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Access to and Use of Health Care Services among Latinos in East Los Angeles and Boyle Heights

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Abstract

This study examined differences in access, utilization and barriers to health care by nativity, language spoken at home and insurance status in East Los Angeles and Boyle Heights, California. Data from household interviews of neighborhood residents conducted as part of corner store intervention project were used. Binary and multinomial logistic regression models were fitted. Results showed that uninsured and foreign-born individuals were differentially affected by lack of access to and utilization of health care. While the Affordable Care Act may ameliorate some disparities, the impact will be limited due to the exclusion of key groups, like the undocumented, from benefits.

Keywords

health services; acculturation; insurance; health care disparities

Background

Latinos comprise 16% of the US population,¹ and they represent the largest ethnic minority group.² This number is projected to double by the year 2050.² As of 2010, over 4.5 million Latinos live in Los Angeles County in California, with 75% being of Mexican-origin.³ Given the size of the Mexican-origin population and its growth nationally,⁴ understanding access to and utilization of health care services among this group has high policy import, particularly considering that limited access and utilization have been associated with a range of adverse health outcomes.^{5–8}

In general, Latinos have lower levels of access to and utilization of health care services than non-Latino whites and Asians.^{9–11} However, like other ethnic and racial groups, Latinos are not monolithic.¹² Mexican-origin Latinos have health insurance coverage at lower rates when compared with other Latino heritage groups in the US^{13–15} and other racial groups.¹³

Disclosures

Authors have no conflicts of interests to disclose.

Similarly, Mexican-origin Latinos utilize certain health care services (i.e. emergency departments, prescription medications, cancer screening and ambulatory medical visits) at lower rates than their non-Latino counterparts.^{12,16} This may partially be attributable to increased barriers to care facing sizable Mexican-origin heritage groups such as the young, poor and less acculturated.¹⁷

While Mexican-origin Latinos generally have poorer access to and utilization of health care services than other groups, heterogeneity exists within this group. First, generational status and nativity moderate the disparity between Mexican-origin Latinos and non-Latino whites. For example, Mexican-origin Latinos born in the US visit the doctor more often than their undocumented peers.¹⁸ Among Mexican-origin Latinos in California, immigrants have lower rates of insurance and utilization of primary and emergency department care than their non-Latino white or second generation peers.¹⁹ By the third generation, the discrepancy between Mexican-origin and non-Latino white individuals becomes non-significant.¹⁹ Second, poor English language proficiency is associated with lower rates of insurance coverage and service utilization among Latinos.^{20,21} Finally, because access to health services is a frequent precursor of service utilization and a stronger predictor of utilization than health or medical need among Mexican-origin Latinos,²² it is somewhat unsurprising that lack of insurance is associated with lower levels of health service utilization.¹³

While the literature has shown that Mexican-Americans have poorer access to and utilization of health care services, the generalizability of studies is limited. This may be due to reliance on data collected via telephone surveys, which have declining response rates²³ and have historically excluded cell phone only households.²⁴ This creates problems with non-response bias.^{25,26} Additionally, national or statewide surveys are designed to yield estimates of large geographic areas, making them impractical to investigate issues among smaller catchment areas. Consequently, in depth examinations of specific communities are usually not permissible with large-scale surveys. For these reasons, the present study aims to assess the patterns of health care access and utilization among adults living in East Los Angeles (East LA) and Boyle Heights using a community household survey. These adjacent communities are almost entirely Latino, with Mexican-origin Latinos comprising the vast majority of the population.^{27–30} These communities will provide a unique challenge for the Affordable Care Act (ACA) implementation. Some residents are obtaining coverage through MediCal (California's Medicaid program) expansion or through private insurance exchanges, thereby increasing the demand for services in the area, and others are unable to gain coverage due to the exclusion or limitations placed on undocumented immigrants.³¹ Consequently, this study examines whether or not nativity status, language use and insurance status impact health care access and utilization in specific Mexican and immigrant majority community contexts.

Methods

Design

The present investigation is secondary to the primary aims of the *Proyecto MercadoFRESCO* intervention study. A detailed description of the original study is available elsewhere.³² In brief, the intervention aimed to transform the food environment in

low-income, urban food swamps in East LA and Boyle Heights by converting corner stores into healthy food retailers and by engaging in comprehensive social marketing and educational campaigns. The study was approved by UCLA's Institutional Review Board.

