Enhancing Preventative Health Care for Latino Migrant Dairy Farm Workers in Addison County, Vermont

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Enhancing Preventative Health Care for Latino Migrant Dairy Farm Workers in Addison County, Vermont

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Abstract

Background: Latino dairy farmworkers, mainly from Mexico and Guatemala, help produce over 50% of Vermont’s milk. Latino dairy farmworkers may not seek health care for many reasons, including fear of immigration/law enforcement, language barriers, lack of transportation, and cost of care. Purpose: The purpose of this DNP project was to increase the utilization of health care services, including immunizations, of migrant farmers by educating and providing information about preventative, curative, and support services available in southern Vermont (VT). Methods: The intervention, one 60-minute educational program session took place at a local church service for migrant farmers, and an informational pamphlet was provided to the attendees. A DNP student-designed survey was administered to five farmers before and 5 weeks after an educational intervention took place in order to obtain health information. Descriptive statistics were used to analyze the data. Results: Health survey data showed that the participant’s healthcare knowledge increased by 0% for immunizations (100% pre- and 100% post-intervention), 40% for annual check-ups (60% pre- and 100% post-intervention), 20% for blood pressure checks (80% pre- and 100% post-intervention), 40% for diabetic screenings (40% pre- and 80% post-intervention), 20% for mammogram screenings (20% pre- and 40% post-intervention), and 20% for colonoscopies (0% pre- and 20% post-intervention. Additionally, their health status improved by 1.8 (6.2 vs. 8.0), and all participants reported that they used free health care clinics at pre- and post-intervention. Conclusion: Our project results suggest that the educational intervention was helpful in increasing healthcare knowledge and access among migrant farmworkers. Improving health care among migrant workers can assist with maintaining ethical living and working conditions, and it can help sustain local farming.

Keywords: dairy farmer, Latino, immigrant worker, health barriers, health disparities.
Enhancing Preventative Health Care for Latino Migrant Dairy Farm Workers in Addison County, Vermont

Introduction

Latino dairy farmworkers in VT frequently live and work in poor conditions. Their jobs can be both dangerous and stressful, as they work long hours, at times in poor health, and their jobs usually involve intense physical activity. Often, they do not seek medical care regularly, or when needed in emergency situations (Buckheit et al., 2017). To improve and maintain health among migrant farmworkers, it is necessary to identify their needs and understand health-seeking behaviors. A migrant is an individual who moves from place to place, within a country or across borders, usually for economic reasons such as seasonal work (International Rescue Committee, 2022). An immigrant is someone who makes the conscious decision to leave her or his home to move to a foreign country with the intention of settling there (International Rescue Committee, 2022).

The purpose of this DNP project was to assess the health goals, behaviors, and health care needs of Latino migrant farmworkers and the barriers they face in accessing health care, as well as to provide information about health care services in order to improve the health among farmworkers. An educational intervention of a public outreach program was offered to migrant workers in an effort to improve their access to health care in southern VT. The DNP student-designed program was created based on an initial survey of migrant farmworkers. Health care interventions were developed in collaboration with the Open Door Clinic (ODC) in southern VT, in order to address the health needs, goals, and medical behaviors of Latino migrant farmworkers and to also identify the barriers that Latino migrant farmworkers face.

Problem Statement
In the U.S., immigrants and migrants have lower rates of health insurance, they use less health care, and they receive a lower quality of health care in comparison to U.S.-born populations due to various barriers (Derose et al., 2007). In particular, Latino migrant farmworkers, tend not to seek medical attention because of disparities in health literacy, language barriers, lack of trust in the health care system, cultural differences, and financial constraints (Buhrman et al., 2021).

