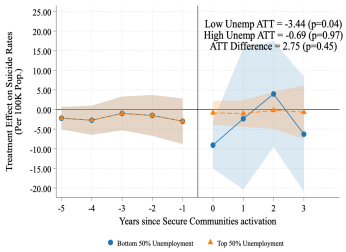
(b) Men: Ages 25–34



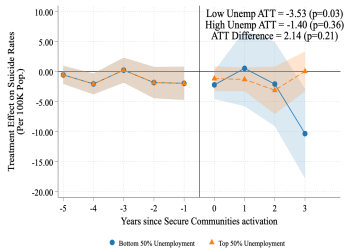
(c) Women: Ages 25–34



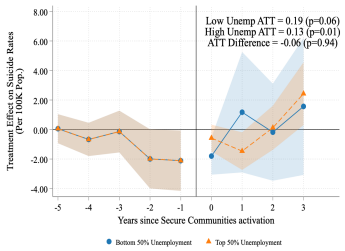
(d) Men + Women: Ages 35–44



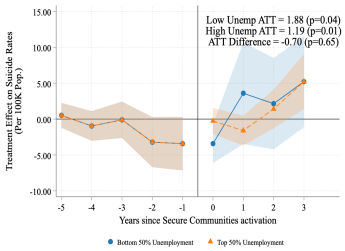
(e) Men: Ages 35–44



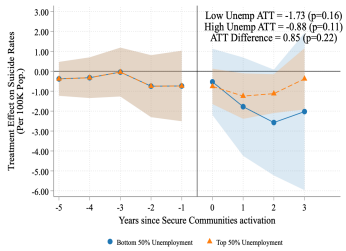
(f) Women: Ages 35–44



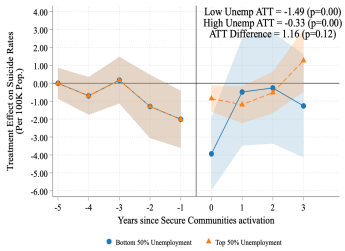
(g) Men + Women: Ages 45+



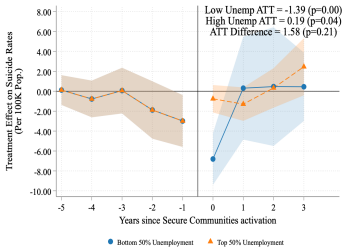
(h) Men: Ages 45+



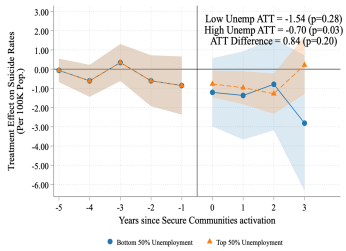
(i) Women: Ages 45+



(j) Men + Women: Ages 25+



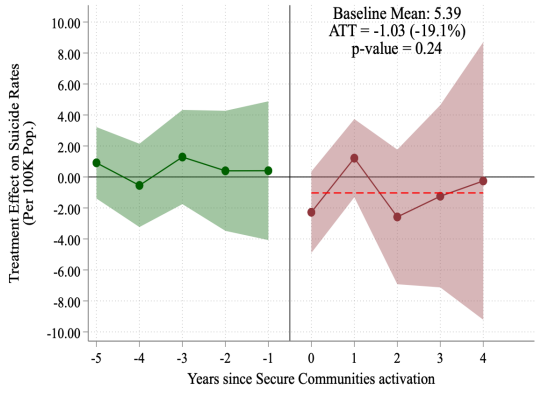
(k) Men: Ages 25+



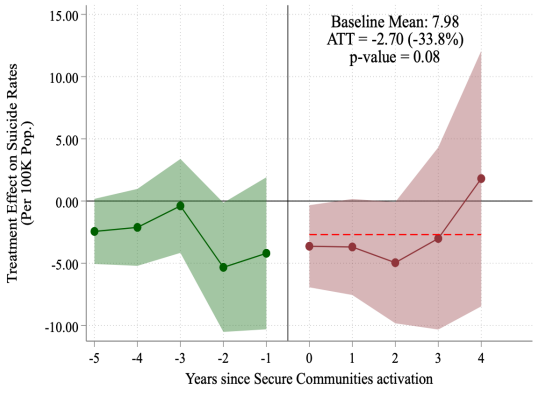
(l) Women: Ages 25+

Notes: Counties split at median unemployment rate using LAUS data. See Figure 8 for specification details.

Figure A.5: Effect of Secure Communities on Deaths of Despair by Age Group Women



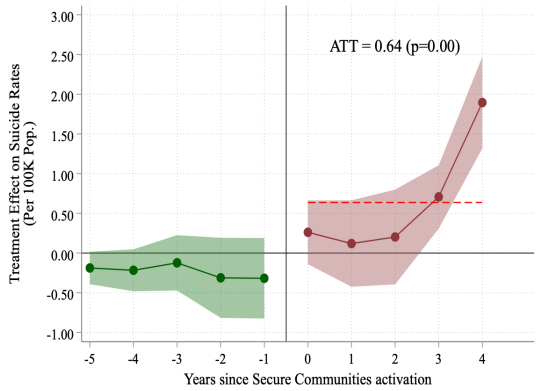
(a) Ages 25-34



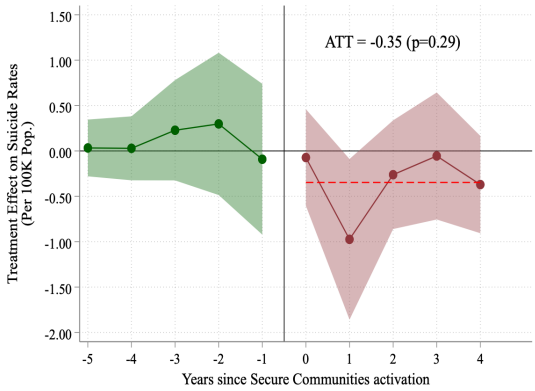
(b) Ages 35-44

Notes: This figure displays event study estimates for deaths of despair (suicides, alcohol-related deaths, and drug-related deaths combined) among women across different age groups. See Figure 3 for specification details including fixed effects and clustering.

