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The New Destination Disadvantage: Disparities in Hispanic Health Insurance Coverage Rates in Metropolitan and Nonmetropolitan New and Established Destinations

Shannon M. Monnat^a

Assistant Professor of Rural Sociology, Demography, and Sociology Research Associate,
Population Research Institute Pennsylvania State University

Abstract

Hispanics have the lowest health insurance rates of any racial/ethnic group, but rates vary significantly across the U.S. The unprecedented growth of the Hispanic population since 1990 in rural areas with previously small or non-existent Hispanic populations raises questions about disparities in access to health insurance coverage. Identifying spatial disparities in Hispanic health insurance rates can illuminate the specific contexts within which Hispanics are least likely to have health care access and inform policy approaches for increasing coverage in different spatial contexts. Using county-level data from the 2009/2013 American Community Survey, I find that early new destinations (i.e., those that experienced rapid Hispanic population growth during the 1990s) have the lowest Hispanic adult health insurance coverage rates, with little variation by metropolitan status. Conversely, among the most recent new destinations that experienced significant Hispanic population growth during the 2000s, metropolitan counties have Hispanic health insurance rates that are similar to established destinations, but rural counties have Hispanic health insurance rates that are significantly lower than those in established destinations. Findings demonstrate that the new destination disadvantage is driven entirely by higher concentrations of immigrant non-citizen Hispanics in these counties, but labor market conditions were salient drivers of the spatially uneven distribution of foreign-born non-citizen Hispanics to new destinations, particularly in rural areas.

Keywords

new vs. established destinations; health insurance; Hispanics; rural; immigrants

Introduction

Hispanics have the lowest health insurance rate of any U.S. racial/ethnic group (Kaiser Family Foundation 2016). One-third of non-elderly U.S. Hispanics are uninsured - twice the rate for non-Hispanic whites. The disadvantage is particularly pronounced for working-age Hispanic adults (aged 18-64), 41% of whom had no health insurance in 2013 (Kaiser Commission 2013).

^aPlease address all correspondences to Dr. Shannon Monnat, smm67@psu.edu, 814-867-2871.

Hispanics' access to health insurance is important to overall U.S. population health due to the increasing size of the Hispanic population (from both immigration and high relative fertility) and their geographic dispersion across the U.S. Compared to individuals with health insurance, those without insurance have worse health outcomes, are at higher risk of premature mortality, and are less likely to utilize preventive care and more likely to utilize high-cost health care (e.g., emergency department services) (Hadley 2003; LeClere et al. 1994). However, the adverse consequences of no insurance go beyond the individual level. Spatial differences in *collective* insurance coverage may contribute to spatial disparities in poor health outcomes, collective unpaid health care costs, and reduced workplace productivity, placing strains on local governments, businesses, and communities. Moreover, because health insurance facilitates well-being, longevity, and productivity, it has important long-term implications for group mobility; unhealthy parents are likely to produce unhealthy children. Identifying spatial differences in Hispanic health insurance coverage can illuminate the specific contexts within which Hispanic group well-being is most disadvantaged in the U.S. and can inform spatially-relevant policy approaches.

A goal of Healthy People 2020 is to eliminate Hispanic disparities in insurance coverage, but there are several challenges to this goal, including recent Hispanic migration trends and geographic variation in industries/occupations providing employer-sponsored health insurance and in immigrant eligibility for Medicaid and other safety net programs. In 1990, about 90% of Hispanics lived in just 10 states. California and Texas alone accounted for 54% of all Hispanics in the U.S. Since 1990, however, communities beyond these gateways have experienced massive Hispanic population growth through both internal and international migration (Kandel and Cromartie 2004; Singer 2004) and now increasingly through fertility (Johnson and Lichter 2008). Newly emerged and emerging Hispanic destinations differ from established gateways in important ways that likely influence Hispanic health insurance rates, including the collective human capital resources of Hispanics that enable them to compete for employment and income; the supply of and competition for jobs offering employer-provided health insurance; the foreign-born composition of Hispanics, which influences eligibility for public insurance programs; and the receptivity context, including state policy differences in immigrant safety-net program eligibility (Burton et al. 2013; Graefe et al. 2015; Kandel et al. 2011; Lichter et al. 2015; Monnat and Chandler, forthcoming; Parrado and Kandel 2010; Singer 2004; Stamps and Bohon 2006). Moreover, Hispanics living in established destinations benefit from previous generations of immigrant and U.S. born co-ethnics who can provide advice about health insurance systems (Waters and Jimenez 2005). Established destinations also benefit from health-related structural advantages that have developed over time, including advocacy organizations that provide Hispanics with information about why and how to obtain health insurance and assistance with enrollment documents (Casey et al. 2004).

There are considerable barriers to Hispanic coverage in new versus established destinations (Blewett et al. 2003; Casey 2004; Cunningham et al. 2006; Harari et al. 2008; Gresenz et al. 2012). However, there is no research on collective spatial inequalities, particularly rural-urban inequalities, in Hispanic health insurance coverage in new versus traditional Hispanic residential contexts. Although Census data show a health insurance disadvantage for rural compared to urban Hispanics (59.1% of Hispanic adults ages 18-64 have insurance in

metropolitan counties versus 54.7% in nonmetropolitan counties) (U.S. Census Bureau 2013), these aggregate numbers likely obscure differences in coverage between new versus established rural destinations. Labor market conditions, the human capital and foreign born composition of Hispanics, and newcomer receptivity contexts vary greatly along the rural-urban continuum. Therefore, it is important to consider metropolitan status when examining differences in Hispanic health insurance coverage between new and established destinations.

To this end, I utilize county-level data from the 2009/2013 American Community Survey to answer the following questions about Hispanic adult (ages 18-64) health insurance rates: 1) Do Hispanic health insurance rates differ between established and new Hispanic destinations? 2) Do destination-type differences in Hispanic insurance rates vary by metropolitan status? 3) Do collective Hispanic group characteristics (economic disadvantage, nativity, citizenship, English proficiency), labor markets, and/or policy contexts explain differences in Hispanic insurance rates between metropolitan, large nonmetropolitan, and rural new and established destinations?

Ultimately, this research sheds light on whether new destination disparities in health insurance coverage are simply a function of the selection of disadvantaged Hispanic immigrants into these places or whether spatial disparities in coverage are a function of more limited labor markets and/or less supportive policy environments. The results from this research contribute to the growing body of literature identifying whether Hispanic group well-being is more limited in new or established destinations (Dondero and Muller 2012; Fischer 2010; Hall 2009; Hall 2013; Lichter, Sanders, and Johnson 2015; Park and Iceland 2010; Stamps and Bohon 2006).

Conceptual Approach

The analyses that follow are framed within the subnational theoretical approach that emphasizes how state and local forces are important contributors to spatial inequality because state and local governments have significant responsibility for economic and social welfare (Lobao, Hooks, and Tickamyer 2007; Lobao, Hooks, and Tickamyer 2008). This approach emphasizes delineating shared place attributes to understand how social processes and resultant inequalities unfold differently across the U.S. (Lobao et al. 2007). Moreover, the approach emphasizes the importance of both where actors are located in geographic space (e.g., the spatially unequal distribution of Hispanics) that geographic entities themselves are key arenas in which inequalities emerge, operate, and change (Burton et al. 2013; Lichter, Parisi, and Taquino 2012; Lobao 2004; Lobao et al. 2008).

Concomitant forces interacted to drive the geographic dispersion of Hispanics from established gateways in the U.S. southwest to other parts of the country in the 1990s, including the militarization of the Mexico/U.S. border; anti-immigrant legislation in traditional gateways (e.g., California's Proposition 187 in 1994); growing U.S. and international demand for pre-packaged meat and other food that led to food industry restructuring and relocation; and the resultant growing demand for low-skill, low-wage, and non-union labor in services, manufacturing and agriculture (Gouveia and Saenz 2000; Gozdziaik and Martin 2005; Kandel and Parrado 2005; Massey and Sanchez 2010).

Moreover, U.S. states and counties have widely varying economic opportunities, industrial structures, health and safety net policies, and historical experiences with immigrants, all of which may influence Hispanics' access to health insurance.

Classic theoretical models of spatial assimilation view the spatial distribution of an ethnic group as a function of group human capital and assimilation characteristics (Massey 1985). As Hispanics collectively enjoy a longer residential history in the U.S., *the collective group* should move from a marginal position into the mainstream through geographic mobility – moving away from traditional ethnic enclaves into higher quality neighborhoods with more resources and opportunities. Thinking about health insurance coverage, this would mean better access to the types of employment offering employer-subsidized health insurance and higher real wages to afford private insurance. However, recent patterns of Hispanic migration from established to new destinations have not necessarily conformed to this upward mobility pattern. The growth of the Hispanic population in rural new destinations, in particular, was not driven by better Hispanic human capital, higher incomes, or assimilation into the mainstream, but instead was the result of the political and economic forces noted earlier. These processes resulted in spatially uneven patterns of Hispanic incorporation and social integration, concentrated rural Hispanic poverty, and new rural ghettos (Lichter 2012), wherein Hispanics are unlikely to have widespread access to opportunities to procure health insurance.

