J Immigrant Minority Health (2014) 16:724–732
DOI 10.1007/s10903-013-9794-8

ORIGINAL PAPER

Mexican Immigrants' Attitudes and Interest in Health Insurance: A Qualitative Descriptive Study

Carolyn M. Ziemer · Sylvia Becker-Dreps · Donald E. Pathman · Paul Mihas · Pamela Frasier · Melida Colindres · Milton Butterworth · Scott S. Robinson

Published online: 26 February 2013

Abstract Mexican immigrants to the U.S. are nearly three times more likely to be without health insurance than non-Hispanic native citizens. To inform strategies to increase the number of insured within this population, we elicited immigrants' understanding of health insurance and preferences for coverage. Nine focus groups with Mexican immigrants were conducted across the State of North Carolina. Qualitative, descriptive methods were used to assess people's understanding of health insurance, identify their perceived need for health insurance, describe perceived barriers to obtaining coverage, and prioritize the components of insurance that immigrants value most. Individuals have a basic understanding of health insurance and perceive it as necessary. Participants most valued insurance that would cover emergencies, make care affordable, and protect family members. Barriers to obtaining insurance included cost, concerns about immigration status discovery, and communication issues. Strategies that address immigrants' preferences for and barriers to insurance should be considered.

Keywords Immigrant · Health · Mexican · Insurance

Introduction

The number of Hispanics living in the United States (U.S.) surpassed 50 million in 2010, a 43 % increase since 2000 [1]. North Carolina has consistently ranked in the top ten U.S. states for Hispanic population growth, with a growth rate of nearly 400 % from 1990 to 2000 and 111 % from 2000 to 2010 [1, 2]. Immigrant growth rates in North Carolina over this period largely outpaced national rates, making the state a new destination state for Hispanic immigrants. About 60 % of Hispanics living in North Carolina, as in the U.S. as a whole, are of Mexican origin [3].

Mexican immigrants to the U.S. have poorer access to and lower utilization of health care than native citizens. Approximately 34 % of individuals of Mexican origin in the U.S. are uninsured, similar to the 32 % rate for all

C. M. Ziemer
School of Medicine, Gillings School of Global Public Health, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

S. Becker-Dreps (✉) · P. Frasier
Department of Family Medicine, University of North Carolina at Chapel Hill, 590 Manning Drive, CB #7595, Chapel Hill, NC 27599-7595, USA
e-mail: sbd@unc.edu

D. E. Pathman
Department of Family Medicine, The Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

P. Mihas
The Odom Institute, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

M. Colindres
Inter-Am: English and Spanish Cross-Cultural Communications, Chapel Hill, NC, USA

M. Butterworth
Development and Community Relations, Blue Ridge Community Health Services, Inc, Hendersonville, NC, USA

S. S. Robinson
Departamento de Antropologia, Universidad Autónoma Metropolitana, Iztapalap Campus, Mexico, Distrito Federal, Mexico

Hispanics, and much higher than the 14 % rate for non-Hispanics [4, 5].

There are several well-described barriers to insurance for this vulnerable population. Mexican immigrants living in the U.S. have less education and higher poverty rates than national averages, making insurance difficult to afford [6]. Obtaining insurance is also hindered by cultural and linguistic barriers [7]. Undocumented immigrants are prohibited by federal law from receiving public assistance through Medicaid and Medicare, and those who attain legal permanent residency status are barred from eligibility during the first 5 years as legal residents. Fear of disclosing immigration status also deters some parents in "mixed-status" families from seeking publicly supported insurance for eligible children [8].

While such characteristics help to describe the epidemiology of the uninsured population, less is known about Mexican immigrants' attitudes towards health insurance. To develop strategies for increasing the number of insured within this population, it is important to evaluate immigrants' understanding of health insurance and preferences for coverage.

