



HHS Public Access

Author manuscript

J Agromedicine. Author manuscript; available in PMC 2018 August 13.

Published in final edited form as:

J Agromedicine. 2017 ; 22(3): 275–281. doi:10.1080/1059924X.2017.1319314.

Providing Health Information to Latino Farmworkers: The Case of the Affordable Care Act

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Abstract

Objective: Providing health program information to vulnerable communities, such as Latino farmworkers, is difficult. This analysis describes the manner in which farmworkers receive information about the Affordable Care Act, comparing farmworkers to other Latinos.

Methods: Interviews were conducted with 100 Latino farmworkers and 100 urban Latino North Carolina residents in 2015.

Results: Most farmworkers had received health information from a community organization. Trusted sources for health information were health care providers and community organizations. Sources that would influence decisions to enroll were Latino nurses and doctors, religious leaders, and family members. Traditional media, including oral presentation and printed material at the doctor's office were preferred by the majority of farmworkers and non-farmworkers. Farmworkers used traditional electronic media: radio, television, telephone. More non-farmworkers used current electronic media: e-mail and internet.

Conclusions: Latino farmworkers and non-farmworkers prefer traditional media in the context of a health care setting. They are willing to try contemporary electronic media for this information.

Keywords

Immigrant health; rural health; health services; health care access; farmworkers

Introduction

Providing information about health programs to vulnerable communities, such as Latino farmworkers, is difficult.¹ Farmworkers are a “hard-to-reach” population, a population with members who may not want to be identified or contacted.² No list of farmworkers exists. Farmworkers, like many other Latino immigrants, are often undocumented and do not want to be known or contacted by individuals such as health workers, who might be connected to government and law enforcement officials. Farmworker vulnerability results from their migrant status, limited ability to communicate in English, limited formal education, and low incomes.³ This vulnerable population experiences high rates of occupational injury and illness, yet has limited access to health care.^{1,4-6} Finding effective ways to get information about health programs to farmworkers is particularly important.

Investigators have tried to determine effective means to reach farmworkers for community health programs.⁷⁻⁹ In particular, they hope that electronic media can be used for this purpose.¹⁰⁻¹² As opposed to only 10 years ago,¹³ many farmworkers now have access to telephones, particularly cell-phones and smart phones.^{8,9}

The focus of this paper is an understanding of the best ways to provide health program information to Latino farmworkers. When this study was conducted, the Affordable Care Act (ACA) was a major health program that could improve health care access for Latino farmworkers. Guild and colleagues¹⁴ provided an overview of the issues surrounding the implementation and impact of the ACA for farmworkers. Although some Latino farmworkers were not eligible due to their immigration status, those with H-2A visas were eligible to apply for health insurance through the ACA. Using survey data, we address two specific aims. First, we describe the manner in which farmworkers receive and wish to receive information about health programs, including their current information sources, the information sources they trust, the media they prefer, and the information sources that influence their decisions. Second, we compare farmworkers to other Latinos in North Carolina (NC) in how they receive and wish to receive information about health programs. It is important to compare Latino farmworkers with other Latino immigrants so that processes to provide health information can be appropriately tailored to different immigrant communities.

Methods

Data for this pilot study were collected in 2015 as part of an ongoing community-based participatory research project. The primary study partners were the North Carolina Farmworkers’ Project (Benson, NC), El Buen Pastor Latino Community Services (Winston-Salem, NC), and Wake Forest School of Medicine (Winston-Salem, NC). This pilot study was implemented because the NC Farmworkers’ Project had a program to educate farmworkers about the ACA and wanted additional information about reaching farmworkers

with health information. NC Farmworkers' Project has an established health outreach program, but it is not a health care center. NC Farmworkers' Project refers farmworkers to the Benson Area Medical Center; Benson Area Medical Center does not conduct outreach. NC Farmworkers' Project and Benson Area Medical Center receive funding from the North Carolina Farmworker Health Program. The study protocol was approved by the Wake Forest School of Medicine Institutional Review Board.

