Nurse-Led Mobile Health Clinics: An Opportunity for Student Scholarship and Faculty Practice

Marianne Cockroft, PhD, RN; Johanne Laboy, PhD; Leight Mullen, MSN, RN, FNP-C; and Sara L. Hubbell, DNP, RN, PMHNP, FNP-C

ABSTRACT

Background: The benefits of nurse-led mobile clinics to the communities they serve have been adequately documented in the nursing and health literature. Nurse-led clinics are credited with a variety of positive outcomes from improving access to care to helping build healthier communities. However, the impact of nurse-led clinics on nursing education has not been as widely discussed. **Method:** A nurse-led, mobile health clinic was established to serve individuals and families facing financial crisis and provide a practice site for students and faculty. **Results:** Students developed nursing skills, including leadership, cultural awareness, active listening, critical thinking, effective communication, and collaboration. In the first 4 years of operation, 30 students have been assigned to the mobile clinic and approximately 2,250 visitors received free health care. **Conclusion:** These findings can inform the implementation of nursing curriculum or activities specifically designed for student involvement in nurse-led mobile health clinics and the development and advancement of nursing skills. **[*J Nurs Educ*. 2020;59(10):594-596.]**

Mobile health clinics (MHCs) make a significant contribution to the communities they serve. Traditionally, MHCs have been physician led. However, RNs increasingly lead and manage MHC activities (Hatchett, 2013). The proliferation of nurse-led clinics (NLCs) has prompted clinic specialization, including chemotherapy treatment (Burns et al., 2014), colorectal health (Naguib et al., 2017), geriatrics (Rodriquez et al., 2007), and homelessness (Collinson & Ward, 2010). Such growth has increased the chances for low-income or uninsured patients to find an MHC or NLC willing to treat their illness or chronic disease at low or no cost.

The MHC and NLC literature typically focuses on the cost-savings and health benefits provided to the communities they serve. Nursing faculty also stand to gain from exploring the benefits the clinics offer to nursing scholarship and pedagogy. Nurse-led MHCs afford unique opportunities for skill development in a variety of nursing specializations and settings. Nursing students are expected to acquire and polish multiple sets of clinical and nonclinical skills, including clear and compassionate communication (Arnold & Boggs, 2019; Hawthorn, 2015), critical thinking (Pitt et al., 2015), decision making (Johansen & O'Brien, 2016; Johnsen et al., 2016), beneficial nurse–patient relationship building (Bridges et al., 2013; Strandås & Bondas, 2017), patient advocacy (Davoodvand et al., 2016), patient and family education (Sherman, 2016), and leadership (Brown & Rhode, 2018).

Skilled and competent nurses are an asset to health care. Nurses constitute the chief support system of health care in the United States and also comprise the largest group in the health care sector (Daniel & Smith, 2018). Although the United States has historically experienced nursing shortages and surpluses, economists project that by 2025 the country will experience the worst shortage of nurses ever, resulting in an inadequate number of RNs to handle future demand (Staiger et al., 2012). This shortage is expected to be fueled by two main factors: limited nursing faculty and an insufficient number of clinical sites (Haryanto, 2019; MacIntyre et al., 2009). Haryanto (2019) urged the nursing sector to come up with "innovative, out-of-the-box thinking" before the shortage of sites and faculty "become a crisis for American healthcare delivery" (p. 2). Recognizing the shortage of nursing faculty and clinical training sites for nursing students and a need to serve individuals in crisis, a nurse-led MHC was established as an innovative strategy to address these issues. The purpose of this article is to describe the development and outcomes of the nurse-led MHC.

Method

The idea of establishing an MHC emerged when members of a faith community discussing issues of social justice, poverty, and other local concerns used a strengths-based approach of appreciative inquiry (Whitney & Trosten-Bloom, 2010). Appreciative inquiry addresses problems and opportunities by focusing on organizational strength. The approach is implemented in four phases: discovery, dream, design, and destiny.

Dr. Cockroft is Associate Professor, Dr. Laboy is Adjunct Assistant Professor, and Ms. Mullen is Clinical Instructor, The University of North Carolina at Chapel Hill, School of Nursing, Chapel Hill; and Dr. Hubbell is Assistant Professor, School of Nursing, The University of North Carolina-Wilmington, Wilmington, North Carolina.

