

# State Immigration Policy Contexts and Racialized Legal Status Disparities in Health Care Utilization Among U.S. Agricultural Workers

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**ABSTRACT** Research links restrictive immigration policies to immigrant health and health care outcomes. Yet most studies in this area focus on the impact of single policies in particular years, with few assessing how broader state-level immigration policy contexts affect groups by nativity, race/ethnicity, and legal status. Linking data from the National Agricultural Workers Survey (2005–2012) with information on state immigration policies, we use an intersectional approach to examine the links between policy contexts and health care utilization by nativity, race/ethnicity, and legal status. We also assess the associations between two specific types of state immigration policies—those governing immigrant access to Medicaid and driver’s licenses—and health care utilization disparities. We find that state-level immigration policy contexts are associated with health care utilization among U.S.-born and naturalized U.S. citizen non-White Latinx agricultural workers, who report lower levels of health care utilization and greater barriers to care-seeking in more restrictive policy contexts. By contrast, we find little evidence that state policies shaped health care utilization among undocumented workers. These findings advance understanding of the impact of “policies of exclusion” on the lives of marginalized groups and underscore the importance of *racialized legal status* in considering the links between sociopolitical contexts and health and health care disparities.

**KEYWORDS** Immigration policy • Agricultural workers • Latinx health • Health care • Health inequalities

## Introduction

State legislatures have seized considerable control over U.S. immigration policy over the past several decades, playing an increasingly large role in shaping the contexts in which immigrants live and work (Reich 2017, 2019). A substantial body of research investigates how state immigration policies—both punitive and accommodating—shape pathways of immigrant incorporation and impact the health and well-being of immigrants. Findings from this research highlight the critical role of states in shaping the life chances and outcomes of immigrants and their descendants

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and contributing to broader patterns of inequality in the United States (Arcury and Quandt 2007; Friedman and Venkataramani 2021; Hatzenbuehler et al. 2017; Perreira and Pedroza 2019; Philbin et al. 2018; Stanhope et al. 2019; Torche and Sirois 2019; Torres et al. 2018). These sociopolitical contexts influence access to and utilization of services, such as health care, which are vital for immigrants' societal incorporation and overall well-being and have large and enduring consequences for racial/ethnic, nativity, and legal status disparities across a host of outcomes (Asad and Clair 2018; Menjívar 2021).

Despite increased attention to the links between state immigration policies and contexts and immigrant well-being in the United States, two gaps warrant attention. First, given that the political messaging and enforcement of these policies have largely centered on Latinx immigrants, much of the research in this area focuses on the impact of immigration policies and environments on Latinx individuals (Hatzenbuehler et al. 2017; Ornelas et al. 2020; Wang et al. 2022). Still, questions about how state immigration policy contexts differentially affect individuals by nativity, race/ethnicity, and legal status—as well as at the intersections of these axes of social stratification—remain unanswered. Notably, undocumented immigrants are often underreported in administrative and survey data, with many surveys not collecting information on respondents' legal status. This limitation is consequential because immigration policies may be particularly deleterious for undocumented individuals, given that many policies specifically target such immigrants. Similarly, how state policies differentially impact groups by race/ethnicity remains unclear. For example, it is possible that state immigration policies disparately impact Latinx individuals racialized as White versus Black, and the effects may be further stratified by legal status (Brown 2018). Still, these intersectional inequalities are underexplored. As a result, the role of immigration policy in patterning health and well-being within and across multiple intersecting systems of stratification and in simultaneously producing racialized, nativity, and legal status inequalities is poorly understood.

Second, most studies in this area have focused on specific state policies implemented in specific years, in what Philbin et al. (2018:29) described as a “one-policy, one-level, one-outcome” approach. However, state legislatures have passed thousands of laws on immigration-related issues in the last decade, producing tremendous variation in policy environments across both place and time (Reich 2017, 2019). Exposure to these broad policy environments may shape patterns of health and health care inequality beyond what research on the implementation or repeal of singular policies in single years can reveal. More research on how the temporal and geographic patterning of these broader state immigration policy contexts contributes to population-level inequalities is needed.

The present study expands understanding of the links between state immigration policy and racial/ethnic, nativity, and legal status inequalities in health care by leveraging data from several sources, including restricted-access geocoded data from the 2005–2012 National Agricultural Workers Survey (NAWS) and two data sets on state immigration policy contexts. We assess nativity, racial/ethnic, and legal status disparities in health care utilization and investigate the roles of broad state immigration policy contexts (both restrictive and accommodating) as well as the implementation of specific domains of state immigration policy in the production of these disparities among a nationally representative sample of U.S. agricultural workers.

Agricultural workers represent an important but understudied group in research on the impact of immigration policy. U.S. agriculture relies heavily on immigrant labor and about half of the agricultural workforce is undocumented (Castillo and Simmitt 2021). Undocumented workers' legal status and limited public visibility leave them susceptible to social isolation and low levels of access to public and social resources, suggesting they may be particularly vulnerable to changes in state immigration policy contexts (Culp and Umbarger 2004). Therefore, this study focuses on agricultural workers and elucidates the roles of both macro-level state immigration policy contexts and specific types of immigration laws in the production of nativity, racial/ethnic, and legal status inequalities in health care utilization and reported barriers to care-seeking among this potentially vulnerable group of workers.

Our findings highlight the complex ways that state immigration policy contexts shape the lives and health care utilization of marginalized groups in the United States. We document striking disparities in health care utilization at the intersection of nativity, race/ethnicity, and legal status, with undocumented immigrant workers having especially low levels of utilization. Notably, we find that state immigration policy contexts—either more restrictive or more accommodating—have little impact on health care utilization among undocumented immigrants, who are often the direct targets of immigration policies. However, more restrictive policy contexts *do* chill utilization among (foreign-born) naturalized U.S. citizen non-White Latinx workers, in particular. Such workers are also most likely to report material (financial or transportation) or information barriers to seeking care in more restrictive policy climates. Despite not experiencing reduced or increased health care utilization in the context of changing policy climates, both White and non-White Latinx undocumented immigrants report greater perceptions of other barriers to care (including xenophobia) in more restrictive policy contexts. Our findings highlight the complex and nuanced role of *racialized legal status* (Asad and Clair 2018) in patterning health care utilization and barriers to care, with important implications for science, policy, and intervention. This study adds to a growing body of research (e.g., Montez 2020; Montez et al. 2020) on the critical importance of state policies in shaping patterns of population health inequality in the United States.

## Background

### Impact of U.S. Immigration Policies

Alongside federal policies that have long aimed to prevent Latin American immigration to the United States in the first place (Tienda and Sanchez 2013), Latinx immigrants and their descendants are subjected to a variety of federal, state, and local immigration policies that shape their integration *once inside* the country (Perreira and Pedroza 2019). “Restrictive” policies are those that discourage integration through creating policy contexts in which immigrants face increased surveillance, restricted access to public and social services, and greater risk of deportation. By contrast, “accommodating” policies expand immigrants’ rights and access to public and social resources, often regardless of legal status (De Trinidad Young and Wallace 2019).