Participants

Two hundred adults ages 18 and older were recruited to the study. Inclusion criteria were being ages 18 and older, having been born in Mexico, self-identifying as Latino or Hispanic, and being either a farmworker living in Johnston County, NC or a non-farmworker living in Forsyth County (Winston-Salem), NC. Farmworkers were defined as those actively employed in farm work on a seasonal basis and spouses (women in all cases) of those actively employed in farm work on a seasonal basis; farmworker health service providers consider co-resident family members as farmworkers. Participants had to be native Spanish speakers. Half of the participants were farmworkers, with 80 being men and 20 being women; half of the participants were non-farmworkers, evenly split by gender.

NC Farmworkers' Project facilitated recruitment of farmworker participants. Most farmworkers were recruited from camps, with no more than five participants recruited from any camp to minimize clustering. Farmworker camps are dwellings in which migrant farmworkers reside. Camps may be barracks, individual houses, or apartments. All male farmworkers lived in camps. NC Farmworkers' Project had conducted outreach in these camps previously. Project data collectors visited camps in the evening or on weekends when farmworkers were not working. They described the study to the farmworkers, asked for volunteers, and obtained informed consent. Female farmworkers were more difficult than male farmworkers to locate. NC Farmworkers' Project staff worked with local organizations that serve the population to identify and recruit female participants. Female farmworker participants were contacted by project data collectors who explained the project, answered any questions, and obtained informed consent. El Buen Pastor Latino Community Services facilitated recruiting non-farmworker participants. Working with their own clients and those of other organizations that serve Latinos in Forsyth County, staff identified potential participants. Participants were contacted by project data collectors who explained the project, answered any questions, and obtained informed consent. Potential participants in Johnston and Forsyth counties were screened to ensure that they met the inclusion criteria. Participants received a \$20 cash incentive for completing the interview.

Data Collection

Interviews were administered verbally by trained Spanish-speaking interviewers using a tablet with Research Electronic Data Capture (REDCap) electronic data capture tools hosted at Wake Forest School of Medicine.¹⁵ Twelve interviews were conducted using paper forms due to technical difficulties with tablets. Interviews lasted an average of 30 minutes and included sections addressing participant personal characteristics, knowledge about the ACA, and how participants receive/wish to receive information about health programs, as well as information for other study questions on participants' knowledge about genetics, Human

Papilloma Virus (HPV), HPV vaccine, cancer, and use of traditional healers. Questions about the ACA were adapted from the National Health Survey of Latino Adults – April 2013, conducted by the Robert Wood Johnson Foundation Center for Health Policy at the University of New Mexico (Toplines, National Latino Health Care Survey – May 1, at <http://www.latinodecisions.com/recent-polls/2013-polling-resul/>).

Measures

Personal characteristics included gender; age grouped into the categories <30 years, 30–39 years, 40–49 years, 50+ years; marital status grouped into the categories not currently married versus married or living as married; education groups into the categories 0–6 grade, 7–11 grade, 12+ grade; if a farmworker, if they had an H-2A visa; if Spanish was the dominant language; and years worked (farmworkers with H-2A visas and other migrant farmworkers) or lived (seasonal farmworkers and non-farmworkers) in the United States, grouped into the categories <5 years, 5–9 years, 10–14 years, 15+ years. For farmworkers with H-2A visas, years in the United States included years they had been coming to the United States.

Sources from which participants noted that they received current ACA information were grouped into 12 types (health care providers; health insurance company; community centers or organizations; church; schools; social services; employers; union; North Carolina Department of Labor; elected officials; professionals; and family, friends, co-workers), as well as nobody for those who had never received information about the ACA. Sources from which participants would trust ACA information included 11 of the 12 information sources (North Carolina Department of Labor was not included).

Sources that would influence decision to enroll in ACA included nine categories that participants stated would make them less likely to enroll, have no effect on their enrollment, and make them more likely to enroll. Categories included boss or people at work; Spanish language media; Hispanic or Latino small business owners; Hispanic or Latino actors or musicians; Hispanic or Latino professional athletes; Hispanic or Latino nurses or doctors; religious leaders; family members; or a close friend. Participants noted whether they would prefer to receive information about the ACA from nine different media outlets, including television, radio, e-mail, internet, telephone, friends or family, printed material at a doctor's office, printed material sent to their home, or an oral presentation.

