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Access to Health Care Among Mexican Migrants and Immigrants: A Comparison Across Migration Phases

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Abstract

Objectives—We examined differences in, and factors associated with, access to health services among Mexican im/migrants to the U.S. across migration phases, including pre-departure, destination, interception, and return.

Methods—Using data from a cross-sectional survey conducted in Tijuana, Mexico (N=1,541), we computed descriptive statistics and staged logistic regressions to estimate health care access indicators and factors associated with access to services.

Results—Im/migrants at post-migration phases had lower likelihood of receiving health care and having a usual source of care, and higher rates of forgone care, than their counterparts at pre-departure. These differences were partly explained by length of migration phase, health insurance status, transportation barriers, and detention or imprisonment.

Conclusions—Mexican im/migrants face challenges in accessing health services across the migration continuum, especially at post-migration phases. Binational efforts to provide affordable insurance coverage and reduce transportation limitations and incarceration could contribute to improving health care access among Mexican im/migrants.

Keywords

Health care access; Mexican migrants and immigrants; migration phase

Migration is a social process with different phases: pre-departure, transit, destination, interception/deportation, and return.(1) During these phases, im/migrants find themselves in

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different contexts, which can present special health risks, changes in health rights, and challenges in accessing health care services. In the U.S. there are approximately 12 million Mexican-born im/migrants.(2) Among them, about one in three engages in circular migration, often sojourning in both places due to voluntary decisions or involuntary circumstances, such as deportation.(3,4) Compared with their peers who settle permanently in the U.S., circular im/migrants are more likely to be male and poorly educated, to earn low wages, and (while in the U.S.) to be unemployed, undocumented, and unaccompanied.(5) These factors may result in fewer informational or economic resources to access health care services among circular compared with permanent immigrants and compared with the host and source populations. Understanding how mobility and circular migration can limit or disrupt access to, and receipt of, health care among Mexican im/migrants can help inform policies to redress disparities in this vulnerable population.

Data from the 2007 California Health Interview Survey indicated 47% of undocumented Mexican im/migrants had a usual source of health care and only 53% had health insurance, (6) but those data did not allow differentiation between circular and permanent im/migrants. A small 2010 survey of circular, mostly undocumented Mexican im/migrants returning to Mexico from the U.S. found that less than half reported a usual source of care or had received health care services in the U.S. in the previous 12 months.(7) Estimates from the 2012 Survey of Migration in Mexico's Northern Border indicated that only 55% of voluntary return im/migrants and 4% of deported im/migrants had health insurance while they were in the U.S.(8) Research also suggests that Mexican im/migrants' challenges accessing health care continue after they return to Mexico. In 2010, an estimated 54% of return im/migrants in Mexico lacked health insurance(9) compared with 35% of nonmigrant Mexicans. The different methodologies and timing of these studies make it difficult to compare health access estimates and determine whether and how access to services changes across migration phases.

This study aimed to fill this critical research gap by examining differences in health care access among Mexican im/migrants representing four distinct migration phases: pre-departure, destination, interception, and return. Our conceptual model is based on Andersen's Behavioral Model of Health Services Use,(10) which proposes that access to health care is the result of predisposing (individual's inherent characteristics), need (individual's health status), and enabling factors (external facilitators and barriers). We adapted this model to identify factors associated with differential health care access among Mexican im/migrants. The results have implications for future policies and programs to increase adequate and timely health care utilization across the migration continuum.

Methods

Study participants and setting

We used data from the 2013 MIGRANTE Survey on Health Care Access and Utilization. *MIGRANTE* is a binational project that consists of several cross-sectional probability surveys of Mexican im/migrants traveling through Tijuana, Mexico, between 2007 and 2015 (www.migrante.weebly.com).

Between 30% and 40% of Mexican im/migrants circulating between the U.S. and Mexico traveled through Tijuana in the years preceding implementation of the survey.(11–13) Survey participants were recruited at transportation centers including the San Ysidro deportation facility, the Tijuana airport, and the central bus station. A multistage sampling frame with geographic and temporal dimensions was employed to sample migrants from different migration flows. Targeted migration flows, sampling methods, and eligibility criteria for the MIGRANTE surveys have been described in more detail elsewhere.(7,14–16)

Overall, 3,664 eligible individuals were screened and 1,991 participated in the survey, yielding a response rate of 54.3%. We excluded participants who spent fewer than 30 days in their most recent migration context (U.S. or Mexico) during the last 12 months (N=450) because their short stay would have limited the need for, and opportunities to seek, health care in the U.S. and Mexico, respectively. Our final analytical sample included 1,541 individuals. The majority were either immigrants who had settled in the U.S. (42%–73% depending on the migrant flow) or labor migrants (18%–42%).

