

Does Migration Destination Affect the Mortality Advantage of Mexican Immigrants? A
comparison of Traditional, New, and Emerging Destinations

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Abstract

Health declines for immigrants with greater exposure to the United States, but the specific characteristics of the migration and assimilation processes that contribute to this pattern are less clear. As the Mexican population in the US has grown, it has expanded outside traditional gateways in California and Texas to new destinations throughout the US. This study examines the mortality of Mexican immigrants in *Traditional* versus *New* and *Emerging* destinations in the US. Using National Health Interview Survey data between 1989 and 2009 the analysis finds that Mexican immigrants in New and Emerging destinations have a significant survival advantage over their counterparts in traditional established destinations. This advantage may reflect selective migration to new destinations, superior employment prospects, or slower behavioral assimilation. US-born Mexicans do not benefit from this advantage. The results suggest that the spatial characteristics of the assimilation process are important when considering the health of immigrants.

Introduction

The Hispanic mortality advantage refers to the finding that the Hispanic-origin population in the United States experiences lower adult mortality rates than the non-Hispanic white population, despite lower average socioeconomic status among Hispanics. The “Hispanic Paradox” calls attention to the fact that Hispanics resemble African-Americans in terms of socioeconomic indicators but non-Hispanic whites in health and mortality indicators (Hummer, et al., 2000, Markides and Eschbach, 2011). In many studies, Hispanics exhibit higher life expectancy than non-Hispanic whites, as well as more favorable profiles with respect to non-fatal conditions such as cancer incidence and severity, heart disease, and hypertension (Eschbach, et al., 2005, Singh and Siahpush, 2002). Although the earliest empirical findings demonstrated this for Hispanics as a whole, subsequent work demonstrates that the pattern varies significantly by country of origin and place of birth, with the largest advantage observed for Mexican immigrants (Palloni and Arias, 2004).

The migration history of Mexican-origin arrivals in the United States is strongly patterned by geography. Established destinations for Mexican immigrants have traditionally been concentrated in the border states (California, New Mexico, Texas), although a few other destinations such as Chicago have been longstanding destinations with little geographic proximity. More recently, Mexican populations have grown rapidly in areas with previously low immigrant presence. In-migrants to locations such as Louisiana, Georgia, Pennsylvania, and North Carolina have redefined the ethnic landscape of the United States and has expanded the presence of Mexican immigrants outside the traditional ethnic enclaves in the Southwest (Hall, 2013). Immigrant experience in these new destinations has been the topic of considerable research over the past two decades, with a renewed interest in the impacts of assimilation on

individual and family well-being (Rumbaut, 1997). This process is significant for understanding how communities with little previous experience with incoming migrants respond to new arrivals, and how these responses can shape the experience of the new arrivals (Massey, 2008, Zúñiga and Hernández-León, 2006).

This study will examine the health of Mexican immigrants at a fundamental level, specifically comparing the mortality experience of Mexican immigrants in *Traditional*, *New*, and *Emerging* destinations (Park and Iceland, 2011) to native-born non-Hispanic whites in those destinations using a nationally-representative population-based survey. Preliminary results suggest that Mexican immigrants living in new and emerging migration destinations tend to have a larger mortality advantage over their non-Hispanic white counterparts. Mexicans living in established destinations have an advantage as well, but it is smaller. These results suggest that some aspects of new and emerging destinations or of the immigrants who arrive in them may have beneficial impacts on health. Subsequent analyses will examine the contribution of co-ethnic concentration, duration of residence, and health practices and behaviors to this difference in order to understand how destination impacts the process of health assimilation among Mexican immigrants in the United States.

Background

Explaining the Hispanic and Immigrant Mortality Advantages

Research on the Hispanic mortality advantage in the United States focuses on three broad sets of explanations: data artifacts, migration effects, and cultural-behavioral effects. The data artifacts explanation suggests that traditional analyses relying on vital statistics may be inaccurate due to the mismatch in coding of Hispanic ethnicity in vital statistics and in the census (Elo, et al., 2004). The use of survey-based and government datasets indicate that although data

