

Partnership to increase care access through mobile outreach to migrant farm communities: A feasibility study

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ABSTRACT:

Background. Health care access for migrant farmworkers is limited given the nature of seasonal farm work, including migration patterns, capacity, and availability of local community health services. Consideration of these contextual elements when exploring a community-academic partnership to increase access to care for migrant farmworkers is essential.

Objective. Explore the partnerships and processes for integrating nursing faculty and students from a regional public university's School of Nursing into a farmworker health outreach program's mobile clinic process.

Method. A feasibility study was undertaken using Bowen et al.'s¹ feasibility framework.

Results. Integrating faculty and students into the farmworker health outreach program's mobile clinic process was determined to be feasible.

Conclusions. Integrating faculty providers and students into a farmworker outreach program's mobile health process has several nuances requiring consideration before operationalizing the partnership, including nursing faculty practice (e.g., credentialing, malpractice insurance), student clinical placement processes, the farmworker outreach program's processes, and farmworker availability.

KEYWORDS: Community-Academic Partnerships, Migrant Farmworkers, Mobile Clinic, Advanced Practice Nursing Faculty, Rural Health Services

Background

Access to healthcare services for migrant farmworkers is limited. Barriers to care include fewer health services in rural spaces, cost, transportation, inflexible clinic hours, and language differences². Community-academic affiliated free clinics offer the chance to provide care for those that would otherwise not receive essential services while at the same time providing experiential learning for students^{3,4}. This community-academic partnership offers the prospect of enhancing the farmworker health outreach program's mobile clinic by adding faculty and students to provide care.

According to the National Agricultural Statistics Service (NASS)⁵, there are 46,418 farms in North Carolina (NC), with 1,684 of those farms reporting migrant farm labor. Each growing season, approximately 150,000 migrant farmworkers and their dependents work and reside in North Carolina⁶. Despite estimates, it is difficult to reliably track migrant farmworkers because no U.S. Census Bureau data sets provide comprehensive information on the population's size, distribution, and demographic characteristics⁷. Still, nationwide averages suggest that over half of migrant farmworkers are undocumented⁶, up to 85% are uninsured, and 94% are exclusively Spanish speaking⁸.

Migrant and seasonal farmworkers can be found in nearly every county across North Carolina, with most of this population distributed throughout the state's eastern and southern regions (Figure 1). For the southern region, migrant farmworkers in these counties typically begin arriving in mid-January and work through September each year. Access to care for many migrant farmworkers in this area is facilitated through a rural federally qualified health center (FQHC) look-alike (LAL). FQHCs are healthcare facilities that receive funding from the Health

Resources and Services Administration (HRSA) to provide primary care services to underserved communities⁹. FQHC LALs are also community-based health centers but depend on funding mechanisms other than HRSA¹⁰.

Figure 1

Distribution of Farmworkers in NC by County



Note. Demographic data from 2017. From "The Health and Well-being of North Carolina's Farmworkers" by E. F. Lambar and G. Thomas, 2019, 80(2), 107-112 (<https://doi.org/10.18043/ncm.80.2.107>)

Figure 1: *Distribution of Farmworkers in NC by County*

The North Carolina Farmworker Health Program (NCFHP) is a voucher program that works with agencies throughout the state to meet the needs of geographical areas with localized densities of farmworkers². Outreach workers in these local agencies find farmworkers at migrant camps and assess farmworker health issues². In southeastern NC, farmworkers in six rural counties are serviced by a farmworker health outreach program (FWHOP) within an FQHC LAL. The FWOHP staff provides outreach services, health education, primary care, and case

management through mobile outreach. The mobile outreach program uses a multiphasic lifecycle approach to services. Figure 2 depicts this flow of events, which occurs in three cyclical phases.