As part of the baseline assessment of the *Proyecto MercadoFRESCO* community study, household surveys of residents in East LA and Boyle Heights were conducted. Household surveys were conducted in each of the neighborhoods immediately surrounding the converted intervention and comparison stores. Households were randomly sampled from the neighborhoods surrounding each store. Within each household, the adult (18 years of age or older) who identified as the primary food purchaser and preparer was invited to participate. Interviewer-administered surveys using computer-assisted personal interviewing were conducted in both Spanish and English and took roughly an hour and a half to complete. Data were collected on a rolling basis from August 2011 to July 2013. Participants provided oral or written consent and received a \$25 incentive to participate.

Sample

A total of 1,035 interviews were completed and an overall response rate of 80% was achieved. Characteristics of the sample are shown in Table 1. Participants were mostly female, under age 50, foreign-born, of Mexican-origin, spoke both English and Spanish at home, had less than a high school education and did not participate in any public programs (i.e. TANF, SSI, SNAP or WIC). No data were available from households that did not participate. However, the most recent 2010 census data indicate that the sample closely mirrored the target population in terms of Mexican heritage and marital status. The sample was slightly older and had a greater proportion of females than the target population; this would be expected given the study inclusion criteria. Between Boyle Heights and East LA, participants only differed in terms of household language use, with a greater proportion of respondents in East Los Angeles living in households that spoke only Spanish when compared to Boyle Heights (not shown).

Questionnaire

The survey included 25 modules, of which one examined access to, utilization of and barriers to health care. The overall instrument contained 403 total items, 11 of which pertained access to, utilization of and barriers to health care utilization. Both English and Spanish versions of the instruments were pretested and modified to improve clarity.

Measures

Primary outcome variables measured access, utilization and barriers to health care. Access and utilization of health care measures were drawn from the 2009 California Health Interview Survey.³³ Self-reported insurance status, health care utilization and barriers to health care utilization have been shown to be valid measures of their respective constructs.^{34–37} Access had two components: insurance status and having a usual source of care. We assessed participant's current insurance status and categorized them as either insured or uninsured. Additionally, we assessed whether or not participants had a doctor or a regular place to go to for health care or health advice. Those who indicated having a doctor or place to go to were categorized as having a usual source of care.

Utilization of health care services was measured using four items: 1) practice type for usual source of care; 2) using the emergency department in the past 12 months; 3) number of physician visits in past 12 months; and 4) time since last physician visit. These four measures capture key features of utilization of health care services, which include site of service and time intervals since receiving services.³⁸ Practice type identified the setting of participant's usual source of care. Responses were coded as private office, ambulatory/hospital clinic or other type. The number of physician visits in the past 12 months were coded into three categories (0/1/2 or more) for bivariate analyses and dichotomized for multivariate analyses (0 versus 1 or more). We determined whether or not participants had used the emergency department in the past 12 months (yes/no). Time since last physician visit was coded into four categories: 1) 12 months or less; 2) more than one year and less than two years; 3) more than two years and less than five years and 4) five or more years for bivariate analyses. For multivariate analyses time since last physician visit was recoded into two categories (less than or equal to 1 year versus more than one year).

Barriers to utilization were assessed only among participants who reported not having seen a physician in the last year. Barriers represented reasons participants were unable, despite medical or health need, to utilize health care. Barriers included being unable to afford to see a physician, lacking transportation, inability to take time off of work, and inability to find a physician who spoke the participant's language. All barrier measures (i.e. financial limitations, transportation, work and language) had dichotomous (yes/no) responses for bivariate analyses, but for multivariate analyses the four questions were combined (any barrier versus no barrier).

The main independent variables of interest were nativity status (US-born versus foreign-born), language spoken at home (any English versus Spanish-only) and insurance status (insured versus uninsured).

Control variables used in multivariate analyses included age, gender, years of education and participation in public assistance programs like TANF or WIC (yes versus no).

Statistics

IBM SPSS Statistics, Version 21.0 was used for statistical analyses. Results of the analyses are presented in three ways. First, for descriptive purposes, data on access, utilization and barriers to health care are shown for the full sample. Second, these data were stratified by nativity, language spoken at home and insurance status. Cross tabulations were run and chi-squared tests were used to test for associations between access, utilization and barrier variables and nativity, language spoken at home and insurance status. Third, multivariate regressions predicting access, utilization and barriers from nativity, language spoken at home and insurance status were fitted. Binary logistic regression was used for all outcomes except practice type, which necessitated the use of multinomial logistic regression. Multivariate analyses included control variables. Individual bivariate and multivariate tests excluded missing cases.

Fit of logistic models was evaluated using Hosmer-Lemeshow's goodness-of-fit (HL GOF) tests. Multinomial logistic regression models were broken down into logistic regressions to allow for the assessment of model fit with using HL GOF tests.