quality issues exist, they are not sufficient to explain the mortality advantage for many Hispanic subgroups (Palloni and Arias, 2004). The migration effects explanation asserts that our estimates of Hispanic mortality may be biased by migrant selection, both in terms of the characteristics of those who come to the United States as well as those who remain in the United States over time. The selective-migrant hypothesis suggests that international migrants may have greater human capital and health resources than their counterparts who do not move, such that migrants in the US form a highly select group of healthy individuals (Abraido-Lanza, et al., 1999). The salmon-bias hypothesis emphasizes that immigrants in the US may return to their countries of origin prior to death, leaving their death unobserved in US vital statistics (Palloni and Arias, 2004). Finally, the cultural-behavioral explanation holds that characteristics of Hispanic culture and communities contribute to better health and lower mortality for particular subgroups. These characteristics may include stronger networks in immigrant communities, greater familial support, or healthier behaviors. Indeed, recent immigrants appear to smoke less and eat healthier diets than native-born Americans, although this advantage may erode over time (Fenelon, 2013, Gordon-Larsen, et al., 2003).

Immigrant Assimilation, Health, and Mortality

Examining the Hispanic mortality advantage also requires considering the role of migration. In the 2010, nearly half of all Hispanics, and the majority of Hispanic adults, were born outside the United States (US Census Bureau, 2011). Related to the Hispanic paradox is the immigrant paradox, the tendency for foreign-born populations to outlive the native-born despite lower socioeconomic status (Blue and Fenelon, 2011). A large literature has developed recently focusing on the decline in the health of immigrants with increased exposure to the United States. As immigrants spend more time in the United States, they may face increased challenges and

adverse socioeconomic or behavioral conditions that impact their health (Goldman, et al., 2014). And the children of immigrants may face additional threats to poor health, since they are exposed to US stratification systems and social norms from birth (Zhou, 1997). Indeed, US-born Hispanics tend to live shorter lives than their immigrant parents (Fenelon, 2013).

Much of the literature on immigrant cultural assimilation and health has focused on broad measures of length of residence in the United States. Such studies typically treat length of residence as an indicator of acculturation, assuming that greater length of time spent in the US is associated with greater assimilation (Lara, et al., 2005). Some studies have incorporated more nuanced measures of assimilation (such as language ability), but generally assume a large amount of uniformity in the assimilation process across places (Abraido-Lanza, et al., 2006, Gordon-Larsen, et al., 2003). Less attention has been paid to the specific characteristics of the places in which assimilation occurs, and how immigrants' destinations may mediate the processes of socioeconomic and behavioral acculturation. Research on "spatial assimilation" underscores the importance of understanding immigrant adaptation as a two-sided process, involving the relationship between the immigrant group and the receiving destination (Alba and Nee, 1997, Waters and Jiménez, 2005). The relationship between assimilation and immigrant outcomes can only be understood by considering both adaptation of the immigrants to their receiving destination as well as the adaptation of the destination to the new immigrant arrivals (Viruell-Fuentes, 2007). Assimilation processes are context specific, and the perceived minority status of Mexican immigrants depends in large part on the structural characteristics of the destination (Iceland and Nelson, 2008, Iceland and Scopilliti, 2008, Portes and Rumbaut, 2006).

Immigrant Destinations

Given that the relationship between immigrant destination, assimilation, and health depends on the characteristics of both the immigrant group and the destination, examining the health of Mexican immigrants by the characteristics of their destinations can give us some purchase on understanding the health assimilation process. Integration into the United States involves both cultural assimilation as well as integration into the American racial stratification system (Portes, 1997, Rumbaut, 1994). New immigrants, especially those from Latin America, face racial discrimination, residential and occupational segregation, and categorization into broad racial categories that may conflict with individual identities (Zhou, 1997). The process of racialization differs across destination types, as does the construction of the Mexican or Mexican-American identity for new immigrants.

As immigrant populations, particularly those of Mexican origin, have spread across many regions of the US in recent decades, there has been increased attention to their experience in these new destinations. *Traditional* destinations are typically considered to be those cities with relatively longstanding (since the 1970s) populations, in which immigrant communities developed in enclaves (Singer, 2004). *New* destinations refer to areas that have experienced growth more recently, and although immigrant populations may be large, they are less established. In contrast to traditional destinations which tend to have institutional infrastructure to support immigrants, new destinations experienced growth prior to the development of these communities and networks (Park and Iceland, 2011). Still more recently, the growth of Mexican populations in increasingly varied locations (such as the non-metropolitan and micropolitan areas of the South), demonstrates how immigrants adapt to areas with little prior experience with

outsiders (Massey, 2008). These *Emerging* destinations are significant for understanding the bi-directional relationship between immigrants and their destinations.