**Background**

Migrant farmworkers in VT rarely seek medical attention despite experiencing many serious health issues including back and neck pain, dental issues, allergies, flu, rashes or skin problems, eye and vision issues, gastrointestinal complaints, and psychological issues, such as anxiety, depression, and isolation (Reidel, 2012). Furthermore, immigrants and migrants nationwide face numerous barriers when accessing health care. These barriers are related to a lack of confidence and self-advocacy and cultural differences (Ghahari et al., 2020). Due to these barriers, most Latino farmworkers tend to delay seeking health services, and this can lead to insufficient care for acute health issues or chronic conditions (Ortega et al., 2015).

The dairy industry in the U.S. relies on Latino migrant workers, and approximately 67.4% of large dairy farms in New York, Pennsylvania, and Vermont employ Spanish-speaking workers (Buckheit et al., 2017). Additionally, VT is the 12th largest milk-producing state within the U.S., and more than 50% of its production comes from the help of Latino migrant farmworkers (Reidel, 2012). Latino migrant workers are integral to the dairy industry’s economic stability in VT (Panikkar & Barrett, 2021). Historically, migrant farmers have experienced hardship when it comes to accessing healthcare due to barriers, which can
negatively affect on their health. Migrant workers should have adequate access to health care to address their medical needs.

**Review of Literature**

To obtain information for this literature review, evidence-based research was synthesized from studies found in articles obtained through academic journal archives on UMass Amherst’s library website and through a Google Scholar search. The following databases were used when researching information regarding improving health care access for immigrants: PubMed, CINAHL, JSTOR, and Academic Search Premier. The following search terms were used during the data collection process; *Vermont Latino dairy farmworkers healthcare, Latino dairy farmworkers healthcare, Latino dairy farm worker, improving Vermont fairy farm workers health, improving immigrant access to health care, improving healthcare for immigrants*, and *access to health care for immigrants*. Ninety articles were retrieved from the databases used in the research process. For these articles, inclusion criteria included full-text articles published in the English language between the years 2000-2020 in a peer-reviewed journal. Additionally, only articles with evidenced-based interventions for improving immigrant access to health care were chosen for this literature review.

Once the inclusion criteria were applied to the ninety journal articles retrieved in the research process, eleven articles were left and were selected for this literature review. All eleven articles included qualitative studies and presented evidence-based interventions that provided information on how to increase healthcare access for migrants and immigrants. These interventions were considered when developing this project. These interventions were chosen as they could potentially help to improve the health of Latino dairy farmworkers within the county.
When immigrants and migrants arrive in the U.S., they face many challenges in adapting to a new lifestyle including, a new culture, different norms, and understanding of certain institutions (Perreira & Pedroza, 2019). Additionally, they often face barriers when accessing health care, which can negatively influence the overall health of immigrant and migrant populations (Salami et al., 2020). In order to eliminate barriers to health care for immigrants, the following evidence-based interventions have shown to be effective, enhancing interpretation services, making policy changes, increasing funding, implementing educational and public outreach programs, utilizing telemedicine and mobile clinics, community-based initiatives, including partnerships with colleges and universities, and increasing cultural competence teaching within health care settings.

Blewett et al. (2004) discussed a qualitative study within Latino communities in the Midwest. The study focused on using of free clinics, creating school health programs, implementing public health outreach programs, and utilizing Spanish to communicate with patients, to improve the health of these communities (Blewett et al., 2004). Similarly, Ruiz and Briones-Chavez (2010) discussed the use of health promotion and education, outreach community campaigns and programs and volunteering to address rising HIV rates among Latino communities in New Orleans (Ruiz & Briones-Chavez, 2010).

Martinez-Donate et al. (2017) discussed the use of a health survey that was provided to Mexican 1,541 immigrants within the U.S. The survey results identified barriers that immigrants and migrants face when accessing healthcare. Barriers identified included, unaffordable health insurance, transportation difficulty, the desire to preserve cultural values and norms, limited employment opportunities, and incarceration (Martinez-Donate et al., 2017). Buckheit et al. (2017) and Baker and Chappelle (2012) discussed qualitative studies at dairy farms with Latino
workers in VT. The research from these studies identified common health complaints from farm workers and specific barriers to health care that these workers faced. Common health complaints reported by farm workers included back/neck pain, dental complaints, and mental health issues (Baker & Chappelle, 2012). Additionally, these studies identified the importance of community-based initiatives, including partnerships with colleges and universities, to improve access to health care for migrant dairy farm communities (Baker & Chappelle, 2012).