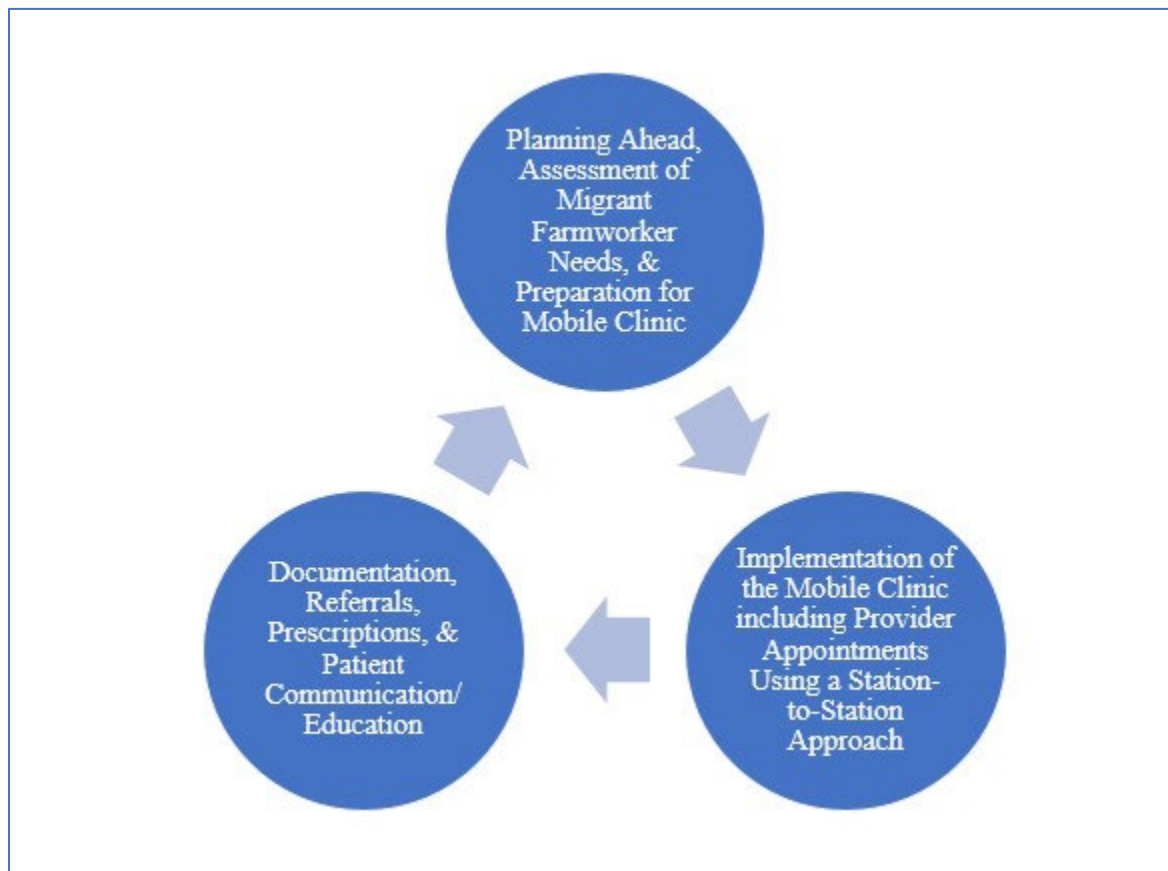


Figure 2: *Farmworker Health Outreach Program Mobile Clinic Process*

Objectives

Understanding the work context and characteristics of migrant farmworkers, including migration patterns, is essential when considering forming a community-academic partnership to expand the services of a local farmworker support program. Faculty and FWHOP staff engaged in conversations for several years learning each other and the other’s respective work, and continued to seek opportunities for joint work. A small grant opportunity, internal to the

university, presented an opportunity for this joint effort that could benefit the FWHOP, nursing faculty and students, and ultimately, the farmworkers. This feasibility study aimed to explore the integration of nursing faculty and students from a regional public university's School of Nursing (SON) into the FWHOP's mobile clinic processes.

Methods

A prioritization discussion during a partnership meeting yielded several topics from the staff on how to increase the FWHOP's services to better support farmworker health, including the desire to address the population's mental health needs. The challenge, as raised during the discussion, was that of program capacity and funding to take on additional work. At the end of the discussion, the partners decided that an important first step was to determine how to leverage faculty and student partners to enhance the work of the FWHOP. The partners agreed that a feasibility study to explore the integration of nursing faculty and students into the outreach program specifically to deliver health services was viewed by both partner groups as an essential first step in moving towards enhanced services to the migrant farmworker population.

Study Design

A feasibility study was undertaken using Bowen et al.'s¹ feasibility framework. A feasibility study examines if an intervention of interest, in this case, integrating UNCW SON faculty/students into mobile outreach activities to deliver health services and programs, could be efficient and effective. The actual implementation of this intervention was outside the scope of this feasibility study.