This study was supported by Christ the King Lutheran Church, Cary, North Carolina.

The authors have disclosed no potential conflicts of interest, financial or otherwise.

Address correspondence to Marianne Cockroft, PhD, RN, Associate Professor, School of Nursing, The University of North Carolina at Chapel Hill, Carrington Hall, CB #7406, Chapel Hill, NC 27599-7460; email: cockroft@email.unc.edu.

Received: January 20, 2020; Accepted: April 3, 2020

doi:10.3928/01484834-20200921-11

The discovery phase of the process started when members of the group posed the question, "What more can we do to help our community?" The group focused on the positive programs and efforts that were currently in place in the congregation and community. Two local crisis ministries were recognized as providing a valuable service to the public. The agencies were well-established, with strong support from local faith communities and town leaders. They offered services to individuals and families undergoing financial hardship and provided relief in the form of food pantries, financial assistance, job training, and counseling. However, they did not offer health care services.

Working through the dream phase (when the group tries to envision the future), a crisis ministry director shared a vision to become a community service center, providing additional services to residents seeking stability and self-sufficiency. A faculty member at a local school of nursing expressed her vision of establishing a clinical site for nursing students and offering nursing faculty the opportunity to volunteer their knowledge and expertise.

The conversation sparked the design of a new academic–community partnership and the creation of a nurse-managed health clinic providing free services to clients of the two local crisis ministries.

A health needs assessment was administered to clients at both crisis ministries. A key finding of the survey indicated that 73% of the individuals reported having at least one chronic health condition and many individuals had multiple comorbidities.

A mission statement and goals that integrated the health needs of the crisis ministry clients and the aims of the school of nursing were developed: (a) provide screening and education for the prevention and self-management of chronic illnesses, (b) offer resources to promote health and well-being, (c) reduce potential visits to the emergency department and their prospective financial burden, (d) establish a clinical site for undergraduate and graduate nursing student practice, and (e) present active and retired nurses and nursing faculty an opportunity to serve the community. The mobile clinic would address otherwise unmet health needs that could improve quality of life and prevent the long-term complications of unmanaged chronic illness. The impact of the project would be measured by aggregating the number and satisfaction with care of crisis clients served, documenting their alternative sources of health care, and eliciting feedback from undergraduate and graduate nursing students regarding their experience with the clinic. Due to limited indoor space, a mobile health vehicle was chosen as the mode of delivery for the weekly visits to the crisis ministries.

Support for the nursing clinic was garnered through meetings with key stakeholders, including a local federally qualified health clinic, the crisis ministry leaders, and administrators in the school of nursing. Nursing faculty representing advanced practice, public health, administration, and research participated in the preliminary planning group.

Initial funding was provided through a grant from the faith community that sparked the original conversation, and a gift of supplemental monies was received from an additional collaborating church. The school of nursing afforded the costs of the clinical director in the first year of operation and of an added family nurse practitioner beginning in the second year.

Tuesdays were selected for the MHC operations, as the directors at both crisis ministries identified Tuesdays as their busiest day. During the first year, the clinic was open 3 hours per week. The hours of operation were increased to 4 hours per week the second year to serve more clients and grant nursing students additional practice time. Bimonthly Saturday hours were subsequently added during the fourth year of operation.

The initial services provided included blood pressure screening, diabetes assessments, education on chronic disease self-care management, nutrition information, connecting to local resources, and smoking cessation resources. Sick care visits, cholesterol assessments, HIV testing, and mental health screening were added in the second year of the project and, more recently, dental screenings and retinal scans were included.

The MHC recruits a mix of undergraduate and graduate nursing students. Undergraduate nursing students are enrolled in a public health or summer work experiential course. The students are surveyed about their areas of interest for clinical practice, and those who declare an interest in serving low-income populations or working in community-based settings are offered the opportunity to choose the MHC as a clinical practice site. Undergraduate students are responsible for conducting individual and community assessments, providing individual and group health education, and connecting clients to community resources. Student progress is measured against their goals and their attained levels of independence.

Graduate students are required to complete 120 clinical hours per semester. Because the MHC offers fewer hours per semester, the students assigned to it are matched with an additional learning site to complete their clinical hours. At the MHC, these students practice taking patient histories, performing examinations, administering assessments, and creating patient care plans. Nurse practitioner students pursuing specializations in family practice, adult primary care and geriatrics, and psychiatric-mental health are good matches for the site, as are graduate students seeking degrees in nursing education or administration. Student progress is measured through a competency-based clinical evaluation tool. Students receive formative feedback about their competencies during practice and summative feedback on their skills at the end of the course.