Salami et al. (2020), Perreira and Pedroza (2019), and Ku (2017) researched various interventions that could be utilized to address barriers often experienced by immigrants and migrants. Interventions discussed in these studies included having interpreters available in medical settings, changing policies in various systems and institutions, and re-allocating funds to assist immigrant and migrant families experiencing financial hardship. Turin et al. (2020) and Ghahari et al. (2020) presented healthcare policy changes and programs researched in Canada, which were found to be effective in increasing health care access for immigrants and migrants. Comparatively, Turn et al., (2020) identified that increasing interpretation services, implementing changes to health care services, and providing education on how to navigate the health care system in Canada, assisted with increasing health care access for these immigrants and migrants. Ghahari et al. (2020) discussed using a newly developed educational program entitled Accessing Canadian Healthcare for Immigrants: Empowerment, Voice, & Enablement (ACHIEVE), which helped increase immigrant and migrant confidence when accessing the health care system in Canada.

Immigrants face many hardships as they adjust to life in a new country, even if it is just temporary for work. All the studies reviewed utilized qualitative research to identify systemic barriers in place preventing immigrants and migrants from receiving adequate healthcare.
Additionally, the research identified certain interventions that could be used to potentially eliminate these barriers.

**Theoretical Framework or Evidence-Based Practice Model**

The project was conceptually based upon Madeleine Leininger’s Transcultural Nursing Theory (Appendix A) (Albougami et al., 2017). Leininger’s theory focuses on the delivery of culturally congruent, meaningful, high-quality, and safe healthcare to patients of diverse cultures. Culture can influence an individual’s attitude toward health and illness. Cultural competence is essential to practice for effective health care (Albougami et al., 2017).

As outlined by Leininger’s Sunrise Model (Appendix A), cultural care requires the consideration of a patient’s beliefs and heritage when developing a health plan (Albougami et al., 2017). Transcultural nursing considers the concepts of ethnicity, race, and culture in order to understand an individual’s perceptions and behaviors (Albougami et al., 2017). When implementing the various interventions of this project to improve the health of Latino farm workers, referencing the concept of transcultural nursing when interacting with these communities, was essential to maintain ethical and non-biased interactions.

**Objectives and Outcomes**

The DNP’s project’s main goal was to increase farmers’ health service utilization, including immunizations, by providing education and information about preventative, curative, and support services available at the local clinic, county, and state. There were three main objectives for this project, which included: educating the importance of preventive health care services, including immunizations to obtain optimal health for migrant farmers, providing information about preventive, curative, and support services available at the clinic to promote health service utilization described below in the table.
### Table 1 Goals, Objectives, and Outcomes of the project

<table>
<thead>
<tr>
<th><strong>Goal</strong></th>
<th><strong>Objective(s)</strong></th>
<th><strong>Outcome(s)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Educate the importance of preventive health care services, including immunizations to obtain optimal health.</td>
<td>• Farmers attended one 60 minute educational session on preventative and curative services available at the clinic in November 2021.</td>
<td>• Farmers participating in the project attended an educational session.</td>
</tr>
<tr>
<td>2.) Provide information about preventive, curative, and support services available at the clinic to promote health service utilization.</td>
<td>• Farmers participating in the educational session received informational pamphlets, including detailed information about the clinic and support services.</td>
<td>• Pamphlets were distributed to all farmer’s participating in the educational session.</td>
</tr>
<tr>
<td>3.) Provide pre- and post-education questionnaires.</td>
<td>• 5 farmers were surveyed before and 6 weeks after the educational program to evaluate the effectiveness of the educational program.</td>
<td>• Farmer’s knowledge on preventative health care services, including immunizations, and preventative, curative, and support services available in the clinic, and the intention of health service utilization were increased after the education program.</td>
</tr>
</tbody>
</table>