Analysis

Descriptive statistics (count, percent) were calculated for participant characteristics of interest by farmworker status, and chi-square tests were used to examine the association between the participant characteristics and farmworker status; p-values of < 0.05 were considered statistically significant. Other analyses were descriptive. The number/percent reporting each source that had provided ACA information as well as their trust in that source was calculated by farmworker status. Also stratified by farmworker status are the counts describing the impact factor of various sources for enrollment into the ACA and the preferred media for learning about the ACA. All analyses were performed using SAS 9.4 (SAS Institute, Cary, NC).

Results

Participant Characteristics

By design, 80 of the farmworkers were male, and 50 of the non-farmworkers were male (Table 1). Farmworkers were younger than non-farmworkers, with 27 farmworkers versus 16 non-farmworkers being <30 years old, and 13 farmworkers versus 26 non-farmworkers were 50+ years. More farmworkers (91.8%) than non-farmworkers (71%) were married. Farmworkers were less well educated, with 45 farmworkers versus 37 non-farmworkers having completed 0–6 grade, and 11 farmworkers versus 36 non-farmworkers having completed 12+ grade. There were 78 farmworkers who had an H-2A visa. Spanish was the dominant language for all participants. Farmworkers had been in the United States for fewer years, with 24 farmworkers versus 9 non-farmworkers having been in the United States for <5 years, and 29 farmworkers versus 64 non-farmworkers having been in the United States for 15+ years.

ACA Information Sources

Most of the farmworkers and non-farmworkers had heard about the ACA, with 76% of farmworkers and 87% of non-farmworkers referring to it as “Obamacare.” However, although 55% of farmworkers had received specific information about the ACA, only 15% of non-farmworkers had received such information. Most of the Latino farmworkers who had received ACA information had received it from a community organization, such as the NC Farmworkers’ Project (51%) or from their employers (8%) (Table 2). Health insurance companies were the only substantial source of ACA information for the non-farmworkers (11%).

Trusted Health Information Sources

Farmworkers and non-farmworkers had a similar pattern for trusted health information sources (Table 3). The sources they trusted most were health care providers (90% and 76%, respectively) and community organizations (96% and 75%, respectively). Health insurance companies, education and social agencies, and churches were also considered to be trusted sources of health information for between half and three-quarters of both groups. About one-third of each group trusted professionals, such as lawyers and tax preparers. Few would trust labor unions or elected officials for health information.

Influential Sources

Latino farmworkers and non-farmworkers generally had similar patterns for sources that would influence their decision to enroll in the ACA (Table 4). Latino nurses and doctors would be the most influential (90% of farmworkers, 75% of non-farmworkers). About equal numbers of farmworkers and non-farmworkers would be most likely influenced by religious leaders (48%, 44%) and family members (47%, 54%), and least likely influenced by religious leaders (46%, 31%) and family members (44%, 25%). Most farmworkers and non-farmworkers would be least likely influenced by Hispanic or Latino small business owners (62%, 38%), actors or musicians (86%, 56%), and professional athletes (86%, 43%).

Preferred Media

Traditional media, including oral presentation (93%, 75%), printed material at the doctor's office (84%, 80%), and printed material sent to the home (79%, 69%) were the media preferred by the majority of the Latino farmworkers and non-farmworkers to receive information about the ACA (Table 5). The farmworkers were also geared more toward traditional electronic media, radio (68% versus 37%), television (67% versus 35%), and telephone (57% versus 52%), than non-farmworkers. Non-farmworkers were more apt to use current electronic media than farmworkers: e-mail (57% versus 47%) and internet (63% versus 46%).