The purpose of this study was to assess interest in and preferences for health insurance coverage among Mexican immigrants in North Carolina. We conducted focus groups with Mexican immigrants across the state. This research uses qualitative, descriptive methods to assess Mexican immigrants' understanding of health insurance, determine their perceived need for health insurance, describe perceived barriers to obtaining coverage, and prioritize their desired components of insurance plan coverage.

Methods

Subjects and Recruitment

Nine focus groups of Mexican immigrants to North Carolina were conducted between December, 2007 and July, 2009. Inclusion criteria required participants to be Mexican immigrants to the U.S. and 18 years of age or older. Individuals who had emigrated from Mexico to the U.S. at any point in time were recruited. There were no exclusions based on duration of stay in the U.S., citizenship status for the individual or family, or whether individuals or family members currently possessed health insurance. Institutional Review Board approval was obtained from the University of North Carolina at Chapel Hill.

The focus groups were chosen to represent the spectrum of Mexican immigrants in the state. Participants were sampled from the state's eastern (2 groups), central (4 groups), and western (3 groups) regions (Fig. 1). At each site, a community contact approached individuals to solicit participation. These contacts included a lay health advisor, community health center outreach coordinators, the coordinator of a farmworker health program, and staff from several Latino advocacy groups. The settings of recruitment varied and included meetings of Latino advocacy and community groups, a Head Start Program, a farmworker outreach program, a community health center and a Latino health fair. This purposeful sampling to generate a diverse sample able to speak to a breadth of issues included individuals employed in agriculture, poultry, housekeeping, restaurant and hotel industries, and homemakers. Six of the nine groups were divided by gender to avoid having the presence of individuals of the opposite gender inhibiting mention of some issues. In two of the mixed gender groups, participants were acquainted with each other prior to participating in the focus groups. In the final mixed gender group, individuals were recruited at a Latino health fair, where it was logistically difficult to recruit single gender groups without causing long delays for participants. Finally, groups were chosen in areas with varying access to primary care services.

Data Collection and Measures

All focus groups were conducted in Spanish with a bilingual facilitator previously unknown to the participants. The facilitator introduced herself to participants as they attended sessions and explained the purpose of the study. Focus groups were also attended by the bilingual principal investigator (SBD), who helped to answer any questions and clarify points during meetings. Before each session, individuals were informed that no identifiable information would be shared, and participants were asked not to share information about the group's discussion outside the group. Participants were also informed that discussions would be audio-recorded. The format of the focus group discussions was described, and the facilitator obtained verbal informed consent from all participants. To protect privacy and encourage openness, participants were not required to share demographic information other than Mexican state of origin. Dinner and babysitting service were provided free of charge. Each focus group session lasted approximately 90 min. Audiotapes were subsequently transcribed verbatim into Spanish and then translated into English by the bilingual focus group facilitators.

Focus group facilitators used a 15 item topic guide to steer and promote discussion (Table 1). This guide aimed at understanding: (1) the participants' experiences with health care in the U.S.; (2) their understanding of and interest in health insurance; (3) their perceived barriers to health insurance coverage; and (4) which components of