There are reasons to expect that Mexicans may fare differently in each destination type. One possibility is that economic stratification may be less strong in traditional destinations, particularly if social infrastructure geared towards Mexican communities is well-established (Denton and Massey, 1991). In locations without longstanding community support networks or public services, experience of discrimination may be stronger and have a greater impact on individual outcomes. New destinations tend to be largely populated by foreign-born Hispanics (Lichter, et al., 2010), who tend to be both more highly segregated as well as in better health than US-born Hispanics, although evidence for greater segregation in new destinations is quite mixed. Park and Iceland (2011) argue that Hispanic segregation tends to be higher in traditional destinations because residential patterns for Hispanics in new destinations is a categorically different process from their settlement in established destinations.

Alternatively, residential segregation in new destinations may protract the assimilation process for incoming migrants, particularly if geographic barriers are combined with social and linguistic isolation (Lichter et al 2010; Hall 2013). This may partially reflect the reluctance of existing populations in new destinations to incorporate immigrant arrivals given lack of prior experience (Massey, 2008). But this process may have positive impacts on immigrant health as well, especially with respect to health-related behaviors common among the native-born. If new destinations slow down immigrant behavioral assimilation, migrants arriving in new destinations may be less like to adopt unhealthy behaviors characteristic of their socioeconomic strata in the United States (Akresh 2007). Mexicans in new destinations may be less likely to take up smoking, eat unhealthy diets, or engage in heavy drinking (Abraido-Lanza, et al., 2005).

Finally, economic opportunities may be stronger in new destinations, and may themselves be the reasons for growth in new areas of the United States. As labor markets in sectors employing immigrants in traditional gateway destinations become saturated, new arrivals may be forced to settle in new employment centers, sacrificing community resources for employment resources (Kandel and Parrado, 2005, Zúñiga and Hernández-León, 2006). These characteristics may either provide more stable income sources for Mexican immigrants in growing destinations and may attract a more robust and motivated group of migrants (Crowley, et al., 2006). Migration to new destinations may select for migrants with more human capital particularly if the lack of existing migration streams raises the initial economic and personal cost of migration (McKenzie and Rapoport, 2010, Ullmann, et al., 2011).

Contribution

The analysis focuses on Mexican immigrants, both the largest Hispanic subgroup and the largest single immigrant subgroup in the United States. Nearly two-thirds of Hispanics in the United States identify as Mexican origin, and Mexican populations have now spread to most areas of the country (Hall, 2013, US Census Bureau, 2011). The significance of Mexican settlement patterns for understanding the changing experience of immigrant incorporation is clear, particularly as it relates to health and well-being: Mexicans show perhaps the most consistent mortality advantage of any Hispanic subgroup (Palloni and Arias, 2004). The analysis will contribute to the existing literature on the relationship between immigrant acculturation and outcomes in new and emerging destinations by considering whether and how new destinations impact the mortality advantage of Mexicans in the United States. This will be the first study to use a nationally-representative dataset to examine health outcomes of immigrants by type of destination.

Data and Methods

Data

This project uses data from the restricted-use National Health Interview Survey (NHIS) linked mortality files (LMF) covering the period 1989-2009 with mortality follow-up through the end of 2011. NHIS is a large nationally-representative health and demographic survey collected in annual cross-sections and maintained by the National Center for Health Statistics. NHIS-LMF matches deceased individuals to mortality vital statistics through stochastic linkage to the National Death Index (NDI). The survey years 1989-2009 were chosen because they contain complete information on Hispanic origin and nativity status.

The restricted-use version of NHIS-LMF provides information on state and county of residence for all respondents, which allows us to assign individuals to destination types. Respondents will be linked to destination metropolitan areas by county of residence.

Sample

A substantial benefit of NHIS is the large and nationally representative sample. Pooled each year between 1989 and 2009, the total sample becomes large enough to obtain stable estimates for Hispanic subgroups by nativity and country of origin.

The analytic sample includes all individuals aged 25 or above at baseline with usable information on the covariates. To ameliorate some of the problems with left censoring, individuals 18-24 are not permitted to age into the analytic sample, partially because individuals under age 18 at baseline are not eligible for interview and thus cannot enter the sample even if they reach 25 during follow-up. The primary focus is on the comparison between US-born non-Hispanic whites, US-born Mexicans, and foreign-born Mexicans. The total sample includes nearly 900,000 individuals and more than 150,000 deaths observed through 2011.