Measures

Our main outcome variable was *access to health care*, measured by three indicators: *any health care utilization* (including ambulatory, emergency, or inpatient service); having *a usual source of care* defined as having a specific doctor's office, clinic, medical center, or other places to go to when the individual was sick or needed health advice, and *foregone health care* defined as going without needed medical care, dental care, tests, or treatments as determined by the individual or their health care provider–all in the past 12 months.

Our main predictor was migration phase. Based on migrant flow and migration history, survey respondents represented four distinct migration phases:(14) 1) Northbound im/migrants who had not migrated previously to the U.S. reported on access to care prior to leaving their sending communities in Mexico and represented the *Pre-departure* phase. (2) Northbound im/migrants who had migrated previously to the U.S. reported on access to care during the time they spent back in their sending communities in Mexico and represented the *Return* phase. 3) Southbound im/migrants who were returning voluntarily from the U.S. to Mexico reported on their access to care while in their destination communities in the U.S. and represented the *Destination* phase. 4) Im/migrants returning to Mexico via deportation reported about health care access in the U.S. before and during the time they spent in detention or deportation proceedings. They represented the *Interception/Deportation* phase.

We measured the amount of time (months) the individual had stayed in the U.S. (Southbound and Deported im/migrants) or Mexico (Northbound im/migrants) during the previous 12 months (the observation period), as a potential predictor of access to health care.

We also included enabling, need, and predisposing covariates based on Andersen's Model. (10) Enabling factors comprised health insurance status, transportation limitations, and duration of incarceration or detention in the U.S. (Southbound and Deported im/migrants) or Mexico (Northbound im/migrants). The latter variable was expressed as the proportion of the last 12 months spent detained or incarcerated (possible range 0% to 100%). Need factors included any reported work-related injuries or burns in the past 12 months and a composite

health status score. The latter was a modified version of the short form 12-item health survey (SF-12) that included items on physical and emotional health-related activity limitations, work limitations, activities of daily living, and social activities (Cronbach's alpha=0.79; range 0 – 44).(17) We modified the SF-12 by omitting the first item on self-rated health to reduce the potential endogeneity of this variable with respect to our outcome of interest. Predisposing factors were age in years, gender, educational attainment, marital status, indigenous ethnicity, and employment status in the U.S. (Southbound and Deported im/migrants) or Mexico (Northbound im/migrants).

Statistical analysis

Data were weighted to account for the complex survey design and response rates. Survey design and survey weighting procedures have been described elsewhere.(18, www.migrante.weebly.com) We computed descriptive statistics (i.e., percentages, means, and standard deviations) for health care access indicators and for time, enabling, need, and predisposing factors by migration phase. We then performed unadjusted and adjusted logistic regression models to estimate the association of migration phase with each of the three health care access outcomes (i.e., having any health care utilization, having a usual source of care, and foregone health care). Adjusted models included duration of migration phase and enabling, need, and predisposing factors as control variables. All analyses were performed using STATA/SE 13.1 (StataCorp LP, College Station, TX). The command svyset was used to specify the complex survey design and statistical weights.

Results

Access to health care

Rates of health care utilization went down from 60.1% at pre-departure to 47.4% at destination in the U.S. (Table 1). The estimated percentage of im/migrants who had a usual source of care decreased from 68.7% among pre-departure im/migrants to 42.0% among deported im/migrants. Rates of forgone health care ranged from 6.0% at pre-departure to 16.6% among deported im/migrants.

Enabling, need, and predisposing factors

With only a few exceptions, significant differences in all of these factors were found across migration phases (Table 1). In general, im/migrants at pre-departure compared with im/migrants in other post-migration phases were more likely to be female (p=.010) and to have health insurance, to have spent significantly less time detained or incarcerated, to be healthier, to be more educated, and to be living with their spouse or partner (p<.001).