Over the past three decades, the 287(g) and Secure Communities programs have played especially critical roles in expanding immigration enforcement and shaping immigrant integration (Coleman 2012). The 287(g) program became law as part of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA) and increased collaboration between federal immigration officials and state and local law enforcement in enforcing federal immigration laws. Secure Communities further engaged state and local law enforcement in immigration enforcement by facilitating information sharing between law enforcement, the Federal Bureau of Investigation (FBI), and the Department of Homeland Security (DHS). These programs dramatically increased immigrant surveillance and gave rise to an inward migration of immigration enforcement from the southern border to the U.S. interior (Coleman 2012). Whereas both 287(g) and Secure Communities claim to target immigration enforcement activities at undocumented immigrants who have committed crimes, law enforcement has used these programs to target all potentially undocumented immigrants (Coleman and Kocher 2019; Donato and Rodriguez 2014). Although they are federal programs, they take local form, contextualized within specific political, legal, and racial contexts (Coleman 2012; Moinester 2018).

Stagnation of federal immigration policy after the passage of the IIRIRA in 1996 has resulted in immigration-related policy making being concentrated at the state level (Reich 2017). In the years following the Great Recession of 2007–2009, punitive anti-immigrant legislation at the state level surged (Ybarra et al. 2016). Southern states and those along the southern border generally passed the greatest numbers of restrictive immigration policies in recent years. Many of these states—including Alabama, Arizona, Georgia, and Texas—also have especially high numbers of agricultural workers (U.S. Bureau of Labor Statistics 2020).

State immigration policies can shape patterns of health care utilization through several mechanisms. They can directly restrict access to social safety-net programs (such as Medicaid and the Supplemental Nutrition Assistance Program) and health care services (Waters and Pineau 2015). State legislatures can use immigration policy to maintain a system of segregation that prevents immigrants from utilizing resources that promote well-being (Taylor 2020). These policies can prevent immigrants from utilizing services by restricting their ability to access government-funded services (e.g., federally funded programs that provide HIV testing and perinatal care) (Rhodes et al. 2015) and may also indirectly limit immigrants' utilization of services by denying them the material resources that facilitate access to care, such as the ability to obtain driver's licenses.

Restrictive legislation can also generate stress and anxiety among immigrant communities stemming from fear of surveillance and increased risk of deportation (Bernstein et al. 2019). Some restrictive policies require health care workers to report patients to U.S. Immigration and Customs Enforcement (ICE) if they are suspected to be undocumented. Although such collaboration is rare in practice, studies find that undocumented immigrants fear collaboration between immigration enforcement and health care professionals (Berk and Schur 2001; Kuczewski et al. 2019; Maldonado et al. 2013), and this fear can serve as a barrier to utilizing care (Martinez et al. 2015). Such fear of collaboration may lead to delays in care-seeking or forgone preventative, diagnostic, and treatment services (Castro-Echeverry et al 2013; Dondero and Altman 2020; Poon et al. 2013; Rhodes et al. 2015), which can generate

population-level health and mortality disparities downstream. Despite substantial evidence of an immigrant health advantage (Hamilton and Hagos 2021) that is particularly pronounced among Latinx immigrants (Hummer and Gutin 2018; Lariscy et al. 2015; Risomena et al. 2015), both U.S.- and foreign-born Latinx groups experience substantial health risks (Brown 2018). Compared with U.S.-born Whites, U.S.- and foreign-born Latinx individuals experience elevated risks of disability (Garcia et al. 2017; Hayward et al. 2014), diabetes (Crimmins 2004), and physiological dysregulation (Boen and Hummer 2019). Undocumented Latinx immigrants may face greater risk of specific health issues (Cabral and Cuevas 2020), including hypertension (Young and Pebley 2017), anxiety and depression (Martinez et al. 2015; Sullivan and Rehm 2005), and stress (Arbona et al. 2010), than documented immigrants. Thus, immigration policies may further exacerbate health risks experienced by Latinx groups by limiting their access to vital health care services that prevent, diagnose, and treat illness and disease and by decreasing psychosocial well-being and contributing to stress-related health conditions (Finch and Vega 2003).

Despite the substantial literature on the negative impact of restrictive policies on health and well-being, a growing body of research has assessed the effects of accommodating immigration policies, providing mixed evidence on their benefits for expanding and increasing immigrant access to and utilization of care (Hainmueller et al. 2017; Young et al. 2020; Young et al. 2018). This mixed evidence may be because of states implementing a mixture of both restrictive and accommodating policies, which may send conflicting messages to immigrants and result in psychological harm and exacerbation of socioeconomic, health, and other disparities across nativity, race/ethnicity, and legal status groups (Taylor 2020).

### “Spillover” Effects of State Immigration Policies

Immigration policies play a critical role in shaping the context of reception that immigrants encounter postmigration. These policies have long been used to maintain immigrant precarity and to integrate immigrants into the labor market to satisfy the demand for cheap labor, while ensuring that they remain vulnerable and exploitable (Gleeson and Gonzales 2012). Restrictive state immigration policies are also emblematic of deeper systems of racialized oppression and domination that exist in the United States (Taylor 2020). These policies serve as reactions to unfolding demographic processes, including the aging of the U.S. White population (Colby and Ortman 2015; Richeson and Sommers 2016) and increasing racial/ethnic and immigrant diversity (Alba 2020). Scholars theorize that these broader demographic processes generate concern among U.S.-born Whites, specifically, that existing racial hierarchies that privilege Whites and U.S. citizens will be dismantled (e.g., see Zuberi’s lecture; Benson Center 2019). As a result, although the primary target of restrictive immigration policies is often undocumented immigrants, policies can further marginalize those with *racialized legal statuses* who may be “lumped in” with undocumented immigrants because of perceived social, nativity, racial/ethnic, and language proximity to this group (Asad and Clair 2018; Philbin et al. 2018). Consequently, even documented immigrants and U.S.-born people of color may be affected by immigration policies, subjecting them to stereotypes that associate them

with the undocumented to produce a “racialization of illegality” (Menjívar 2021:94). Recent research provides compelling evidence that immigration enforcement and policy have spillover effects on U.S.-born citizen and documented immigrant Latinx individuals, in particular (Rhodes et al. 2015; Watson 2014).

### The Health and Health Care Needs of Immigrant Agricultural Workers

Since the 1960s, U.S. agriculture has been transformed by what has been termed the “Latinization” of the industry (Mines et al. 2007). In response to this demographic change, stereotypes have emerged that link agricultural work to specific nativities (i.e., foreign-born), races/ethnicities (i.e., non-White and Latinx), and most importantly, legal statuses (i.e., undocumented). Consequently, agricultural workers experience a “racialized illegality” that marginalizes them in broader society (Menjívar 2021). Moreover, qualitative work shows that farmworkers also experience marginalization within the agriculture industry, as internal labor hierarchies correlate strongly with nativity, race/ethnicity, and legal status (Holmes 2013).

This hierarchy is linked to access to resources in important ways; notably, those at the bottom of the hierarchy are more marginalized and possess lower levels of human and financial capital, which reduces access to health care and other services (Holmes 2013). Agricultural workers at the bottom of the labor hierarchy are also more likely to experience unique health care and health concerns related to their marginalized social position and to their specific occupational hazards (Caxaj and Cohen 2019). Common health issues include musculoskeletal pain (Hamilton et al. 2019), infectious diseases (Medel-Herrero et al. 2018), cancers resulting from close and prolonged contact with pesticides and carcinogenic chemicals (Mills et al. 2009), and traumatic injuries and physical limitations (Chari et al. 2018; Moyce and Schenker 2018). Still, agricultural workers rarely have access to paid sick leave, have low levels of health care utilization, and often work through pain and illness (Arcury and Quandt 2007; Arroyo et al. 2018; Bleiweis et al. 1977; Caxaj and Cohen 2019; Mazzoni et al. 2007; Weathers et al. 2004). These risks—especially those related to barriers to health care utilization—may be exacerbated in increasingly restrictive policy climates. Given the larger population-level health and health care utilization patterns observed among Latinx groups in the United States, as well as the unique social and health vulnerabilities experienced by U.S. agricultural workers, we theorize that immigration policies may compound health and well-being disadvantages among structurally marginalized groups working in U.S. agriculture.