Partners and Stakeholders

The established partners for this feasibility study included faculty from the university's SON, the FWHOP director, and a regional hospital alliance's (RHA) director of operations. The RHA was a local investor in the FWHOP mobile clinic and funded the mobile clinic vehicle and driver, which greatly facilitated the delivery of the FWHOP services to surrounding migrant farms.

Important stakeholder groups for this feasibility study included the FWHOP staff, FQHC LAL, the North Carolina Farmworker Health Program (NCFHP), local growers and farmworkers, SON administrators and advanced practice registered nurse faculty. The project partners identified stakeholder groups as either internal or external stakeholders and performed a stakeholder analysis based on type, importance to the project, role in project processes, impact of the stakeholder on the project team's work and the project team's impact on the stakeholder, and reciprocal needs. Initial contact with stakeholders included information about the project team, feasibility study, and an invitation to meet with the project team to share perspectives. Partner meetings occurred monthly during the project period, and stakeholder meetings occurred based on stakeholder availability. Partner and stakeholder meetings were conducted in a hybrid format.

Data Collection

Bowen et al.'s¹ framework (Table 1), which addresses eight key feasibility focus areas, guided data collection for this feasibility study. The project team's methods for data collection included notetaking during partner and stakeholder meetings, and analysis of deidentified farmworker health assessment data. Farmworker health assessment data, including a behavioral health screening, was collected using the state's health assessment forms². These assessments were completed by FWHOP staff and was an established activity conducted during outreach

events to farmworker camps before scheduling the mobile clinic provider for onsite service delivery.

Table 1: *Feasibility Study Focus Areas and Outcomes of Interest*

Area of focus	Outcome of interest
Acceptability	<ul style="list-style-type: none"> • Perceived appropriateness • Perceived positive or negative effects
Demand	<ul style="list-style-type: none"> • Expressed interest • Perceived demand
Implementation	<ul style="list-style-type: none"> • Amount and type of resources needed
Practicality	<ul style="list-style-type: none"> • Factors affecting implementation • Ability of participants to carry out intervention • Financial analysis
Adaptation	<ul style="list-style-type: none"> • Process outcomes comparison between intervention used in the clinic setting and mobile/on-site setting
Integration	<ul style="list-style-type: none"> • Perceived fit with infrastructure • Perceived sustainability
Expansion	<ul style="list-style-type: none"> • Potential success of intervention
Limited efficacy	<ul style="list-style-type: none"> • Pilot test of intervention

Note: Adapted from "How We Design Feasibility Studies," by D. J. Bowen, M. Kreuter, B. Spring, L. Cofta-

Woerpal, L. Linnan, D. Weiner, S. Bakken, C.P. Kaplan, L. Squiers, C. Fabrizio, & M. Fernandez, 2009,

American Journal of Preventative Medicine, 36(5), p.452-457 <https://doi.org/10.1016/j.amepre.2009.02.002>

Analysis

The academic and community partner (and staff) reviewed notes from stakeholder discussions during a debrief session and analyzed the aggregated farmworker health assessment data at the end of the growing season. The author representing the community partner participated in meetings with stakeholders that interfaced with the Farmworker Outreach

Program (e.g., NC Farmworker Behavioral Health Coordinator) and co-facilitated team debriefs following the stakeholder meetings.

A codebook was created based on the three health assessment forms used during the 2021 growing season. Health assessment data were entered into a statistical software – SPSS – for analysis using descriptive techniques. Results of the investigation were then shared with the FWHOP staff during a half-day workshop where the project team facilitated a ‘making meaning of the data’ session. The FWHOP staff offered explanations, based on their lived experience in their roles, for select data. For example, data reflected that 92% of farmworkers had a cell phone which was thought to be useful for follow-up care until FWHOP staff shared that often the fields do not have a cell signal. Thus, the presence of a cell phone may not be as valuable a communication tool as first thought.

Ethics

The feasibility study and analysis of deidentified health assessment forms were determined to be not human subjects research based on the university Institutional Review Board’s staff review and federal regulations [45 CFR 46.102 (d or f)].

Results

The primary purpose of this study was to explore the feasibility of integrating faculty and students into a regional, rural Farmworker Health Outreach Program (FWHOP). The results of this study indicated that planning for integrating faculty providers and students into the FWHOP was determined by the study team to be feasible. Brief discussions of results follow below and are organized using Bowen et al.’s (2009) focus areas for feasibility studies (Table 1).