State and labor market processes may combine with these collective Hispanic group characteristics to affect spatial disparities in health insurance coverage. Below, I outline the pathways through which I hypothesize lower Hispanic health insurance rates in new versus established destinations, and especially low rates in rural new destinations.

Labor Market Context

First, lower Hispanic insurance rates in new destinations may operate through differences in labor market contexts. In the U.S., working-age adult health insurance comes primarily through employer compensation plans. In 2014, 55% of U.S. nonelderly adults had employer-based insurance, but this aggregate masks considerable variation in employer-sponsored coverage rates, with statewide rates ranging from 43% to 68% (Kaiser Family Foundation 2016). Decades of industrial restructuring has rescaled employment and contributed to reductions in unions and bargaining power, lower pay, less job security, less full-time employment and more part-time and contingent work, all of which resulted in cuts to employer-subsidized insurance and reduced access to wages necessary to afford insurance premiums (Blanchard et al. 2011).

Importantly, this restructuring was spatially heterogeneous, resulting in spatially uneven Hispanic population growth during the 1990s. Beginning in the 1980s, U.S. and international demand for processed and pre-packaged foods increased considerably. In an effort to meet growing demand and cut costs, owners and operators of food-processing and manufacturing industries deskilled and routinized production. Many relocated plants from the heavily unionized northeastern and north-central U.S. to small cities and rural towns in the south-Atlantic, south-central and Midwestern U.S. where land was cheaper, inputs were closer, and labor costs were lower (Kandel and Parrado 2005). These industrial moves led to wide-

spread recruiting of nonunionized, low-wage immigrant labor from California and Texas as well as directly from Mexico and Central America (Gouveia and Saenz 2000; Gozdziaik and Martin 2005).

In every type of industry, Hispanics are less likely than whites to have employer-sponsored health insurance; 63% of whites vs. 38% of Hispanics had employer-sponsored health insurance in 2014 (Kaiser Family Foundation 2016). However, coverage varies across industries. New destinations, especially rural new destinations, are characterized by rapid increases in employment in industries least likely to offer employer-subsidized insurance or sufficient wages to afford private premiums. Employment opportunities in industries that offer insurance (e.g., in state/federal government) are sparse in rural areas (Glover et al. 2004; Probst et al. 2004). Finally, employment competition also varies geographically. Specifically, a larger share of non-Hispanic blacks in southern new destinations creates a different labor market competition context for newcomer Hispanics than they may face in traditional destinations, where black populations are comparatively smaller.

Collective Group Characteristics: Hispanic Economic Incorporation and Foreign-Born Composition

In addition to their direct effects on insurance, labor markets may operate indirectly through their role in attracting specific types of Hispanics to new destinations. New destination labor markets, especially in rural areas, comprise low-wage and low-skill jobs that attracted undocumented Hispanic immigrants with the least education and the most language and cultural barriers (Donato et al. 2007; Farmer and Moon 2009; Kochhar et al. 2005). As a result, rural new destinations may have lower Hispanic insurance rates simply due to selection processes that drew comparatively disadvantaged Hispanics to new versus established destinations, including foreign-born and non-citizen Hispanics and those with less human capital.

Human capital (e.g., education, job skills) facilitates economic wellbeing by reducing risk of unemployment and poverty and by increasing income and homeownership. Socioeconomic resources increase access to health insurance not only through the necessary income to afford premiums, but also via knowledge about the importance of having insurance and literacy skills to understand how to obtain coverage (Goldman and Smith 2011; Ross and Wu 1995; Smith 2004). Human capital also facilitates entry into industries and occupations most likely to provide employer-sponsored insurance or sufficient wages to purchase coverage and protects workers from unemployment spells that may lead to benefit loss.

Spatial differences in Hispanic insurance rates may also be driven by the differential geographic distribution of recently-arrived Hispanic immigrants through at least three pathways. First, large shares of Hispanics living in new destinations may be ineligible for public health insurance (Medicaid). Hispanics have disproportionately high reliance on Medicaid; as of 2014, 33% of nonelderly Hispanics were covered by Medicaid, the highest rate of all major racial/ethnic groups, with rates well over 40% in some states (Kaiser Family Foundation 2016). However, unauthorized immigrants are ineligible for federally funded Medicaid. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 further restricted access to public benefits for immigrants with less than

five years of qualified status. States can choose to cover immigrants during the 5-year ban with substitute Medicaid using state-only funding, but only 15 states currently do so. This means that places with comparatively larger shares of immigrants, especially newcomer immigrants are likely to have lower Hispanic coverage rates simply because most Hispanics in those places are not eligible for Medicaid.

Second, recently arriving Hispanic immigrants were attracted to new destinations for rapidly expanding job opportunities in construction, textiles, and food processing (Gouveia and Saenz 2000; Kandel and Parrado 2005; Massey and Sanchez 2010). Though these jobs often provide better wages than Hispanic immigrants are able to secure in their home countries, they rarely include health insurance. Even when they do, there are typically waiting periods before benefits take effect. This is especially the case in rural new destinations in the Midwest and southeast where the meat processing industry attracted low-wage and low-skill foreign-born Hispanics to do the “dirty work” rejected by native workers (Gouveia et al. 2005; Griffith 2005).

Third, recent migrants are likely to have limited English proficiency. English-proficiency facilitates health care system interactions, including the ability to read health information and communicate with an employer’s human resources department and insurance providers (Cheng et al. 2007; Lara et al. 2005). Established destinations have the advantage of previous generations of co-ethnics who can provide advice and advocacy about health insurance and health-related organizational and advocacy infrastructures that provide newcomer Hispanics with translation services and assistance with enrollment documents (Casey et al. 2004).

For several reasons, rural new destinations may be especially disadvantaged by the previously described selection processes that attracted low-skill non-citizen immigrants who are unable to secure insurance through employment and are ineligible for Medicaid. First, recent evidence suggests greater Hispanic educational attainment and English proficiency and higher concentrations of U.S. citizens among Hispanics in *metropolitan* new versus established destinations (Stamps and Bohon 2006). However, the opposite trend is observed in rural new destinations, where educational attainment is lower, poverty rates are higher, and the Hispanic population is more likely to be composed of recent immigrants relative to rural established and metropolitan new destinations (Burton et al. 2013; Lichter and Brown 2011; Kandel et al. 2011; Lichter 2012; Lichter et al. 2015). During the 1990s, Hispanic immigrants increasingly moved directly into rural areas, bypassing traditional metropolitan destinations that historically served as first stops prior to secondary migration to rural areas (Lichter 2012; Massey and Capoferro 2008). As a result, rural new destinations have attracted disproportionately poor, non-citizen, and unauthorized immigrants with little to no prior exposure to the U.S. health care system and fewer interpersonal resources to help with navigating the system. Further compounding these disadvantages, many rural areas have severe health care service funding challenges than metropolitan areas and are therefore unlikely to be equipped to offer necessary translation and other services to assist newcomer Hispanics with procuring health insurance.

Speed and Timing of Hispanic Population Growth

Complicating the issue of Hispanic well-being in new destinations are differences in the timing and speed of Hispanic population growth driven by the economic and political factors discussed earlier. In the 1990s, Hispanics (mostly Mexican immigrants) were drawn to soaring economies in the southeast and Midwest bolstered by low-wage and precarious jobs (Donato et al. 2007; Singer 2008). Following the economic boom of the 1990s, however, the 2000s were characterized by economic recession and growing anti-immigrant sentiment, particularly against low-wage Mexican immigrants perceived as “stealing” native jobs and pilfering government resources. In rural new destinations in the south and Midwest especially, Hispanics typically occupy low-wage periphery jobs in agriculture, construction, manufacturing, and services – sectors that fared poorly during the economic downturn (Thiede and Monnat, 2016). Rural boomtowns with low-wage industrial contexts that attracted disproportionately large shares of Hispanic immigrants in the 1990s have been particularly vulnerable to globalization, economic restructuring, and employment downgrading (Brown and Schafft 2011). As a result, 1990s boomtowns are likely to have lower Hispanic insurance rates than both established destinations and more recently emerged and emerging Hispanic destinations.