### Research Questions

In merging survey data from the NAWS with longitudinal data on state immigration policies, this study aims to answer the following overarching questions:

1. How is health care utilization among U.S. agricultural workers patterned by nativity, race/ethnicity, and legal status, as well as at the intersections of these axes of stratification?

2. How do state-level immigration policy contexts and specific types of restrictive and accommodating immigration policies shape nativity, racial/ethnic, and legal status disparities in health care utilization among U.S. agricultural workers?
3. How do state-level immigration policy contexts and specific types of restrictive and accommodating immigration policies shape barriers to care-seeking among U.S. agricultural workers by nativity, race/ethnicity, and legal status?

## Data and Methods

### Data

This study draws on data from three key sources: NAWS, the Correlates of State Policy Project (CSPP), and state immigration policy data from Reich (2019). Individual-level data come from the restricted-access NAWS, which is administered by the U.S. Department of Labor. This is an annual, repeated cross-sectional survey that currently includes information on U.S. native and immigrant agricultural workers. The NAWS draws on a national multistage probability sample stratified by region, crop cycle, farming clusters, counties, and employers. Response rates among agricultural workers are generally high. For example, the response rate to the 2009 NAWS was 66% among randomly selected agricultural employers, and 59% of the eligible employers were ultimately sampled; in the random sample of farmworkers chosen from these employers, 92% agreed to be interviewed (U.S. Department of Labor 2009). The NAWS excludes farmworkers with H-2A temporary work visas but includes other types of temporary workers.<sup>1</sup> At each wave, the NAWS interviews between 1,500 and 3,600 agricultural workers. The NAWS includes detailed information on respondent sociodemographic characteristics—including nativity, race/ethnicity, and legal status—as well as information on health conditions and health care utilization. We obtained restricted-access geocoded NAWS data to enable merging of individual-level survey data to state-level immigration policy data. We use data from the NAWS spanning 2005–2012 (U.S. Department of Labor 2020).

We merge individual-level data from the NAWS with data on state immigration policies from the CSPP (Jordan and Grossmann 2020). CSPP data on restrictive and accommodating immigration policies are taken from an original coding by Reich (2017) of 1,393 laws approved by state legislatures between 2005 and 2012; the data are available

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<sup>1</sup> A limitation of the NAWS is that it excludes temporary H-2A workers. H-2A workers are increasingly represented in U.S. agriculture, and their numbers have increased fivefold over the past 15 years (Castillo and Simmitt 2021). H-2A visa holders are eligible for health insurance through the Affordable Care Act, which increases their access to (and potentially their utilization of) health care relative to other groups of agricultural workers (i.e., undocumented workers). Thus, findings in this study pertaining to “documented” agricultural workers (which include those with green cards or temporary visa statuses, such as temporary protective status, U or T visas, border crossing cards, and some types of student visas) are not generalizable to H-2A farmworkers, but should reflect most documented farmworkers in U.S. agriculture (Hamilton et al. 2019).

by state and year. Reich coded legislation as restrictive if it sought to bar immigrant access to social services, employment, state licenses (including driver's licenses), or housing, or if it enlisted state and local law enforcement in efforts to identify unauthorized immigrants. Reich coded legislation as accommodating if it sought to integrate immigrants into society and increase access to public and social services.

We also include data on specific types of immigration laws passed by state legislatures between 2005 and 2012. These data, described in Reich (2019), are available by state and year. In this study, we examine two specific domains of state-level immigration policies: (1) policies that do not extend Medicaid to immigrants beyond what is required by federal law (a restrictive law) and (2) policies that allow undocumented immigrants to obtain a driver's license or license privileges (an accommodating law).

### Analytic Samples

Our analytic sample includes 11,594 NAWS workers interviewed between 2005 and 2012. We exclude respondents who identified as non-Latinx Black or non-Latinx Asian ( $n=88$ ). We also exclude respondents who had missing data on key variables: health care utilization ( $n=21$ ), family poverty status ( $n=73$ ), and education ( $n=7$ ).

The analysis of the specific types of health care barriers reported by NAWS respondents includes 8,093 workers. This analytic sample resulted from dropping 3,501 workers who were not asked about information pertaining to their health care-seeking barriers. Both workers who did and did not utilize health care in the past two years were asked about their care-seeking barriers in the NAWS.

### Measures

#### *Outcomes*

Outcomes are drawn from the NAWS. The first outcome is a binary measure of whether workers *utilized health care in the past two years* (1 = yes). The second outcome is a categorical measure of the barriers respondents reported facing the last time they either successfully or unsuccessfully attempted to utilize health care. This constructed measure includes three care-seeking barrier categories: (1) no barriers, (2) material or information barriers, and (3) other barriers. *Material/information barriers* reflect workers' responses about facing barriers to care-seeking owing to lack of transportation, lack of financial resources to pay for care, fear of job loss if they took time off to seek care, and lack of information on how or where to access care. *Other barriers* capture whether workers reported believing health care providers did not understand their needs, feeling unwelcome to utilize health care, or not seeking care because they were undocumented and feared they would not be treated well, or that health care facilities were not open when needed or did not offer the medical services needed. We created the *other barriers* category because of small sample sizes of health care- and xenophobia-related barriers that made these specific barriers difficult to examine independently.



### *Key Exposures*

We include two sets of exposures that are longitudinal (2005–2012), time-varying, and available across the 48 contiguous United States represented in the NAWS. The first set includes a continuous measure of the proportions of immigration policies passed by each state between 2005 and 2012 that were either restrictive or accommodating (where the numerator of the proportion is the total number of policies that are restrictive/accommodating in a given year and the denominator is the total number of immigration-related policies passed in the state in a given year). These continuous policy measures were lagged across a two-year period to account for the fact that the first outcome—workers’ health care utilization—reflects a two-year period. Alternative operationalizations of these variables (including categorical and continuous measures of total restrictive/accommodating state immigration policies passed in each state and year, and a net measure of the difference in accommodating and restrictive policies in a context) produced substantively similar results (not shown). In our presentation of results, we focus on the measure of restrictive policy contexts, and show results for accommodating policy contexts in online appendix Table A1.

The second set of exposures allows us to assess how the implementation of two specific types of state immigration policies shape disparities in health care utilization. These policy exposures include those that (1) did not extend health insurance coverage to immigrants beyond what was required by federal law and (2) extended driver’s licenses or driver’s licenses privileges to undocumented immigrants. These are operationalized as binary measures in which “1” indicates that the policy was passed in that state/year. Like the state immigration policy contexts variables, these are included as lagged variables, reflecting policy exposures two years prior to the survey.

### *Covariates*

NAWS workers report whether they are U.S. citizens (U.S.-born and naturalized U.S. citizens), documented immigrants (including green card holders, temporary visa holders, and those with border crossing cards), or undocumented immigrants.<sup>2</sup> Because legal status is sensitive to report for undocumented individuals, the NAWS explicitly ensures respondents that their information will be deidentified and not shared with government entities (i.e., ICE). Further, to ensure high data quality, the legal status variable is corrected for potential response errors for NAWS respondents who are suspected of misreporting their legal status, on the basis of their answers to several questions pertaining to year of U.S. entry and visa status at the time of entry (Hamilton et al. 2019).