Results

Univariate and Bivariate Analyses

Table 2 shows access and utilization of health services for the study sample. Most participants were currently insured and had a usual source of care. The majority of participants received their care from an ambulatory/hospital clinic versus a private physician office, did not use the emergency department in the past 12 months, and had two or more physician visits in the past 12 months. Barriers were reported infrequently. Specifically, a little more than a quarter of the sample reported financial limitations as a barrier, approximately one-tenth of the sample reported work as a barrier and only a small minority reported either transportation or language as barriers.

When stratified by nativity, there was an association between being currently insured and place of birth between US-born and foreign-born participants (71.8% versus 57.1%). Furthermore, US and foreign-born differed in where they typically received their health care, with a larger percentage of foreign-born participants receiving care in an ambulatory/hospital clinic versus private physician office. Finally, the association between nativity and time since last physician's visit approached significance ($p=0.058$), with foreign-born respondents having longer time between visits.

When stratified by language, there was an association between the place where the participant received his or her health care and language spoken at home. Those who spoke only Spanish at home more often received care in an ambulatory/hospital clinic compared with those who spoke any English who were more likely to be seen in a private office. Language was associated with where usual source of care was received. Additionally, individuals speaking any English at home and those speaking only Spanish differed in indicating work was a barrier to utilization (6.3% versus 19.4%).

Finally, when stratified by insurance status, differences in access and utilization emerged. The insured and uninsured differed in having a usual source of care (89.7% versus 63.6%), where they received their care, number of physician visits in the past 12 months, and utilization of the emergency department in the past 12 months (11.0% versus 31.8%). In all cases, the insured had more optimal utilization than the uninsured. Additionally, insured and uninsured differed in their reporting of financial limitations (15.7% versus 36.3%) and work (4.3% versus 14.5%) as barriers to health care utilization.

Multivariate Analyses

Table 3 shows the results of multivariate analyses in which nativity, language and insurance status were entered into models simultaneously and socio-demographic characteristics were controlled. HL GOF tests determined that all models fit the data reasonably well ($p>0.05$). Being foreign-born was associated with 65% lower odds of being insured ($OR=0.35$; 95% $CI=0.24-0.50$) and 68% greater odds of having usual source of care ($OR=1.68$; 95% $CI=$

1.07–2.62), when compared to being US-born. Additionally, being foreign-born, as compared to being US-born, was associated with 102% greater odds of receiving care in an ambulatory/hospital clinic versus a private office (OR=2.02; 95% CI= 1.36–3.01). Speaking only Spanish, as compared to any English, was associated with 98% greater odds of receiving care in an ambulatory/hospital clinic versus a private office (OR=1.98; 95% CI= 1.34–2.91).

Having insurance was associated with all access, utilization and barrier measures except time since last physician visit. Those who were currently insured had 77% lower odds of having a usual source of care (OR=0.23; 95% CI= 0.16–0.33) than those not currently insured. In terms of utilization, being currently insured, as compared to being currently uninsured, was associated with 51% lower odds of receiving care in an ambulatory/hospital clinic versus a private office (OR=0.49; 95% CI= 0.34–0.72). Similarly, being currently insured, as compared to being currently uninsured, was associated with 82% lower odds of receiving care in another type of setting versus a private office (OR=0.18; 95% CI= 0.07–0.46). Likewise, those who were insured had 37% lower odds of emergency department utilization (OR=0.63; 95% CI= 0.45–0.89) as compared to those uninsured. Unsurprisingly, being insured was associated with a 266% increase in odds of having one or more physician visits in the past year, when compared to those who were uninsured (OR=3.66; 95% CI= 2.56–5.23). Finally, those who were insured had 63% lower odds of reporting any barriers to care (OR=0.37; 95% CI= 0.18–0.76), when compared to those who were uninsured.

Discussion

This study provided a unique opportunity to assess health care access and utilization within two large, neighboring, Mexican-majority communities in California. A considerable fraction of participants were uninsured or lacked a usual source of care. High levels of community uninsurance are problematic because they can set the stage for high burden of disease among the uninsured and can have effects that spillover to the insured by decreasing satisfaction of health care providers³⁹ and decreasing quality and access of services.⁴⁰ Similarly, the sizable proportion of participants who did not visit their physicians on an annual basis and those who frequently visit the emergency department are problematic for preventing disease.