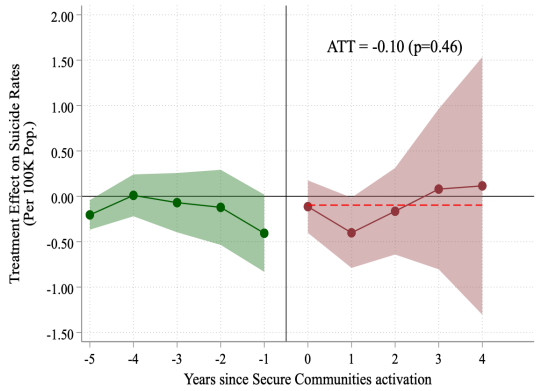
Figure A.6: Effect of Secure Communities on Alcohol-Related Deaths: All Age Groups



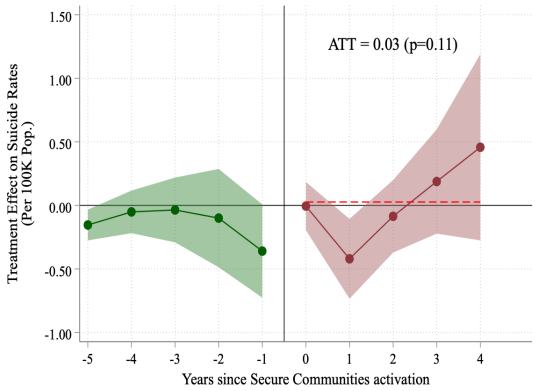
(a) Ages 25-34



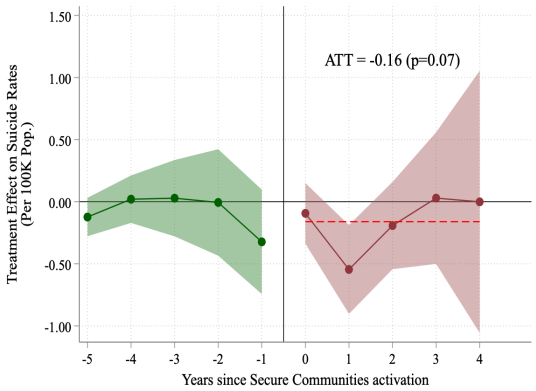
(b) Ages 35-44



(c) Ages 45+



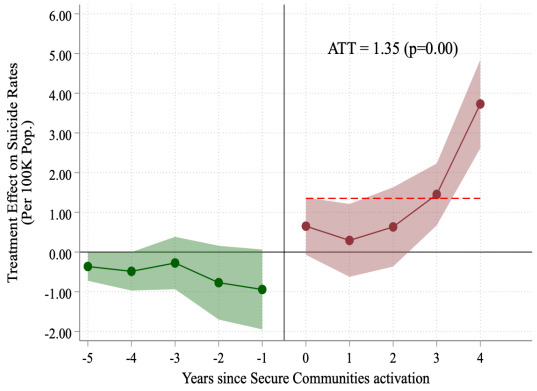
(d) Ages 25+



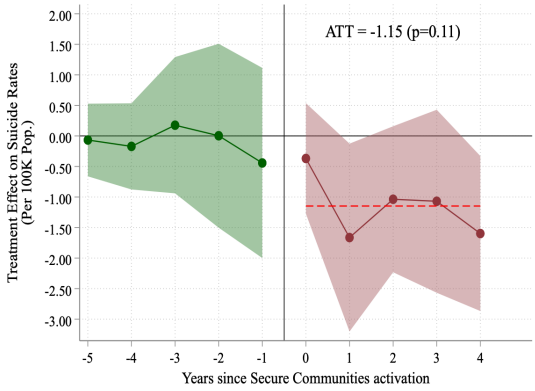
(e) Ages 34+

Notes: This figure displays event study estimates for alcohol-related deaths across different age groups. See Figure 3 for specification details including fixed effects and clustering.

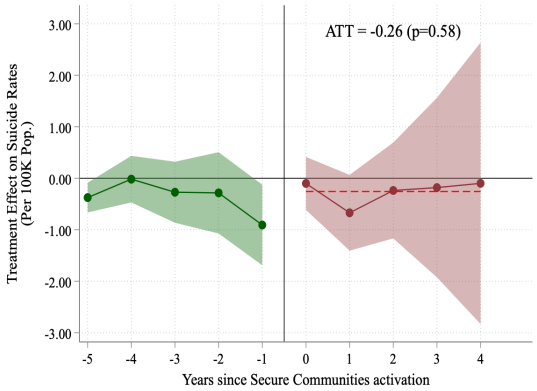
Figure A.7: Effect of Secure Communities on Alcohol-Related Deaths: Men



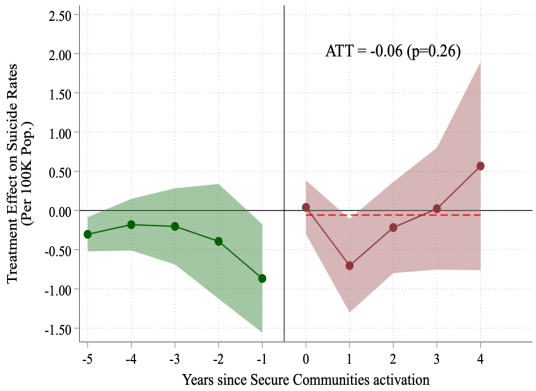
(a) Ages 25-34



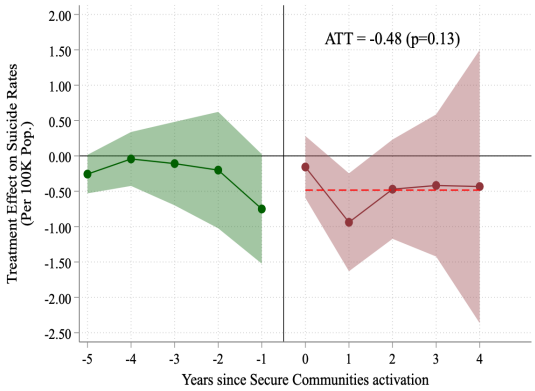
(b) Ages 35-44



(c) Ages 45+



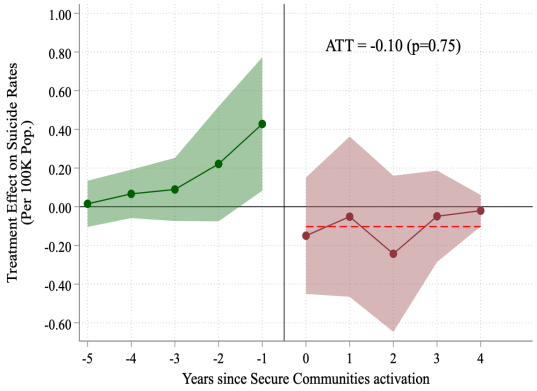
(d) Ages 25+



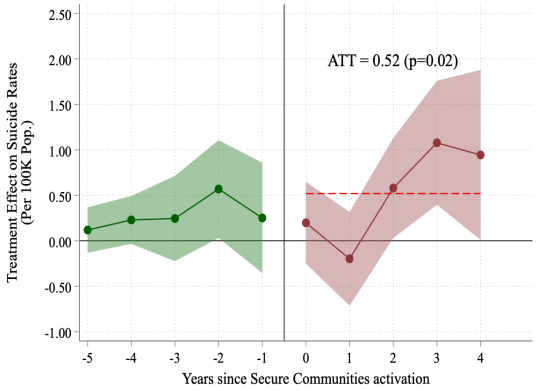
(e) Ages 34+

Notes: This figure displays event study estimates for alcohol-related deaths among men across different age groups. See Figure 3 for specification details including fixed effects and clustering.