Workers also self-identify their race (Black/African American, American Indian/Alaska Native/Indigenous, Asian, Native Hawaiian/Pacific Islander, or Other)

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<sup>2</sup> Although the “documented” legal status category includes a wide range of legal categories, including green card holders and visa holders, we chose to group those with the aforementioned legal statuses under two “documented” categories because of a relatively small proportion of NAWS respondents who identified as having a documented status other than green card holder (less than 2% of the sample).

and Latinx or non-Latinx ethnicity. Respondent race was operationalized as a binary variable, White or non-White, with non-White workers including those who identified racially as Black/African American, American Indian/Alaska Native/Indigenous, Asian, Native Hawaiian/Pacific Islander, or Other.<sup>3</sup> We combine information on nativity, race/ethnicity, and legal status to generate a seven-category measure that includes U.S.-born White non-Latinx, U.S.-born non-White Latinx, naturalized U.S. citizen non-White Latinx, documented White Latinx, documented non-White Latinx, undocumented White Latinx, and undocumented non-White Latinx. Our inclusion of U.S.-born White non-Latinx respondents—who, theoretically, are less likely to be affected by immigration enforcement—allows us to better account for secular changes that might affect immigration enforcement activity and health risk and health care utilization, thereby reducing concerns about unmeasured confounding.

Models also adjust for continuous measures of age and age squared, a binary measure of sex (1 = female), a continuous measure of the number of health conditions reported (range, 1–7), a continuous measure of years of education, a binary measure of whether the farmworker “follows the crop” (i.e., moves seasonally to work on different crops across the country), and a binary measure of whether the respondent and their family live under the federal poverty line (1 = under the poverty line).<sup>4</sup> All models also include state, year, and month fixed effects. State fixed effects account for potential time-constant state-level confounders; year fixed effects are included to account for temporal variation in sociopolitical and historical contexts, and month fixed effects are included to account for seasonal variation in health care utilization.

## Analytic Strategy

We first show weighted descriptive statistics of all measures; time-varying measures reflect means over the study period. We also show disparities in health care utilization and reported barriers to care-seeking by nativity, race/ethnicity, and legal status.

Our multivariate analyses of our two outcomes proceed in two stages. First, we assess disparities in health care *utilization* across state policy contexts using ordinary least-squares (OLS) regression. We model health care utilization using linear (as opposed to logistic) probability regression models because linear regressions may be less biased when including fixed effects. These models also facilitate interpretation of estimates across stepwise models (Gomila 2021). Model 1 is a baseline model of disparities in health care utilization by nativity, race/ethnicity, and legal status that includes state, year, and month fixed effects. Model 2 builds on Model 1 by including the measure for policy context (restrictive and accommodating context measures included separately). Model 3 includes the interaction of policy

<sup>3</sup> These specific racial groupings were categorized together as “non-White” because of the small number of respondents who identified as Black or Asian ( $n=406$ ).

<sup>4</sup> The number of health conditions measured includes the following conditions collected in the NAWS health history grid: asthma, diabetes, high blood pressure, tuberculosis, heart disease, urinary tract infections, or some other condition. The NAWS asks whether respondents have *ever* been told by a doctor or nurse that they had one of these health conditions, but this measure may not reflect conditions that NAWS respondents actively have at the time of interview.

context on health care utilization disparities across nativity, race/ethnicity, and legal status, without the full set of covariates. Model 4 builds on Model 3 by including the full set of covariates.

We next examine how disparities in health care utilization vary across states with and without the specific restrictive and accommodating policies (restrictive policy: state did not extend health insurance coverage to immigrants beyond what was required by federal law; accommodating policy: state extended driver's licenses or driver's licenses privileges to undocumented immigrants change). In these models, Model 1 includes the combined measure of nativity, race/ethnicity, and legal status and a binary indicator for the state policy measure; Model 2 adds an interaction term for the combined nativity, race/ethnicity, and legal status measure and the policy; and Model 3 includes the full set of covariates. All models include state, year, and month fixed effects.

The basic form of the fully adjusted models for the first stage of analysis is presented below;  $Y_{ij}$  denotes the likelihood of utilizing health care for individual  $i$  in state  $j$ ,  $RE$  is race/ethnicity,  $FE$  indicates fixed effects, and  $\mathbf{X}$  is a vector of covariates:

$$Y_{ij} = \beta_1 + \beta_2 \text{immigration.policy} + \beta_3 \text{immigration.policy} \times \text{nativity.RE.legal status}_i + \mathbf{X}_i + \text{state FE} + \text{month FE} + \text{year FE}.$$

The key parameter of interest is  $\beta_3$ , which indicates how state policy contexts and specific immigration policies differentially relate to health care utilization across nativity, race/ethnicity, and legal status.

In the second stage of analysis, we use multinomial logistic regression models to examine the associations between state immigration policy contexts and respondent-reported *barriers* to health care utilization by nativity, race/ethnicity, and legal status. These models adjust for the full set of covariates and include an interaction of policy context on health care utilization disparities across nativity, race/ethnicity, and legal status. We do not run separate models of the associations between specific state immigration policies and agricultural worker reported barriers to health care utilization because these models are underpowered. Moreover, because of small sample sizes ( $n < 20$ ), we do not show results for *other barriers* for U.S.-born citizen non-White Latinx and documented non-White Latinx workers, but instead only show estimates for *no barriers* and *material/information barriers* for these two groups.

## Results

### Descriptive Statistics

**Table 1** presents weighted demographic, socioeconomic, and health characteristics of agricultural workers included in this analysis. Eighteen percent are U.S.-born White non-Latinx, 7% are U.S.-born non-White Latinx, 14% are naturalized U.S. citizens who identify as non-White and Latinx, 12% are documented (11% identify as White Latinx and 1% as non-White Latinx), and 49% are undocumented (15% identify as White Latinx and 34% as non-White Latinx). The mean age of workers is 36 years,

**Table 1** Weighted demographic, socioeconomic, and health characteristics of study sample

Nativity, Race/Ethnicity, and Legal Status (%)	
U.S.-born White non-Latinx	18.1
U.S.-born non-White Latinx	6.6
Naturalized U.S. citizen non-White Latinx	14.4
Documented White Latinx	11.3
Documented non-White Latinx	1.2
Undocumented White Latinx	14.9
Undocumented non-White Latinx	33.6
Mean Age	36.2 (0.2)
Women (%)	23.5
Mean Years of Education	8.1 (0.1)
Family Below Poverty Level (%)	32.1
Worker "Follows the Crop" (%)	5.5
Number of Reported Health Conditions (%)	
0	81.0
1	15.2
2+	3.8
U.S. Region of Residence (%)	
Northeast	13.5
Southeast	11.8
Midwest	19.0
Southwest	7.6
Northwest	15.1
California	33.0
<i>N</i>	11,594

*Note:* Standard errors are shown in parentheses.

*Source:* National Agricultural Workers Survey, 2005–2012.

and women account for 24% of workers. Generally, educational attainment among agricultural workers is low, at 8.1 years. Thirty-two percent of workers report their family is living below the U.S. federal poverty level, and 6% "follow the crop." Most workers (81%) report no chronic health conditions, but 15% report one condition and 4% two or more. Most workers reside in California (33%), the Midwest (19%), or the Northwest (15%).