Predictors of receiving health care

Prior to statistical adjustment, im/migrants at the return, destination, and interception phases were significantly less likely to have utilized any health services compared to im/migrants at pre-departure. After adjusting for time, enabling, need, and predisposing factors, im/migrants at post-migration phases did not longer have significantly different odds of having received health care compared with pre-departure im/migrants. In general, the odds of receiving health care increased with time in the migration context and with availability of

health insurance and time detained or imprisoned (enabling factors). In contrast, the odds decreased for im/migrants who were healthier (need factor), male, and/or married but living away from their partners (predisposing factors).

Predictors of foregone health care

The unadjusted regression model indicated that intercepted/deported im/migrants had significantly greater odds of reporting having gone without necessary medical care. The adjusted regression model reflected that migration phase was no longer independently associated with the odds of reporting having gone without needed medical care, after adjusting for time, enabling, need, and predisposing factors (Table 2). The model further showed that length of stay and having a history of work-related injuries (need factor) were positively related to the odds of foregone healthcare, while health status (need factor) was inversely associated with this outcome.

Predictors of a usual source of care

Im/migrants at the three post-migration phases were significantly less likely to have an available source of care compared to pre-departure in the unadjusted regression model. Migration phase did not longer have a significant effect on the likelihood of having a usual source of care once length of stay and enabling, need, and predisposing factors were adjusted for (Table 2). Instead, access to a usual source of care was positively associated with length of stay, health insurance, and being employed full or part time; and negatively associated with time incarcerated or in detention, male gender, and being married but not living with one's partner.

Discussion

This study examined health care access among Mexican im/migrants representing different migration contexts and phases. Regardless of migration phase and context, Mexican im/migrants reported low levels of health care access relative to non-migrant populations in the U.S. and Mexico. For example, across migration phases, the estimated rates of health care receipt in the U.S. (47.4–60.1%) were substantially below rates found in other studies among U.S. adults (74%)(19) and Mexican adults (78%).(20) These differences persisted even when we restricted our analysis to im/migrants who spent the entire last 12-month observation period in the key context (i.e., U.S. for Southbound and Deported and Mexico for Northbound im/migrants; data not shown).

Overall, our results also suggest that im/migrants experience a reduction in health care access following the pre-departure phase. This is indicated by significantly lower odds of receiving health care and of having a usual source of care and greater odds of reporting forgone care at the destination, interception, and/or return phases compared with the pre-departure phase.

Results from our adjusted regressions shed some light regarding factors that could explain changes in health care access across migration phases. Marked variations in health insurance rates (from about 84% at pre-departure to about 25–50% at post-migration phases), time incarcerated or in detention (from virtually no time at pre-departure to 34% of the time in

the U.S. among deported im/migrants), and transportation barriers (from zero at the pre-departure phase to over a third at the deportation phase) likely explain the reduction in health care access among im/migrants after migration compared with pre-departure. Finally, variations in health care access across phases could be partially attributable to differences in the health needs and sociodemographic make up of im/migrants at different phases. For example, migrants at pre-departure phases were significantly healthier, more likely to be male, and be married and living with their spouses compared to migrants at other phases. In our adjusted models, these enabling, need, and predisposing factors were significantly related to health care access indicators and rendered the effect of migration phase statistically insignificant.

These findings have important implications for research and practice. First, they underscore the negative impact of mobility on health care access and recommend economic and immigration policies that promote economic development and allow im/migrants to stay in their communities of origin (i.e., reduce “push” factors).(21) For those who choose or need to migrate, policies are necessary to facilitate settling and integration and connection to health and social services in destination communities. Second, findings also call for the design and evaluation of policies and programs that offer and promote affordable and portable health insurance options so im/migrants can maintain pre-departure levels of health care access after leaving their communities of origin. Examples include promoting enrollment of return migrants in Seguro Popular, a universal health insurance program designed to complement Mexico’s employment-based social security program;(22) maintaining and expanding the Affordable Care Act (ACA)(23) or developing alternative policies to cover unauthorized and circular im/migrants in the U.S.; and developing binational health insurance options.(24) In addition, the findings suggest separation from spouses and lack of employment may hinder im/migrants’ ability or motivation to access health care services and call for immigration policies that promote family cohesion and participation in the labor market. Finally, this study suggests the importance of increasing access to transportation as a potential strategy to remove a significant barrier to health care among circular Mexican im/migrants. Future research should examine the impact of state laws that allow unauthorized im/migrants to obtain drivers’ licenses on im/migrants’ ability to access health services.(25)

The study findings should be interpreted in light of several limitations. First, the probability survey was conducted only in Tijuana. Second, the response rate was only moderate (40–60%). As is common in other health care access studies,(26) all the information was self-reported and may be subject to information bias. Finally, the cross-sectional methodology limits our ability to establish causal associations.