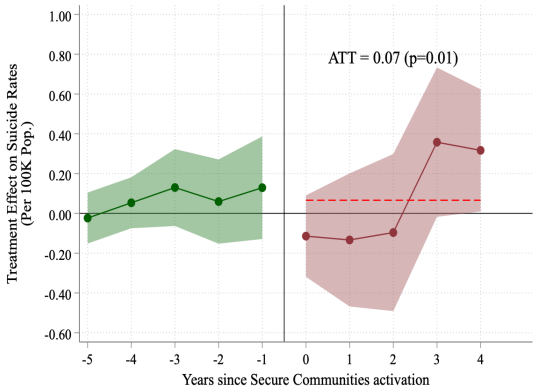
Figure A.8: Effect of Secure Communities on Alcohol-Related Deaths: Women



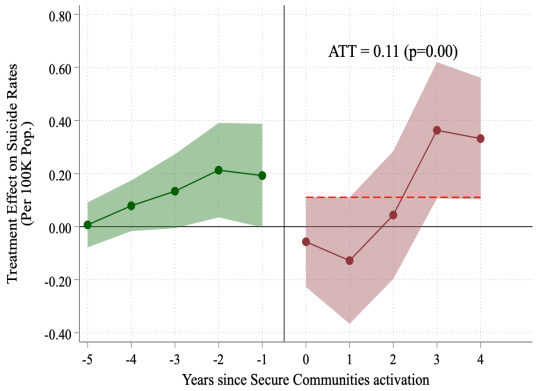
(a) Ages 25-34



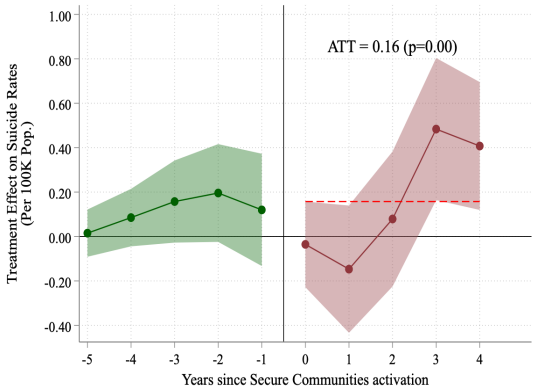
(b) Ages 35-44



(c) Ages 45+



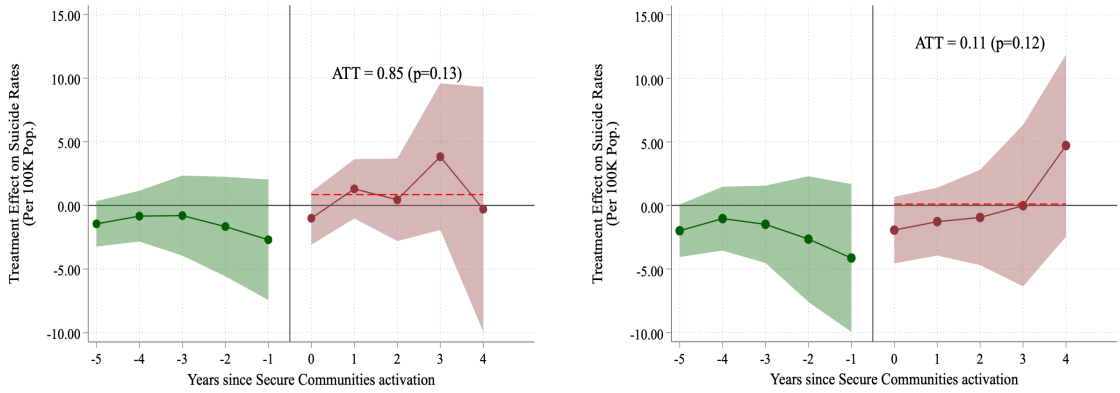
(d) Ages 25+



(e) Ages 34+

Notes: This figure displays event study estimates for alcohol-related deaths among women across different age groups. See Figure 3 for specification details including fixed effects and clustering.

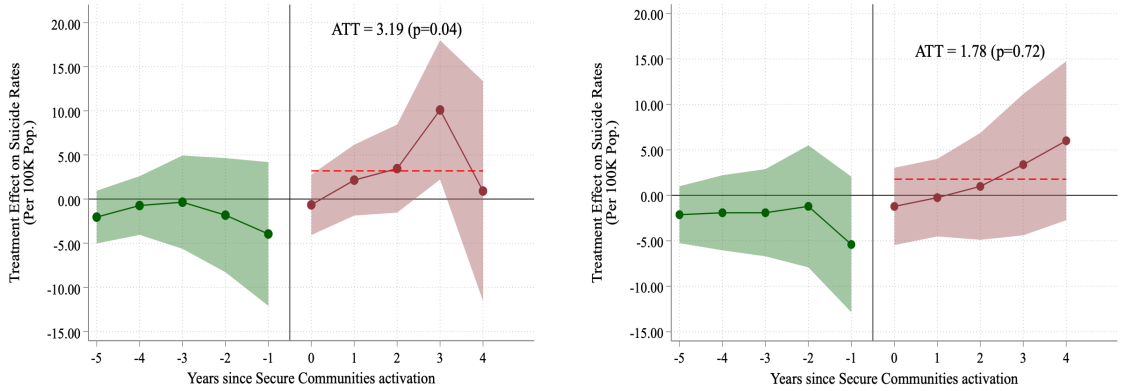
Figure A.9: Effect of Secure Communities on Drug-Related Deaths by Age Group



(a) Ages 25-34 (b) Ages 35-44

Notes: This figure displays event study estimates for drug-related deaths across different age groups. See Figure 3 for specification details including fixed effects and clustering.

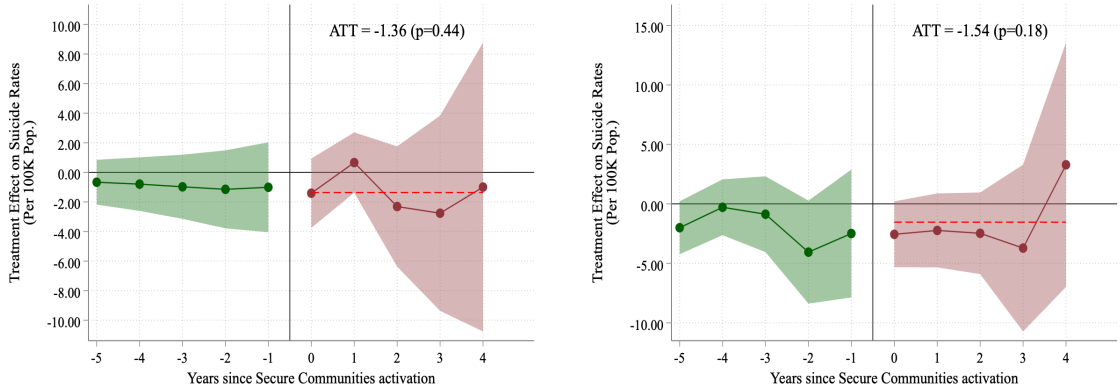
Figure A.10: Effect of Secure Communities on Drug-Related Deaths by Age Group Men



(a) Ages 25-34 (b) Ages 35-44

Notes: This figure displays event study estimates for drug-related deaths among men across different age groups. See Figure 3 for specification details including fixed effects and clustering.