Nativity status was a predictor of access and utilization of health care services. Consistent with previous studies,^{19,41} foreign-born participants had insurance at lower levels than their US-born counterparts. Additionally, foreign-born individuals relied on ambulatory/hospital clinics versus private clinics in greater proportions than US-born participants. Unlike previous research, language was not associated with number of physician visits,⁴² suggesting the care sought by residents in these neighborhoods is provided in a language concordant manner. Nativity did not influence use of emergency department services or frequency of physician visits. The former is important because of the popular conception that immigrants, especially the undocumented, use emergency department services, a common site for safety net services, at high rates, despite evidence to the contrary.¹⁸

An important finding seen in both bivariate and multivariate results is that language affected access and utilization in the sample, especially given that language was not reported as a significant barrier to care in bivariate findings. Spanish-only households relied on ambulatory/hospital clinics versus private offices as usual sources of care at greater rates than households speaking any English. Moreover, English-speaking households were more likely to frequent private offices. Coupled with parallel findings by nativity, this suggests acculturation to the US shifts the usual source of care away from ambulatory and hospital settings to private settings. In the short-term, however, if residents who gain insurance coverage through the ACA are Spanish-speaking, clinics will have to confront the challenge of providing language-concordant care or translation services for a larger patient population. This finding can have national policy considerations, because 25% of people who are eligible to gain coverage through the ACA are Latino,^{43,44} with this number increasing further if immigration reform occurs. Surprisingly, language spoken at home was not associated with insurance status, which contradicts prior research exploring the larger Latino context.⁴⁵ Additionally, participants from Spanish-only households reported work as a barrier to utilization of services. The concentration of foreign-language monolinguals in “brown-collar” jobs that tend to be among the least desirable jobs, with low pay and the expectation of subservience^{46,47} may be driving this finding.

Uninsurance limited access on most measures and led to a greater reporting of financial and work characteristics as barriers to utilization in bivariate findings. While the ACA may help remedy some issues of insurance coverage, its reach will likely be limited in East LA and Boyle Heights, where 19.9% of the larger geographic area is non-citizen.³¹ The ACA excludes the undocumented from both the federally-funded Medicaid expansion and eligibility for tax credits to purchase insurance through Health Insurance Exchanges,⁴⁹ suggesting that current policy solutions will leave East LA and Boyle Heights with unmet need. Furthermore, over a third of undocumented parents have children who are US citizens,⁵⁰ resulting in “mixed-status” families. While the children in these families are potentially eligible for publically financed insurance coverage,⁴³ the incongruence in legal status between parents and children may lead parents to eschew care due to fears of being deported or potentially jeopardizing naturalization.⁵¹ Multivariate findings revealed that insurance’s ability to promote usual source of care reverses when accounting for underlying socioeconomic disparities. This suggests that greater socioeconomic homogeneity in East LA and Boyle Heights may dampen the positive impact of insurance. Overall, the findings suggest ACA’s ability to improve access to insurance, and subsequent utilization of care, will be stymied in East LA and Boyle Heights and other communities with similar demographics.

Despite highlighting important health care access and utilization characteristics of East LA and Boyle Heights, several study limitations exist. Generalizability of findings may be limited. Because the study prioritized sampling household primary food purchasers and preparers, the study sample is disproportionately female. This might also inflate estimates of health care service utilization because women generally use services at higher rates than men.⁵² However, the extent of this effect may be attenuated by the fact the study sample was otherwise representative of the target population. While it would be beneficial to examine health care access and utilization by generational status, within Latino groups and between

other racial groups, the present study did not permit this type of comparison. Instead, this study was able to elucidate access and utilization in two specific Latino community contexts.

Overall, the findings from this study highlight important unique characteristics of the communities of East LA and Boyle Heights. Primarily, despite the high prevalence of foreign-born individuals and Spanish-only households in these neighborhoods, these factors still impact where people sought health care services. Given the increased access problems seen in clinic settings,⁵³ observed differences in site of care can reinforce and exacerbate health disparities. Thus, even if people in these communities gain access to care under the ACA, this may not be sufficient to ensure uniformity of care quality. Additionally, given the potential benefit to Latinos under the ACA, findings highlight that sizable subgroups have usage patterns that should be considered in order to maximize effective implementation. Finally, the findings highlight a unique strength of the communities under investigation whereby language does not present a barrier to access and language spoken at home does not impact frequency of healthcare utilization. These findings suggest language-concordant care is being effectively delivered in East LA and Boyle Heights.