Acceptability

Acceptability examines how stakeholders react to the idea of integrating SON faculty and students into community-based organizational processes to include collaborative delivery of health care to southeastern NC migrant farmworkers using mobile outreach. Perceived appropriateness and positive or negative effects were assessed as outcomes of interest.

During a scheduled meeting, SON faculty presented the project to the local community and regional stakeholders. Attendees “expressed interest and excitement over this collaboration and health screening and treatment in the future for the migrant farmworkers” . . . “All parties agreed that this collaboration between the university and the community is promising” (FWHOP Director, personal communication, January 21, 2021). Potential barriers were discussed, including how the Hispanic culture views health issues, concerns with protecting privacy, and potential difficulties with consistency and establishing trust due to the rotation of students (FWHOP Director and Outreach Coordinator, personal communication, March 25, 2021).

Demand

Demand seeks to clarify the extent to which the collaborative efforts of community-academic partners, particularly mobile-based depression screenings and behavioral healthcare services, would likely be used among the target population of migrant farmworkers in southeastern North Carolina. To measure this area of focus, data reflecting the expressed interest and perceived demand were gathered as estimates of intervention use.

Regarding the population to be served, North Carolina ranks 6th in the United States in the total number of migrant farmworkers⁶. There are an estimated 150,000 migrant farmworkers, as well as their dependents, that reside in NC throughout the growing season⁶. In 2020, the

federally funded North Carolina Farmworker Health Program (NCFHP) provided behavioral health services to 88 migrant farmworkers, averaging 3.2 encounters per patient¹¹.

As an existing resource in the community, the FWHOP provides primary clinical care to farmworkers through their mobile services at migrant camps in southeastern NC. The mobile health clinic assessed and treated more than 1300 farmworkers in southeastern North Carolina in 2021. Health assessment data indicated that at least half of the farmworkers had high blood pressure. Additionally, they reported having a physical exam in the last two years and taking medicines for hypertension, high cholesterol, or diabetes. Many farmworkers who completed the health assessment (82%) reported no general health concerns. Behavioral health was also assessed through several questions, including four CAGE questions (less than one percent responded positively). Farmworkers expressed several areas where they felt they would like additional health information including dental concerns (13%), diabetes (4%), emotional health (1%), family planning (<1%), hypertension (6%), green tobacco sickness (<1%), nutrition (13%), STI, HIV, smoking, substance abuse, (<1%), and other (20%).

Implementation

The concept of implementation assesses the degree to which health assessment screenings and follow-up health care services can be successfully delivered to the sample migrant farmworker population with the support of the university's SON faculty and students. Integrating SON faculty, students, and other programs and services would require continued partnership and coordination of effort with the FWHOP staff. Additionally, access to existing mobile outreach program resources (e.g., mobile vehicles, tents, medical supplies, access to the

electronic health record, translators, partnerships with growers and camp supervisors, etc.) would be fundamental to any integration effort between the academic and community partners.

Practicality

To appropriately evaluate practicality, migrant farmworker assessment and health care delivery should be viewed in the context of how well these can be implemented using the specified partners, stakeholders, and existing circumstances. Outcome measures for practicality included a review of factors that affect implementation, the ability of participants to carry out the intervention, and a brief financial analysis of the project. The primary factors affecting implementation revealed by stakeholders included faculty practice (e.g., credentialing, malpractice insurance), nursing student clinical placement processes, the FWHOP organizational processes, and farmworker availability (both in terms of seasonal migration patterns and work schedules). Financial considerations for any joint programming include the FWHOP's funding stability for continued mobile outreach, and the SON Director assigning faculty workload to precept students in mobile clinic activities.

Adaptation

Concerning Bowen et al.'s¹ focus on adaptation, this area seeks to understand how health assessment screenings and follow-up health care services perform when adjustments are made, such as implementing these services among migrant farmworkers via a mobile delivery format compared to delivery in a traditional clinic setting. At present, reliable access to health and mental health services are non-existent for farmworkers.

Integration

Integration examines how university SON faculty and students, conducting health screenings and follow-up healthcare, can be integrated into the existing FWHOP organizational system to provide the full range of health services to migrant farmworkers. Measurable outcomes include perceived fit with the current infrastructure and the perceived sustainability of the intervention (i.e., integration of nursing faculty and students into FWHOP processes for health care of migrants).