**Table 2** presents health care outcomes among agricultural workers. Overall, 58% report having utilized health care services at least once in the past two years; however, the proportion varies substantially by nativity, race/ethnicity, and legal status. Notably, U.S.-born White non-Latinx workers are more likely than any other group to report utilizing health care: for example, 84% of U.S.-born White non-Latinx workers utilized care in the past two years compared with 46% of undocumented White Latinx workers and 42% of undocumented non-White Latinx workers ( $p < .001$  for both groups relative to U.S.-born White non-Latinx workers). Sixty percent of naturalized U.S. citizen non-White Latinx and 58% of documented non-White Latinx workers utilized care ( $p < .001$  for both groups).

When asked about barriers to utilizing health care, 49% of all agricultural workers report they faced no barriers, 44% faced material/information barriers, and 8% faced other barriers. U.S.-born White non-Latinx (70%) and U.S.-born non-White Latinx

**Table 2** Cross-tabulation of health care utilization and barriers to care-seeking by respondent nativity, race/ethnicity, and legal status

	All Workers	U.S.-born		Naturalized		Documented		Undocumented	
		White	Non-Latinx	U.S. Citizen	Non-White Latinx	White Latinx	Non-White Latinx	White Latinx	Non-White Latinx
Utilized Health Care in Past Two Years (%)	58.4	84.0	74.7***	60.0***	71.6***	58.1***	45.5***	41.9***	3,825
<i>N</i>	11,594	1,583	699	1,926	1,507	147	1,907	3,825	
Care-Seeking Barriers (%)	48.7	69.5	65.2***	53.9***	52.5***	53.0**	42.6***	35.2***	
No barriers	43.7	22.2	33.5***	42.5***	41.7***	43.5***	47.3***	54.9***	
Material/information barriers	7.5	8.3	1.4***	3.6***	5.8***	3.5*	10.0***	9.9***	
Other barriers	8,093	1,248	612	1,282	805	112	1,143	2,891	

*Note:* Significance levels are for two-tailed *t* tests between U.S. citizen White non-Latinx farmworkers and other nativity, race/ethnicity, and legal status groups of farmworkers.

*Source:* National Agricultural Workers Survey, 2005–2012.

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

(65%) workers are the most likely to experience no barriers to care-seeking, whereas undocumented White Latinx and undocumented non-White Latinx workers are the most likely to report material/information barriers to care-seeking (47% and 55%, respectively) and other barriers (10% each).

## Multivariable Regression Analyses

### *State Immigration Policy Contexts and Health Care Utilization*

Table 3 presents coefficient estimates for four OLS models estimating health care utilization. Consistent with descriptive statistics in Table 2, results from Model 1 show that health care utilization disparities are large among most groups of agricultural workers relative to U.S.-born White non-Latinx workers. Compared with U.S.-born White non-Latinx individuals, all other nativity, racial/ethnic, and legal status groups are less likely to utilize health care. Notably, undocumented White Latinx (coeff. =  $-0.356$ ,  $p < .001$ ) and undocumented non-White Latinx (coeff. =  $-0.382$ ,  $p < .001$ ) workers experience the greatest gaps in health care utilization relative to U.S.-born White non-Latinx workers.

Model 2 includes the measure of restrictive state policy context. Results indicate that net of the restrictiveness of a policy context, subgroup disparities in health care utilization are similar to those observed in Model 1. In Model 3, we explore whether health care utilization disparities are exacerbated in more (as opposed to less) restrictive policy contexts. We find that health care disparities are exacerbated for naturalized U.S. citizens who identify as non-White and Latinx in increasingly restrictive policy contexts (coeff. =  $-0.141$ ,  $p < .05$ ). We find no evidence that more restrictive contexts differentially impact health care utilization among other groups of workers, including those who are undocumented. In Model 4, which includes the full set of sociodemographic and health characteristics, the association between restrictive state policy contexts and health care access is strengthened for naturalized U.S. citizens who identify as non-White and Latinx (coeff. =  $-0.145$ ,  $p < .01$ ).

Table A1 in the online appendix shows health care utilization disparities in the context of more accommodating policy contexts. Results from the fully adjusted model (Model 4) provide suggestive evidence that naturalized non-White Latinx workers experience increased utilization of health care (coeff. =  $0.096$ ,  $p < .10$ ) in more accommodating policy contexts, adjusting for other sociodemographic and health factors. However, similar to results in Table 3, no other groups of workers appear to experience increased utilization of health care in more accommodating policy climates. Compared with the associations in Table 3, the associations between accommodating policy contexts and health care utilization disparities are weaker.

### *Specific State Immigration Policies*

Consistent with descriptive evidence in Table 2, results from multivariable models in Table 3 demonstrate wide disparities in health care utilization among agricultural workers, and particularly, among those who are naturalized U.S. citizens and

**Table 3** Coefficients (and SEs) from ordinary least-squares models of health care utilization with state, month, and year fixed effects: Restrictive policy contexts

Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status	Model 2: Model 1 + Policy Context	Model 3: Model 2 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 4: Model 3 + Sociodemographic and Health Controls
Nativity, Race/Ethnicity, Legal Status (ref. = U.S.- born White non-Latinx)				
U.S.-born non-White Latinx	-0.117*** (0.023)	-0.116*** (0.023)	-0.122*** (0.037)	-0.084* (0.035)
Naturalized U.S. citizen non-White Latinx	-0.203*** (0.018)	-0.202*** (0.018)	-0.160*** (0.028)	-0.072* (0.028)
Documented White Latinx	-0.126*** (0.019)	-0.125*** (0.019)	-0.107*** (0.029)	-0.041 (0.029)
Documented non-White Latinx	-0.247*** (0.042)	-0.246*** (0.042)	-0.246*** (0.062)	-0.150* (0.059)
Undocumented White Latinx	-0.356*** (0.018)	-0.355*** (0.018)	-0.346*** (0.029)	-0.201*** (0.029)
Undocumented non- White Latinx	-0.382*** (0.016)	-0.382*** (0.016)	-0.394 (0.026)	-0.233*** (0.026)
Proportion of Restrictive Policies/Total Policies		0.061*** (0.028)	0.069† (0.042)	0.070† (0.039)
Proportion of Restrictive Policies × U.S.-born Non-White Latinx			0.014 (0.070)	-0.003 (0.067)
Proportion of Restrictive Policies × Naturalized U.S. Citizen Non-White Latinx			-0.141* (0.058)	-0.145** (0.055)
Proportion of Restrictive Policies × Documented White Latinx			-0.057 (0.063)	-0.047 (0.060)
Proportion of Restrictive Policies × Documented Non-White Latinx			0.008 (0.144)	0.039 (0.137)
Proportion of Restrictive Policies × Undocumented White Latinx			-0.022 (0.058)	-0.043 (0.055)

**Table 3** (continued)

Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status	Model 2: Model 1 + Policy Context	Model 3: Model 2 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 4: Model 3 + Sociodemographic and Health Controls
Proportion of Restrictive Policies × Undocumented Non- White Latinx			0.054 (0.052)	0.027 (0.049)
Age				0.005** (0.002)
Age Squared				-0.000* (0.000)
Woman (ref. = man)				0.220*** (0.011)
Number of Health Conditions				0.195*** (0.008)
Worker “Follows the Crop” (ref. = does not “follow the crop”)				-0.076*** (0.018)
Family Lives Below Poverty Level (ref. = above poverty level)				-0.059*** (0.010)
Years of Education				0.013*** (0.001)
State Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
Month Fixed Effects	X	X	X	X
Constant	0.822*** (0.014)	0.803*** (0.016)	0.798*** (0.022)	0.423*** (0.045)
Adjusted $R^2$	0.090	0.090	0.091	0.182
$N$	11,594	11,594	11,594	11,594

Source: National Agricultural Workers Survey, 2005–2012; Correlates of State Policy Project.