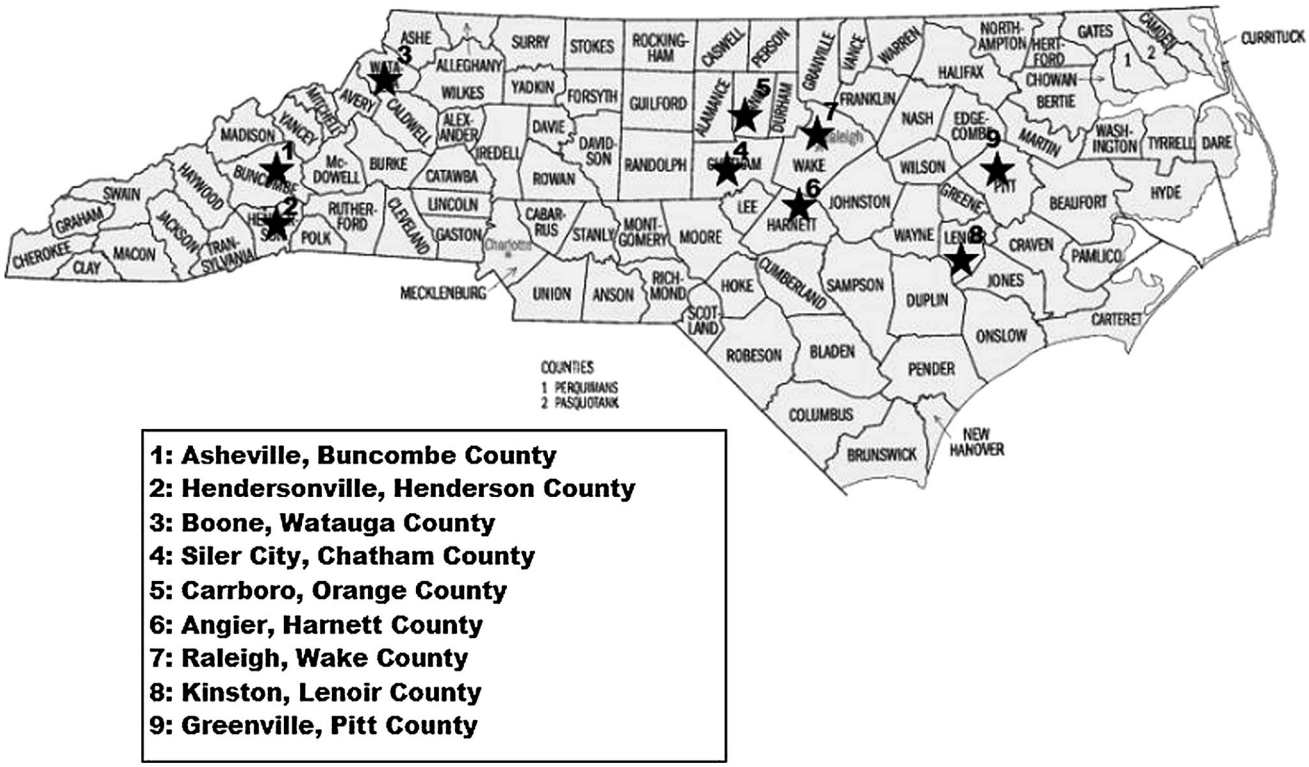

Fig. 1 Location of nine focus groups (Modified from [30])

health insurance were most important to them, such as coverage of primary care or emergency room care. For this final aim, the facilitator read aloud a list of potential components of health insurance coverage and participants wrote down the component(s) that were most important to them. These responses were collected and tabulated. The facilitator obtained verbal responses from low-literacy participants.

Analysis

English transcripts were entered as text into Microsoft Word and uploaded into Atlas.ti qualitative analysis software (version 6.2, Atlas.ti, Berlin). Following review of the common response issues in the transcripts, descriptive codes were created and agreed upon by three co-authors. Transcripts were then analyzed by one investigator (CZ),

Table 1 Sample questions from focus group topic guide

Experiences in U.S. health care system	Where do you receive your healthcare?
	Why do you attend that clinic or hospital?
	How do you communicate with your doctor/medical staff?
	Does the medical staff understand and respect Mexicans/Hispanics?
Understanding and interest in health insurance	What does health insurance mean to you?
	Is health insurance necessary?
	Do you think is it important for you to have health insurance?
Desired components of health insurance coverage	If you were to buy a health insurance plan which option(s) would be attractive to you? Choose any of the following you would want if you had health insurance. Remember that the more you choose, the more expensive the plan will be
	1. Primary care
	2. Specialty care
	3. Emergency room
	4. Hospitalization
	5. Medications
	6. Dental

who assigned descriptive codes to these issues using an editing analysis method [9]. Select sections of transcripts were reread by a second investigator (SBD) who assigned the same codes while blinded to the original coding. There were negligible coding differences between the two coders.