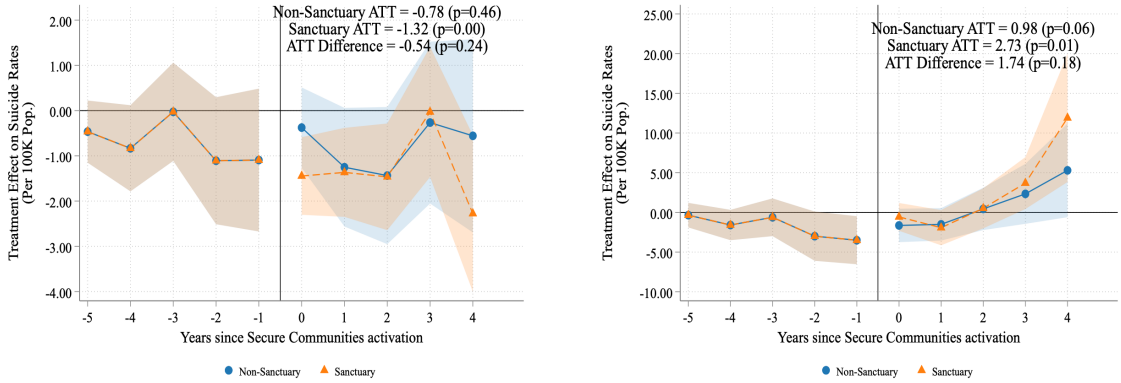
Figure A.11: Effect of Secure Communities on Drug-Related Deaths by Age Group Women



(a) Ages 25-34 (b) Ages 35-44

Notes: This figure displays event study estimates for drug-related deaths among women across different age groups. See Figure 3 for specification details including fixed effects and clustering.

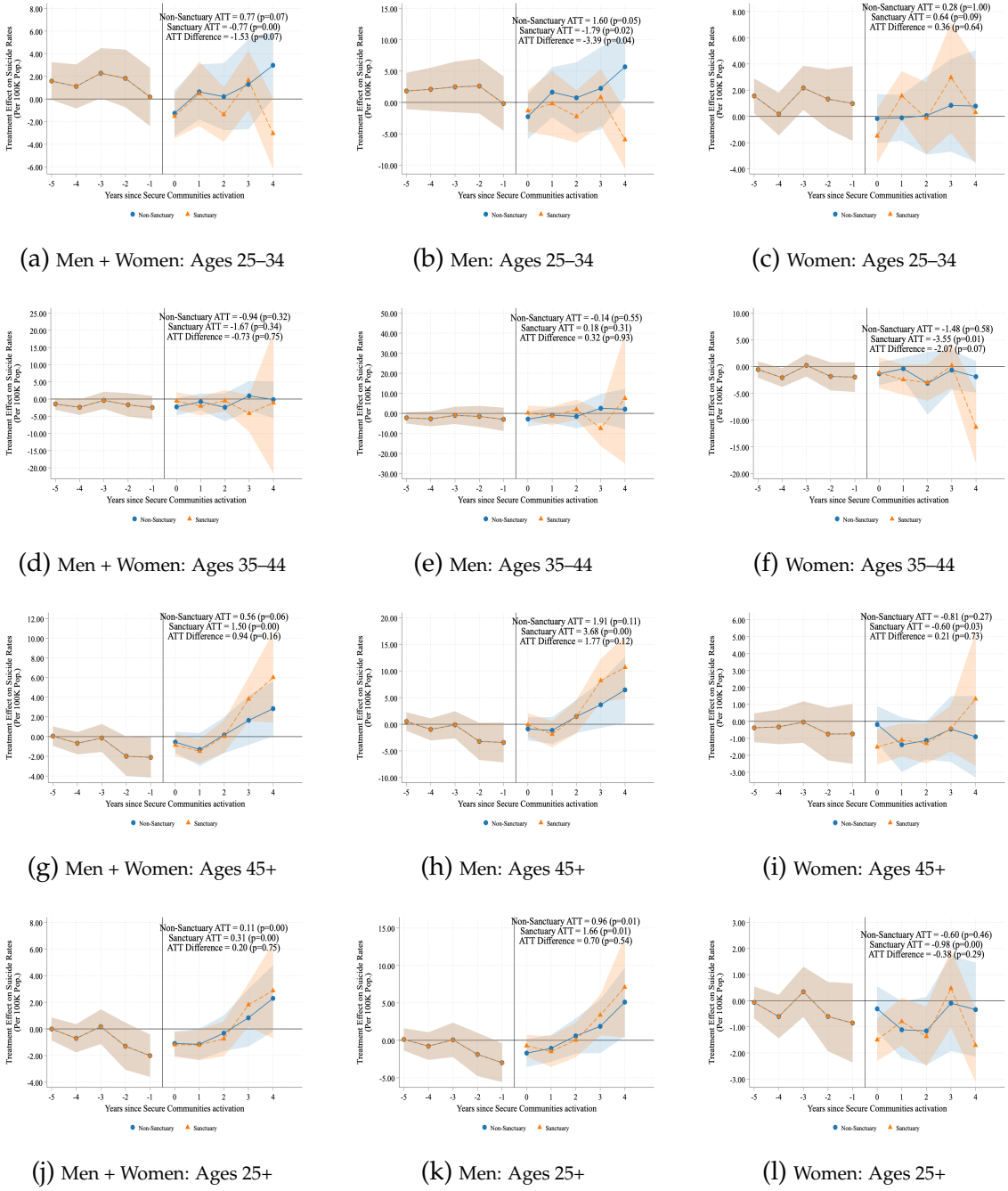
Figure A.12: Triple Difference-in-Differences with Sanctuary Heterogeneity: Effect on Hispanic vs White Suicide Rates by Gender (Ages 34+)



(a) Women (Ages 34+) (b) Men (Ages 34+)

Notes: See Figure 11 for details. Suicide rates per 100,000 among adults aged 34+ by gender.