† $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

non-White Latinx, undocumented and White Latinx, and undocumented and non-White Latinx. More restrictive policy contexts (and to a lesser extent, more accommodating policy contexts) appear to exacerbate health care utilization disparities (or marginally mitigate them, in the context of more accommodating policy contexts) only among naturalized U.S. citizen non-White Latinx workers.

We next investigate how the implementation of specific state immigration policies shapes health care disparities among agricultural workers. Table 4 presents disparities in health care utilization among NAWS workers in the context of specific policies that do not extend health coverage (specifically, Medicaid) to immigrants beyond what is required by federal law (a restrictive policy). In Model 2, results show that in states



**Table 4** Coefficients (and SEs) from ordinary least-squares models of health care utilization with state, month, and year fixed effects: No Medicaid expansion to immigrants

Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status + Policy Context	Model 2: Model 1 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 3: Model 2 + Sociodemographic and Health Controls
Nativity, Race/Ethnicity, Legal Status (ref. = U.S.-born White non-Latinx)			
U.S.-born non-White Latinx	-0.115*** (0.023)	-0.083** (0.029)	-0.052† (0.027)
Naturalized U.S. citizen non-White Latinx	-0.202*** (0.018)	-0.179*** (0.023)	-0.104*** (0.024)
Documented White Latinx	-0.125*** (0.019)	-0.120*** (0.024)	-0.062** (0.024)
Documented non-White Latinx	-0.246*** (0.042)	-0.246*** (0.050)	-0.155*** (0.048)
Undocumented White Latinx	-0.355*** (0.018)	-0.341*** (0.023)	-0.216*** (0.024)
Undocumented non-White Latinx	-0.381*** (0.016)	-0.382*** (0.021)	-0.238*** (0.022)
No Medicaid Expansion	0.042 (0.034)	0.061 (0.039)	0.027 (0.037)
No Medicaid Expansion × U.S.-born Non-White Latinx		-0.086† (0.046)	-0.088* (0.044)
No Medicaid Expansion × Naturalized U.S. Citizen Non-White Latinx		-0.079* (0.038)	-0.058 (0.036)
No Medicaid Expansion × Documented White Latinx		-0.009 (0.041)	0.013 (0.039)
No Medicaid Expansion × Documented Non-White Latinx		0.007 (0.089)	0.044 (0.036)
No Medicaid Expansion × Undocumented White Latinx		-0.041 (0.038)	-0.011 (0.036)
No Medicaid Expansion × Undocumented Non-White Latinx		0.016 (0.034)	0.029 (0.032)
Age			0.005** (0.002)
Age Squared			-0.000* (0.000)
Woman (ref. = man)			0.221*** (0.011)
Number of Health Conditions			0.195*** (0.008)

**Table 4** (continued)

Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status + Policy Context	Model 2: Model 1 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 3: Model 2 + Sociodemographic and Health Controls
Worker “Follows the Crop” (ref. = does not “follow the crop”)			-0.075*** (0.018)
Family Lives Below Poverty Level (ref. = above poverty level)			-0.059*** (0.010)
Years of Education			0.013*** (0.001)
State Fixed Effects	X	X	X
Year Fixed Effects	X	X	X
Month Fixed Effects	X	X	X
Constant	0.809*** (0.017)	0.801*** (0.020)	0.437*** (0.044)
Adjusted R <sup>2</sup>	0.090	0.091	0.181
N	11,594	11,594	11,594

Source: National Agricultural Workers Survey, 2005–2012; Correlates of State Policy Project.

†*p* < .10; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

where Medicaid was not extended to immigrants, naturalized U.S. citizen non-White Latinx workers (coeff. = -0.079, *p* < .05) and, to some extent, U.S.-born non-White Latinx workers (coeff. = -0.086, *p* < .10) saw reduced utilization of health care. However, after adjusting for sociodemographic and health factors in Model 3, only U.S.-born non-White Latinx workers face additionally reduced utilization of health care in policy contexts with no extension of Medicaid to immigrants (coeff. = -0.088, *p* < .05).

Table 5 presents health care utilization disparities in contexts where driver’s licenses or license privileges were extended to undocumented immigrants (an accommodating policy). Model 2 shows that the interaction between policy implementation and nativity, race/ethnicity, and legal status indicates that undocumented non-White Latinx workers (coeff. = 0.135, *p* < .001) and, to a lesser extent, U.S.-born non-White Latinx workers (coeff. = 0.140, *p* < .10) experienced improved health care utilization after these laws were implemented. Adjusting for sociodemographic and health factors in Model 1 fully attenuates the association for undocumented non-White Latinx workers, while the association becomes stronger for U.S.-born non-White Latinx workers (coeff. = 0.161, *p* < .05).

*Barriers to Health Care–Seeking*

Figure 1 presents results from multinomial regression models that regress respondent reported barriers to health care–seeking on the measure of restrictive state

**Table 5** Coefficients (and SEs) from ordinary least-squares models of health care utilization with state, month, and year fixed effects: License laws implemented

Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status + Policy Context	Model 2: Model 1 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 3: Model 2 + Sociodemographic and Health Controls
Nativity, Race/Ethnicity, Legal Status (ref. = U.S.-born White non-Latinx)			
U.S.-born non-White Latinx	-0.117*** (0.023)	-0.129*** (0.024)	-0.099*** (0.023)
Naturalized U.S. citizen non-White Latinx	-0.203*** (0.018)	-0.196*** (0.019)	-0.109*** (0.020)
Documented White Latinx	-0.127*** (0.019)	-0.123*** (0.020)	-0.056** (0.020)
Documented non-White Latinx	-0.247*** (0.042)	-0.240*** (0.044)	-0.135** (0.043)
Undocumented White Latinx	-0.357*** (0.018)	-0.361*** (0.019)	-0.219*** (0.020)
Undocumented non-White Latinx	-0.383*** (0.016)	-0.394*** (0.017)	0.237*** (0.019)
License Law Implemented	0.026 (0.046)	-0.015 (0.058)	0.007 (0.055)
License Law Implemented × U.S.-born Non-White Latinx		0.140† (0.083)	0.161* (0.079)
License Law Implemented × Naturalized U.S. Citizen Non-White Latinx		-0.056 (0.062)	-0.080 (0.058)
License Law Implemented × Documented White Latinx		-0.021 (0.065)	-0.027 (0.062)
License Law Implemented × Documented Non-White Latinx		-0.046 (0.131)	-0.047 (0.124)
License Law Implemented × Undocumented White Latinx		0.056 (0.064)	0.006 (0.060)
License Law Implemented × Undocumented Non-White Latinx		0.135*** (0.057)	0.083 (0.054)
Age			0.005** (0.002)
Age Squared			-0.000* (0.000)
Woman (ref. = man)			0.221*** (0.011)
Number of Health Conditions			0.194*** (0.008)