Destination Type

The distinction between traditional and new destinations is a well-studied question, and migration researchers have taken a few different approaches to classifying places, mostly with respect to metropolitan areas. The most common approach involves classifying destinations as a function of the proportion of (Mexican) immigrants in the metropolitan area and the rate of growth of the immigrant population (Fischer and Tienda, 2006, Singer, 2004). Hall (2013) used a similar approach to classify metropolitan areas according to destination type for specific immigrant origins. His analysis categorized metropolitan and non-metropolitan areas in the United States into three groups: (1) Traditional (Established) Gateways, (2) New Destinations, or (3) Emerging (Minor) Destinations. These groups reflect area differences in the historical size of the immigrant population as well as the period of major growth. Although Hall carried out this procedure for many different immigrant subgroups, this analysis specifically relies on his categorizations for Mexicans.

Hall's classification defines traditional destinations as those in which the percentage of Mexican immigrants in the population in 1970 or 1980 exceeded the average of the 100 largest metropolitan areas during the period 1970-2000. New destinations refer to those experiencing a growth rate of the Mexican immigrant population between 1990 and 2000 exceeding the average growth rates for all immigrant groups. Emerging destinations are those with neither large historical populations of Mexican immigrants nor recent rapid growth. Thus, all counties in the United States fall into one of the three categories.¹

I adopt Hall's classification scheme for Mexican immigrants in the United States (see Table 1 for classification of the 100 largest metro areas by destination type). Preliminary results

¹ Emerging destinations refer to the residual areas of the United States not included in the former two categories. Restricting Emerging destinations to metropolitan areas only has no effect on the substantive results, since 96% of Mexicans live in Traditional or New destinations.

classify destination type by state. Future analyses will classify destination at the level of the Metropolitan Statistical Area (MSA). Mexican immigrants are attached to specific MSAs through their county of residence, which is taken from the restricted-use version of the NHIS.

Controls

Models also control for sociodemographic characteristics: age, sex, education, marital status, household size, poverty status, and employment status. Education is measured using 4 categories: less than high school, high school graduate, some college, and college graduate or more. Education is largely the preferred measure of SES in health research since it is available for all individuals regardless of labor force status and does not respond to health shocks in later life (Elo 2009). Poverty status measures whether individuals are below the poverty line, above the poverty line, or unknown. I also consider the role of duration of residence for Mexican immigrants since destination types may differ in the composition of recent versus long-term (<5 years, 5-10 years, 10-15 years, 15+ years). Finally, additional analyses consider whether there are destination-type differences in health-related behaviors: smoking status, drinking status, and body mass index. Analyses using health behavior variables are restricted to the NHIS sample adult file covering the period 1997-2009.

Methods

Mortality comparisons are estimated using a hazard modeling approach predicting death during follow-up as a function of age, race/ethnic subgroup, and socioeconomic and demographic controls. Since the exact date of interview and death are available in the restricted-use file, I use a continuous-time hazard model with a proportional hazards procedure

$$\ln(m_x) = \alpha + \beta_R R + \beta_D D + \beta_{RD} R \cdot D + \boldsymbol{\beta}_X \mathbf{X} + \epsilon$$

where m_x is the death rate for group x , R is a series of dummy variables for the race/ethnicity/nativity subgroup of the individual, D is the destination type (*Traditional*, *New*, *Emerging*), and \mathbf{X} is a vector of sociodemographic covariates. The model also includes an interaction between race/ethnicity/nativity and destination type, to investigate whether the mortality advantage of each Mexican subgroup differs across destination type. Respondents are weighted using NHIS mortality weights adjusted for eligibility status for mortality linkage.

Preliminary Results

Table 1 shows major metropolitan areas classified by destination type. Established destinations tend to be large cities in California, Arizona, and Texas. New destinations are located in all regions of the United States, with many in the South, Central Midwest, Mountain West, and Pacific Northwest. Emerging destinations show very little geographic concentration, reflecting the increasing spread of Mexican immigrant destinations to many different regions of the United States.