Given the declining economy and growing hostility toward racialized newcomers during the 2000s, it is likely that Hispanics venturing into places without substantial Hispanic populations in the 2000s (compared to the 1990s) had to arrive with more human capital resources (i.e., job skills/experience, English proficiency) in order to successfully compete for employment that offers insurance or wages sufficient to purchase private insurance. Moreover, the places that attracted and retained Hispanics during the 2000s are likely to have had better economic opportunities than the places hit hardest by the 2000s economic downturn. Otherwise, it is unlikely these places would have experienced or maintained significant Hispanic population growth. A basic review of Census data demonstrates that an overwhelming share of counties (67%) that experienced over 150% Hispanic population growth during the 1990s were concentrated in the south (especially the south-Atlantic), whereas a greater percentage of counties with rapid Hispanic population growth during the 2000s are located in the northeast, and Midwest. These places have drastically different labor markets, political and social contexts, and demographic composition, all of which are likely to affect Hispanics' opportunities to acquire health insurance for the reasons discussed earlier. Yet previous research on variation in Hispanic outcomes between new and established destinations lumps all new destinations into one category. The reasons for this include the appeal of simplicity, data constraints, and lack of an agreed-upon definition of new destinations. Most existing studies categorize new destinations based on some defined percentage and absolute Hispanic population growth between 1990 and 2000, but these studies miss the many new spaces that experienced most of their Hispanic population growth after 2000. Moreover, in preliminary descriptive analyses, I found that there *are* distinct socioeconomic, labor market, and geographic differences between counties with rapid Hispanic population growth in the 1990s versus those with later and/or slower Hispanic population growth. These differences have implications for Hispanic health insurance that are masked if all new destinations are collapsed into one category. Therefore, I distinguish

between 1990s new destinations (early new destinations) and 2000s new destinations (recent new destinations).

Current Study

Data and Methods

The county is the main subnational unit of analysis because it is small enough to reflect local economic and political conditions but also large enough to be meaningful for policy. County governments provide political and economic structure, the county represents the context within which most social and health services are delivered (McLaughlin et al. 2001; McLaughlin and Stokes 2002), and state funding for social programs is often administered by counties. Moreover, county boundaries remain relatively consistent over time, allowing for straight-forward comparisons of Hispanic population size in 1990, 2000, and 2010.

County-level data are from the 2009/2013 American Community Survey (ACS) (U.S. Census Bureau 2014). The dependent variable is the health insurance coverage rate for Hispanic working-age adults (aged 18-64). This measure includes both private and public insurance (disaggregated rates are not available). I do not examine rates for Hispanics aged 65+ because over 95% have insurance. An examination of Hispanic children's insurance is also beyond the scope of this study because different federal and state policies apply to coverage for children versus adults, and a greater percentage of Hispanic children are U.S.-born compared to Hispanic adults, resulting in a more complex paper than space allows for here. This is an important area for future research.

Data produced by the U.S. Census Bureau for the ACS are estimates and are prone to sampling error. Some counties have larger margins of error (less reliable estimates) than others. Moreover, estimates for counties with small Hispanic populations are likely to be skewed. Accordingly, I excluded counties missing on any of the ACS variables of interest and counties with fewer than 100 Hispanic¹ adults (18-64) to reduce skew in counties with very small Hispanic populations. In addition, I restricted analyses to counties with acceptable reliability values for the Hispanic adult insurance rate, defined as having a coefficient of variation (CV) of less than .40 (ESRI 2014)². I calculated CVs in line with the formula for derived ratios suggested by the U.S. Census Bureau (2008). In addition, I weight all analyses by the inverse of the CV to give less weight to less reliable estimates. The final sample includes 2,259 counties.

Hispanic Destination Categories

I used data from the 1990, 2000, and 2010 decennial U.S. censuses to group counties into four mutually exclusive Hispanic destination categories based on Hispanic population size and growth: established destinations, 1990s (early) new destinations, 2000s (recent) new destinations, and non-destinations. Based upon previous research (Lichter and Johnson

¹As a robustness check, I also ran analyses excluding counties with fewer than 200 Hispanic adults (18-64) in 2009/2013. Results were no different from analyses excluding counties with fewer than 100 Hispanic adults.

²Of the 2,452 counties with at least 100 Hispanic adults and not missing on any ACS variable of interest, 192 were excluded due to unreliable Hispanic insurance rate estimates (i.e., CV > .40). Excluded counties were overwhelmingly non-destinations (N=176). Only three were established destinations, and 13 were new destinations.

2009; Parrado and Kandel 2010), *established Hispanic destinations* are counties with a Hispanic population composition of at least 10% in 1990. *New Hispanic destinations for the 1990s* are counties with less than 10% Hispanic population in 1990 but that experienced Hispanic population growth of at least 150% and at least 1,000 Hispanics between 1990 and 2000 (Crowley and Lichter 2009; Kandel and Cromartie 2004), with an important adjustment for counties with small populations (i.e., 1990 total population < 20,000). The requirement of an absolute increase of 1,000 Hispanics is unreasonable in counties with only a few thousand total residents, and it eliminates several rural counties with substantial Hispanic population growth, potentially biasing the findings.³ Accordingly, counties with populations under 20,000 that met the 150% growth criterion but did not meet the 1,000 absolute growth criterion were classified as 1990s new destinations if the percent Hispanic in the county exceeded the national average percent Hispanic in 2000 (12.5%). *New Hispanic destinations for the 2000s* are counties that did not meet the population growth threshold by 2000 to be categorized as a 1990s new destination but that did experience Hispanic population growth of at least 150% and at least 1,000 Hispanics between 1990 and 2010, with the same adjustment made for small counties (<20,000). Small counties meeting the 150% growth criterion but not the 1,000 Hispanic absolute growth criterion were classified as 2000s new destinations if the percent Hispanic in the county exceeded the national average percent Hispanic in 2010 (16.3%).⁴ All others counties were classified as *non-destinations*.

This strategy resulted in 322 established destinations, 308 1990s new destinations, 558 2000s new destinations, and 1,071 non-destinations among the 2,259 counties included in these analyses (Figure 1).⁵ In 2009/2013, 66.9% of all U.S. Hispanics adults (18-64) lived in established destinations, 11.3% lived in 1990s new destinations, 14.7% lived in 2000s new destinations, 6.8% lived in non-destinations, and the remaining 0.3% lived in counties that were excluded from the analyses due to missing information on variables of interest, having fewer than 100 Hispanic residents, or having unreliable estimates (CVs).

Metropolitan Status

I defined county metropolitan status using the USDA Economic Research Service's rural-urban continuum codes (USDA ERS 2003). I combined the three metropolitan categories into *metropolitan*. I split nonmetropolitan counties into *large nonmetropolitan* (urban population of 20,000+) and small/medium nonmetropolitan (urban population < 20,000),

³For example, Hamilton County, Kansas had a population of 2,388 in 1990 with only 139 Hispanics (5.8% of its population). By 2000, the overall population had increased to 2,670, with 550 Hispanics representing over 20% of the county's population. Without Hispanic population growth, the county would have experienced overall population decline.

⁴I also examined descriptive statistics and results from regression models that further separated new destinations by the speed of Hispanic population growth. In those analyses, the definitions of established destinations and 1990s new destinations remained the same, but 2000s new destinations were separated into those that experienced at least 150% Hispanic population growth between 2000 and 2010 (rapid growth new destinations for the 2000s) versus those that experienced 150% Hispanic population growth over the 20 year period from 1990-2010 (slow growth new destinations). The descriptive statistics and regression results were similar for these two groups of new destinations (results available from the author upon request), so they were combined into the category of 2000s new destinations in order to present a more straightforward comparison of differences.

⁵To assess the sensitivity of findings to these operationalizations, I tested multiple additional specifications for established and new destinations, including an established destination requirement of a 15% Hispanic population share (instead of 10%) in 1990, 2000, and 2010 and a new destination requirement of Hispanic population increases of 200% and 250% (instead of 150%). Descriptive and regression results were robust across all specifications leading me to be confident that my findings were not driven by destination operationalizations.

hereafter referred to as *rural*. Although the ERS further breaks down nonmetropolitan counties into those with urban populations of 2,500-19,999 versus <2,500, I combined the medium and small nonmetropolitan counties to ensure large enough sample sizes in each of the Hispanic destination categories. In preliminary analyses, I also included adjacency to a metropolitan area as an independent variable. Adjacency was not a significant predictor of Hispanic health insurance rates in the models, so I excluded it from the final analyses.