The clinical director is responsible for the overall management of the clinic, including staff scheduling, equipment procurement, developing and maintaining community partnerships, community outreach, budgeting, securing funding, and annual report creation and dissemination. The FNP is the lead clinician and preceptor for advanced practice students. She performs physical examinations, conducts point-of-care testing, provides patient education, delivers sick care, and offers limited treatments and medication prescriptions.

Results

The MHC is now in the destiny phase, a time of strengthening its capabilities. In 4 years of operation, approximately 2,250 client visits to the MHC occured. The number of new client visits continues to grow as additional services are offered and more clients are returning for follow-up visits. After 4 years of operation, 30 nursing students were assigned to the MHC, including two graduate students enrolled in the health care systems program and seven students enrolled in the nurse practitioner concentration. Staffing includes two paid faculty, 14 volunteer faculty, and five community volunteers. In addition, 13 community partnerships have been established, providing sources of revenue and health services.

Students, faculty, and the community benefit from the nurse-led MHC. The MHC attracts students who are interested in underserved

populations and those who envision the recreational vehicle as an interesting and unique work environment. Students develop a variety of clinical and nonclinical skills, including leadership, cultural awareness and humility, active listening, critical thinking, effective communication, and collaboration. They acquire first-hand experience coping with environmental conditions, health disparities, social determinants of health, therapeutic communication, behavior changing techniques, and motivational interviewing strategies for helping patients become more empowered about their health. The students also have the opportunity to work with interprofessional disciplines (e.g., social workers, dental hygienists, vision specialists, and nutritionists). Student reflections support these findings:

- It makes me feel good knowing our work has positively changed the trajectory of many individuals' lives. For example, our group recently worked with a Spanish-speaking client who had a child with diabetes at home. She had no tools to check his blood sugar, and she lacked the proper knowledge and speaking skills to act as an advocate for herself or her son. (undergraduate student)
- I've done more patient education than I ever have in the hospital setting. One of the things that struck me was how valuable a service blood pressure screenings are. So many people are unaware of what their blood pressure is, or don't understand what the numbers mean. (undergraduate student)
- It was interesting the different races and cultures that were represented within the population in which we served. It ultimately solidified my passion to serve the underserved community, especially those of Hispanic origin. (graduate student)

The MHC provides faculty volunteers with the opportunity to share their knowledge and expertise with students and the community. The site provides them with a chance to work independently and a clinical practice site to support renewal of their nursing licenses and certifications. One faculty member shared, "I love volunteering here. This work reminds me of why I went into nursing!"

Community stakeholders and clients have expressed their appreciation and acknowledged the benefit of the services provided by the nurses. "When the mobile unit is on site we can readily address health issues and clients can get treatment, advice, or referrals to other medical providers" (crisis ministry director) and "I am happy to visit the clinic and have my blood pressure checked every week. It is very convenient to have the clinic so close, and we feel comfortable that professional staff is monitoring my progress and health goals" (client).

Conclusion

Food insecurity, unemployment, and potential homelessness are stress-producing realities for the individuals and families served by the mobile clinic. The unmanaged chronic health conditions can be life threatening, impact quality of life, and result in hospitalization. The nurse-led MHC effectively fills gaps in health care of a vulnerable population, while offering a unique clinical setting for faculty and nursing students to practice, learn, and fulfill the service mission of the university. As future health care providers, the students are given a valuable opportunity to assess and address often overlooked social determinants of health and to grow in their education as they transition to practice and learn how to best serve marginalized populations.

References

Arnold, E. C., & Boggs, K. U. (2019). *Interpersonal relationships: Professional communication skills for nurses.* Elsevier Health Sciences.