Results

Participants

The nine focus groups included between 6 and 15 adult Mexican immigrants each, with a total of 81 participants. Four of the groups were entirely female, two groups were all male, and the remaining three groups were mixed-gender. While it was not a requirement, many participants did volunteer personal information, such as age, occupation, personal immigration status, and family members' immigration status. Some noted having "mixed-status" families, where U.S.-born children were U.S. citizens, but one or both parents were undocumented. In the six groups that provided age, participants spanned from 18 to 74 years. From voluntary disclosures, we know that all participants in at least two groups had full legal documentation or were in the process of obtaining permanent resident status. Individuals originated from Mexico City (Distrito Federal) and 17 different Mexican states from all regions of the country. Unique characteristics of each group are shown in Table 2. Important issues and representative quotations from the group discussions are presented below.

Experiences with the U.S. Health Care System

Most participants had accessed medical care at community health centers. Overall, participants were satisfied with the care received at these centers, including seeing providers who could speak Spanish and the affordability of care. Furthermore, two groups explicitly credited health outreach workers from community health centers with facilitating medical access. These "health navigators" sought workers out at places of employment, provided transportation to clinics, and helped to ensure continuity of care.

In contrast, participants who received care in emergency department or urgent care settings largely viewed the experience as negative. Complaints of high costs, long waiting times, and discriminatory treatment recurred in many discussions.

> … I had to take my husband [to the ER] for an allergy and we had to wait a long time, from 8 am to 3 pm. While I was taking a nap, they took an X-ray and just for that we were charged $ 2,300!… For that price, I should have taken my nap in a luxury hotel! And the truth is, you can't afford the *luxury* of emergency services because they are too expensive.

> I've also heard this from my friends: You go to the hospital with pain and they don't give you the usual kind of treatment if you don't have 'papers,' – they only give you something to calm the pain momentarily. That's happening a lot now.

Table 2 Focus group characteristics

Site	Number of participants	Participant gender	Unique characteristics
Asheville	12	Mixed gender	Ages 18–54. Employed in farm work, housekeeping, restaurant and hotel industries.
Hendersonville	10	All male	Mostly young males (9 participants under 28 years, 1 participant 74 years). Farm workers without H2A visas. Low literacy group.
Boone	7	All male	Ages 19–58, all with H2A visas for farm work. Had spent between 3 and 8 years returning to same farms under H2A visa program.
Siler City	9	All female	Ages 32–56, originating from wide array of Mexican states. Employed in local poultry industry and housekeeping.
Carrboro	7	All female	Ages 31–43, originating from wide array of Mexican states. Most were mothers of young children. Three participants with legal documentation, four in process of receiving legal documentation.
Angier	6	All female	Ages 24–45, most were mothers of young children.
Raleigh	8	All female	All participants had full legal documentation. Only group to include several participants with health insurance. Most of participants had lived in U.S. for 10–40 years.
Kinston	11	Mixed gender	All participants originated from Mexican state of Veracruz. Majority employed in poultry industry.
Greenville	11	Mixed gender	Participants originated from wide variety of Mexican states, attending a latino health fair.

Understanding of Health Insurance

Overall, participants understood fundamental concepts of health insurance coverage. In all but one of the groups, participants were able to describe several basic elements of insurance policies, such as co-pays, coverage for only certain medical services, and employer-sponsored insurance. Participants frequently noted that some health insurance plans were more comprehensive than others.

> It's like car insurance – it only covers certain things!

Most groups commented on the comparatively lower cost of obtaining health insurance through an employer. However, even participants offered insurance through an employer sometimes found the policies unaffordable.

> If you are working in a company, insurance costs you less, but if you stop working and want to pay on your own, then it is more expensive.

> Where I work I could get insurance, but one needs to pay, and I, as head of the family, prefer to save this little bit for other needs.