Discussion

Initial results from this research were presented to service organizations as a two-page policy brief¹⁶ for use in their outreach efforts to Latino farmworkers and non-farmworkers before the November 2015 ACA open enrollment period. This policy brief remains available. These results suggest several generalizations about getting information about health programs to Latino farmworkers that reflect past farmworkers research and programs.^{11,17} Health care providers, including hospitals, clinics, doctors, and nurses, are the preferred source of health information. Information from these sources is trusted by most farmworkers. Community service organizations are also widely trusted, as are service (education and social service) organizations. This is true for non-farmworkers as well as farmworkers. Family members may be trusted, but probably are not an efficient conduit for health information.

The majority of participants stated a preference for very traditional media—oral presentations and printed materials. This is the usual process to get health and safety information to farmworkers and other Latino workers.^{18–20} However, this approach requires significant time and resources. Two-thirds of farmworkers feel that radio and television are good media for getting health information, but these media are not amenable to getting information on specific topics to distinct populations. Fewer than half of farmworkers would prefer e-mail or internet (two of many mHealth approaches) for getting health information. More of the non-farmworkers would use these media. Price et al.⁸ and Sandberg et al.⁹ indicated that a large and growing number of farmworkers have smart phones. Snipes et al.¹¹ reported a willingness among farmworkers to use mobile devices to receive health information (specific occupational safety information) and provide data through these devices. Grzywacz et al.²¹ found that other Latino workers (construction workers) would use mobile devices to provide daily diary research data. It is worth the effort to investigate the use of mHealth approaches for getting health information to vulnerable populations such as farmworkers.

These results should be interpreted in light of the study's limitations. Generalization of results is limited, because this research was in two limited areas of a single state, the sample size was small, and the participants were not randomly selected. Questions on factors related to information on the ACA were only a single component of a larger interview; therefore, some important topics may not have been included. The ACA is a distinct health program, and perspectives on this program may differ from perspectives on other programs. Certain types of mHealth, such as texting, were not explored by the survey. However, this research

was part of a long term community-based participatory research program, in which the community partners had the trust of the participants. Research on ACA information was conducted at the request of one of the community partners. The questionnaire items about the ACA were adapted from an existing instrument.

Health programs are important to improving access to health care for the members of vulnerable populations. Efforts to continue health programs, such as the ACA, funding for federally qualified health centers, and providing dental services, are public health policy that remain topics of public discourse. Bolstering these programs will improve the health and well-being for large segments of the United States population that experience health disparities.

Our results show that Latino farmworkers and non-farmworkers prefer traditional media in the context of a health care setting to get health program information. They also show that a substantial number of farmworkers and non-farmworkers are willing to try contemporary electronic media to get this health program information. Further research on mHealth approaches for getting health information to vulnerable populations is required.

Acknowledgement:

This research was supported by grant R01-ES008739 from the National Institute of Environmental Health Sciences.

References

1. Arcury TA , Quandt SA . Delivery of health services to migrant and seasonal farmworkers. *Annu Rev Public Health*. 2007;28:345–63.17291182
2. Heckathorn DD . Respondent-driven sampling: a new approach to the study of hidden populations. *Soc Probl*. 1997 5;44(2):174–99.
3. Quesada J , Hart LK , Bourgois P . Structural vulnerability and health: Latino migrant laborers in the United States. *Med Anthropol*. 2011 7;30(4):339–62.21777121
4. McCurdy SA , Xiao H , Hennessy-Burt TE , Stoecklin-Marois MT , Tancredi DJ , Bennett DH , Schenker MB . Agricultural injury in California Hispanic farm workers: MICASA follow-up survey. *J Agromedicine*. 2013;18(1):39–49.23301889
5. Quandt SA , Brooke C , Fagan K , Howe A , Thornburg TK , McCurdy SA . Farmworker housing in the United States and its impact on health. *New Solut*. 2015;25(3):263–286.26320122
6. Scribani M , Wyckoff S , Jenkins P , Bauer H , Earle-Richardson G . Migrant and seasonal crop worker injury and illness across the Northeast. *Am J Ind Med*. 2013;56(8):845–855.23280646
7. Elder JP , Ayala GX , Parra-Medina D , Talavera GA . Health communication in the Latino community: Issues and approaches. *Annu Rev Public Health* 2009;30:227–251.19296776
8. Price M , Williamson D , McCandless R , Mueller M , Gregoski M , Brunner-Jackson B , Treiber E , Davidson L , Treiber F . Hispanic migrant farm workers' attitudes toward mobile phone-based telehealth for management of chronic health conditions. *J Med Internet Res*. 2013;15(4):e76.23624105
9. Sandberg JC , Spears Johnson CR , Nguyen HT , Talton JW , Quandt SA , Chen H , Summers P , Arcury TA . Mobile and traditional modes of communication among male Latino farmworkers: Implications for health communication and dissemination. *J Immigr Minor Health*. 2016;18(3):522–531.26463228
10. Snipes SA , Smyth JM , Murphy D , Miranda PY , Ishino FA . Provision increases reported PPE use for Mexican immigrant farmworkers: An mHealth Pilot Study. *J Occup Environ Med*. 2015;57(12):1343–1346.26641832