### Methods

#### Population
Latino migrant farmworkers, who are the largest ethnic population in VT, comprise 60% of the total VT patient population at the ODC (ODC, 2021). Mexico and Guatemala are the main countries of origin for Latino farmworkers within the county (ODC, 2021). The main patient population of the ODC is Latino males, who are generally between 40-50 years of age (ODC, 2021). However, the ODC does see Latino families that consist of young children, women, men, and older adults. This project included 5 migrant farm workers, who were 18 years of age and older. All of the participants were from Mexico.

**Educational Intervention**

On the first visit to the local church, a survey was given to the participants prior to the educational intervention took place. After the survey, the DNP student, with the help of a ODC staff member to translate, presented information regarding preventative health, such as immunizations and health care maintenance, by verbally discussing these topics and supportive and curative resources available in the community. Additionally, an educational handout discussing preventative health and resources available within the county was given to the participants. The total time for educational intervention was approximately 30 minutes. Below is a table describing the components of education provided both verbally and by the use of pamphlet.

**Table 2 Intervention**

<table>
<thead>
<tr>
<th>Delivery of information</th>
<th>Components of Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal</td>
<td>Discussed importance of preventive health, including information regarding immunizations. Resources available in the state to help increase healthcare access were also discussed.</td>
</tr>
</tbody>
</table>
Handout | Preventive health services further discussed, and resources were written out for participants to reference.

All information provided to participants verbally, was reinforced through the use of an pamphlet.

**Intervention Implementation Procedure**

To accomplish the objectives of this quality improvement project, a survey was given to migrant farmers before and 6 weeks after an educational program at a local church service within the country took place, to improve health service utilization. This survey was distributed to farm workers participating in the educational program at the church service within the county in order to obtain data. These surveys identified preventative health service and immunization knowledge, current illnesses, health-seeking behavior, and intention-seeking behavior for immunizations and other health services. (Appendix B)

The DNP student visited two-holiday church services at a local church within the county with a staff member from the clinic who acted as an interpreter when needed when education was presented to the migrant farmworkers. Once farmers willing to participate in the DNP project were identified at the visit to the local church in November 2021 with the help of the ODC staff member, the initial visit consisted of conducting surveys, providing education, and discussing how the date of a second visit date to the church would be determined. The surveys were created in collaboration with the ODC, and they included a series of questions regarding patient demographics, current health needs and issues, and healthcare knowledge. The second visit date was determined after identifying another holiday church service, that the same
farmworkers who participated in the first survey would likely attend in the near future. During the second visit that occurred in December 2021; the same survey was given again to the same farmworkers who completed the survey prior to participating in the educational to identify the increase of health care knowledge and preventative care compliance among these farmers.

**Pre-intervention**

At the first church visit, the DNP student arrived at the church after a holiday service took place with a clinic staff member who acted as a translator. First, the DNP student described the program to the interested farmers meeting in person in the church’s cafeteria for about five minutes. There were five participants interested in the project. Second, the written informed consent was taken from interested farmers after describing the contents of the informed consent form. This process took approximately five minutes. The consent process took place for this project included an explanation of the project and its purpose to all participants. All participants were asked to sign a written consent ensuring their safety and privacy. All information provided by participants in this project during the survey, remained private, and it is only being used for the project without mentioning their identification.

Third, the DNP student explained that a survey would be given prior to an educational program taking place. The DNP student provided instructions on how to complete the survey and why it was being given, and the participants were given approximately 20 minutes to complete the survey. Finally, education regarding preventative health care and available resources to help increase the participant’s access to healthcare were presented to all participants. An information pamphlet regarding preventative health services and resources available at the clinic and county was provided. (Appendix C). The educational program took approximately 30 minutes in duration. The first visit to the church was approximately 60 minutes in duration.
Post-Intervention

The second visit to the church took place six weeks after the first visit, at another holiday church service in December 2021. At this second church visit, the DNP student was accompanied by a clinic staff member who acted as a translator. First, during this second session, the DNP student started the session by providing information regarding the project again, and then instructions on completing the surveys took place. This process took approximately 10 minutes in duration. Second, the DNP student provided the farmers with surveys to complete. These surveys were the same surveys given to participants during the first visit to the church. This process took approximately 20 minutes. Finally, questions from the farmers regarding preventative health care services or regarding the program were discussed. This process took approximately 30 minutes. The total duration of the second session was approximately 60 minutes.