Figure A.13: Sanctuary Heterogeneity: Adult Age Bands by Gender



(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34

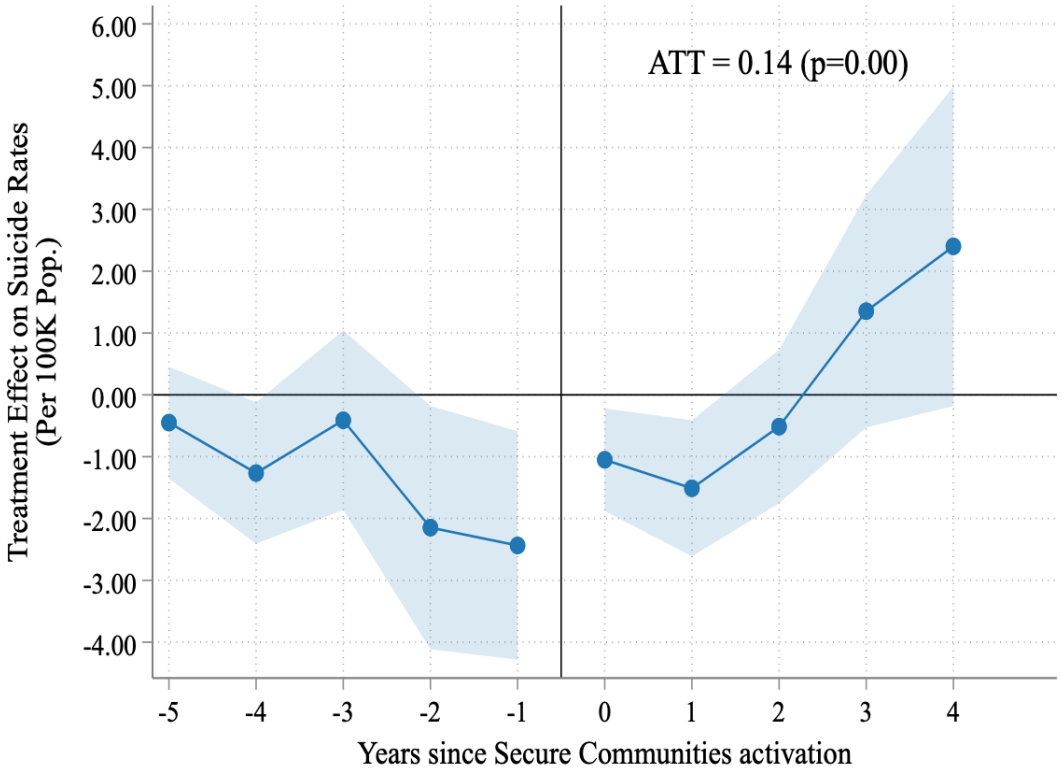
(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44

(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+

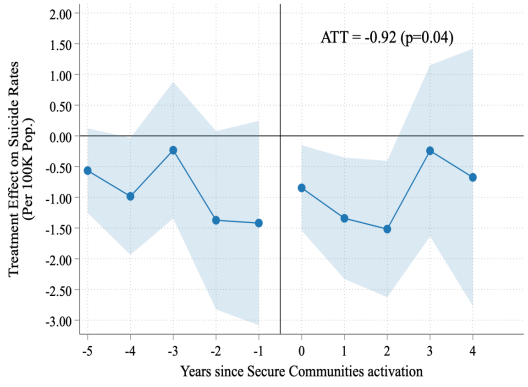
(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

Notes: Each panel shows triple difference-in-differences estimates with sanctuary heterogeneity. See Figure 11 for specification details.

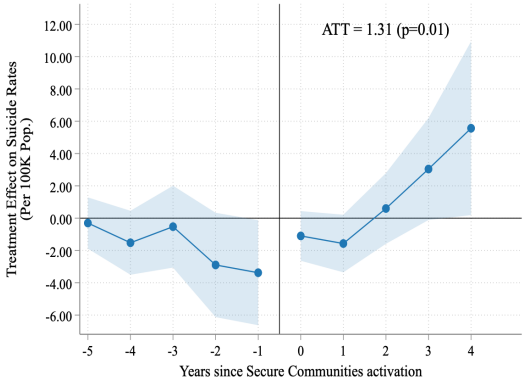
Figure A.14: Triple Difference-in-Differences with Removals as a Control: Ages 34+ (Main and Gender-Specific)



(a) Ages 34+ (Adults)



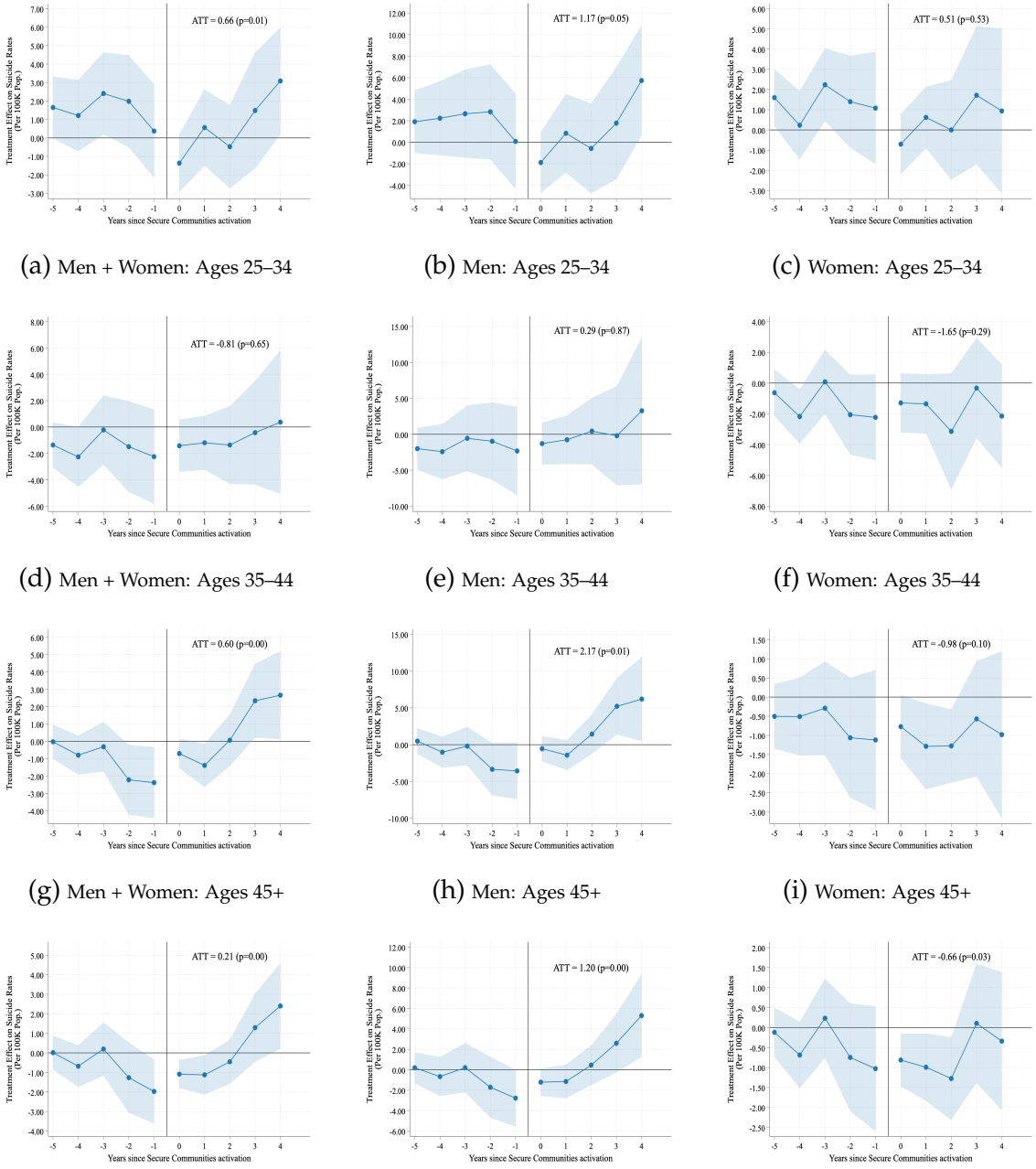
(b) Women Ages 34+



(c) Men Ages 34+

Notes: These results include county-level number of removals as a control. See Figure 3 for more details.