The sociodemographic characteristics of Mexicans may differ depending on whether they move to traditional established destinations or new destinations. Table 2 shows descriptive characteristics of US-born and foreign-born Mexicans by type of destination. The vast majority of Mexicans live in *Traditional* destinations (80% of both foreign-born and 86% of US-born). 13% of Mexican immigrants live in *New* destinations compared to 10% of US-born Mexicans. 4% of both groups live in *Emerging* destinations. Compared to Mexican immigrants in traditional destinations, those in new and emerging destinations are younger and more likely to be male, and slightly less likely to be married. Immigrants in new and emerging destinations also appear to be more socioeconomically advantaged than those in traditional destinations, although the gap is not large. 74% of Mexican immigrants in new destinations are employed compared to

64% in traditional destinations. A slightly larger fraction of those in new destinations have at least a high school education, and they are slightly more likely to be above poverty. The largest differences by destination type are in duration of residence in the US. Immigrants in new and emerging destinations are much more likely to be recent arrivals. 43% of those in new destinations arrived in the US in the preceding 10 years, and 20% in the preceding 5 years, compared to 23% and 9%, respectively, in traditional destinations. More than half of Mexican immigrants in traditional destinations have lived in the US for more than 15 years, compared to just one-third of those in new destinations. US-born Mexicans in New and Emerging destinations tend to be younger and slightly more socioeconomically advantaged than those in Traditional destinations, although the difference is not as large as for foreign-born Mexicans. US-born Mexicans in New and Emerging destinations are slightly more likely to be high school and college graduates, more likely to be employed, and less likely to be in poverty than those in Traditional destinations.

Table 3 examines differences in mortality by race, Hispanic origin, and nativity. It presents hazard ratios estimated using hazard regression comparing the mortality experience of race/ethnicity/nativity subgroups focusing on Mexicans. Model 1 controls for age and sex, and shows that both US-born and foreign-born Mexicans have a mortality advantage over non-Hispanic whites. Model 2 adds controls for socioeconomic and demographic characteristics. The advantage for the Mexican subgroups expands (HR 0.68 for foreign-born), since both US-born and foreign-born Mexicans experience significant socioeconomic disadvantage relative to non-Hispanic whites. Models 3 and 4 add a control for destination type and interact destination type with race/ethnicity/nativity. The results in Model 4 show a statistically significant interaction between foreign-born Mexican and new and emerging destinations, indicating that Mexican

immigrants in these destinations have a mortality advantage over their counterparts in traditional destinations, an additional 35-40% reduction in the hazard of death. US-born Mexicans do not experience different hazard rates across destination types. Model 5 examines the duration of residence among Mexican immigrants; more recent arrivals experience lower mortality than those who have lived in the US for longer periods. This variable does not, however, reduce the additional advantage for Mexican immigrants in new and emerging destinations.

The mortality advantages for each Mexican group relative to non-Hispanic whites are shown graphically in Figure 1. Although US-born Mexicans in each destination type exhibit a significant advantage over whites (HR 0.75), their advantage does not vary in magnitude across destination types. However, as demonstrated in Model 4 above, Mexican immigrants have significantly larger advantages if they reside in new or emerging destinations.

Next Steps

Additional analyses will consider the possible reasons for the difference in mortality experience by destination type in order to situate the study in the literature on immigrant health and assimilation. The analysis will use restricted-use variables in the NHIS to examine the contribution of three sets of factors to the advantage of Mexican immigrants in new and emerging destinations: (1) duration of residence/age at entry to the United States, (2) health-related behaviors, and (3) social, economic, and demographic characteristics of destination communities.

Comment

Preliminary results suggest that Mexican immigrants living in *New Destinations* and *Emerging/Minor Destinations* for Mexicans experience better mortality outcomes than their counterparts in *Traditional Established Destinations*. This is consistent with Palloni and Arias'

(2004) finding that Mexican immigrants living outside California and Texas enjoy an additional mortality advantage. Mexican immigrants who make the move to new emerging destinations or destinations with few other immigrants may be a more select group since they are unable to rely on existing ethnic infrastructure or communities. New and emerging destinations may also be populated largely by recent immigrants, who tend to have better health in general than those who have been in the United States many years (Lara, et al., 2005). At the same time, higher levels of residential segregation among Mexicans in new destinations and particularly emerging destinations (Hall, 2013) may compound any beneficial effects of co-ethnic residence (Eschbach, et al., 2004) and may facilitate the retention of cultural characteristics that have positive impacts on health. Finally, new destinations may experience growth precisely because economic opportunities in emerging regional economic sectors encourage arrivals of new Mexican immigrants (Zúñiga and Hernández-León, 2006). Expanded economic and employment opportunities for migrants in new and emerging destinations may have positive benefits for health and well-being that offset some of the negative effects of residential segregation (Leach and Bean, 2008). Future analyses will consider these questions and how they improve our understanding of the processes surrounding migration, assimilation, and mortality.