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References

1. United States Census Bureau. [Accessed January 1, 2015] Hispanic or Latino by Type: 2010 Census Summary File 1, United States. Community Facts. 2010. <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>
2. Passel JS, Cohn DV. US population projections: 2005–2050. 2008
3. United States Census Bureau. [Accessed July 15, 2014] Hispanic or Latino by Type: 2010 Census Summary File 1, Los Angeles. Community Facts. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_QTP10
4. Passel JS, Cohn D, Lopez MH. Hispanics account for more than half of nation's growth in past decade. Pew Hispanic Center. 2011 <http://pewhispanic.org/files/reports/140.pdf>.
5. Sorlie PD, Johnson NJ, Backlund E, Bradham DD. Mortality in the uninsured compared with that in persons with public and private health insurance. *Archives of Internal Medicine*. 1994; 154(21): 2409–2416. [PubMed: 7979836]
6. Decker SL, Kostova D, Kenney GM, Long SK. Health status, risk factors, and medical conditions among persons enrolled in medicaid vs uninsured low-income adults potentially eligible for medicaid under the affordable care act. *JAMA*. 2013; 309(24):2579–2586. [PubMed: 23793267]
7. Blewett LA, Johnson PJ, Lee B, Scal PB. When a usual source of care and usual provider matter: adult prevention and screening services. *Journal of general internal medicine*. 2008; 23(9):1354–1360. [PubMed: 18506542]
8. Ayanian JZ, Weissman JS, Schneider EC, Ginsburg JA, Zaslavsky AM. Unmet health needs of uninsured adults in the united states. *JAMA*. 2000; 284(16):2061–2069. [PubMed: 11042754]
9. Guendelman S, Wagner TH. Health services utilization among Latinos and white non-Latinos: results from a national survey. *Journal of Health Care for the Poor and Underserved*. 2000; 11(2): 179–194. [PubMed: 10793514]

10. Alegría M, Cao Z, McGuire TG, et al. Health insurance coverage for vulnerable populations: contrasting Asian Americans and Latinos in the United States. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*. 2006; 43(3):231–254.
11. Corbie-Smith G, Flagg EW, Doyle JP, O'Brien MA. Influence of usual source of care on differences by race/ethnicity in receipt of preventive services. *J Gen Intern Med*. 2002 Jun; 17(6): 458–464. [PubMed: 12133161]
12. Weinick RM, Jacobs EA, Stone LC, Ortega AN, Burstin H. Hispanic healthcare disparities: challenging the myth of a monolithic Hispanic population. *Med Care*. 2004 Apr; 42(4):313–320. [PubMed: 15076807]
13. Treviño FM, Moyer M, Valdez R, Stroup-Benham CA. Health insurance coverage and utilization of health services by mexican americans, mainland puerto ricans, and cuban americans. *JAMA*. 1991; 265(2):233–237. [PubMed: 1984153]
14. Vargas Bustamante A, Fang H, Rizzo JA, Ortega AN. Understanding observed and unobserved health care access and utilization disparities among US Latino adults. *Medical care research and review : MCRR*. 2009 Oct; 66(5):561–577. [PubMed: 19556553]
15. Vargas Bustamante A, Fang H, Rizzo JA, Ortega AN. Heterogeneity in health insurance coverage among US Latino adults. *Journal of general internal medicine*. 2009; 24(3):561–566. [PubMed: 19842007]
16. Vargas Bustamante A, Chen J, Rodriguez HP, Rizzo JA, Ortega AN. Use of preventive care services among Latino subgroups. *American journal of preventive medicine*. 2010 Jun; 38(6):610–619. [PubMed: 20494237]
17. Estrada AL, Trevino FM, Ray LA. Health care utilization barriers among Mexican Americans: evidence from HHANES 1982–84. *American Journal of Public Health*. 1990; 80(Suppl):27–31. [PubMed: 9187578]
18. Ortega AN, Fang H, Perez VH, et al. Health care access, use of services, and experiences among undocumented mexicans and other latinos. *Archives of Internal Medicine*. 2007; 167(21):2354–2360. [PubMed: 18039995]
19. Durazo EM, Wallace SP. Access to Health Care Across Generational Status for Mexican-Origin Immigrants in California. *Field Actions Science Reports*. The journal of field actions. 2014; (Special Issue 10)
20. Schur CL, Albers MLA. Language, sociodemographics, and health care use of Hispanic adults. *Journal of Health Care for the Poor and Underserved*. 1996; 7(2):140–158. [PubMed: 8935388]
21. Hu DJ, Covell RM. Health care usage by Hispanic outpatients as a function of primary language. *Western Journal of Medicine*. 1986; 144(4):490. [PubMed: 3716414]
22. Trevino RP, Trevino FM, Medina R, Ramirez G, Ramirez MRR. Health care access among Mexican Americans with different health insurance coverage. *Journal of Health care for the Poor and Underserved*. 1996; 7(2):112–121. [PubMed: 8935386]
23. Curtin R, Presser S, Singer E. Changes in Telephone Survey Nonresponse over the Past Quarter Century. *Public Opinion Quarterly*. 2005; 69(1):87–98.
24. Hu SS, Balluz L, Battaglia MP, Frankel MR. Improving public health surveillance using a dual-frame survey of landline and cell phone numbers. *American journal of epidemiology*. 2011 Mar 15; 173(6):703–711. [PubMed: 21343246]
25. Schneider KL, Clark MA, Rakowski W, Lapane KL. Evaluating the impact of non-response bias in the Behavioral Risk Factor Surveillance System (BRFSS). *Journal of epidemiology and community health*. 2012 Apr; 66(4):290–295. [PubMed: 20961872]
26. Yeager DS, Krosnick JA, Chang L, et al. Comparing the Accuracy of RDD Telephone Surveys and Internet Surveys Conducted with Probability and Non-Probability Samples. *Public Opinion Quarterly*. 2011; 75(4):709–747.
27. United States Census Bureau. [Accessed July 15, 2014] Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data, East Los Angeles. *Community Facts*. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1