Figure A.15: Removals Control: Adult Age Bands by Gender



(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34

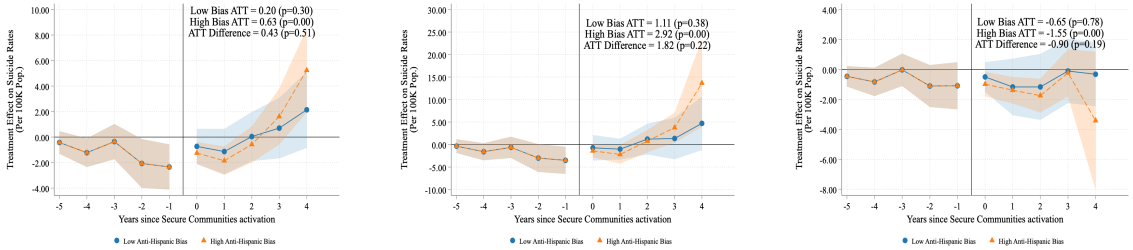
(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44

(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+

(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

Notes: Each panel includes county-level number of removals as a control. See Figure 3 for specification details.

Figure A.16: Anti-Hispanic Bias Heterogeneity: Effect on Hispanic Suicide Rates (Ages 34+)



(a) Men + Women (b) Men (c) Women

Notes: This figure estimate event study models for Hispanic suicide rates, comparing counties with above-median ("High Bias") versus below-median ("Low Bias") values of a composite anti-Hispanic bias index. The composite bias index incorporates implicit and explicit bias measures. See Figure 3 for specification details.
Source: The bias index is constructed using Lubotsky and Wittenberg (2006) and incorporates measures of implicit association test (IAT) scores, hate crime rates, and explicit bias at the state level (American National Election Studies 2021; Bureau of Justice Statistics 2023a; Greenwald, McGhee, and Schwartz 1998).

Figure A.17: Anti-Hispanic Bias Heterogeneity: Adult Age Bands by Gender

(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34

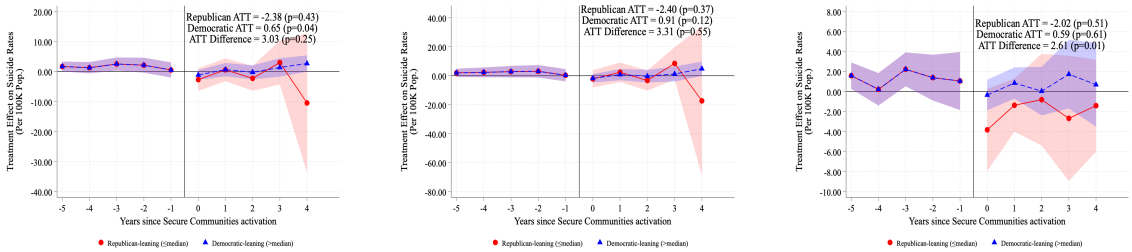
(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44

(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+

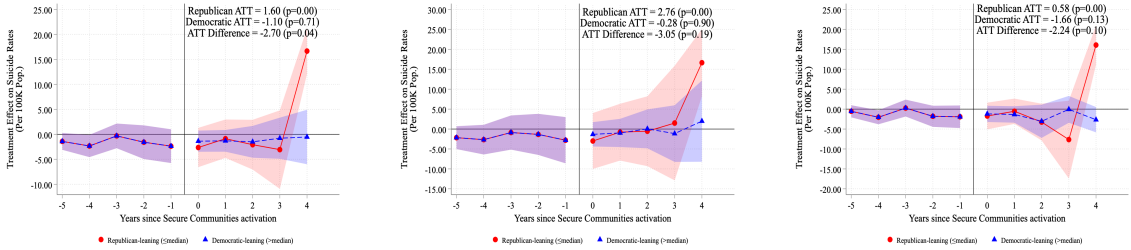
(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

Notes: Each panel shows heterogeneous effects by county-level anti-Hispanic bias. See Figure A.16 for specification details.

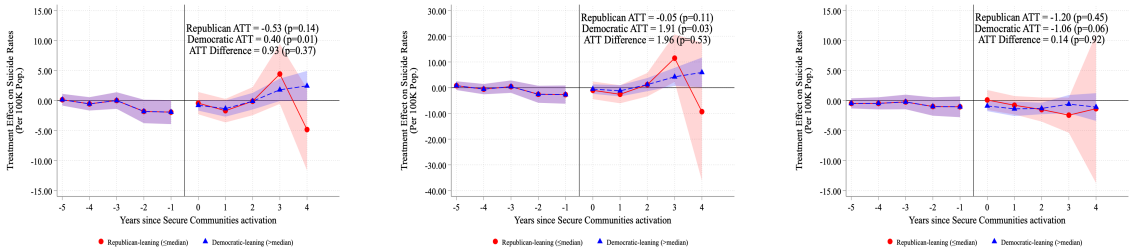
Figure A.18: Political Affiliation Heterogeneity: Effect on Hispanic Suicide Rates by Age and Gender



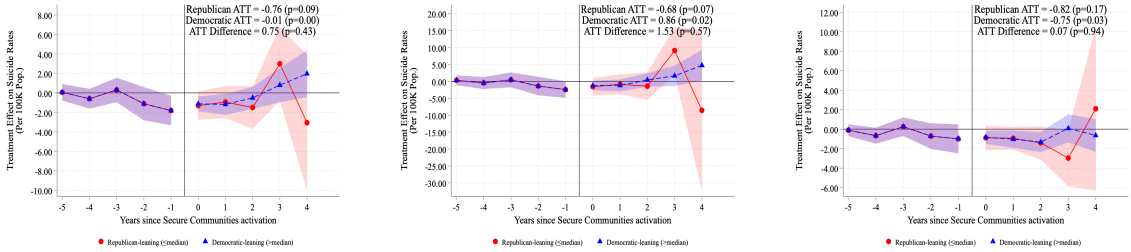
(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34