The analysis is somewhat limited in that NHIS data are unable to specify the length of time that individuals have spent in their specific locations, or whether or not they move during follow-up. Cross sectional datasets are unable to capture the length of time that individuals are exposed to specific geographic locations, and thus the current analysis has difficulty establishing how long respondents have lived in their current residences at the time of the survey. We can be somewhat assured that this limitation does not entirely explain the survival difference between New and Traditional destinations since, although we lose statistical power, we obtain similar

results when we restrict the sample to immigrants who have been in the United States fewer than 10 years (Table 4).

Two other limitations are data quality issues and migration effects for Mexicans in the United States. First, some recent evidence suggests linkage quality between NHIS and NDI differs across race/ethnic groups, with foreign-born Hispanics experiencing lower matching quality than non-Hispanic whites (Lariscy, 2011). Establishing the true impact of linkage differences on calculated mortality differences in NHIS is difficult because linkage rates combine both differences in linkage given death and differences in death risks. However, differential matching likelihood of Hispanics and non-Hispanic whites has the potential to explain a portion of the Hispanic mortality advantage (Palloni and Arias, 2004). The impact of this weakness on the current analysis is minor, unless we expect record linkage quality to differ significantly by destination type.

Finally, one issue that the current data cannot completely address is the issue of health-selective return migration or salmon bias. Mexican immigrants may return to Mexico prior to death both leaving their death unobserved in US vital statistics and leaving a relatively healthy population remaining in the US (Palloni and Ewbank, 2004). As with linkage differentials, this weakness will only impact the current analysis if we expect return-migration rates to differ significantly by destination type. Although it is possible that immigrants in new destinations have stronger social ties to Mexico given less established communities in the US, the magnitude of return migration would need to be very large to explain the mortality differential with traditional destinations (Turra and Elo, 2008).

Table 1: Destination Type Classification of 100 Largest US Metro Areas for Mexican Immigrants in the United States

Traditional	New	Emerging		
Chicago, IL	Albuquerque, NM	Nashville, TN	Allentown, PA	Little Rock, AR
Dallas, TX	Atlanta, GA	New York, NY	Ann Arbor, MI	Louisville, KY
Fresno, CA	Austin, TX	Oakland, CA	Baltimore, MD	Middlesex, NJ
Houston, TX	Bakersfield, CA	Oklahoma City, OK	Birmingham, AL	Milwaukee, WI
Los Angeles, CA	Baton Rouge, LA	Orange County, CA	Cincinnati, OH	Mobile, AL
McAllen, TX	Bergen-Passaic, NJ	Orlando, FL	Cleveland, OH	Monmouth, NJ
Phoenix, AZ	Boston, MA	Portland, OR	Dayton, OH	Nassau, NY
Riverside, CA	Charleston, SC	Raleigh, NC	Detroit, MI	New Haven, CT
San Antonio, TX	Charlotte, NC	Richmond, VA	Gary, IN	New Orleans, LA
San Diego, CA	Columbia, SC	Sacramento, CA	Grand Rapids, MI	Omaha, NE
San Francisco, CA	Columbus, OH	St. Louis, MO	Greenville, SC	Philadelphia, PA
San Jose, CA	Denver, CO	Salt Lake City, UT	Harrisburg, PA	Pittsburgh, PA
Toledo, OH	Fort Lauderdale, FL	Sarasota, FL	Hartford, CT	Providence RI
Vallejo, CA	Fort Worth, TX	Scranton, PA	Honolulu, HI	Rochester, NY
	Greensboro, NC	Springfield, MA	Jacksonville, FL	Syracuse, NY
	Indianapolis, IN	Tacoma, WA	Jersey City, NJ	Tampa, FL
	Las Vegas, NV	Tulsa, OK	Kansas City, MO-KS	Tucson, AZ
	Memphis, TN	Ventura, CA	Knoxville, TN	West Palm Beach, FL
	Miami, FL	Washington, DC		
	Minneapolis, MN	Wichita, KS		