**Table 5** (continued)

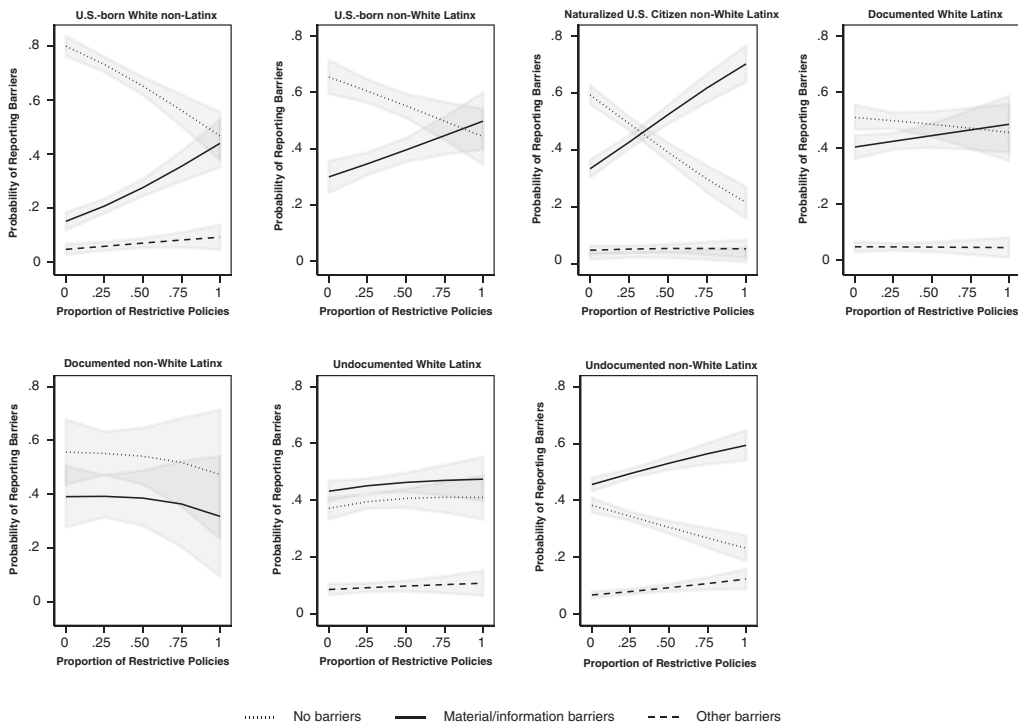
Characteristic	Model 1: Nativity, Race/Ethnicity, and Legal Status + Policy Context	Model 2: Model 1 + Nativity, Race/Ethnicity, and Legal Status × Policy Context	Model 3: Model 2 + Sociodemographic and Health Controls
Worker “Follows the Crop” (ref. = does not “follow the crop”)			-0.074*** (0.018)
Family Lives Below Poverty Level (ref. = above poverty level)			-0.059*** (0.010)
Years of Education			0.013*** (0.001)
State Fixed Effects	X	X	X
Year Fixed Effects	X	X	X
Month Fixed Effects	X	X	X
Constant	0.820*** (0.014)	0.823*** (0.015)	0.447*** (0.043)
Adjusted <i>R</i> <sup>2</sup>	0.090	0.092	0.182
<i>N</i>	11,594	11,594	11,594

Source: National Agricultural Workers Survey, 2005–2012; Correlates of State Policy Project.

†*p* < .10; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

immigration policy context. Full model results are in Table A2 in the online appendix. Living in more restrictive policy contexts is associated with decreased probabilities of facing no barriers to care, suggesting that restrictive policy contexts increase barriers—particularly material/information barriers—to care-seeking. In general, reports of other (primarily health care– and xenophobia-related) barriers remain relatively low and stable across varying levels of restrictive policy contexts, although they increase for undocumented White and non-White Latinx respondents as state policy contexts become more restrictive. Results further indicate that the probability of reporting material/information barriers to care-seeking increases among most nativity, race/ethnicity, and legal status groups as the restrictiveness of the policy context increases. This is the case for all groups, except for documented non-White Latinx and undocumented White Latinx workers, for whom the predicted probability decreases or remains flat, respectively, as the restrictiveness of the policy context increases. Moreover, the confidence intervals are quite wide for estimates of documented non-White Latinx respondents, reducing the reliability of estimates for this group.

Figure A1 in the online appendix presents the predicted probabilities of workers reporting health care-seeking barriers in the context of more accommodating policy contexts, with full model results in Table A3. For nearly all groups, the predicted probability of reporting no barriers to care-seeking increases as the proportion of accommodating policies increases, except among documented White Latinx workers and undocumented White Latinx workers, for whom the predicted probabilities



**Fig. 1** Respondent-reported barriers to care-seeking by proportion of restrictive policies in a state context. “Other barriers” estimates are not shown for U.S.-born and documented non-White Latinx groups because of small sample sizes. Gray shading in all graphs indicates 95% confidence intervals.

decrease. Declines in the probability of reporting material/information barriers are also noted among all groups of workers, except for documented White and non-White Latinx and undocumented White Latinx workers, who experience an increased probability of reporting such barriers as the proportion of accommodating policies increases. Notably, among undocumented non-White Latinx immigrants, there is a slight decrease in the probability of reporting other barriers as the proportion of accommodating policies in a context increases.

### Discussion

A growing body of research examines the impact of state immigration policies on health care utilization among immigrants in the United States. Still, research in this area generally focuses on singular state policies in particular years, which can mask how broader state immigration policy contexts pattern health care inequalities over time and space. Further, because of data limitations, few studies assess differential effects of immigration policy on undocumented groups or consider effects at the intersection of multiple dimensions of social and legal status stratification. In this study, we link survey and state policy data to assess the links between state

immigration policy contexts, specific types of restrictive and accommodating state immigration policies, and disparities in health care utilization within and between multiple intersecting axes of social stratification, including nativity, race/ethnicity, and legal status. Our findings provide new evidence of the role of state immigration policy in patterning racialized legal status inequities in health care utilization.

A key contribution of this study is its use of an intersectional structural approach (Crenshaw 1991; Dill and Zambrana 2009; Homan et al. 2021; Viruell-Fuentes et al. 2012) to document and interrogate health care disparities among agricultural workers representing various positions within nativity, racial/ethnic, and legal status hierarchies. Findings show tremendous inequities in health care utilization between and within these groups. U.S.-born White non-Latinx workers report the highest levels of health care utilization and the fewest barriers to care. Irrespective of state policy contexts (restrictive or accommodating), most groups of workers (but especially, naturalized U.S. citizen non-White Latinx, undocumented White Latinx, and undocumented non-White Latinx workers) are less likely to utilize health care than U.S.-born White non-Latinx workers. These findings are consistent with the notion that systems of racial/ethnic, nativity, and legal status stratification jointly pattern health care utilization in the United States, resulting in especially low levels of utilization among structurally marginalized groups, including non-White and undocumented workers.

In addition, we find that state immigration policy contexts play an important role in patterning inequality in health care utilization. Importantly, our results show that health care utilization among naturalized U.S. citizen non-White Latinx individuals is particularly sensitive to state level immigration policy. As state immigration policy contexts become more restrictive, health care utilization among such individuals decreases. Furthermore, health care utilization among U.S.-born and naturalized non-White Latinx individuals is responsive to the specific state immigration policies examined. When states choose not to extend health care coverage to immigrants, health care utilization among these two groups declines, and when states extend drivers licenses to undocumented immigrants, health care utilization among U.S.-born non-White Latinx individuals improves. Taken together, these findings highlight that the impact of state immigration policy spill over to U.S.-born and naturalized U.S. citizen individuals, with evidence of differential effects by race/ethnicity. In these ways, results from this study suggest that state policies governing immigration play an important role in generating and maintaining broader patterns of racial/ethnic and nativity status stratification in the United States, with consequences not just for undocumented immigrants, but also for both naturalized immigrants and U.S.-born Latinx people.