Measurement Instruments

Migrant farmworker survey: Migrant farmworker survey: a survey developed for this project was given to Latino farmworkers during and after educational sessions. Survey questions were focused on farm workers’ health needs and goals, knowledge of preventative health and immunizations, intention to take immunizations, and health-seeking behaviors, ongoing health issues, current health needs, vaccination history, and demographic information. Questionnaires were written in English and Spanish. Questions asked on the survey provided multiple choices for answers and yes or no options. Additionally, questions allowed the individual taking the survey to expand on their response (Appendix B).

Data Analysis
Participant demographic information was presented through a table. Descriptive statistics such as frequency, mean, median, standard variation, and variation were used for quantitative data analysis, when it came to comparing how the participants rated their health before and after the education took place. Percentages were utilized to describe patient responses to survey questions. Bar diagrams were used to present the percentage difference in pre- and post-intervention data regarding preventative health care knowledge, including immunizations, intention to seek health services, and current health needs and issues. The number of Latino farmworkers who took an informational pamphlet during the first education session during the first-holiday service was compared to the total number of farm workers attending the educational session.

**Human Subjects’ Protection**

To ensure the protection of the participants, IRB approval was obtained from the University of Massachusetts Amherst where the DNP student was enrolled. The written informed consent was taken from all participants prior to their interview. Additionally, all the data collected was aggregated and no identifying information was attributed to the individual participants. There was no participant identifiers on the survey or questionnaire data collected. Participant attendance and presentation data were kept in separate electronic files and were kept on the DNP student’s laptop. The laptop was password protected and kept in a locked building. Only the DNP student had access to the laptop and data.

**Results**

The program was implemented among Latino migrant farmworkers living in southern VT between November and December 2021 at a local church. Five farmers participated in the program. The mean age of the participants was 22.6 years of age. The participants ranged from
18-39 years of age. There were five participants in total. The participants identified themselves as male (n=3) and female (n=2). All participants (n=5) were from Mexico. Most of the participants had a high school education (n=4), and one participant had a middle school education (n=1). Demographic data is displayed in Table 1.

**Table 1**

*Demographic characteristics of migrant farmworkers*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N=5</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>N=5</td>
<td>100%</td>
</tr>
<tr>
<td>Age groups (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>N=3</td>
<td>60%</td>
</tr>
<tr>
<td>30-39</td>
<td>N=2</td>
<td>40%</td>
</tr>
<tr>
<td>Gender Identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>N=2</td>
<td>40%</td>
</tr>
<tr>
<td>Male</td>
<td>N=3</td>
<td>60%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>N=1</td>
<td>20%</td>
</tr>
<tr>
<td>High School</td>
<td>N=4</td>
<td>80%</td>
</tr>
</tbody>
</table>

Table 1 shows that all participants in this project were from Mexico. Participants were mostly male and ranged in ages from 18-39 years. Most participants had a high school education, and one participant had a middle school education.
Health needs

When participants were asked what their ongoing health needs were, two participants responded, that they reported having asthma and high blood pressure. 100% of participants took an educational pamphlet handout during the first visit to the church when the educational program took place.