Notes: Classification of destination types based on Hall's (2013) typology using 1970-2000 Census PUMS

Table 2: Characteristics of Mexicans in the United States by Destination Type, NHIS 1989-2009

	Foreign-born Mexicans			US-born Mexicans		
	Traditional	New	Emerging	Traditional	New	Emerging
N	55784 (83%)	8598 (13%)	2709 (4%)	41043 (86%)	4621 (10%)	2037 (4%)
Percent Men	50.1%	57.9%	56.9%	46.0%	47.1%	47.5%
Mean Age	41.8	37.1	38.0	44.0	42.2	41.9
Mean Family Size	4.4	4.1	4.3	3.5	3.3	3.3
Marital Status						
Married	74.5%	72.3%	71.8%	61.7%	62.9%	62.5%
Divorced/Separated	8.8	8.4	8.5	15.6	17.0	16.8
Widowed	4.1	1.7	2.2	5.3	3.9	3.3
Never Married	12.6	17.6	17.4	17.5	16.3	17.4
Education						
Less than High School	68.2%	64.6%	63.0%	29.4%	24.2%	22.3%
High School	19.0	24.4	23.3	36.1	39.1	37.9
Some College	9.1	6.9	8.7	24.9	24.4	27.5
College Degree	3.7	4.2	5.0	9.6	12.3	12.3
Employment Status						
Employed	63.9%	73.5%	73.4%	66.1%	70.7%	74.1%
Unemployed	3.5	3.4	4.3	3.2	4.1	3.8
Not in Labor Force	32.6	23.1	22.3	30.7	25.2	22.1
Poverty Status						
Not Poor	49.6%	52.2%	55.1%	63.6%	69.5%	72.7%
Poor	23.5	23.6	21.8	13.8	10.7	12.1
Unknown	26.9	24.2	23.1	22.7	19.7	15.3
Duration US Residence						
<5 years	8.7%	19.9%	16.8%	N/A	N/A	N/A
5-10 years	14.3	22.6	21.8			
10-15 years	15.7	18.7	18.0			
15+ years	53.5	32.1	36.0			
Unknown duration	7.8	6.7	7.4			

Notes: Destination type classified according to Hall's (2013) scheme based on 1970-2000 PUMS

Source: 1989-2009 pooled restricted-use NHIS

Table 3: Hazard Model of Mortality by Hispanic Origin Using NHIS-Linked Mortality Files 1989-2009

	Model 1	Model 2 ^a	Model 3 ^b	Model 4 ^c	Model 5 ^d
Race/Ethnicity/Nativity					
US-born NH White	1.00	1.00	1.00	1.00	1.00
US-born Mexican	0.93***	0.77***	0.76***	0.75***	0.76***
Foreign-born Mexican	0.88***	0.68***	0.67***	0.69***	
Arrived <5 years ago					0.56***
Arrived 5-10 years ago					0.62***
Arrived 10-15 years ago					0.81***
Arrived 15+ years ago					0.69***
Unkown Duration					0.83*
Destination Type					
Traditional Destination			1.00	1.00	
New Destination			1.00	0.98*	0.99
Emerging Destination			0.93***	0.92***	0.93***
Destination Type x Race/Ethnicity					
New Destination x US-Born Mexican				1.04	1.02
Emerging Destination x US-Born Mexican				0.90	0.89
New Destination x Foreign-Born Mexican				0.59***	0.59***
Emerging Destination x Foreign-Born Mexican				0.67***	0.66**
Controls for Sociodemographic Characteristics	no	yes	yes	yes	yes
Number of Observations	911,230	911,230	911,230	911,230	911,230

Notes: All models control for age and sex.