The FWHOP is well positioned to assess farmworkers' health status and needs given the program staff's regular presence in migrant camps and positive relationships with the farmworkers. Integrating nursing faculty and students into health assessment, treatment, referral, and follow-up would enhance FWHOP services. This level of integration would require coordination with the NC Farmworker Health Program and ongoing collaboration between the academic and community (i.e., local FWHOP) partner.

Expansion

The outcome of interest for the Expansion focus area is the potential success of the intervention. Integrating university SON faculty and students into the FWHOP's mobile clinic processes and assisting in developing and implementing a structured follow-up process, was determined by the academic and community partners to have a strong potential for success. Operationalizing this partnership in mobile health outreach processes would be complex, given the character of the partner organizations, stakeholder groups, and target population. However, the relationship between the partners and the joint work accomplished during this feasibility study further solidified the foundation for future work.

Limited Efficacy

The final area of Bowen et al.'s¹ focus on feasibility is limited efficacy, with a pilot test of the intervention being an outcome of interest. While a pilot study was not a planned activity in this feasibility study, this study laid the necessary groundwork and provided important insights for a future pilot study.

Lessons Learned

While using Bowen et al.'s 's focused framework to determine feasibility, it was noted that collaborative academic and community partnerships were needed to enhance health and mental health services that address farmworker assessment results. Members of the academic-community partnership agreed that the ability to provide these health and mental health services via a mobile health option addresses challenges with access to care that impacts the migrant farmworker population.

Behavioral health issues, from the perspective of the FWHOP staff, remain a cause for concern in the migrant farmworker population. Factors such as poverty, isolation, lack of healthcare access, and poor working and living conditions all contribute to higher levels of depression in immigrant farmworkers¹². The prevalence of depression among migrant farmworkers demonstrates a need for additional and innovative behavioral health resources for this vulnerable and underserved population. Although the data from the health assessment forms reflected a small percentage of farmworkers voicing behavioral health concerns, FWHOP staff felt that the perceived stigma may have impacted the results. There was also a concern that behavioral health had not been previously assessed due to the lack of available follow-up treatment resources. Standards from primary care organizations recommend implementing screening adults for major depressive episodes (MDE) when there are adequate support

processes in place for diagnosis, treatment, and follow-up¹³. The potential success of offering a mobile health alternative for assessing the physical and behavioral well-being of migrant farmworkers, although complex, would meet this current gap in care.

The steps to implementation, practicality, adaptation, and integration depend on several factors. First, physical and personnel resources must be consistently and adequately supplied. Practical considerations such as faculty availability and credentialing would need to be managed. Developing trust with the migrant farmworkers was one of the challenges of the study. Working with the local FWHOP helped to build trust with the farmworkers, but this relationship required time and consistency to create a genuine rapport. Another challenge involved the actual hours of farmworker availability for outreach services. Farmworker work schedules often start with the sunrise and end with sunset, leaving only late-evening/night hours to conduct many screenings. These hours will also be challenging for integrating students into the process. Language barriers and cultural beliefs around health also posed some challenges, although as trust was established, this became easier to discuss for the farmworkers. Lastly, integration would depend on the continued development and deepening of the existing collaborative relationship among the academic and community partnerships.

An important limitation of this feasibility study was the project team's inability to engage key stakeholder groups, specifically the FQHC LAL, North Carolina Growers Association, local growers, and farmworkers. The university's SON project team members attempted to engage leadership at the FQHC LAL but failed to receive any response. Likewise, communication efforts with growers proved to be unsuccessful. Farmworker schedules and limited availability created barriers to participation in stakeholder discussions. As a result, important insights from

these stakeholder perspectives were not available for consideration during data analysis and evaluation.

Farmworkers continue to share that preventative health services, including behavioral health, are an unmet need. Farmworkers commonly say they do not know where to go for treatment and cannot afford the cost of care¹⁴. Further research on migrant farmworker access to primary care and behavioral health services is indicated. Additionally, this study's findings may lead to a change in health policy for migrant farmworkers by increasing funding and accessibility to quality health care.

Conclusion

Academic and community partners in southeastern North Carolina are committed to exploring the opportunity for developing mutually beneficial partnerships that work to serve vulnerable and medically underserved communities, including migrant farmworkers. The partners prioritized this feasibility study as an essential step in furthering relationship development among the collaborative community partners. The primary purpose of this joint project, to explore the feasibility of integrating faculty and students into a regional, rural Farmworker Health Outreach Program (FWHOP), was determined to be feasible. Future partnership work should include a focused pilot study, including service provision to farmworkers.

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