Health status

During the first and second visits to the church, during pre- and post- intervention, participants graded their health from 1-10, 1=poor health and 10=excellent health. At pre-intervention, the sample mode of the participants’ responses was 8.0, the sample mean was 6.2, the standard deviation was 3.27, and the variance was 8.56. At post-intervention, the sample mode was 9.0, the sample mean was 8.0, and the standard deviation was 2.0, and the variance was 4.0. Thus, the mean difference between pre- and post- intervention was 6.2 and 8.0, which shows that participants rated their health status higher, as the sample mean increased by 1.8. This increase in health status can be compared to the total number of individuals who participated in the project, which shows that the participant’s health increased by 36%.

Vaccination

Participants were asked what their vaccination status was pre- and post- intervention. All participants reported that they were fully vaccinated during pre-intervention, except for one participant. Participant #5 marked that he needed the COVID-19 vaccination. During the post-intervention participants were asked what their vaccination status was again, and all participants reported that they were fully vaccinated. Participant #5 indicated that he had received the COVID-19 vaccination on the survey after the educational intervention, and he stated that he was fully vaccinated.
Knowledge of the healthcare system

The project participants were asked to respond on the survey about their knowledge regarding the healthcare system in their host county during pre- and post-intervention. The participants could choose; some, yes, no, and prefer not to answer. Pre-intervention data showed that 40% of participants responded yes, 40% of the respondents responded some, 20% of the participants responded no. 100% of participants responded that they were familiar with vaccines’ benefits. Post-intervention data showed that 80% of the participants responded yes, and 20% of the participants responded no. 100% of participants responded that they were familiar with vaccines’ benefits. By comparing pre- and post-data from the participants regarding their knowledge about the healthcare system in their host county, there was a 40% increase in the participants’ “yes” response, and there was no change in the participants’ “no” response.

Health seeking behavior

Participants of the project, pre- and post-intervention, were asked what type of health care facility, they visit they have a health problem. The participant’s choices were free health care clinics, primary care offices, urgent care, emergency department, or no medical facility. For health seeking behavior, all participants reported that they use free health care clinics at both pre- and post-intervention.

Barriers to accessing healthcare

Participants were asked about their difficulty when it comes to accessing health care in their host county before and after the intervention. If they did experience difficulty when accessing healthcare, they were asked what type of difficulty they faced. Reasons for having difficulty when accessing healthcare included travel, food, health care knowledge, language barrier, cultural stigma, or mistrust in the health care system. 60% of participants reported that
travel was their main difficulty when accessing health care pre- and post- intervention, and 40% of participants responded that the language barrier was their main difficulty with accessing health care pre- and post- intervention. Thus, there was no change in the participant’s responses when it came to identifying their biggest barrier when accessing healthcare. From the data collected, travel is the biggest barrier, and language is also a large barrier, when it comes to accessing healthcare.

**Knowledge of preventative services**

Participants were asked to report their knowledge of certain preventative services at pre- and post- intervention. The participants could choose from the following preventative services; immunizations, annual checkups, blood pressure screenings, colonoscopy, mammogram, diabetic screenings (HA1C), and counseling (quitting smoking, losing weight, eating healthy, treating depression, and reducing alcohol intake. Participants pre- and post- intervention reported that they had knowledge on the following health topics: immunizations, annual check-ups, blood pressure screenings, diabetic screenings, and mammograms. By comparing health survey data before and after the educational intervention took place, with a health survey, the participant’s healthcare knowledge increased by 0% for immunizations (100% pre- and 100% post-intervention), 40% for annual check-ups (60% pre- and 100% post- intervention), 20% for blood pressure checks (80% pre- and 100% post- intervention), 40% for diabetic screenings (40% pre- and 80% post- intervention), 20% for mammogram screenings (20% pre- and 40% post-intervention), and 20% for colonoscopies (0% pre- and 20% post- intervention) (Figure 2). The data shows that there was a 28% average increase in knowledge regarding important routine health screenings and health maintenance topics.

