EXPERIENCE EXCHANGE

Patient and family centered nursing rounds as a platform for continuing education of nurses in a rural hospital in Haiti

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ABSTRACT

Introduction: Haiti has one of the most severe health care worker shortages in the Americas. In-service continuing education opportunities have been linked to increased nurse motivation and retention, and improved patient outcomes. This paper describes how an academic-non-profit collaboration adapted nursing rounds to create a bedside teaching activity for nurses at a Haitian hospital.

Methods: Rounds are defined as a gathering of nursing staff and students, as well as the patient's family at the patient's bedside, for case presentation and discussion about the medical and nursing care plans. A survey of participants was completed on a quarterly basis to improve the activity and assess whether the project was meeting its goals.

Results: Twenty-six nurses participated in the first quarter survey and twenty-five in the second quarter survey. Surveys showed that participation in rounds increased over time. Nurses were either satisfied or very satisfied with rounds. The majority of nurses reported learning information that improved their patient care every time they attended rounds. Challenges included limited staffing at the hospital, nurses' varying levels of literacy, and Haiti's unpredictable political climate. These were overcome by building a partnership with a reputable local organization, accompanying local colleagues in a peer-to-peer model, and embracing incremental changes during implementation.

Conclusions: Evidence from observation, informal feedback, and responses to participant surveys indicates that rounds may increase opportunities for continuing education, encourage patient and family centered care, and promote inter-professional collaboration. This project has proved to be sustainable and continues to evolve two years following implementation.

Key Words: Haiti, Nursing, Rounds, Continuing education, Family centered care

1. INTRODUCTION

Human resources for health has emerged as a top priority in the global health field.[1] Few low-income countries have enough healthcare workers to meet their populations' needs.[2] Health worker shortages affect a health system's ability to offer universal access to good quality care. There is evidence that health worker migration has adverse effects on population health outcomes,[3,4] and density of health workers is positively correlated with maternal, child, and infant survival.[5]

Nurses currently represent 60%-80% of the world's health-

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care workforce and they provide 90% of healthcare worldwide.[6, 7] However, in many low-income countries, the nursing workforce remains undertrained and under-supported and many nurses are unable to exercise their full scope of practice.[8]

In addition to quality public nursing school and pre-service education, in-service training is an integral component of building a nursing workforce that delivers high quality services. In-service or continuing education opportunities have been linked to increased nurse motivation and retention, as well as improved patient outcomes, including decreased patient mortality.[9] Building institutional capacity to offer continuing education programming and mentoring is essential to strengthening and maintaining a national nursing workforce.[10]

While the number of health worker continuing education initiatives in low-income countries has significantly increased over the past ten years, the quality and appropriateness of programming is unknown. Outcomes of these efforts can fail to meet the long-term needs of national health workforces.[11] Classroom-based didactic teaching has not proven effective for strengthening providers' competencies and short-term interventions may not build institutional capacity to continue the initiatives and ensure sustainability of the benefits.[12, 13]

1.1 Health care workforce in Haiti

Haiti has one of the most severe health care worker shortages and the lowest nurse-to-population-ratio in the Americas. In 2005, there were 1.1 nurses per 10,000 population[14] and estimates show that about 50% of Haitian-trained nurses leave Haiti within five years of graduating from nursing school to seek out higher incomes and better working conditions.[15] Those nurses who remain take on arduous work, often beyond the scope of their training. This small number of nurses provides services to a particularly vulnerable population suffering from high rates of HIV, tuberculosis, and malaria[16] the highest rates of infant, under-five, and maternal mortality in the Americas, and life expectancy below the worldwide average.[17] Nurses were asked about the case presentation process and their ability to apply new knowledge to their practice, as well as their level of satisfaction with rounds and how the program could be improved.

It should be noted that auxiliaries, comparable to licensed vocational nurses in the United States, have a similar professional role to nurses in Haiti, but do not receive a practice license and are not eligible for leadership positions. Due to the practical similarity between the two professions, in this paper, the term "nurse" refers to both nurses and auxiliaries.