In summary, this study found that circular Mexican im/migrants have low levels of access to health care services, particularly those at the post-migration phases. The differences in health care access across migration phases were explained by the length of the phases examined, health and demographic profile of im/migrants at different stages of migration, and also, notably, by modifiable enabling factors, especially health insurance status, transportation barriers, separation from spouses, employment status, and detention and imprisonment. The results call for programs and policies that help circular Mexican im/

migrants settle permanently in one context, provide affordable and portable health insurance, eliminate transportation barriers, preserve the family unit, increase employment opportunities, and reduce detention and incarceration rates in order to improve access to health services among this population. The findings also underscore the need to bolster local resources in towns along the Mexican border to meet the needs of the sizable transient populations moving through this region. Research must also be conducted to inform specific and local actions aimed at developing and improving health services available to im/migrants in sending, receiving, and intermediate communities.

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Table 1

Health care access and opportunity, enabling, need and predisposing factors in the U.S. and Mexico among Mexican im/migrants representing different migration phases[1] (N=1541)

	In Mexico		In the U.S.		P-values[2]
	Pre-departure phase (N=349) (Weighted N=103,894)	**Return phase (N=190) (Weighted N=66,462)**	**Destination phase (N=651) (Weighted N=149,578)**	**Interception/deportation phase (N=351) (Weighted N=25,969)**	
Healthcare utilization					
Any health care utilization, %	60.1	47.5	47.4	51.0	**0.028**
Forgone care, %	6.0	7.6	8.7	16.6	0.154
Usual source of care, %	68.7	62.1	57.1	42.0	**<0.001**
Time					
Time in applicable country during last 12 months (in months), Mean (SD)	9.5 (3.1)	5.6 (4.2)	9.6 (3.3)	10.8 (2.9)	**<0.001**
Enabling factors					
Health insurance, %	83.8	49.1	49.2	23.3	**<0.001**
Transportation limitations, %	13.5	19.3	17.7	24.3	0.548
Percent of time in applicable country spent incarcerated or in detention, Mean (SD)	0	0.01(0.2)	2.3 (12.9)	33.6 (40.8)	**<0.001**
Need factors					
Health status score,[3] Mean (SD)	37.9 (5.4)	35.5 (8.2)	35.9 (7.7)	36.0 (6.4)	**<0.001**
Work-related injuries/burns, %	3.5	4.0	4.3	3.0	0.910
Predisposing factors					
Male, %	71.9	71.9	73.2	93.4	**0.010**
Age, Mean (SD)	39.4 (13.9)	47.8 (15.3)	45.2 (14.0)	35.0 (9.7)	**<0.001**
Education, %					**<0.001**
• Less than high school	26.1	58.3	64.4	80.3	
• High school	16.1	14.4	17.9	17.4	
• College degree	57.8	27.3	17.8	2.4	
Marital status, %					**<0.001**
• Not married	41.9	38.7	38.6	51.7	
• Married living w/ partner	50.4	33.4	38.8	31.8	

	In Mexico		In the U.S.		P-values[2]
	Pre-departure phase (N=349) (Weighted N=103,894)	**Return phase (N=190) (Weighted N=66,462)**	**Destination phase (N=651) (Weighted N=149,578)**	**Interception/deportation phase (N=351) (Weighted N=25,969)**	
• Married not living w/ partner	7.7	27.9	22.7	16.5	
Indigenous ethnicity, %	2.2	2.3	5.1	3.0	0.188
Employment status, %					0.085
• Other[4]	39.0	43.0	31.5	32.4	
• Part-time	5.4	10.0	8.4	5.3	
• Full-time	55.6	47.0	60.1	62.3	

Bold indicates statistical significance at $p<0.05$.