Compositional, Labor Market and State Policy Factors

I examined several Hispanic composition, labor market, and state policy factors that may drive differences in Hispanic health insurance rates across destination types. First, in all models, I included the 2009/2013 ACS estimate of the percentage of non-Hispanic white adults (18-64) with health insurance to ensure that any observed destination differences are not simply a function of poor economic conditions that are producing low insurance rates for all groups in new versus established destinations. *Hispanic economic well-being* measures included the 2009/2013 ACS estimates of Hispanic-specific poverty rate, unemployment rate, percentage aged 25+ with a four-year college degree or more, median income, and percentage of households that are owner-occupied (U.S. Census Bureau, 2014). *Foreign-born composition* measures included the 2009/2013 ACS estimates of percentages of Hispanic adults who are foreign born, foreign-born Hispanics who speak English less than very well, foreign-born Hispanics who are not U.S. citizens, and Hispanics who moved to the county from a different country in the past year (U.S. Census Bureau 2014). *Labor market context* measures included the 2009/2013 ACS estimates of unemployment rate, poverty rate, percentage of adults aged 25+ with a four-year college degree or more, and percent non-Hispanic black, and the 2004 USDA ERS economic dependency indicators for farming, manufacturing, federal/state government, or service sector dependency.

I have argued that spatial disparities in Hispanic health insurance may be driven by differences in county labor markets and the related differential selection of Hispanics most at risk of lacking insurance. However, my subnational approach is also informed by the notion that counties exist within, and are therefore characterized by, the context of the states and regions that house them. This is particularly relevant for a study examining Hispanic health insurance because of heterogeneity in state policies related to immigrant eligibility for Medicaid and other public programs. Accordingly, I included indicators for whether the county is located in a state that provides state-funded Medicaid for immigrants and whether the county is located in a state where immigrants are eligible for cash/food assistance during the 5-year ban, as of 2012 (U.S. Department of Health and Human Services 2012). I also controlled for U.S. Census region to account for variation in historical and cultural processes that influence migration, labor markets, and Hispanic foreign-born composition. Although Census divisions would be preferable, divisions are strongly collinear with destination type and state Medicaid plans for immigrants (all states in the Mid-Atlantic and all but Oregon in the Pacific have Medicaid plans for immigrants). A review of multicollinearity diagnostics revealed no other areas for concern based on recommendations set forth by Allison (2012).

Analysis

I begin by presenting descriptive statistics for Hispanic adult health insurance rates and all covariates by destination type. I use t-tests to identify significant differences in average county characteristics across the four destination types. I then present results from hierarchical linear models with random intercepts, wherein counties (level 1) are nested with states (level 2). Model 1 includes destination type (established destinations = reference) and metropolitan status (metropolitan = reference) and controls for the non-Hispanic white adult insurance rate. I then integrate Hispanic economic indicators (Model 2), general socioeconomic and labor market factors (Model 3), Hispanic foreign-born composition (Model 4),⁶ and state policies and region (Model 5).⁷ I then interact destination type with metropolitan status to identify whether destination differences in Hispanic health insurance rates are conditional upon whether the county is metropolitan, large non-metropolitan, or rural. Finally, I present models stratified by destination type to identify differential predictors of Hispanic insurance rates across different types of destinations.

As emphasized in subnational approaches to examining spatial inequality (Lobao et al. 2007), counties are not independent islands. There is considerable economic, social, and political exchange between counties. Relevant to these analyses, Hispanics may live in one county but commute to work in a bordering county. Therefore, health insurance rates are likely to be associated with labor market conditions in neighboring counties. To assess the sensitivity of my findings to spatially dependent county-relationships, I examined Local Indicators of Spatial Association (LISA) maps and calculated Moran's I for the dependent variable and all county-level covariates using GeoDa. There was significant spatial autocorrelation for Hispanic health insurance coverage rates and many of the county-level covariates. Accordingly, I calculated spatial weights for each variable using a queen weights matrix with a single order of contiguity and then included each of those weights (individually) as covariates in the full regression model. Only the Hispanic health insurance rate and Hispanic poverty rate were significant. However, the introduction of these weights (or any of the weights, for that matter) had no effect on any of the substantive conclusions drawn. Therefore, in the interest of space and model parsimony, and because spatial weights are biased in analyses that exclude several counties, I did not include them in the final models presented here, but those results are available from the author upon request.

Results

Figure 2 shows the distribution of Hispanic adult health insurance rates across the U.S. Coverage rates are lowest in the south, particularly in North and South Carolina, Georgia, Arkansas, Alabama, Tennessee, and eastern Texas. Coverage rates are highest in the northeast and parts of the Midwest. Comparing this map with Figure 1 reveals substantial

⁶The coefficients for destination type were unchanged regardless of whether I added foreign-born composition measures or labor market context measures to the model first. I elected to add labor market context measures first to allow me to describe changes in the associations between labor market factors and Hispanic coverage rates after accounting for foreign-born composition.

⁷A review of model diagnostics identified 16 counties (one metropolitan, 15 rural, one 1990s new destination, two 2000s new destinations, and 13 non-destinations) as extreme outliers (defined as having a studentized residual > 3.0 or < -3.0). I reran all models excluding these 16 counties, and the results were robust.

overlap between new destinations and low Hispanic coverage rates. Besides the dramatic between-state variation, there are also substantial disparities *within* states.

Variation in County Characteristics across Destination Type

Means for county-level Hispanic insurance rates and all covariates by destination type are presented in Table 1. Subscripts identify significant differences ($p < 0.05$) in means across categories. Compared with established destinations, which have an average Hispanic coverage rate of 58.8%, average rates are significantly lower in 1990s new destinations, wherein fewer than half of Hispanic adults (46.6%) have health insurance in the typical county. On the other hand, the difference between established destinations and 2000s new destinations (58.3%) is negligible and not statistically significant. The average Hispanic coverage rate is significantly higher among non-destinations (66%) than among both established destinations and 1990s new destinations, but just under 7% of Hispanic adults live in non-destinations.

Are Hispanic coverage rates lower in 1990s new destinations simply because those places have low insurance rates, in general? If this were the case, we would expect the patterns to be similar for non-Hispanic whites and blacks. Results from rows 2-4 in Table 1 show that this is not the case. In fact, the average non-Hispanic white adult insurance rate is significantly *higher* in 1990s new destinations than in established destinations - the exact opposite pattern observed for Hispanic insurance rates. Moreover, the average gap in non-Hispanic white versus Hispanic insurance rates is largest, by far, in 1990s new destinations, suggesting that Hispanics are especially disadvantaged relative to non-Hispanic whites in these counties. In addition, average non-Hispanic black insurance rates are nearly identical across the four destination types. Together, these findings indicate that the patterns observed for Hispanics are markedly different from those observed for non-Hispanic whites and blacks.

Due to space constraints, I do not discuss differences in each of the confounders/mediators here. It is worth noting that 1990s new destinations are characterized by significantly larger shares of foreign-born and non-citizen Hispanics and significantly higher Hispanic poverty rates than the other destination types. Moreover, 1990s new destinations are the most reliant on manufacturing, and they are the least likely to be located in states where immigrants are eligible for state-funded Medicaid during the federal 5-year ban.

Differences in Hispanic Health Insurance Rates by Destination Type

Results from multilevel regression models predicting county-level health insurance rates for Hispanic adults (aged 18-64) are presented in Table 2. Results from Model 1 show that, net of non-Hispanic white health insurance rates, both 1990s and 2000s new destinations have significantly lower Hispanic adult insurance rates than established destinations, with the lowest rates in 1990s new destinations. Non-destinations have a significantly higher average rate than established destinations. In addition, holding destination type constant, large nonmetropolitan and rural counties have significantly lower Hispanic health insurance rates than metropolitan counties, on average.

The introduction of Hispanic economic indicators in Model 2 results in marginal changes to destination differences. However, Hispanic economic well-being explains metropolitan status differences, as evidenced by the loss of statistical significance and decline in the magnitude of the large nonmetropolitan and rural coefficients from Model 1 to Model 2. This is because, on average, Hispanics have higher poverty rates and lower educational attainment in nonmetropolitan counties compared to metropolitan counties. The introduction of labor market factors in Model 3 also results in only marginal changes to destination-type differences in coverage rates.

However, when I integrate measures of Hispanic foreign-born composition in Model 4, destination differences disappear. Supplemental analyses revealed that this attenuation was entirely attributable to differences in Hispanic foreign-born composition. Compared to established destinations, new destinations (especially 1990s new destinations) are composed of significantly larger shares of foreign-born Hispanics, whereas non-destinations have smaller shares of foreign-born Hispanics. Higher shares of foreign-born Hispanics are associated with lower Hispanic coverage rates. The introduction of foreign-born composition also changed the relationships between labor market characteristics and Hispanic insurance rates observed in the previous model. For instance, foreign-born composition explained the entire disadvantage associated with being a farming dependent county, and whereas manufacturing dependency was not a significant predictor of lower Hispanic insurance rates in Model 3, the positive coefficient increased in magnitude and became statistically significant in Model 4. Holding foreign-born composition constant, manufacturing dependency is positively associated with Hispanic insurance rates. These findings suggest there are integral connections between labor markets and the foreign-born composition of Hispanics that influence Hispanic health insurance rates.