Although we expected that state immigration policies would have especially pronounced effects on utilization of health care among undocumented immigrants, our results did not provide evidence of this. Our results were robust to different specifications of state policy contexts (e.g., operationalizing these variables as the total number of restrictive policies implemented as opposed to the proportion of total policies that were restrictive) and respondent nativity, race/ethnicity, and legal status (i.e., separating documented workers from naturalized U.S. citizens).

Further analysis of the specific barriers to health care that workers report facing suggest that many groups (especially naturalized non-White Latinx workers) report more material/information barriers in more restrictive policy contexts, with the oppo-

site being true in contexts with more accommodating policies. Moreover, reporting no barriers to care generally decreases in more restrictive contexts for most groups of workers, and increases in more accommodating contexts. For undocumented immigrants, specifically, increasingly restrictive policy contexts are associated with greater probabilities of reporting other (including xenophobia-related) barriers, with the opposite being true in more accommodating policy contexts.

These findings paint a complex picture of how the lives and health care utilization of immigrants and U.S.-born people of color are shaped by state immigration policy. Drawing on Asad and Clair's (2018) concept of *racialized legal status*, findings from this study indicate that state immigration policy contexts have the greatest impact on health care utilization among those who share some positional similarities to the undocumented (i.e., nativity, race/ethnicity), but who are not themselves undocumented. Health care utilization among naturalized non-White Latinx individuals may be particularly sensitive to more restrictive immigration policy contexts because they may share nativity, racial/ethnic, language (or perceived language), and occupation commonalities with the undocumented, who are generally the targets of these state policies. These shared experiences and positions within structural hierarchies of nativity, race/ethnicity, and occupational status may subject them to stigmatization, fear, and discrimination by increasing their risk of being profiled by law enforcement or experiencing acts of discrimination or violence, which may prevent them from utilizing services, such as health care. They may live in mixed-status families, which could increase their fear of surveillance in increasingly restrictive policy climates. This group of workers may believe that the risk of contact with immigration officials and/or law enforcement outweighs the risk of forgoing health care (Friedman and Venkataramani 2021).

Another potential explanation for the reduced health care utilization faced by naturalized non-White Latinx workers is that members of this group may be unclear about the impact of more restrictive policy contexts on their lives. Recent qualitative research on barriers to care-seeking among immigrants surveyed in an urban safety-net hospital found that only half of interviewees were aware of recent changes that had been made to the public charge rule and had adjusted their care-seeking accordingly (Wang et al. 2022). Our findings on care-seeking barriers may provide evidence to support this point, as most nativity and legal status groups of Latinx workers had a higher probability of reporting material/information barriers to care-seeking in more restrictive policy contexts. This finding is striking and suggests that more restrictive policy contexts may impede use of health care and other services, not necessarily through generating increased fear of experiencing xenophobia, but rather through creating more material and information barriers for immigrants and people of color to navigate increasingly challenging and hostile policy climates.

Another important finding from this study is that, despite undocumented workers reporting greater perceptions of other (including xenophobia-related) barriers in the context of more restrictive policy climates, state immigration policy contexts (either more restrictive or accommodating) do not appear to additionally reduce utilization of health care among the undocumented, who experience the lowest levels of health care utilization relative to U.S.-born White non-Latinx workers across all policy contexts. This finding may reflect a "floor" effect. Because undocumented immigrants in the United States face high levels of marginalization from federal immigration policies, political campaigns, and cultural and media messages that portray their presence

as undesirable and “illegal” (Cobb et al. 2017), they often rely closely on their social networks and are less likely to utilize such services as health care, from which they are more likely to encounter surveillance and discrimination. Thus, undocumented immigrants may be generally less likely than others to utilize mainstream health care and social services, and so changes in state-level policy contexts matter little for further chilling their utilization of care (Arcury and Quandt 2007).

Several limitations warrant mention. First, this study relies on pooled cross-sectional data and thus is unable to assess workers’ health care utilization and barriers to care-seeking longitudinally. Because of the pooled cross-sectional nature of the NAWS, there may be selection processes at play regarding who remains in agriculture across time and who selects out of agriculture. Specifically, as Hamilton et al. (2019) noted, documented immigrants and U.S. citizens who remain employed in agriculture over time may have lower human, social, and financial capital than those who find subsequent work outside of agriculture.

Second, because the CSPP data and policy data from Reich (2019) are available only for the period between 2005 and 2012, the effects of policies implemented in earlier (pre-2005) or more recent (post-2012) years could not be explored. Further data collection pursuits should work to gather data on state immigration policies during these years for additional analysis of the impact of these policies on the lives of immigrants and Latinx individuals. A related limitation is that our analysis considers the effects of two specific immigration policies (no Medicaid expansion and drivers’ license policies) separately, despite the possibility that a state expanded Medicaid access to immigrants but did not extend driver’s licenses, that it extended driver’s licenses but not Medicaid, both, or neither. Sensitivity analyses exploring this issue found that there are few farmworkers in our NAWS data who reside in a context with the particular situation of having both a license law and no Medicaid expansion together. Future analyses may explore the extent to which there is overlap between specific types of immigration policies and whether these multidimensional policy contexts matter for outcomes related to immigrant services utilization, health, and well-being. Additionally, our data do not allow us to assess how durations of exposure to different state policy contexts shape individuals’ health care utilization and barriers to care-seeking, which is a priority for future research.

Third, underreporting health care utilization may bias our estimates. Because the NAWS asks workers whether they utilized health care sometime in the past two years, recall bias may affect whether workers remember utilizing care in this relatively long time period. Fourth, although response to the NAWS is high among workers (e.g., 92% in 2009), only 59% of eligible employers were ultimately surveyed in that year, with a similar percentage being surveyed across other years of the NAWS. Thus, there may be selection processes at play among employers who choose (or do not choose) to be included in the NAWS.

Finally, the NAWS asks whether workers were *ever* diagnosed with a chronic health condition in their lifetime, rather than more current questions about their health (i.e., self-rated health). Given that undocumented immigrants generally have less access to health care than documented/naturalized immigrants and U.S.-born individuals, undocumented immigrants may be less likely to have a known health condition. Thus, estimates of workers’ health—proxied through the number of health conditions reported—may misclassify workers’ current health status.



Taken together, findings from this study highlight the pivotal role of state immigration policy in shaping *racialized legal status* inequities in health care utilization. These results further highlight the roles of political and legal arrangements operating at the state level in generating population inequities in health and health care, with particularly important consequences for the most structurally marginalized groups (Montez et al. 2021). We find that U.S.-born and naturalized Latinx immigrants—especially those who are not White—are particularly vulnerable to state immigration policies; racialized legal status hierarchies *render* these groups vulnerable. State policies that restrict immigrant access to critical social resources like health care, employment, and housing, or that increase rates of immigrant surveillance and enforcement, work to segregate and oppress minoritized individuals—even when they possess legal status. These policies not only hinder immigrant incorporation and well-being but maintain nativist, racist, and legal status hierarchies in the United States.

Despite a broad literature arguing for the importance of broadly construed “cultural” factors and individual behaviors in shaping disparities among minoritized groups (for a review, see Viruell-Fuentes et al. 2012), this study shows that efforts to reduce health care and health disparities in the United States must continue to shift toward redressing how systemic racism and xenophobia operate through state policies and institutions to generate, maintain, and exacerbate disparities in life chances. Continued efforts to interrogate how structures of racial domination and immigrant exclusion shape health care and health inequalities should be the focus of future research in this area, as such focus will provide deeper understanding of the fundamental causes of racial/ethnic, nativity, and legal status inequalities that can be used to enact social change. ■

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