In a few groups, participants with higher education levels demonstrated more nuanced comprehension of health insurance. In these discussions, participants navigated well the complexities of deductibles, premiums, catastrophic coverage:

> You have to recognize that we are in a country where, unfortunately, medicine is quite expensive. It is very important as a citizen or resident of the U.S. to have insurance. Without health insurance, you could pay up to $10,000 or more for one day in the hospital. But if you have insurance…even though you have to pay your monthly premiums and your deductible, it is much less than paying $40,000 for the four days that you were hospitalized.

In contrast, none of the members of one group (Asheville) were able to answer the facilitator's broad question, "What is health insurance?" A few participants in other groups confused health insurance with life insurance or worker's compensation. Furthermore, a few participants in several groups assumed that most health insurance plans always included dental or eye care.

Necessity of Health Insurance

When participants were asked why someone might need health insurance, five principal issues emerged. Participants described the importance of insurance to cover emergencies, to make medical care affordable, to improve access to physicians, to provide for family members and to promote emotional well-being.

Emergency Care

There was general agreement within all groups that insurance was most needed to cover serious, unanticipated, emergent illnesses. Participants mentioned the severity of illness and the high cost of acute care when justifying the need for this coverage.

> You have to go to the emergency room when you are seriously ill, that's when you really need to see a doctor.

The provision of insurance to cover preventive medical services rarely came up in discussions. In response to the facilitator asking why an individual would *not* need health insurance, one respondent said, "only if they never get sick!" When participants mentioned seeking attention from a primary care provider, it was for the purpose of treating chronic or acute illness, not for disease prevention.

Cost

Health insurance was perceived as necessary to shield families from the high cost of care in the U.S. Participants were aware of how quickly health costs could escalate for families and many had witnessed or experienced financial devastation wrought by medical bills.

> I have seen people here who have saved money for years, but when their children became ill, they lost all of their savings…If someone does not have health insurance and gets sick here in the U.S., well, there go all of their savings.

Many described instances of deferring seeking medical attention due to prohibitive costs. Postponing care had disastrous financial consequences for some participants, who described the high costs of receiving hospital care for preventable exacerbations of chronic illnesses.

Access

The perception that the insured had much better access to physicians than the uninsured was noted across all groups. Shorter waiting time for scheduling appointments was mentioned as an important component of improved access. As one recently insured participant observed, "health insurance is very necessary because when you have insurance, you are seen more quickly in most places." Others remarked that health insurance was essential because many providers did not accept uninsured patients.

For those without Social Security numbers, health insurance cards granted access to care that they had previously avoided. Several participants noted that if they provided proof of health insurance when seeking care, they would not be asked for a Social Security number, which would reveal their documentation status.

> In the case of a medical emergency, they also start asking you a bunch of questions about your Social Security number, and that is when you really have problems. If you have insurance, it's better.

Family

In general, both male and female participants prioritized health insurance for family members above personal coverage. Immigrants who had traveled to the U.S. alone also valued health insurance coverage for family members residing in Mexico. The need for health insurance for children was particularly emphasized, with several participants noting that the fear of disclosing immigration status and the lack of financial resources prevented them from seeking care for their children.

> [Health insurance] is very necessary because there are people who have sick children… and sometimes they do not take them to the doctor because they will have to pay.

The need for insurance to cover family members was especially salient in the all-male groups. In one group of men, there was general consensus that health insurance was not as important for adult men, because they perceived themselves as healthier than women or children.

> I think about my wife and daughter…about what could happen to them if they get sick and I don't have the money needed to help them. This is a situation where insurance is necessary…When you're a young man, you almost never get sick… but having a family insurance plan is good for the family.

Emotional well-being

Several participants remarked that health insurance was important for promoting emotional well-being. Fear of illness and the inability to pay for care were a source of considerable anxiety among those without insurance. The few participants who did have insurance commented on the immense relief that accompanied the coverage.

> When I think about insurance, the word 'payment' comes to mind, but 'peace of mind' also comes to mind. I know that when I have a health problem I am financially covered if I have health insurance…
>
> When I don't have health insurance, I feel bad because I'm afraid of getting sick.