(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44



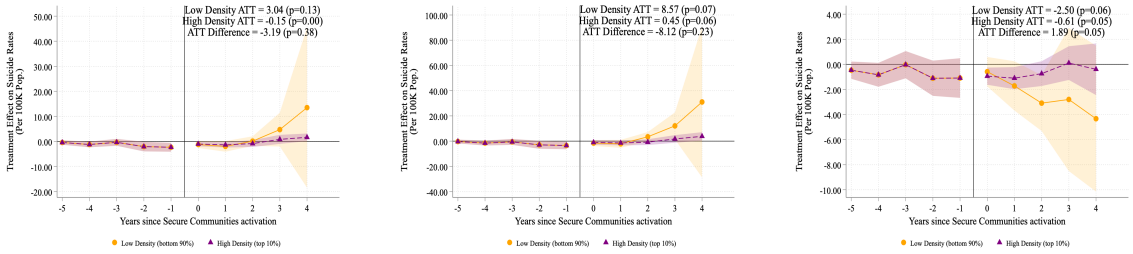
(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+



(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

Notes: Each panel shows heterogeneous effects by county-level political affiliation comparing Hispanic suicide rates per 100,000. Rows correspond to age bands; columns show results for all individuals, men, and women. See Figure 12 for specification details including political classification, fixed effects, and clustering.

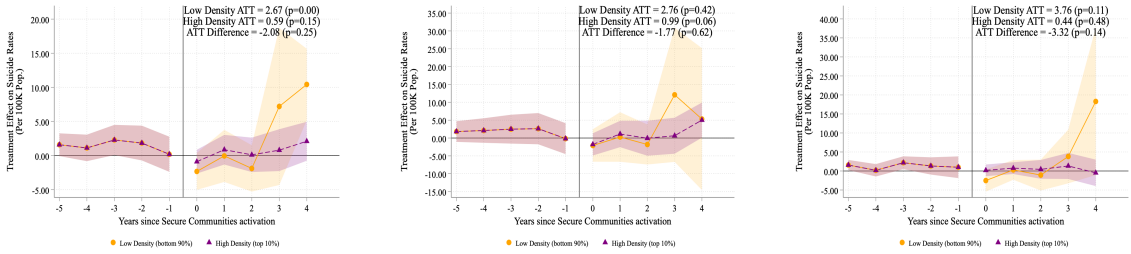
Figure A.19: Population Density Heterogeneity: Effect on Hispanic Suicide Rates (Ages 34+)



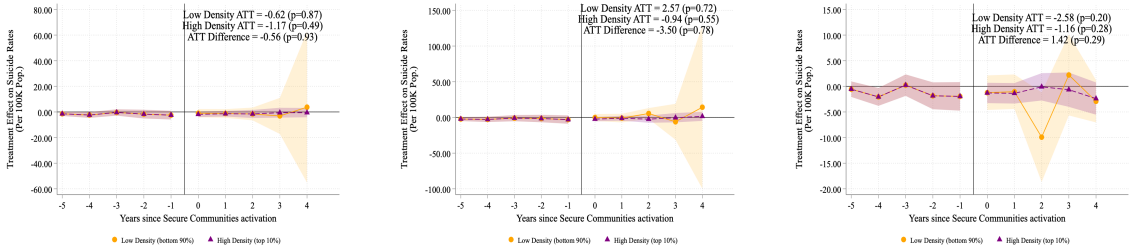
(a) Men + Women (b) Men (c) Women

Notes: These figures estimate event study models for Hispanic suicide rates per 100,000 among adults aged 34+, comparing high-density counties (top 10% of population density) versus low-density counties (bottom 90%). Pre-treatment coefficients test the parallel trends assumption; post-treatment coefficients capture how the mental health impact of Secure Communities varies by county-level population density. Standard errors are clustered at the county level and weighted by county population.

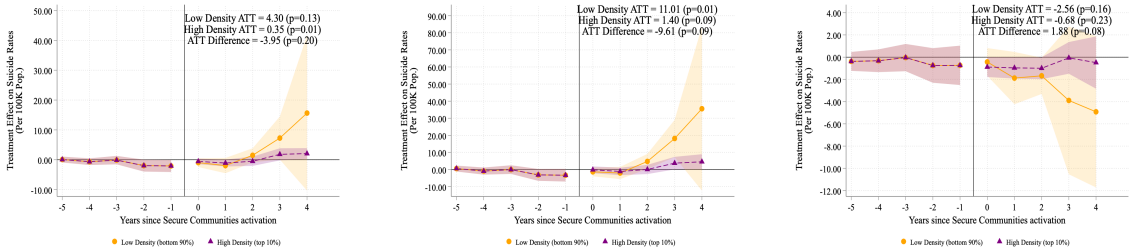
Figure A.20: Population Density Heterogeneity: Effect on Hispanic Suicide Rates by Age and Gender



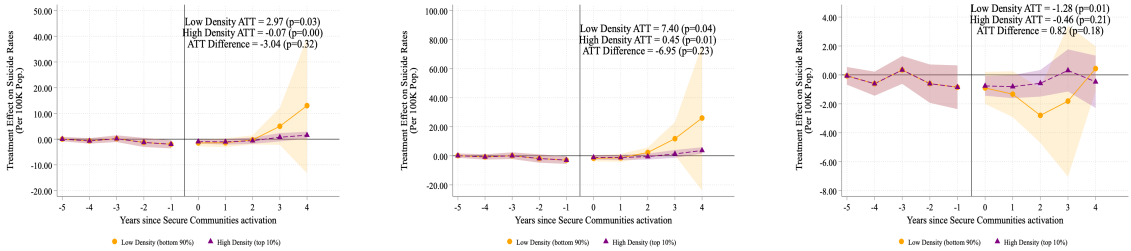
(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34