There are no additional changes with the introduction of state and regional factors in Model 5. Although immigrant eligibility for state-funded Medicaid is associated with higher Hispanic health insurance rates, and rates are significantly higher in the northeast and Midwest than in the south, these state policy and regional differences do not mediate destination type differences in Hispanic health insurance coverage above and beyond the other variables already in the model.

The Moderating Role of Metropolitan Status

A primary aim of this research is to determine whether rurality contributes an added disadvantage to new destination counties. Examining unadjusted Hispanic insurance rates by destination type and metropolitan status (Figure 3) and interaction models (not shown, but available upon request) suggests that this is indeed the case. These analyses show that 1990s new destinations have the lowest Hispanic insurance rates, but they are *particularly* disadvantaged if they are also rural⁸. Conversely, metropolitan 2000s new destinations have an average coverage rate that is statistically similar to metropolitan established destinations, but rural 2000s new destinations have a significantly lower average coverage rate than both rural established destinations and metropolitan 2000s new destinations. In fact, the rural/

⁸Note that Figure 3 presents unadjusted means. In interaction models that account for the clustering of counties within states, the difference between rural 1990s new destinations and metropolitan 1990s new destinations is statistically significant.

metropolitan disparity is *largest* among 2000s new destinations. The only other significant rural/metropolitan disparity is among non-destinations. Ultimately, the lowest Hispanic coverage rates are in 1990s new destinations at all levels of metropolitan status and rural 2000s new destinations. Appendix Figure A1 shows similar patterns for average white-Hispanic insurance rate gaps.

To highlight these interactions and better understand the drivers of metropolitan status and destination differences, I present results from regression models stratified by destination type in Table 3. There are several important findings. First, in unadjusted models that control only for the non-Hispanic white insurance rate, there are significant metropolitan status differences only among 2000s new destinations. Rural and large nonmetropolitan 2000s new destinations have significantly lower Hispanic coverage rates than metropolitan 2000s new destinations. Those significant metro status differences are attenuated in the fully adjusted model. Supplemental analyses (available from the author upon request) show that all of the large nonmetropolitan disadvantage and part of the rural disadvantage is explained by foreign-born composition. Among 2000s new destinations, significantly larger shares of Hispanics are immigrants in large nonmetropolitan and rural counties than in metropolitan counties (see Appendix, Figure A2). However, it is not until all covariates are added to the model that the rural disadvantage is completely attenuated. In addition to being disadvantaged by having larger shares of immigrant Hispanics, rural 2000s new destinations also have significantly higher poverty rates and significantly lower shares of Hispanics with 4-year college degrees than metropolitan 1990s new destinations (see Appendix, Figure A3). Moreover, among 2000s new destinations, metropolitan counties are characterized by a heavier reliance on service sector and state/federal government employment than rural counties, and a greater percentage of rural versus metropolitan counties are reliant on farming (see Appendix, Figure A4). Finally, a much lower percentage of rural 2000s new destinations are located in states where immigrants are eligible for Medicaid during the 5-year federal ban compared to metropolitan 2000s new destinations (see Appendix, Figure A5). Each of these factors contributes to the rural 2000s new destination insurance disadvantage vis a vis metropolitan counties.

The second major finding is that, among 1990s new destinations, there were not significant metropolitan status differences in the unadjusted model, but in the fully adjusted model, the coefficient for rural is positive and significant. Supplemental analyses revealed that this suppression is attributable to two interrelated factors – the Hispanic poverty rate and foreign-born composition. Among 1990s new destinations, rural counties have significantly higher Hispanic poverty rates and significantly greater shares of foreign-born non-citizen Hispanics than metropolitan counties. If not for these negative selection effects, rural 1990s new destinations would actually have *higher* Hispanic insurance rates than metropolitan 1990s new destinations.

Finally, there are several important differences in the correlates of Hispanic health insurance rates across the four types of destinations. I highlight only a few of those here. Although the share of Hispanic adults who are foreign born is associated with lower Hispanic insurance rates in all four types of destinations, the non-citizen share is associated with lower insurance rates in new and non-destinations but not established destinations. Moreover,

higher shares of newcomer Hispanic immigrants (those who arrived in the last year), are positively associated with Hispanic insurance rates in established destinations. The Hispanic poverty rate is associated with lower Hispanic insurance rates only in new destinations, and Hispanic educational attainment is associated with higher insurance rates in all except 1990s new destinations. Manufacturing dependence is associated with higher Hispanic insurance rates in established destinations, and farming dependence is associated with lower Hispanic insurance rates in 1990s new destinations, but higher insurance rates in 2000s new destinations. Finally, immigrant eligibility for state-only funded Medicaid is associated with higher Hispanic insurance rates only in non-destinations, holding all else constant.

Discussion

Previous studies note that Hispanics in new destinations are less likely to have health insurance than their peers in traditional destinations (Cunningham 2006; Gresenz et al. 2012). The current study expands on this prior work by disaggregating destinations by metropolitan status and the timing of their Hispanic population growth and by focusing on collective Hispanic group disparities rather than individual-level disparities in coverage. Collective disparities are important both because they help illuminate spatially segmented Hispanic group well-being in the U.S., and because they have implications for state and local governments, public health providers, and employers. Counties with low Hispanic coverage rates may face larger unpaid health care cost burdens, emergency departments in these counties may be faced with greater demand for services, and employers that rely on Hispanic labor may be faced with unhealthy workforces, resulting in lower productivity. This is especially problematic for rural areas that already suffer from limited health care infrastructures, small tax bases, and competitive disadvantages due to prior decades of industrial restructuring and neoliberal dismantling of social welfare programs (Lobao et al. 2007).

The empirical results support several general conclusions that have important implications for future research on destination and metropolitan status differences in Hispanic well-being and for public health policy efforts to improve Hispanic insurance coverage in the places where it is currently most lacking. First, consistent with the subnational theoretical approach that emphasizes how social processes and inequalities unfold differently within a nation (Lobao et al. 2007; Lobao et al. 2008), there are clear state delineations in Hispanic insurance rates but also substantial within-state (county-level) disparities in Hispanic coverage rates. These patterns highlight both spatially uneven Hispanic migration patterns (Lichter 2012) and spatially uneven Hispanic group well-being, even among neighboring counties within the same state.

Second, the new destinations that attracted large shares of Hispanics in the 1990s (early new destinations) have the lowest Hispanic insurance rates and largest white-Hispanic insurance rate gaps, by far. This is the case at all levels of metropolitan status, but the disadvantage is most pronounced among rural counties. Importantly, these are not simply counties where poor economic and labor market conditions produce low insurance rates for *all* racial/ethnic groups. In fact, insurance rates for non-Hispanic whites are higher in 1990s new destinations than in established destinations. Instead, regression analyses demonstrated that the Hispanic

health insurance disadvantages observed in 1990s new destinations are entirely the function of larger relative shares of foreign-born non-citizen Hispanics in these places. The geographic dispersion of Hispanics from traditional metropolitan gateways to new destinations during the 1990s did not conform to conventional spatial assimilation and mobility models (Lichter 2012). Instead, multiple social, economic, and political forces led to comparatively large concentrations of low-skill non-citizen Hispanics in particular *types* of counties in the 1990s (Donato 2007; Martin et al. 2006) – the very types of places where jobs available to these workers (agriculture, meatpacking/processing) are often difficult, dangerous, low-paying, and are unlikely to include employer-sponsored health care, especially in rural areas. Although I was unable to account for it with these data, 1990s new destinations are also less likely to have the various institutional resources (e.g., legal aid and health care advocacy services) that have developed over time in established destinations (Waters and Jimenez 2005). Without these institutional supports, foreign-born non-English speaking Hispanics may experience difficulty navigating the necessary systems for procuring health insurance or even understanding the need for insurance.

These findings also demonstrate the importance of distinguishing between the places that experienced rapid Hispanic population growth during the 1990s and those where growth occurred slower or later. 2000s new destinations have higher Hispanic insurance rates than 1990s new destinations at each level of metropolitan status. Among metropolitan counties, 2000s new destinations have Hispanic insurance rates similar to established destinations. Metropolitan areas that emerged as new destinations during the 2000s are characterized by the selection of better resourced Hispanics (lower poverty rates, higher educational attainment) who are less likely to be foreign born compared to those who participated in the earlier (1990s) wave of migration to new destinations. These findings add to the growing literature suggesting that better-resourced Hispanics (those with higher household incomes, educational attainment, and English-proficiency) selected into more economically desirable metropolitan new destinations (Park and Iceland 2011; Stamps and Bohon 2006). However, selection processes do not occur in isolation from structural conditions. As emphasized by Lobao (2007), we must understand that both where actors are located *and* those places themselves are key arenas in which inequalities emerge and operate. My results suggest that metropolitan counties that attracted Hispanic migrants during the 2000s have labor markets more likely to facilitate Hispanic procurement of health insurance than the counties that attracted Hispanic migrants during the 1990s.