Barriers to Insurance Coverage

Commonly expressed barriers to seeking health insurance were cost, immigration status, and communication issues. Just as readily as participants acknowledged the necessity of health insurance to reduce medical expenses, they also remarked that the cost of insurance plans was prohibitively high. For many, other competing financial needs put health insurance out of reach.

> I know that it's not much, but in order to pay $60 for every member of the family, you have to choose between paying for insurance or eating and paying the rent.

Many individuals remarked that without legal documentation, they were ineligible to receive affordable health insurance coverage.

> Health insurance is very beneficial, because it covers a percentage of the doctor's visit and medications. We can't enjoy these benefits because we don't have documentation, and we don't earn enough to pay for insurance; insurance is very expensive.

Finally, several participants cited frustrations in communicating with health insurance companies as obstacles to obtaining coverage. Some complained that the Spanish-speaking personnel answering phones were poorly equipped to answer specific questions about policies. For others, limited availability of Spanish-speaking staff made the process too difficult:

> The majority of insurance companies do not have this service [Spanish-speaking staff]. Also, often when they have the service, it's very limited. Only on certain days or at certain times.

Most Desirable Components of Health Insurance

Participants in each group selected what they perceived as the most desirable components of health insurance coverage (Table 3). In general, emergency, primary and dental care were prioritized over hospital care and medication coverage. The male groups tended to prefer emergency, primary, and specialty care, whereas the female and mixed groups tended to have a broader range of desired components of health insurance. Overall, coverage for primary care was less desired by the groups who already had access to affordable care at community health centers.

Table 3 Desired components of health insurance; percentages of participants, by site

Site (N)								
Percentage of respondents in group desiring component	Asheville (12)	Hendersonville (10)	Boone (7)	Carrboro (7)	Angier (6)	Raleigh (8)	Kinston (11)	Greenville (11)
ER	17	100	43	100	33	38	55	36
Primary care	50	100	71	14	83	75	64	45
Specialty care	25	0	43	86	50	63	0	18
Hospitalization	35	0	0	86	0	0	55	27
Dental	50	0	14	86	17	63	18	73
Medications	8	0	0	29	0	50	45	9

These questions were not asked in the Siler City group

Discussion

The results of this study indicate that Mexican immigrants in North Carolina generally have a basic understanding of health insurance and perceive a need for coverage. Findings suggest that insurance plans that offset the cost of emergency care services would be most desirable to this population. Other valued insurance characteristics include affordability and family coverage. Despite the desire for health insurance, the cost of purchasing plans was an insurmountable barrier for many. Participants in this study did not prioritize preventive care, consistent with a national trend of underutilization of primary and preventive care for Mexican immigrants [10–13].

Most in this study population had access to primary care through community health centers. Despite this access, participants commonly described delaying seeking care until the severity of the condition warranted emergency attention, often citing expense as the reason. In general, participants expressed dissatisfaction with the high cost of care provided by emergency departments.

Of note, this pattern of postponement of care is not unique to immigrants to North Carolina. Latino immigrants to other new destination states may face more obstacles in accessing care than individuals in areas with a well-established immigrant presence. Gresenz et al. [14] found that immigrants to new destinations were more likely to have unmet health needs, delays receiving care, and poorer satisfaction with medical services. In addition, the attitudes about health insurance described in this study reflect previous findings among Latino immigrants to other new destinations in the U.S. Focus group studies of Latino immigrants to the upper Midwest demonstrate that these immigrant groups also perceive health insurance as necessary to access quality health care. Similarly, participants in these studies believed that the cost of insurance, confusion in navigating the system, documentation status, and poor coverage of family members were the principal barriers to coverage [15–17].

We note several study limitations. Our findings are limited to Mexican immigrants living in North Carolina, and may not directly apply to other immigrant populations or Mexican immigrants in other states. Additionally, in the selection of our groups, we only considered gender and no other demographic variables in order to protect participant confidentiality. As such, we cannot identify differences in group responses by occupation, age, immigration status or other characteristics. While our findings summarize perceptions of health insurance and barriers to coverage, future research is needed to more fully address behaviors discussed by participants, such as deferring seeking medical attention and putting family needs above one's own.