11. Snipes SA , Montiel-Ishino FA , Smyth JM , Murphy DJ , Miranda PY , Davis LA . User perceptions of ¡Protéjase!: An intervention designed to increase protective equipment use among Mexican immigrant and Mexican American farmworkers. *JMIR Mhealth Uhealth*. 2016;4(2):e28.27066727
12. Kilanowski JF , Trapl ES . Evaluation of the use of audio-enhanced personal digital assistants to survey Latino migrant farmworkers. *Res Nurs Health*. 2010;33(2):156–163.20135629
13. Grzywacz JG , Quandt SA , Early J , Tapia J , Graham CN , Arcury TA . Leaving family for work: ambivalence and mental health among Mexican migrant farmworker men. *J Immigr Minor Health*. 2006;8(1):85–97.19835002
14. Guild A , Richards C , Ruiz V . Out of Sight, Out of Mind: The Implementation and Impact of the Affordable Care Act in U.S. Farmworker Communities. *J Health Care Poor Underserved*. 2016;27(4A):73–82.27818415
15. Harris RA , Taylor R , Thielke R , Payne J , Gonzalez N , Conde JG . Research Electronic Data Capture (REDCap) – a metadata-driven methodology and workflow process for providing translational research information informatics support *J Biomed Inform*. 2009;42(2):377–381.18929686
16. Center for Worker Health. Providing information about the Affordable Care Act to Latino immigrants. Policy Brief, Center for Worker Health, Wake Forest School of Medicine. 2015 Available at <http://www.wakehealth.edu/Center-for-Worker-Health/Research/CWH-Research---Policy-Briefs.htm>. Accessed 2016 February 01.
17. Arcury TA , Estrada JM , Quandt SA . Overcoming language and literacy barriers in safety and health training of agricultural workers. *J Agromedicine*. 2010;15(3):236–248.20665309
18. Arcury TA , Marín A , Snively BM , Hernandez-Pelletier M , Quandt SA . Reducing farmworker residential pesticide exposure: evaluation of a lay health advisor intervention. *Health Promot Pract*. 2009;10(3):447–455.18287581
19. Grzywacz JG , Arcury TA , Marín A , Marín A , Carrillo L , Coates ML , Quandt SA . Using lay health promoters in occupational health: outcome evaluation in a sample of Latino poultry-processing workers. *New Solut*. 2009;19(4):449–466.20129903
20. Quandt SA , Grzywacz JG , Talton JW , Trejo G , Tapia J , D'Agostino RB , Mirabelli MC , Arcury TA . Evaluating the effectiveness of a lay health promoter-led community-based participatory pesticide safety intervention with farmworker families. *Health Promot Pract*. 2013;14:425–432.23075501
21. Grzywacz JG , Quandt SA , Marín A , Summers P , Lang W , Mills T , Evia C , Rushing J , Arcury TA . Feasibility of interactive voice response methods in health behavior research with immigrant Latinos. *Am J Health Behav*. 2013;37(2):238–247. 23026105

Table 1.