*Figure 2 Preventative Healthcare Knowledge*
Discussion

The major findings of the project were that the participant’s healthcare status and health care knowledge were increased when comparing pre- and post- intervention data, and that specific barriers to healthcare for Latino migrant farmworkers were identified. Participants increased in their knowledge regarding annual check-ups, blood pressure screenings, diabetic screenings, mammograms, and colonoscopy screenings. The main barriers of the participants both pre- and post- intervention was largely travel, and language. The educational program that took place at the local church was helpful when it came to increasing the knowledge regarding preventative healthcare topics among farmworkers, while it also helped improve the health status of participants. Additionally, the survey given to farmworkers pre- and post- intervention, was an effective way to assess the participant’s health care knowledge, healthcare status, and what particular barriers they faced when accessing healthcare.
The main health concerns of participants of this project included high blood pressure and asthma. Buckheit et al. (2017) and Baker and Chappelle (2012) have previously discussed and analyzed qualitative studies that identify common health complaints that farmworkers face. Common health complaints as identified through their research included back/neck pain, dental complaints, and mental health issues (Baker & Chapelle, 2012). The main health concerns of the participants of the project differed from findings of these studies, as the participants from this project complained of high blood pressure and asthma.

There was a 36% increase in participant health status after the implementation of the project. Participant’s healthcare knowledge regarding their host county’s health care system, preventative health care knowledge, and the participant’s vaccination status increased from pre- and post- intervention. This shows there was an increase in the rating of the participant’s health grade after the educational intervention took place. Ruiz and Briones-Chavez (2010) identified the importance of public outreach and using health promotion and education in order to increase health care knowledge among Latino communities in New Orleans. Similar to the findings in Ruiz and Briones-Chavez’s research, the resulting data of this project showed that public outreach and education was an effective method for increasing health care knowledge and health status among Latino migrant farmworkers.

Immigrants can face numerous difficulties when they are adjusting to their new host county. Martinez-Donate et al. (2017) utilized a health survey during a study with 1,541 Mexican immigrants in the U.S., in order to identify specific barriers that they face when accessing healthcare. Barriers that were identified through their research included unaffordable health insurance, transportation difficulty, the desire to preserve cultural values and norms, limited employment opportunities, and incarceration (Martinez-Donate et al., 2017). Data from this
project, pre- and post- intervention showed that travel was the biggest barrier to healthcare for migrant farmers, and language was the second biggest barrier. The health survey used in this project was a useful tool when it came to identifying specific barriers among Latino migrant farm workers in southern VT.

Participant healthcare knowledge increased, and their health status improved after the implementation of the project. Although participants still reported that they mainly use free healthcare clinics for healthcare needs, and that their barriers remained the same pre- and post-intervention, their access to healthcare and general health increased. The patients had more knowledge regarding preventative healthcare services post- intervention. They were given information regarding resources around the state that can assist with accessing health care during the project, resulting in increased health-seeking behavior.

Although data collected from this study showed that public outreach and utilizing a survey were effective methods in increasing health care knowledge and healthcare access, and improving the health of migrant farmworkers, there were some limitations to this project. One limitation was the small number of migrant farmworkers who participated in the project. A larger sample size could have allowed for more definitive results. For a more accurate idea of healthcare status and knowledge of Latino migrant farmworkers, it may have been more beneficial to have Latino migrant farmworkers participate in the project from different counties within the state.

**Conclusion**

Migrant farmworkers experience limited access to health care services, and this affecting their overall health. Health promotion interventions, such as providing education about preventative health care and resources available within counties of the state and conducting
surveys to identify the health needs, goals, and medical behaviors of farmworkers can increase health care access and improve the overall health of these farmworkers.