28. United States Census Bureau. [Accessed July 29, 2014] Hispanic or Latino by Type: 2010 Census Summary File 1, ZCTA5 90023. Community Facts. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_QTP10
29. United States Census Bureau. [Accessed July 29, 2014] Hispanic or Latino by Type: 2010 Census Summary File 1, ZCTA5 90033. Community Facts. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_QTP10
30. United States Census Bureau. [Accessed July 29, 2014] Hispanic or Latino by Type: 2010 Census Summary File 1, ZCTA5 90063. Community Facts. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_QTP10
31. California Health Interview Survey. 2011 – 2012 California Health Interview Survey: Citizenship and immigration status (3 levels); Metro and East Area. 2013 <http://ask.chis.ucla.edu>.
32. Ortega AN, Albert SL, Sharif MZ, et al. Proyecto MercadoFRESCO: A Multi-level, Community-Engaged Corner Store Intervention in East Los Angeles and Boyle Heights. *Journal of community health*. 2014 Sep 11.
33. California Health Interview Survey. CHIS 2009 Adult Questionnaire Version 3.4. Los Angeles: California Health Interview Survey; 2011.
34. Call KT, Davidson G, Davern M, Brown ER, Kincheloe J, Nelson JG. Accuracy in self-reported health insurance coverage among Medicaid enrollees. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*. 2008; 45(4):438–456.
35. Reijneveld SA, Stronks K. The validity of self-reported use of health care across socioeconomic strata: a comparison of survey and registration data. *International Journal of Epidemiology*. 2001; 30(6):1407–1414. [PubMed: 11821355]
36. Short ME, Goetzel RZ, Pei X, et al. How Accurate are Self-Reports? An Analysis of Self-Reported Healthcare Utilization and Absence When Compared to Administrative Data. *Journal of occupational and environmental medicine / American College of Occupational and Environmental Medicine*. 2009; 51(7):786–796. [PubMed: 19528832]
37. Keating S, Carlson B, Jimenez S, et al. Psychometric testing of the Immigrant Barriers to Health Care Scale: Hispanic Version. *Nursing & health sciences*. 2009 Sep; 11(3):235–243. [PubMed: 19689631]
38. Aday LA, Andersen R. A framework for the study of access to medical care. *Health services research*. 1974; 9(3):208. [PubMed: 4436074]
39. Pagán JA, Balasubramanian L, Pauly MV. Physicians' career satisfaction, quality of care and patients' trust: the role of community uninsurance. *Health Economics, Policy and Law*. 2007; 2(04):347–362.
40. Pauly MV, Pagán JA. Spillovers and vulnerability: the case of community uninsurance. *Health Affairs*. 2007; 26(5):1304–1314. [PubMed: 17848441]
41. Singh GK, Lin SC. Marked Ethnic, Nativity, and Socioeconomic Disparities in Disability and Health Insurance among US Children and Adults: The 2008–2010 American Community Survey. *BioMed research international*. 2013; 2013
42. Derose KP, Baker DW. Limited English Proficiency and Latinos' Use of Physician Services. *Medical Care Research and Review*. 2000; 57(1):76–91. [PubMed: 10705703]
43. Ortega AN, Rodriguez HP, Vargas Bustamante A. Policy Dilemmas in Latino Health Care and Implementation of the Affordable Care Act. *Annu Rev Public Health*. 2015 Jan 7.
44. Gee, ER. Eligible Uninsured Latinos: 8 in 10 Could Receive Health Insurance Marketplace Tax Credits, Medicaid, or CHIP. Washington, D.C.: Assistant Secretary for Planning and Evaluation; 2014.
45. DuBard CA, Gizlice Z. Language spoken and differences in health status, access to care, and receipt of preventive services among US Hispanics. *American Journal of Public Health*. 2008; 98(11):2021. [PubMed: 18799780]
46. Catanzarite L. Brown-collar jobs: Occupational segregation and earnings of recent-immigrant Latinos. *Sociological Perspectives*. 2000; 43(1):45–75.
47. Saucedo LM. Employer Preference for the Subservient Worker and the Making of the Brown Collar Workplace. *The. Ohio St. LJ*. 2006; 67:961.