Fourth, results from interaction and conditional models highlight important rural/urban inequalities among new destinations that are not observed among established destinations. Among established destinations, Hispanic coverage rates are statistically similar between metropolitan, large nonmetropolitan and rural counties. In addition, among 1990s new destinations, rural counties would actually have *higher* Hispanic insurance coverage rates than metropolitan counties if not for having significantly larger shares of immigrants. However, among 2000s new destinations, metropolitan counties have a considerable advantage over rural counties. In fact, the metropolitan-rural gap in average Hispanic insurance rates was largest among 2000s new destinations. This was partly explained by higher shares of immigrants in rural versus metropolitan counties, but differences in

Hispanic economic well-being, labor market contexts, and state Medicaid policies also played important roles in explaining this difference.

These conditional models also demonstrated that several of the predictors of Hispanic insurance rates varied across destinations. For instance, the Hispanic poverty rate was inversely associated with Hispanic insurance rates only in new destinations, Hispanic unemployment was inversely associated with insurance rates only in 1990s new destinations, and whereas farming dependence was positively associated with Hispanic insurance rates in 2000s new destinations, it was associated with significantly lower insurance rates in 1990s new destinations. Together, these findings suggest that Hispanic compositional characteristics and labor market factors interact in complex ways to differentially influence opportunities for Hispanics to procure health insurance in different types of destinations.

Douglas Massey (2008) has questioned whether immigrant incorporation will occur as readily in new destinations as in traditional destinations, given that traditional destinations have established institutions intended to facilitate incorporation that may be missing in new destinations. On the one hand, my findings suggest reasons to be cautiously optimistic about Hispanic health in new destinations. For one, metropolitan new destinations that emerged in the 2000s have Hispanic insurance rates, Hispanic poverty rates, and white-Hispanic insurance rate gaps that are comparable to established destinations, and Hispanics are more highly educated in metropolitan 2000s new destinations. In addition, despite their disadvantaged labor markets and lack of institutional resources, new destinations that emerged during the 1990s have similar rates of Hispanic health insurance coverage as established destinations once differences in immigrant concentration are held constant. This suggests that, as shares of foreign-born Hispanics are replaced with second and future generation U.S.-born Hispanics in these places, insurance rates should climb. However, my findings also lend support to arguments made by others that migration of low-income Hispanic immigrants to small towns has driven the emergence of “rural ghettos” characterized by poverty, social isolation, and marginal labor force attachment (Burton et al. 2013; Donato et al. 2007; Kandel et al. 2011; Lichter et al. 2010; Lichter and Brown 2011; Lichter et al. 2012; Monnat and Chandler, forthcoming), all of which interact with immigrant status to produce comparatively lower health insurance rates. This is worrisome given the younger Hispanic age structure and the fact that Hispanic fertility, a large second-order effect of past Hispanic immigration, is particularly high in rural areas, especially among the poorest and most disadvantaged immigrants (Lichter et al. 2012; Lichter et al. 2015). Immigrants who lack insurance are at risk of poor health, which may negatively affect their current and future children. Beyond the myriad problems associated with lack of health insurance for mothers during pregnancy, the relatively disadvantaged starting position of babies who are born to foreign-born, poorly-resourced, and potentially unhealthy Hispanic parents in rural new destinations brings to bear questions about the future incorporation and health trajectories of this rural population (Lichter et al. 2015).

Results should be considered in light of some important limitations. First, I was unable to compare insurance rates for U.S. versus foreign-born Hispanics or across country-of-origin. The ACS has county-level foreign-born insurance rates, but those rates are not disaggregated by ethnic group. Metropolitan areas are home to larger Asian immigrant populations,

whereas the overwhelming majority of rural immigrants are from Mexico. As a result, using immigrant insurance rates instead of Hispanic-specific insurance rates would produce upwardly biased estimates of rural versus metro disparities because Asian immigrants have higher employment rates (especially in professional industries that offer employer-sponsored insurance), lower poverty rates, and higher incomes. Second, undocumented immigrants face even more pronounced health insurance challenges, and many undocumented Hispanic immigrants, especially those in rural new destinations, are likely not captured in Census data. As a result, Hispanic insurance rates in rural new destinations are probably upwardly biased in the ACS estimates presented here, and actual disparities between metropolitan versus rural new destinations are likely larger than observed in this study. Third, although the ACS has separate county-level counts and rates for public, employer-based, and direct-purchase insurance, they are not disaggregated by ethnicity. Access to private health insurance is more desirable than reliance on public health insurance because the need for public insurance reflects socioeconomic disadvantage. In a hypothetical scenario in which all immigrants were eligible for public insurance, higher county rates of public coverage would reflect greater economic disadvantage among Hispanics in those counties, whereas higher rates of private coverage would reflect stronger Hispanic economic incorporation. Forth, ACS estimates are prone to sampling error, with some counties having larger errors than others. I have attempted to deal with this by excluding counties with unacceptably large errors and by weighting the analyses to give less weight to counties with the highest errors (ESRI 2014; U.S. Census Bureau 2008). Similarly, in order to incorporate rural counties, I was restricted to using 5-year estimates. There was significant variation in economic and migration conditions between 2009 and 2013 that I was unable to capture in these analyses. Future research should compare the patterns observed in this study to those of future ACS waves to determine whether these differences are sensitive to the time period captured. Finally, there is no clear consensus on how “new destinations” should be defined. Extensive sensitivity analyses using alternative definitions similar to those tested by Lichter et al. (2015) make me confident that these results would hold with different operationalizations, but future research should explore the robustness of various outcomes to different destination definitions.

Despite these limitations, this study makes a substantial contribution to our understanding of the factors that influence spatial differences in Hispanic health insurance coverage rates and contributes to literature identifying whether Hispanic group well-being is more limited in new versus established destinations (Dondero and Muller 2012; Fischer 2010; Hall 2013; Lichter et al. 2015; Park and Iceland 2010; Stamps and Bohon 2006; Monnat and Chandler, forthcoming). Comparatively low Hispanic adult insurance rates in 1990s new destinations at all levels of metropolitan status and rural 2000s new destinations are driven by the disproportionate selection of foreign-born non-citizen Hispanics into these places. However, spatially divergent patterns of Hispanic group incorporation and foreign-born composition were driven by dynamic political and economic conditions over the past three decades, resulting in spatially segmented Hispanic health insurance coverage across the U.S. Consistent with subnational theories of spatial inequality, my findings suggest there are integral connections between labor markets and the foreign-born and socioeconomic composition of Hispanics that influence insurance rates.

These findings suggest that targeted and locally tailored policy interventions may be more effective at increasing Hispanic insurance rates than broad sweeping policies. Universal insurance coverage for immigrants, regardless of documentation status, would improve Hispanic insurance rates the most in rural new destinations, but such policies are unlikely to garner widespread political support. In counties with larger relative shares of U.S. born Hispanics and eligible immigrants (i.e., established and non-destinations), the Affordable Care Act (ACA) should lead to improvements in Hispanic insurance coverage, especially in counties located in states that expanded Medicaid. However, undocumented immigrants are not eligible for ACA marketplace subsidies nor Medicaid, and legal permanent residents are eligible only after a 5-year wait. As a result, the ACA is unlikely to immediately increase Hispanic insurance rates in 1990s new destinations and rural 2000s new destinations, wherein the majority of Hispanic residents are not citizens, but it should improve coverage for future generations of Hispanics born in these places. In established destinations and 2000s new destinations, where educational attainment is associated with higher Hispanic insurance rates, enhancing Hispanics' opportunities for completing college degrees would facilitate entry into industries that offer employer-sponsored health insurance. Given its positive association with insurance rates, investment in U.S. manufacturing also holds promise for increasing Hispanic insurance rates in established destinations. Alternatively, Hispanics in farming dependent 1990s new destinations may benefit from the development of community clinics to serve the comparatively larger percentages of Hispanics without health insurance in those counties or from federal or state incentives to farm employers to provide employer-subsidized insurance.