[1] Among those who stayed in the most recent migration context for more than 30 days during last 12 months

[2] Based on Chi-square test for categorical variables and univariate ANOVA for continuous variables.

[3] Based on a modified version of the SF-12 (range 0–44), where higher scores denote better health status.

[4] This category included self-employed, unemployed, retired, student, and other.

Table 2

Unadjusted and adjusted logistic regression models examining the association between migration phase and last 12-month healthcare access indicators among Mexican im/migrants[1] (N=1541)

		Healthcare Utilization	Forgone Healthcare	Availability of a Usual Source of Care
Unadjusted Models	**Migration phase**			
	• Pre-departure	Ref	Ref	Ref
	• Return	**0.49 (0.33–0.71)**	1.46 (0.76–2.81)	**0.57 (0.40–0.83)**
	• Destination	**0.68 (0.51–0.91)**	0.88 (0.46–1.69)	**0.63 (0.45–0.90)**
	• Interception/deportation	**0.62 (0.43–0.89)**	**2.48 (1.19–5.17)**	**0.39 (0.24–0.64)**
Adjusted Models	**Migration phase**			
	• Pre-departure	Ref	Ref	Ref
	• Return	1.07 (0.64–1.79)	1.58 (0.65–3.86)	1.09 (0.73–1.63)
	• Destination	0.91 (0.63–1.31)	0.65 (0.31–1.36)	0.93 (0.63–1.37)
	• Interception/deportation	0.71 (0.42–1.21)	1.19 (0.47–3.03)	1.05 (0.58–1.89)
	Covariates			
	Time			
	Time in applicable country during last 12 months (in months)	**1.12 (1.08–1.16)**	**1.11 (1.01–1.22)**	**1.06 (1.02–1.09)**
	Enabling factors			
	Health insurance	**3.07 (2.29–4.12)**	0.68 (0.38–1.22)	**3.32 (2.37–4.64)**
	Transportation limitations	0.80 (0.58–1.10)	1.32 (0.81–2.14)	0.92 (0.62–1.38)
	Percentage of imprisonment time during last 12 months in applicable country (every 10% increment)	**1.14 (1.07–1.22)**	1.05 (0.96–1.15)	**0.89 (0.82–0.96)**
	Need factors			
	Health status score	**0.96 (0.94–0.98)**	**0.89 (0.86–0.92)**	0.99 (0.97–1.02)
	Work-related injuries/burns	1.48 (0.69–3.20)	**2.81 (1.03–7.74)**	0.97 (0.47–2.00)
	Predisposing factors			
	Male	**0.68 (0.50–0.92)**	1.23 (0.63–2.40)	**0.64 (0.48–0.86)**
	Age	1.01 (1.00–1.02)	0.98 (0.97–1.00)	1.00 (0.99–1.01)
	Education		x	
	• Less than high school	Ref	0.83 (0.44–1.57)	Ref
	• High school	1.00 (0.72–1.39)	0.83 (0.44–1.57)	1.02 (0.75–1.40)

	Healthcare Utilization	Forgone Healthcare	Availability of a Usual Source of Care
• College degree	0.97 (0.69–1.36)	1.22 (0.69–2.19)	0.85 (0.62–1.18)
Marital status			
• Not married	Ref	Ref	Ref
• Married living w/ partner	0.87 (0.67–1.12)	0.94 (0.59–1.51)	1.16 (0.87–1.56)
• Married not living w/ partner	**0.52 (0.36–0.76)**	1.36 (0.77–2.41)	**0.71 (0.51–0.99)**
Indigenous ethnicity	0.77 (0.40–1.46)	0.47 (0.09–2.39)	0.80 (0.40–1.60)
Employment status			
• Other	Ref.	Ref	Ref
• Part-time	1.09 (0.67–1.78)	1.22 (0.55–2.70)	**1.88 (1.18–2.99)**
• Full-time	0.97 (0.74–1.28)	0.92 (0.54–1.59)	**1.51 (1.15–1.99)**

Bold indicates significance at p<0.05.

[1]Among im/migrants who stayed in the applicable country (i.e. the U.S. for destination and interception phases; Mexico for pre-departure and return im/migrants) for more than 30 days during last 12 months.