Participant Characteristics Latino Farmworkers and Non-Farmworkers, North Carolina, 2015.

Participant Characteristics	Farmworkers n=100		Non-farmworkers n=100		p-value
	n	%	n	%	
Gender					<0.0001
Male	80	80	50	50	
Female	20	20	50	50	
Age					0.0516
< 30 years	27	27	16	16	
30–39 years	30	30	33	33	
40–49 years	30	30	25	25	
50+ years	13	13	26	26	
Marital Status*					0.0002
Not currently married	8	8.2	29	29	
Married/living as married	90	91.8	71	71	
Education					0.0001
0–6 grade	45	45	37	37	
7–11 grade	44	44	27	27	
12+ grade	11	11	36	36	
H2A Visa					NA
Yes	78	78			
No	22	22			
Dominant language - Spanish	100	100	100	100	NA
Years Worked or Lived in United States					<0.0001
< 5 years	24	24	9	9	
5–9 years	22	22	7	7	
10–14 years	25	25	20	20	
15+ years	29	29	64	64	

*Data for 2 farmworkers are missing.

Table 2.

ACA Information Sources, Latino Farmworkers and Non-Farmworkers, North Carolina, 2015.

ACA Information Sources	Farmworkers	Non-Farmworkers
	n and %	n and %
Health Care Providers (hospitals, doctors, nurses)	3	2
Health Insurance Company	0	11
Community centers or community organizations (inc. NC Farmworkers' Project)	51	0
Church	2	3
Schools (inc. migrant education, migrant head start)	0	1
Social services (inc. Medicaid, SNAP-food stamps, child services)	1	2
Employers (inc. NC Growers' Association)	8	4
Unions (inc. Farm Labor Organizing Committee)	0	0
NC Department of Labor	0	1
Elected officials	0	0
Professionals (lawyers, tax preparers)	1	2
Family, friends, co-workers, or other individual or organization	2	3
No one, never received information	45	85

Table 3.

Trusted Health Information Sources, Latino Farmworkers and Non-Farmworkers, North Carolina, 2015.

Health Information Sources	Farmworkers	Non-Farmworkers
	n and %	n and %
Health Care Providers (hospitals, doctors, nurses)	90	76
Health Insurance Company	74	67
Community centers or community organizations (inc. NC Farmworkers' Project)	96	75
Church	52	60
Schools (inc. migrant education, migrant head start)	64	72
Social services (inc. Medicaid, SNAP-food stamps, child services)	62	71
Employers (inc. NC Growers' Association)	51	34
Unions (inc. Farm Labor Organizing Committee)	17	19
Elected officials	11	10
Professionals (lawyers, tax preparers)	34	33
Family, friends, co-workers, or other individual or organization	60	47

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Table 4.

Sources that Would Influence Decision to Enroll in ACA, Latino Farmworkers and Non-Farmworkers, North Carolina, 2015.

Influential Sources	Latino Farmworkers			Latino Non-Farmworkers		
	Less Likely	No Effect	More Likely	Less Likely	No Effect	More Likely
	n and %	n and %	n and %	n and %	n and %	n and %
Boss or people at work	37	19	44	25	40	35
Spanish language media	38	17	45	18	26	56
Hispanic or Latino small business owners	62	16	22	38	28	34
Hispanic or Latino actors or musicians	86	9	5	56	33	11
Hispanic or Latino professional athletes	86	8	6	43	34	23
Hispanic or Latino nurses or doctors	7	3	90	6	19	75
Religious leaders	46	6	48	31	25	44
Family members	44	9	47	25	21	54
Close friend	59	6	35	36	24	40

Table 5.

Preferred Media for Learning about the ACA. Latino Farmworkers and Non-Farmworkers, North Carolina, 2015.

Media	Farmworkers	Non-Farmworkers
	n and %	n and %
Oral presentation	93	75
Printed material at doctor's office	84	80
Printed material sent to home	79	69
Radio	68	37
Television	67	35
Telephone	57	52
E-mail	47	57
Internet	46	63
Friends or family	55	43

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