Our findings suggest that providing high deductible plans with emergency care coverage and low premiums may be one way to meet the top health insurance priorities of Mexican immigrants. Unfortunately, these plans would not fulfill this population's other desires for coverage of primary or dental care. Making routine care geographically accessible and affordable through federally-supported community health centers may help to meet this population's need for primary and dental care. While increasing access to these centers could reduce preventable emergency room visits [18, 19], this option alone would not meet the need for emergency care. One way to respond to the need for affordable acute care would be to expand hours of operation and spectrum of care offered by community health centers.

Local strategies may also be useful for overcoming access barriers. Hispanic lay health workers, or *promotoras de salud*, could aid community members in navigating available health resources. To date, community *promotora* programs have been particularly successful at increasing appropriate screening practices in adults and promoting immunizations in children [20–22]. Programs designed to educate communities about eligibility for health insurance for mixed-status families, affordable primary care and avoidance of unnecessary use of the emergency department

have the potential to improve access and decrease costs for Mexican immigrants.

Another strategy used by Mexican immigrants to circumvent access barriers in the U.S. is to seek lower-cost health care in Mexico [23–26]. Binational insurance options are emerging as another possible solution, with several private insurance companies currently offering such coverage in California [27]. Though these binational plans may be attractive to immigrants living near Mexico, cross-border travel is not feasible for immigrants who live in states far from the Mexican border and those without legal documentation who fear being unable to return if they travel to Mexico for care. Large advances in access to health care for undocumented individuals will likely be difficult to achieve without immigration reform.

In the Patient Protection and Affordable Care Act, low-income citizens will gain access to health insurance through public and private sector programs, but undocumented immigrants will be excluded from the provisions [28]. By 2019, when the Act is to be fully in effect, this vulnerable population will comprise 25 % of the 19 million non-elderly uninsured [29]. As this generally young and healthy population ages, their health care needs will increase. Until an affordable insurance option emerges, much of their needs will likely go unmet.