48. Diaz E, Prigerson H, Desai R, Rosenheck R. Perceived needs and service use of Spanish speaking monolingual patients followed at a Hispanic clinic. *Community mental health journal*. 2001; 37(4): 335–346. [PubMed: 11482751]
49. Jerome-D'Emilia B, Suplee PD. The ACA and the undocumented. *The American Journal of Nursing*. 2012; 112(4):21–27. [PubMed: 22456561]
50. Passel, JS.; Taylor, P.; Center, PH. Unauthorized immigrants and their US-born children. Washington, DC: Pew Research Center; 2010.
51. Castañeda H, Melo MA. Health Care Access for Latino Mixed-Status Families: Barriers, Strategies, and Implications for Reform. *American Behavioral Scientist*. 2014
52. Bertakis KD, Azari R, Helms LJ, Callahan EJ, Robbins JA. Gender differences in the utilization of health care services. *The Journal of family practice*. 2000 Feb; 49(2):147–152. [PubMed: 10718692]
53. Starfield B, Powe NR, Weiner JR, et al. Costs vs quality in different types of primary care settings. *JAMA*. 1994; 272(24):1903–1908. [PubMed: 7990241]

Table 1

Demographics of Proyecto MercadoFRESCO Sample*

	n=1035	Percent or Mean (SD)
Sex		
Male	227	21.9
Female	808	78.1
Age	987	45.72 (16.7)
Marital Status		
Single	232	22.7
Married/With Partner	585	57.1
Separated/Divorced/Widowed	207	20.2
Nativity		
U.S. Born	357	34.6
Foreign Born	675	65.4
Mexican Heritage		
Yes	880	88.0
No	120	12.0
Language Spoken at Home		
English Only	138	13.4
English and Spanish	519	50.4
Spanish-Only	372	36.2
Years of Education	1022	10.0 (4.1)
Program Participation (Any)		
Yes	388	38.0
No	634	62.0
Program Participation (Specific)		
Temporary Assistance to Needy Families (TANF) or CalWorks		
Yes	58	5.7
No	963	94.3
Food Stamp Benefits/SNAP/CalFresh		
Yes	185	18.0
No	842	82.0
Supplemental Security Income (SSI)		
Yes	113	11.0
No	911	89.0
Women, Infants and Children (WIC)		
Yes	201	19.5
No	828	80.5

* Some totals do not add up to 1,035 due to missing data

Table 2

Healthcare Access, Utilization and Barriers to Utilization (n=1,035)^a

	N	%	Nativity (%)			Language (%)			Insurance (%)			
			Total	U.S.-Born	Foreign-Born	p-value	English/Bilingual	Spanish-only	p-value	Insured	Uninsured	p-value
ACCESS												
Currently Insured												
Yes	640	62.1	71.8	57.1	<.001	63.5	59.9	0.260	-	-		
No	390	37.9	28.2	42.9		36.5	40.1		-	-		
Usual Source of Care												
Yes	824	79.8	83.1	77.9	0.050	78.9	81.5	0.333	89.7	63.6	<.001	
No	209	20.2	16.9	22.1		21.1	18.5		10.3	36.4		
UTILIZATION												
Practice Type												
Private Office	311	37.8	52.5	29.5	<.001	45.5	24.4	<.001	43.5	24.6	<.001	
Ambulatory/Hospital Clinic	490	59.5	42.7	69.0		51.4	73.6		55.0	70.2		
Other ^b	22	2.7	4.7	1.5		3.1	2.0		1.6	5.2		
Emergency Department Utilization (12 months)												
Yes	244	23.6	23.1	23.9	0.777	24.2	22.3	0.502	27.2	17.9	0.001	
No	788	76.4	76.9	76.1		75.8	77.7		72.8	82.1		
Number of Physician Visits (12 months)												
0	195	19.0	18.1	19.6	0.106	19.5	18.2	0.827	11.0	31.8	<.001	
1	237	23.1	26.9	21.0		23.2	22.6		20.2	27.9		
2 or more	594	57.9	55.0	59.4		57.4	59.2		68.8	40.3		
Time Since Last Physician's Visit												
12 months	45	23.4	22.2	24.0	0.058	22.4	25.8	0.661	31.4	19.0	0.248	
> 1 and up to 2 years ago	63	32.8	46.0	26.4		33.6	30.3		34.3	31.4		
> 2 and up to 5 years ago	49	25.5	20.6	27.9		24.8	27.3		20.0	28.9		
> 5 years ago	32	16.7	11.1	19.4		18.4	13.6		12.9	19.0		
Never	3	1.6	0.0	2.3		0.8	3.0		1.4	1.7		