* p<0.05, ** p<0.01, *** p<0.001

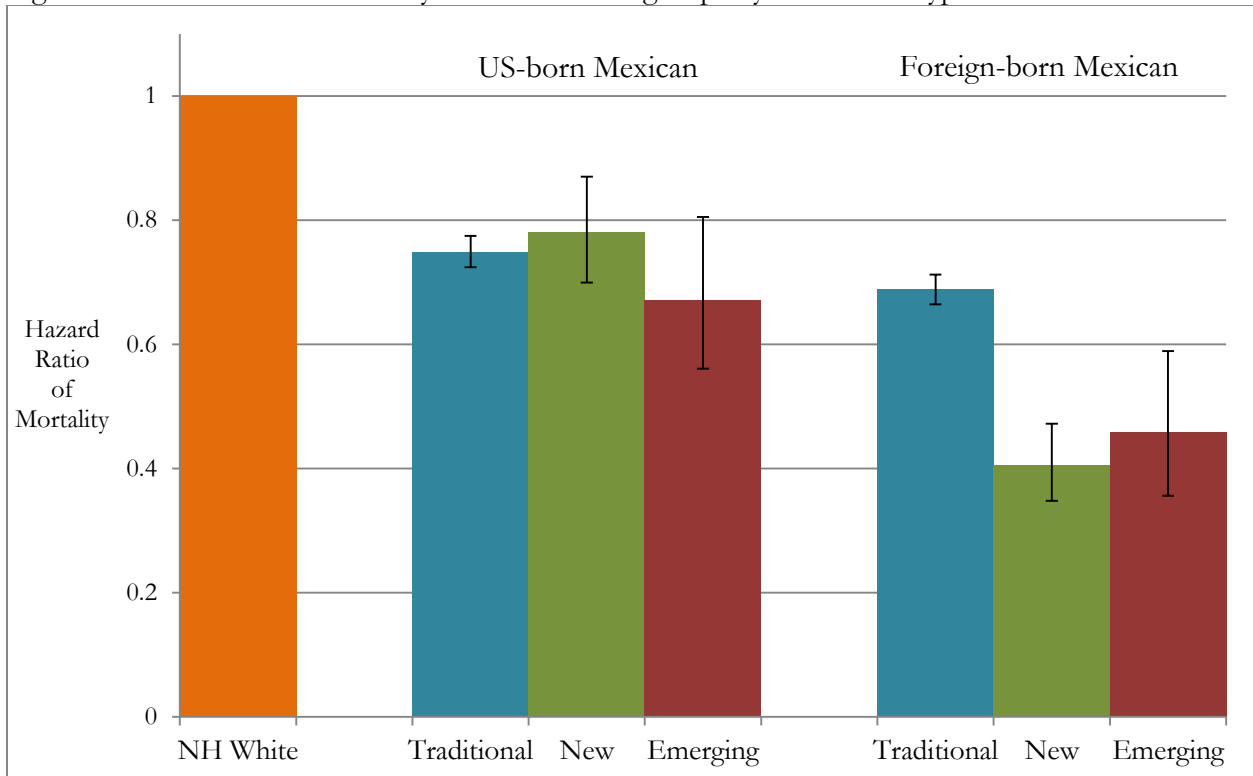
^a Model 2 adds sociodemographic covariates: education, poverty status, employment status, marital status, household size

^b Model 3 adds destination type

^c Model 4 adds an interaction between destination type and race/ethnicity/nativity

^d Model 5 adds the relationship between duration of residence and mortality among Mexican immigrants

Figure 1: Hazard ratio of mortality for Mexican subgroups by destination type



Notes: Estimated using Model 4 in Table 3 above. Reference category is non-Hispanic white
Source: Author's calculations using restricted-use pooled NHIS-LMF 1989-2009

Table 4: Hazard Model of Mortality NHIS-Linked Mortality Files 1989-2009
Restricted to Mexican Immigrants who moved to the US fewer than 10 years

	Model 1 ^a	Model 2 ^b
<u>Race/Ethnicity/Nativity</u>		
US-born NH White	1.00	1.00
US-born Mexican	0.79***	0.77***
Foreign-born Mexican	0.58***	0.61***
<u>Destination Type</u>		
Traditional Destination		1.00
New Destination		0.97
Emerging Destination		0.92
<u>Destination Type x Race/Ethnicity</u>		
New Destination x US-Born Mexican		1.03
Emerging Destination x US-Born Mexican		0.61***
New Destination x Foreign-Born Mexican		0.91
Emerging Destination x Foreign-Born Mexican		0.77
<u>Controls for Sociodemographic Characteristics</u>		
	yes	yes
Number of Observations	837,465	837,465

Notes: Only Mexican immigrants who arrived in the preceding 10 years are included in the model

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Model 1 includes controls for sociodemographic covariates: age, sex, education, poverty status, employment status, marital status, household size

^b Model 2 adds destination type and interaction with Race/Ethnicity/Nativity

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