Bridges, J., Nicholson, C., Maben, J., Pope, C., Flatley, M., Wilkinson, C., Meyer, J., & Tziggili, M. (2013). Capacity for care: Meta-ethnography of acute care nurses' experiences of the nurse-patient relationship. *Journal of Advanced Nursing, 69*(4), 760–772. https://doi.org/10.1111/jan.12050 PMID:23163719

Brown, K. M., & Rode, J. L. (2018). Leadership development through peer-facilitated simulation in nursing education. *Journal of Nursing Education, 57*(1), 53–57. https://doi.org/10.3928/01484834-20180102-11 PMID:29381162

Burns, V., Dunne, H., Longworth, D., & Farrell, C. (2014). The difference a nurse-led mobile chemotherapy unit can make. *Cancer Nursing Practice, 13*(7). https://doi.org/10.7748/cnp.13.7.14.s21

Collinson, S., & Ward, R. (2010). A nurse-led response to unmet needs of homeless migrants in inner London. *British Journal of Nursing, 19*(1), 36–41. https://doi.org/10.12968/bjon.2010.19.1.45910 PMID:20081711

Daniel, K. M., & Smith, C. Y. (2018). Present and future needs for nurses. *Journal of Applied Biobehavioral Research, 23*(1), e12122. https://doi.org/10.1111/jabr.12122

Davoodvand, S., Abbaszadeh, A., & Ahmadi, F. (2016). Patient advocacy from the clinical nurses' viewpoint: A qualitative study. *Journal of Medical Ethics and History of Medicine, 9*(5). PMID:27471588

Haryanto, M. (2019). Nursing shortage: Myth or fact? *Orthopedic Nursing, 38*(1), 1–2. https://doi.org/10.1097/NOR.0000000000000535 PMID:30676566

Hatchett, R. (Ed.). (2013). *Nurse-led clinics: Practical issues.* Routledge. https://doi.org/10.4324/9780203865613

Hawthorn, M. (2015). The importance of communication in sustaining hope at the end of life. *British Journal of Nursing, 24*(13), 702–705. https://doi.org/10.12968/bjon.2015.24.13.702 PMID:26153811

Johansen, M. L., & O'Brien, J. L. (2016). Decision making in nursing practice: A concept analysis. *Nursing Forum, 51*(1), 40–48. https://doi.org/10.1111/nuf.12119 PMID:25639525

Johnsen, H. M., Fossum, M., Vivekananda-Schmidt, P., Fruhling, A., & Slettebø, Å. (2016). Teaching clinical reasoning and decision-making skills to nursing students: Design, development, and usability evaluation of a serious game. *International Journal of Medical Informatics, 94,* 39–48. https://doi.org/10.1016/j.ijmedinf.2016.06.014 PMID:27573310

MacIntyre, R. C., Murray, T. A., Teel, C. S., & Karshmer, J. F. (2009). Five recommendations for prelicensure clinical nursing education. *Journal of Nursing Education, 48*(8), 447–453. https://doi.org/10.3928/01484834-20090717-03 PMID:19681534

Naguib, N., Lewis, M., Iredale, R., Pugh, R., & Haray, P. N. (2017). An innovative solution to raise public awareness using a mobile colorectal clinic—The 'bowel bus'. *International Journal of Surgery, 39,* 188–191. https://doi.org/10.1016/j.ijsu.2017.01.107 PMID:28161528

Pitt, V., Powis, D., Levett-Jones, T., & Hunter, S. (2015). The influence of critical thinking skills on performance and progression in a pre-registration nursing program. *Nurse Education Today, 35*(1), 125–131. https://doi.org/10.1016/j.nedt.2014.08.006 PMID:25194469

Rodriguez, K. L., Appelt, C. J., Young, A. J., & Fox, A. R. (2007). African American veterans' experiences with mobile geriatric care. *Journal of Health Care for the Poor and Underserved, 18*(1), 44–53. https://doi.org/10.1353/hpu.2007.0016 PMID:17337796

Sherman, J. R. (2016). An initiative to improve patient education by clinical nurses. *Medsurg Nursing, 25*(5), 297–333.

Staiger, D. O., Auerbach, D. I., & Buerhaus, P. I. (2012). Registered nurse labor supply and the recession—Are we in a bubble? *The New England Journal of Medicine, 366*(16), 1463–1465. https://doi.org/10.1056/NEJMp1200641 PMID:22436050

Strandås, M., & Bondas, T. (2017). The nurse–patient relationship as a story of health enhancement in community care: A meta-ethnography. *Journal of Advanced Nursing, 74*(1), 11–22. PMID:28702952

Whitney, D., & Trosten-Bloom, A. (2010). *The power of appreciative inquiry. A practical guide to positive change.* Berrett-Koehler.