	Nativity (%)			Language (%)			Insurance (%)		
	Total	U.S.-Born	Foreign-Born	p-value	English/Bilingual	Spanish-only	p-value	Insured	Uninsured
BARRIERS TO UTILIZATION^c									
Financial Limitations									
Yes	56	28.7	25.0	30.5	0.423	26.8	31.3	15.7	36.3
No	139	71.3	75.0	69.5		73.2	68.7	84.3	63.7
Transportation									
Yes	14	7.2	6.3	7.6	0.746	4.8	10.4	4.3	8.9
No	180	92.8	93.7	92.4		95.2	89.6	95.7	91.1
Work									
Yes	21	10.8	6.3	13.0	0.164	6.3	19.4	4.3	14.5
No	173	89.2	93.7	87.0		93.7	80.6	95.7	85.5
Language									
Yes	4	2.1	3.2	1.5	0.449	1.6	3.0	1.4	2.4
No	190	97.9	96.8	98.5		98.4	97.0	98.6	97.6

^aTotals may add up less than 1035 due to missing data

^bOther includes those who reported ER (n=12), no place in particular (n=2) or some other place (n=8)

^cAmong those that reported not utilizing healthcare in last 12 months (n=195).

Table 3
Models Predicting Access, Utilization and Barriers to Health Care from Insurance Status, Nativity and Language

	Currently Insured (n=962)	Regular Source of Care (n=961)	Practice Type: Clinic ^a (n=771)	Practice Type: Other ^a (n=961)	1 or More Physician Visits (n=956)	> 1 Year Since Last Physician Visit (n=181)	Barriers to Utilization (n=184)
Independent Variable ^b	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)	AOR (95% CI)
Foreign-Born	.35 (.24, .50)	1.68 (1.07, 2.62)	2.02 (1.36, 3.01)	.61 (.18, 2.07)	.84 (.54, 1.30)	2.10 (.72, 6.08)	1.77 (.75, 4.17)
Spanish-Only	1.05 (.76, 1.43)	.78 (.53, 1.16)	1.98 (1.34, 2.91)	2.26 (.71, 7.19)	1.14 (.77, 1.68)	1.06 (.44, 2.56)	1.16 (.56, 2.42)
Currently Insured	--	.23 (.16, .33)	.49 (.34, .72)	.18 (.07, .46)	3.66 (2.56, 5.23)	.60 (.27, 1.30)	.37 (.18, .76)
Age	1.05 (1.03, 1.06)	.98 (.97, 1.00)	.98 (.97, .99)	.94 (.90, .98)	1.01 (.99, 1.02)	.96 (.94, .99)	1.00 (.97, 1.02)
Female	1.14 (.80, 1.61)	.57 (.37, .85)	.53 (.35, .80)	.26 (.10, .72)	2.35 (1.59, 3.49)	.77 (.32, 1.84)	.94 (.46, 1.91)
Years of Education	1.04 (.99, 1.08)	1.01 (.95, 1.06)	.93 (.88, .97)	.94 (.80, 1.12)	1.01 (.96, 1.07)	1.12 (1.00, 1.25)	1.09 (.99, 1.20)
Program Participation	1.39 (1.04, 1.87)	1.24 (.87, 1.77)	1.36 (.97, 1.91)	1.72 (.65, 4.52)	1.03 (.72, 1.47)	.48 (.22, 1.03)	1.27 (.65, 2.46)

^a multinomial logistic regression with reference group is private office

^b reference groups are: Currently Insured=yes; Foreign-born=no; Spanish-Only=Any English; Female=Male; Program Participation=No