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Appendix A

Figure A1. Average County-Level Gaps in White Adult vs. Hispanic Adult (aged 18-64) Health Insurance Coverage Rates by Destination Type and Metropolitan Status, 2009/2013

Note: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation > .40). Means are weighted by the inverse of the coefficient of variation, Non-overlapping error bars indicate statistically significant difference ($p < 0.05$)

Figure A2. Percentage of Counties with Economic Dependence on Manufacturing, Farming, Services, and Federal/State Government by Destination Type and Metropolitan Status

Note: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation>.40)

Figure A3. Average Percentage of Hispanic Adults (aged 18-64) who are Foreign-Born by Destination Type and Metropolitan Status 2009/2013

Note: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable

estimates for Hispanic health insurance rate (coefficient of variation > .40) Means are weighted by the inverse of the coefficient of variation

Figure A4. Average Hispanic Poverty Rates, Unemployment Rates, and Percentages with 4-year college degree or more, by Destination Type and Metropolitan Status, 2009/2013

Note: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation > .40) Means are weighted by the inverse of the coefficient of variation

Figure A5. Percentage of Counties wherein Immigrants are Eligible for State-Funded Medicaid, 2012

Note: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation > .40)

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Figure 1. Distribution of Hispanic Destinations by County

Figure 2. Hispanic Adult (ages 18 to 64) Health Insurance Coverage Rates by County, 2009/2013

Note: Rates for counties with unreliable estimates are not shown

Figure 3. Average Hispanic Health Insurance Rates by Destination Type and Metropolitan Status, 2009/2013

Note: N=2,259 counties; Weighted by inverse of coefficient of variation; error bars represent 95% confidence intervals

Table 1
Differences in Average County Characteristics by Destination Type, 2009/2013

	Established (N=322) ^a	1990s New (N=308) ^b	2000s New (N=558) ^c	Non-Destination (N=1,071) ^d
% Hispanics aged 18-64 w/health insurance	58.8 (10.2) bd	46.6 (12.8) acd	58.3 (14.3) bd	66.0 (15.4) abc
% non-Hispanic whites aged 18-64 w/health insurance	80.1 (7.1) bcd	82.5 (5.5) ac	83.6 (5.8) abd	82.5 (5.6) ac
% blacks aged 18-64 w/health insurance	46.7 (19.2)	46.5 (9.0)	46.6 (11.1)	46.8 (17.1)
White-Hispanic gap in health insurance rates	21.4 (10.4) bcd	36.0 (11.6) acd	25.4 (12.3) abd	16.5 (14.4) abc
<u>Hispanic Incorporation</u>				
Hispanic poverty rate	25.3 (7.9) bcd	31.2 (10.1) acd	27.3 (10.4) ab	27.0 (12.8) ab
Hispanic unemployment rate	10.5 (4.5)	11.0 (4.5)	10.9 (5.0)	11.2 (8.5)
% Hispanics aged 25+ w/ 4-year college degree or more	8.0 (5.0) bcd	10.7 (6.7) acd	14.4 (8.8) abd	13.1 (10.2) abc
Hispanic median income (constant 2013 \$)	38288 (9174) cd	38270 (10806) cd	41620 (12239) ab	40729 (18200) ab
% Hispanic households that are owner-occupied	59.0 (13.9) bcd	48.4 (12.0) ad	49.3 (13.3) ad	51.8 (18.6) abc
<u>Foreign-Born Composition</u>				
% Hispanic adults who are foreign-born	36.6 (18.6) bcd	65.6 (12.3) acd	47.0 (15.4) abd	33.8 (17.6) abc
% foreign-born Hispanics who speak English < very well	70.2 (9.1) bcd	68.2 (8.9) acd	60.0 (13.3) abd	54.2 (22.3) abc
% foreign-born Hispanic adults who are not citizens	71.7 (10.7) bd	79.0 (9.6) acd	71.3 (13.7) bd	67.5 (21.2) abc
% Hispanics moved from different country in last year	0.7 (1.1) bcd	1.1 (1.1) a	1.2 (1.4) a	1.1 (2.2) a
<u>Labor Market Context</u>				
Unemployment rate	9.1 (3.5) b	9.7 (2.7) acd	8.9 (2.6) b	9.0 (3.2) b
Poverty rate	18.4 (6.0) bcd	16.1 (5.2) ac	14.7 (5.2) abd	15.8 (5.1) ac
% adults age 25+ w/ 4-year college degree or more	19.9 (9.2) bc	24.1 (10.2) ad	24.8 (9.1) ad	19.3 (7.1) bc
% non-Hispanic black	4.8 (6.0) bc	12.4 (12.0) acd	9.2 (11.1) abd	7.7 (12.3) abc
<u>Economic Dependency Type</u>				
Farming	22.4 bcd	5.8 ac	2.5 abd	7.8 ac
Manufacturing	5.6 bcd	43.8 acd	29.9 abd	35.4 abc
Federal/State Government	18.3 b	6.8 acd	14.2 b	13.6 b
Services	13.7 bcd	20.1 ad	21.3 ad	7.7 abc
<u>State Policy</u>				
Immigrants eligible for state-only Medicaid	28.6 b	17.9 acd	25.1 b	26.5 b
Immigrants eligible for state-only cash/food assistance	35.1	32.5 c	40.0 b	36.5

Census Region and Division	Established (N=322) ^a	1990s New (N=308) ^b	2000s New (N=558) ^c	Non-Destination (N=1,071) ^d
Northeast	3.4 cd	1.9 cd	12.7 ab	10.6 ab
New England	0.6 cd	0.0 cd	3.4 ab	3.9 ab
Mid-Atlantic	2.8 cd	1.9 cd	9.3 ab	6.6 ab
Midwest	4.0 bcd	21.8 ad	25.6 ad	42.6 abc
East North Central	0.6 bcd	9.7 acd	14.9 abd	21.5 abc
West North Central	3.4 bcd	12.0 ad	10.8 ad	21.1 abc
South	53.1 bd	66.9 acd	48.6 bd	34.8 abc
South-Atlantic	3.1 bcd	43.8 acd	22.2 abd	13.4 abc
East South Central	0.0 bcd	12.0 a	10.4 a	10.1 a
West South Central	50.0 bcd	11.0 ac	15.9 abd	11.3 ac
West	39.4 bcd	9.4 a	13.1 a	12.0 a
Mountain	24.5 bcd	5.2 a	7.0 a	7.5 a
Pacific	14.9 bcd	4.2 a	6.1 a	4.6 a

Notes: Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (i.e., coefficient of variation > .40)

Descriptive statistics for values derived from the ACS estimates are weighted by the inverse of the coefficient of variation
Sig difference at p<0.05:

^aSignificantly different from established destination average

^bSignificantly different from 1990s new destination average

^cSignificantly different from 2000s new destination average

^dSignificantly different from non-destination average

Results from Multilevel Models Predicting County-Level Hispanic Adult (ages 18-64) Health Insurance Coverage Rates, 2009/2013

Table 2

	Null Model	Model 1	Model 2	Model 3	Model 4	Model 5
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Intercept	63.398 *** (1.474)	19.282 *** (5.382)	22.742 *** (5.321)	7.650 (6.251)	36.204 *** (5.390)	36.293 *** (5.388)
<i>Destination Type (Established=ref)</i>						
1990s New		-10.498 *** (1.274)	-9.758 *** (1.159)	-8.732 *** (1.182)	-2.009 (1.028)	-1.988 (1.023)
2000s New		-3.508 ** (1.121)	-4.302 *** (1.023)	-3.616 ** (1.042)	-1.525 (.887)	-1.528 (.882)
Non-Destination		4.167 *** (1.112)	2.498 * (1.014)	2.602 * (1.025)	-0.212 (.874)	-0.255 (.869)
<i>Metropolitan Status (Metropolitan=ref)</i>						
Large Nonmetropolitan		-1.812 * (.859)	0.797 (.788)	-0.195 (.791)	0.300 (.671)	0.161 (.671)
Rural		-2.802 *** (.693)	-0.392 (.645)	-0.531 (.661)	0.834 (.562)	0.698 (.561)
Percentage of non-Hispanic white adults (18-64) with health insurance		0.543 *** 0.061	0.348 *** 0.057	0.520 *** 0.066	0.518 *** 0.055	0.479 *** 0.056
<i>Hispanic Economic Well-Being</i>						
Hispanic poverty rate			-0.150 *** (.025)	-0.170 *** (.026)	-0.107 *** (.022)	-0.108 *** (.022)
Hispanic unemployment rate			0.027 (.036)	-0.025 (.038)	-0.139 *** (.032)	-0.147 *** (.032)
Percent of Hispanics aged 25+ w/ 4-year college degree or more			0.385 *** (.030)	0.398 *** (.034)	0.169 *** (.030)	0.169 *** (.030)
Hispanic median income (constant 2013 \$1,000s)			0.040 * (.020)	0.051 * (.020)	0.063 *** (.017)	0.063 *** (.017)
Hispanic homeownership rate			0.180 *** (.017)	0.166 *** (.017)	0.093 *** (.014)	0.094 *** (.014)
<i>General Economic Conditions / Labor Market Factors</i>						
Percent non-Hispanic black				-0.165 *** (.030)	-0.085 ** (.026)	-0.075 ** (.026)
Poverty rate				(.152) * (.072)	(.082) (.061)	(.091) (.061)
Unemployment rate				0.306 * (.129)	0.224 * (.109)	0.238 * (.108)
Percent of adults age 25+ w/ 4-year college degree or more				-0.114 * (.045)	-0.031 (.039)	-0.031 (.039)
<i>Economic Dependency Type</i>						
Farming				-2.967 ** (1.012)	0.860 (.867)	0.831 (.866)
Manufacturing				0.632 (.659)	1.930 *** (.559)	1.910 *** (.559)