References

1. Pew Hispanic Center: Census 2010.: 50 Million Latinos Hispanics account for more than half of Nation's growth in past decade. 2011. http://www.pewhispanic.org/files/reports/140.pdf. Last accessed 27 June 2012.
2. Pew Hispanic Center: The New Latino South. 2005. http://pewhispanic.org/files/reports/50.pdf. Last accessed 27 June 2012.
3. U.S. Census Bureau: Profile of general population and housing characteristics: 2010. 2010 Demographic profile data, North Carolina. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table. Last accessed 27 June 2012.
4. U.S. Census Bureau: Current population survey, annual social and economic supplement. 2010. Table 42. Health insurance status by sex, age, and Hispanic origin type: 2010. http://www.census.gov/population/www/socdemo/hispanic/cps2010.html. Last accessed 27 June 2012.
5. U.S. Census Bureau: Current population survey, annual social and economic supplement. 2010. Table 41. Health insurance status by sex, age, Hispanic origin, and race: 2010. http://www.census.gov/population/www/socdemo/hispanic/cps2010.html. Last accessed 27 June 2012.
6. Rivers PA, Patino FG. Barriers to health care access for Latino immigrants in the USA. Int J Soc Econ. 2006;33(3):207–20.
7. Flores G, Fuentes-Afflick E, Barbot O, et al. The health of Latino children: urgent priorities, unanswered questions, and a research agenda. JAMA. 2002;288(1):82–90.
8. Perry MJ, Stark E, Valdez RB: Barriers to Medi-Cal enrollment and ideas for improving enrollment: findings from eight focus groups in California with parents of potentially eligible children. 1998. Kaiser Family Foundation. www.kff.org/medicaid/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=14649. Last accessed 27 June 2012.
9. Miller WL, Crabtree BF. Primary care research: a multimethod typology and qualitative road map. In: Crabtree BF, Miller WL, editors. Doing qualitative research. Newbury Park, CA: Sage; 1992. p. 3–28.
10. Derose KP, Escarce JJ, Lurie N. Immigrants and health care: sources of vulnerability. Health Aff. 2007;26(5):1258–68.
11. Ortega AN, Fang H, Perez VH, et al. Health care access, use of services, and experiences among undocumented Mexicans and other Latinos. Arch Intern Med. 2007;167(21):2354–60.
12. Ku L. Health insurance coverage and medical expenditures of immigrants and native-born citizens in the United States. Am J Public Health. 2009;99(7):1322–8.
13. Tarraf W, Miranda PY, González HM. Medical expenditures among immigrant and nonimmigrant groups in the United States: findings from the medical expenditures panel survey (2000–2008). Med Care. 2012;50(3):233–42.
14. Gresenz CR, Derose KP, Ruder T, et al. Health care experiences of Hispanics in new and traditional U.S. destinations. Med Care Res Rev. 2012;69(6):663–78.
15. Blewett LA, Smaida SA, Fuentes C, et al. Health care needs of the growing Latino population in rural America: focus group findings in one midwestern state. J Rural Health. 2003;19(1):33–41.
16. Cristancho S, Garces DM, Peters KE, et al. Listening to rural Hispanic immigrants in the Midwest: a community-based participatory assessment of major barriers to health care access and use. Qual Health Res. 2008;18(5):633–46.
17. Harari N, Davis M, Heisler M. Strangers in a strange land: health care experiences for recent Latino immigrants in Midwest communities. J Health Care Poor Underserved. 2008;19(4):1350–67.
18. Streeter S, Braithwaite S, Ipakchi N, et al.: The effect of community health centers on healthcare spending and utilization. National Association of Community Health Centers. 2009. http://www.nachc.org/client/Avalere_NACHC_Report_Final_10.2.09.PDF. Last accessed 27 June 2012.
19. Epstein AJ. The role of public clinics in preventable hospitalizations among vulnerable populations. Health Serv Res. 2001;32(2):405–20.
20. Viswanathan M, Kraschnewski J, Nishikawa B, et al.: Outcomes of community health worker interventions. Evid Rep Technol Assess. 2009;181:1–144, A1–2, B1–14
21. Gibbons MC, Tyus NC. Systematic review of U.S.-based randomized controlled trials using community health workers. Prog Community Health Partnersh. 2007;1(4):371–81.
22. Lewin S, Munabi-Babigumira S, Glenton C, et al. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. Cochrane Database Syst Rev. 2010;3:CD004015.
23. Wallace SP, Mendez-Luck C, Castaneda X. Heading south: why Mexican immigrants in California seek health services in Mexico. Med Care. 2009;47(6):662–9.
24. Landeck M, Garza C. Utilization of physician health care services in Mexico by U.S. Hispanic border residents. Health Mark Q. 2002;20(1):3–16.
25. Macias EP, Morales LS. Crossing the border for health care. J Health Care Poor Underserved. 2001;12(1):77–87.
26. Guendelman S. Health care users residing on the Mexican border: what factors determine choice of the U.S. or Mexican health system? Med Care. 1991;29(5):419–29.

27. Schulz AT, Medlin C. Cross border health care plans. Health Policy Monitor. 2007. http://www.hpm.org/survey/us/d7/4. Last accessed 27 June 2012.
28. Zuckerman S, Waidmann TA, Lawton E. Undocumented immigrants, left out of health reform, likely to continue to grow as share of the uninsured. Health Aff. 2011;30(10):1997–2004.
29. Buettgens M, Hall M. Who will be uninsured after health reform? Robert Wood Johnson Foundation. 2011. http://www.rwjf.org/files/research/71998.pdf. Last accessed 27 June 2012.
30. U.S. Census Bureau, State and County QuickFacts,. North Carolina County Selection Map. http://quickfacts.census.gov/qfd/maps/north_carolina_map.html. Last accessed 27 June 2012.