This quality improvement project focused on providing an educational session regarding healthcare services and resources available to increase health care access, to migrant farmworkers. These interventions were implemented effectively in this project to identify and address the health needs and medical behaviors of Latino migrant farmers in southern VT. It is recommended that further research takes place to identify the healthcare knowledge, healthcare needs, and barriers to accessing healthcare among migrant farmworkers to identify the best methods of increasing healthcare access for farmers. By addressing the health needs of Latino farm workers in the county, these farmers’ overall health can subsequently improve.
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https://www.surveymonkey.com/r/MyHealthMigrantsRefugeesNeeds


https://doi-org.silk.library.umass.edu/10.1146/annurev-publhealth-040218-044115


Appendix A

Madeleine Leininger’s Transcultural Nursing
The Sunrise Enabler to
Discover Culture Care Sunrise Model

Individuals, families, groups, communities, or institutions in diverse health context of

Generic or Folk Care  Nursing Care  Professional Systems

Nursing care decisions and actions

Cultural care preservation & maintenance
Cultural care accommodation & negotiation
Cultural care repatterning & restructuring

Culturally congruent care for health, well-being or dying
Appendix B

Immigrant/Migrant Questionnaire

This survey is being conducted in order to identify the health needs, and demographic information of migrant dairy farm workers in Addison County, VT. All information provided on this survey will remain private and protected by law.

Date:

1.) What is your birth country? ____________

2.) Choose your age range:
   a. 18-29
   b. 30-39
   c. 40-49
   d. 50-59
   e. 60-69
   f. >70

3.) What gender do you identify as?
   a. female
   b. male
   c. Prefer not to answer
   d. What is your highest level of education?
      a. Elementary
      b. Middle school
      c. High school
      d. Some undergraduate college
      e. Undergraduate degree
f. Some graduate school

g. Graduate degree

e. Do you have knowledge in regard to the health care system in your current host country?

(Please circle one)

a. Some

b. Yes

c. No

d. Prefer not to answer

f. If you have a health problem where do you go?

a. Free health care clinics

b. Primary care offices

c. Urgent care

d. Emergency department

e. No medical facility

g. Have you ever had difficulty accessing health care in a host country? If so, what type of problem/difficulty did you have?

a. Travel

b. Food

c. Health care

d. Language barrier

e. Cultural stigma

f. Mistrust in the health care system

g. Other: ____________________
h. Mark a grade 1-10 in regard to your health: (1= poor, and 10= excellent)

Before leaving your country of origin: ______________

When you first arrived to your host country: ______________

Present: _________

i. Please list all current on-going health issues:

_______________________________________________________________________

j. Please list all current health needs:

k. Do you know which vaccines you have already taken? If yes, what which vaccines have you taken? (Please circle one)

a. Yes; please list

vaccinations___________________________________________________________

_____________________________________________________________________

b. No

c. Choose not to answer

If no, which vaccinations do you need?

a. Tetanus

b. COVID-19

c. Shingles

d. Pneumococcal

e. HPV

f. Hepatitis A

g. Hepatitis B
h. Influenza.

Which vaccinations are you familiar with?

i. Tetnus
j. COVID-19
k. Shingles
l. Pneumococcal
m. HPV
n. Hepatitis A
o. Hepatitis B
p. Influenza.

L. Do you know the health benefits of taking vaccinations?

Yes or No

If yes, please list the benefits:

________________________________________________________________________
________________________________________________________________________

M. Do you have a good understanding on preventative health care services?

Yes or No

If yes, please circle or comment on preventative health care services you are familiar with; Immunizations, annual checkups, blood pressure screenings, colonoscopy, mammogram, diabetic screenings (HA1C), and counseling (quitting smoking, losing weight, eating healthy, treating depression, and reducing alcohol intake).
N. Are you familiar with support services available at the Open Door Clinic, county, or state?

Please circle one:

a. Open Door Clinic

b. Transportation services within the county

c. Emergency services

d. Pharmacies

e. Counseling services

f. Family planning services

(My Health, 2021)
Appendix C
How to make a medical appointment

Call the Open Door Clinic (ODC) at (802) 388-0137 to make an appointment. If a sliding fee scale would help you pay for care, ask to talk to the office manager about your options. If you have Medicare, have your Medicare card available when you call.

We have appointments available.

If you need to cancel or reschedule your appointment, please call (802) 388-2468.

If you cannot keep an appointment, call as soon as possible so we can give your time slot to someone who needs medical care.

If you need more information or have questions, call the Open Door Clinic (ODC) at (802) 388-0137.