(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44



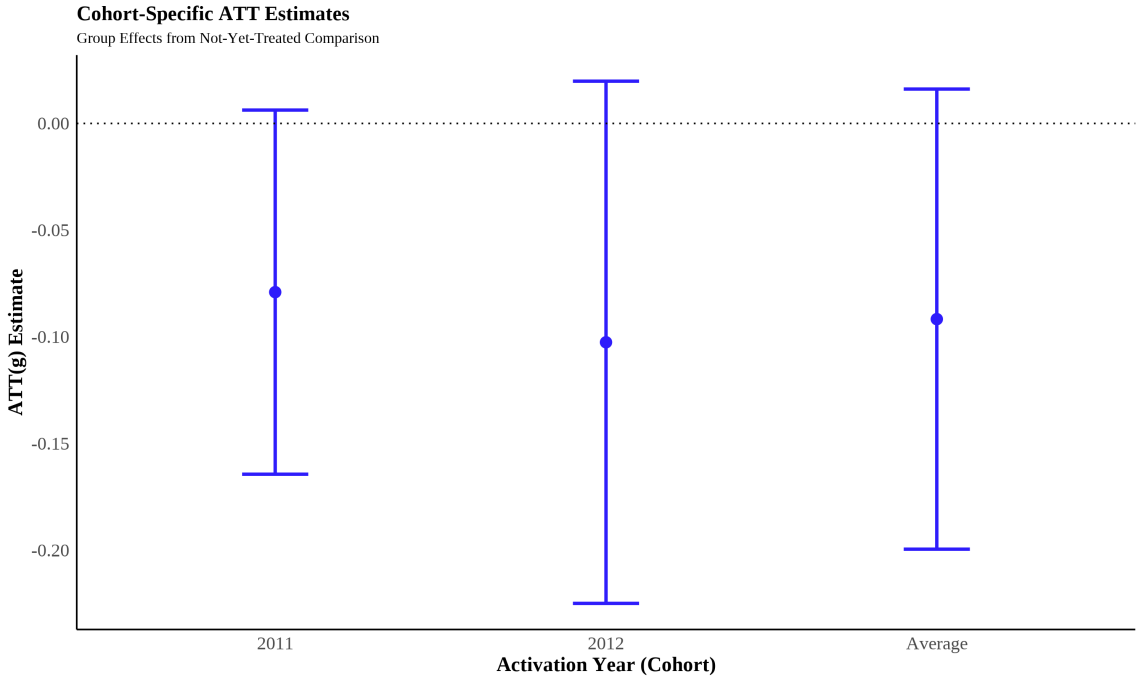
(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+



(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

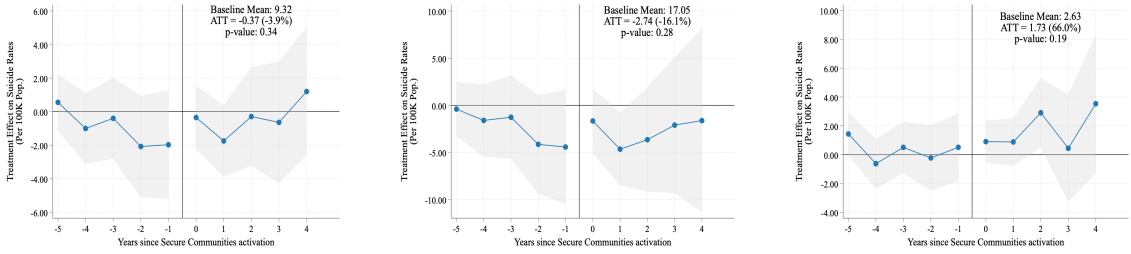
Notes: Each panel shows heterogeneous effects by county-level population density comparing Hispanic suicide rates per 100,000. Rows correspond to age bands; columns show results for all individuals, men, and women. See Figure A.19 for specification details including density classification, fixed effects, and clustering.

Figure A.21: Effect of Secure Communities on Number of Day Reported Mental Unwellness

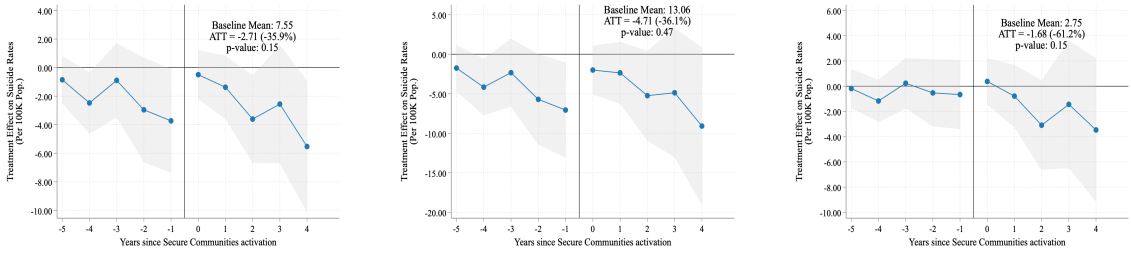


Notes: This figure shows the cohort specific effect of Secure Communities on the average number of days of reported mental unwellness in the past 30 days, using data from the County Health Rankings & Roadmaps. The outcome variable y_{ct} is the average number of days of poor mental health reported by adults in county c at time t.
Source: County Health Rankings & Roadmaps University of Wisconsin Population Health Institute (2025).

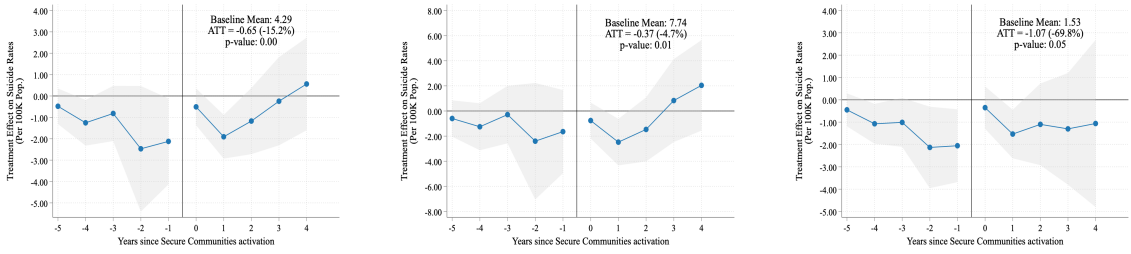
Figure A.22: Placebo Test: Black vs. White Suicide Rates by Age and Gender



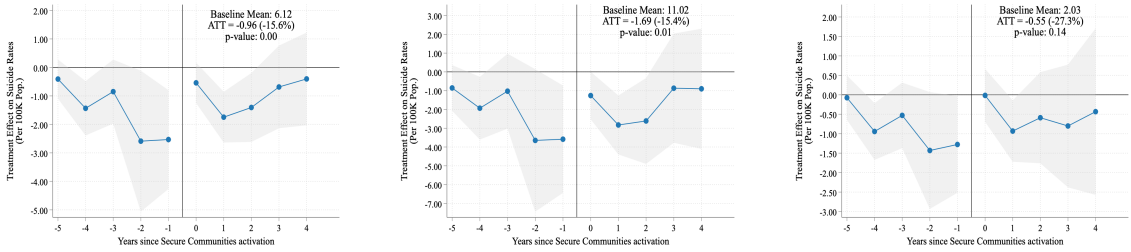
(a) Men + Women: Ages 25–34 (b) Men: Ages 25–34 (c) Women: Ages 25–34



(d) Men + Women: Ages 35–44 (e) Men: Ages 35–44 (f) Women: Ages 35–44



(g) Men + Women: Ages 45+ (h) Men: Ages 45+ (i) Women: Ages 45+



(j) Men + Women: Ages 25+ (k) Men: Ages 25+ (l) Women: Ages 25+

Notes: Each panel shows placebo triple difference-in-differences estimates comparing Black versus White suicide rates per 100,000. The Secure Communities policy should not affect the suicide gap between these two groups. See Figure 3 for specification details.