	Null Model B (SE)	Model 1 B (SE)	Model 2 B (SE)	Model 3 B (SE)	Model 4 B (SE)	Model 5 B (SE)
Federal/State Government						
Services				3.976 *** (.832)	2.209 ** (.712)	2.347 ** (.712)
				-0.419 (.889)	0.302 (.753)	0.251 (.751)
<u>Foreign-Born Composition</u>						
Percentage of Hispanic adults who are foreign-born					-0.363 *** (.015)	-0.357 *** (.015)
Percentage of foreign-born Hispanics who speak English less than very well					-0.040 ** (.013)	-0.040 ** (.013)
Percentage of foreign-born Hispanic adults who are not citizens					-0.106 *** (.013)	-0.104 *** (.013)
Percentage of Hispanics who moved from different country in last year					0.008 (.110)	0.000 (.110)
<u>State Level Factors</u>						
Immigrants eligible for state-only funded Medicaid						2.892 * (1.326)
Immigrants eligible for state-only funded cash and/or food assistance						0.478 (1.286)
<i>Census Region</i> (ref=West)						
Northeast						6.594 *** (1.814)
Midwest						3.509 * (1.583)
South						-1.275 (1.643)
Unconditional Variance (State N=51)	101.660 *** (22.313)	49.246 *** (11.596)	42.162 *** (9.946)	36.019 *** (8.973)	21.272 *** (5.590)	10.519 *** (3.312)
Model Residual Variance (County N=2,259)	158.250 *** (4.764)	139.260 *** (4.199)	114.170 *** (3.447)	110.570 *** (3.347)	79.330 *** (2.405)	79.366 *** (2.406)
Intraclass Correlation Coefficient	0.391	0.261	0.270	0.246	0.211	0.117
Percent of State-Level Variance Explained	NA	51.6	58.5	64.6	79.1	89.7
Percent of County-Level Variance Explained	NA	12.0	27.9	30.1	49.9	49.8
-2 Res Log Likelihood	18337.6	18013.0	17590.0	17515.7	16783.1	16739.2
AIC	18341.6	18017.0	17594.9	17519.7	16787.1	16743.2

Notes: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation>.40)

Models are weighted by the inverse of the coefficient of variation

* p<0.05;

** p<0.01;

stats pval=0.001; two-sided

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Table 3
Results from Multilevel Models Predicting County-Level Hispanic Adult Insurance Coverage Rates, 2009/2013, Stratified by Metropolitan Status

	Established (N=322)		1990s New Destination (N=308)		2000s New Destination (N=558)		Non-Destinations (N=1,071)	
	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)
Intercept	41.950 *** (6.784)	42.011 *** (9.316)	-15.321 (11.574)	9.514 (13.611)	-11.948 (10.850)	22.930 (11.412)	12.548 (8.768)	37.935 *** (8.931)
<i>Metropolitan Status</i> (ref=metro)								
Large Nonmetropolitan	-1.500 (1.706)	0.517 (1.402)	-2.084 (1.732)	0.514 (1.213)	-3.414 * (1.403)	-0.060 (1.021)	0.096 (1.578)	0.397 (1.273)
Rural	-0.348 (1.183)	1.384 (1.102)	-2.699 (1.694)	3.273 * (1.343)	-5.223 *** (1.454)	2.200 (1.154)	-2.085 (1.093)	0.384 (.900)
Percentage of non-Hispanic white adults (18-64) with health insurance	0.239 ** (.076)	0.331 *** (.070)	0.802 *** (.136)	0.843 *** (.143)	0.872 *** (.126)	0.780 *** (.127)	0.659 *** (.103)	0.432 *** (.100)
<u>Hispanic Economic Incorporation</u>								
Hispanic poverty rate		-0.087 (.084)		-0.202 *** (.064)		-0.172 *** (.049)		-0.059 (.031)
Hispanic unemployment rate		-0.021 (.170)		-0.277 ** (.105)		-0.005 (.075)		-0.176 *** (.043)
Percentage of Hispanics aged 25+ w/ 4-year college degree or more		0.340 * (.142)		0.160 (.114)		0.221 ** (.069)		0.158 *** (.041)
Hispanic median income (\$1,000s)		0.158 * (.074)		0.069 (.068)		0.025 (.045)		0.061 ** (.022)
Hispanic homeownership rate		0.073 (.046)		0.156 *** (.044)		0.034 (.033)		0.089 *** (.020)
<u>General Economic Conditions/Labor Market Competition</u>								
Percent non-Hispanic black		0.179 (.092)		-0.216 *** (.045)		-0.173 *** (.045)		-0.034 (.044)
Percentage of adults age 25+ w/ 4-year college degree or more		0.340 * (.142)		-0.070 (.084)		-0.140 (.072)		0.031 (.074)
Unemployment rate		0.017 (.258)		0.764 ** (.274)		0.084 (.206)		0.278 (.175)
Poverty rate		0.069 (.121)		0.385 ** (.140)		0.242 * (.118)		0.013 (.118)
<i>Economic Dependency Type</i>								
Farming		0.042 (1.143)		-4.209 * (2.136)		4.772 * (2.396)		2.037 (1.552)
Manufacturing		3.778 * (1.727)		1.724 (1.095)		0.651 (.923)		1.686 (.923)
Federal/State Government		0.351 (1.171)		-0.678 (1.775)		2.168 (1.202)		2.668 * (1.256)
Services		-1.067 (1.436)		0.193 (1.300)		1.369 (1.065)		-0.295 (1.593)
<u>Foreign-Born Composition</u>								
% Hispanic adults who are foreign-born		-0.321 *** (.029)		-0.312 *** (.045)		-0.352 *** (.030)		-0.383 *** (.023)

	Established (N=322)		1990s New Destination (N=308)		2000s New Destination (N=558)		Non-Destinations (N=1,071)	
	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)	Unadjusted B (SE)	Fully Adjusted B (SE)
% foreign-born Hispanics who speak English less than very well		0.018 (.050)		-0.025 (.053)		-0.065 [*] (.030)		-0.032 (.017)
% foreign-born Hispanic adults who are not citizens		-0.082 (.042)		-0.298 ^{***} 0.059		-0.189 ^{***} (.033)		-0.083 ^{***} (.017)
% Hispanics who moved from different country in last year		0.904 [*] (.389)		-0.025 (.353)		-0.215 (.227)		-0.016 (.152)
State Level Factors								
Immigrants eligible for state-only funded Medicaid		-2.072 (3.740)		-0.195 (1.929)		1.281 (1.432)		4.758 ^{**} (1.697)
Immigrants eligible for state-only funded cash and/or food assistance		-1.177 (3.850)		2.110 (1.762)		1.197 (1.338)		-0.937 (1.604)
Census Region (ref=West)								
Northeast		10.020 [^] (5.362)		-0.114 (3.989)		5.428 [*] (2.129)		5.568 [*] (2.423)
Midwest		3.190 (4.673)		4.745 [^] (2.460)		3.785 [*] (1.825)		3.272 (2.009)
South		-8.192 [^] (4.522)		-1.474 (2.457)		0.270 (1.840)		-0.612 (2.191)
Unconditional Variance	70.616 ^{***} (30.075)	28.793 [*] (15.125)	51.784 ^{***} (16.647)	7.599 [*] (3.743)	56.545 ^{***} (16.449)	6.507 [*] (3.165)	38.515 ^{***} (11.298)	11.384 ^{**} (4.701)
Model Residual Variance	65.726 ^{***} (5.400)	40.635 ^{***} (3.422)	84.169 ^{***} (7.196)	37.369 ^{***} (3.276)	108.880 ^{***} (6.856)	51.707 ^{***} (3.301)	179.980 ^{***} (7.972)	109.570 ^{***} 4.901
-2 Res Log Likelihood	2318.8	2148.0	2318.7	2043.8	4339.2	3893.9	8870.6	8333.9
AIC	2322.8	2152.0	2322.7	2047.8	4343.2	3897.9	8874.6	8337.9

Notes: N=2,259 counties; Excludes counties with fewer than 100 Hispanic adults (ages 18-64), counties with missing values on variables of interest, and counties with unreliable estimates for Hispanic health insurance rate (coefficient of variation>.40)
Models are weighted by the inverse of the coefficient of variation

[^]
p<0.10;

^{*}
p<0.05;

^{**}
p<0.01;

^{***}
p<0.001; two-tailed tests