The current status of nursing education in Haiti is one barrier to strengthening the health workforce. Nursing education capacity in Haiti was severely impacted by the 2010 earthquake, which destroyed the country's public nursing school in Port-au-Prince. One hundred fifty students and numerous faculty members died in the disaster. The few public nursing schools that exist nationwide have large class sizes and limited access to technology.[18] Private nursing schools exist, but are largely unaccredited. National nursing curriculum has been critiqued as outdated and mismatched with the local burden of disease. There is minimal mentorship during students' clinical training, and after graduation there are limited opportunities for attaining higher degrees, specialized training, or continuing education.[9, 15]

1.2 Bedside teaching as a form of nursing continuing education

Continuing education addresses the gaps in nursing competencies after graduation and improves quality of care delivery, although it is underutilized in Haiti and across most low-resource settings. (p.61)[9] In high-resource settings, bedside teaching as a form of continuing education has been shown to be an effective method for improving knowledge, skills, attitudes, and behaviors related to history-taking and physical exam, biomedical ethics, humanism, professionalism, and communication.[19] It also presents the opportunity to model patient centered care for nurse learners.[20] Involving the patient and family in such an activity can allow for a better assessment of the patient. It also empowers the patient and family through knowledge about the patient's condition and prognosis, as well as participation in the formation of the patient's care plan.[21] In low-resource settings with severe staffing shortages, bedside teaching may be the most feasible approach to implementing training programs without depleting staff by taking them off duty.

1.3 University of California San Francisco (UCSF) Global Health Nursing Fellowship

In order to address continuing education needs among nurses in Haiti, the UCSF Global Health Nurse Fellowship was created in 2014 as a collaboration between the UCSF School of Nursing and Partners In Health (PIH), a non-profit organization working in more than 12 countries worldwide. UCSF academic expertise was matched with a rural hospital supported by PIH in need of supplemental education-focused programming. Thus, the fellowship objectives were twofold: (1) to train United States educated, masters prepared nurses in global health through experiential learning in rural Haiti and (2) to increase nursing capacity in a rural healthcare facility by expanding opportunities for continuing education.

This paper will describe how UCSF Global Health Nurse Fel-

lows (fellows hereafter) and their Haitian colleagues successfully adapted nursing rounds to create a continuing education bedside teaching activity for nurses at a rural Haitian hospital supported by PIH. The paper will highlight key features of the project that led to its success and sustainability as well as describe challenges the project team faced when designing and implementing this initiative.

In this context, rounds are defined as a gathering of all hospital staff nurses, nursing students, and the patient's family at the patient's bedside for case presentation by one or two nurses and group discussion about the medical and nursing care plans. Rounds are supervised by the hospital's nurse educators. They take approximately thirty minutes, and occur three times a week, during working hours, on rotation in four wards of the hospital: Pediatrics, Internal Medicine, Maternity, and Surgery.

1.4 Project objectives

The goals of nursing rounds are to (1) increase nursing staff's clinical knowledge, (2) promote patient and family centered care, (3) encourage inter-professional collaboration for patient care management, and (4) advance educational programming across the hospital that contributes to nursing leadership and professional development.

2. METHODS

Rounds were adapted from an affiliated hospital in Haiti. Fellows worked with one nurse to select and prepare a case to present. A guide was created to aid in preparing the case and included history of present illness, past medical and surgical histories, family history, personal social history, diagnostics ordered, final diagnosis, treatment, evolution of the patient's condition, and nursing care plan. Later iterations included pathophysiology of the patient's disease and in-depth overview of their medications. The ward physicians were consulted for clarification on the diagnosis and treatment plan. These interactions fostered open communication within the medical team and contributed to a collaborative atmosphere.

Rounds were intentionally conducted at the patient's bedside with the family present to emphasize patient and family centered care. Fellows and nurse educators helped respond to questions posed by the patient and their family as well as rounds attendees during the discussion. After the presentation, the nurse educators and fellows offered feedback to the presenter on their clinical knowledge, case development, and presentation skills. This format was designed to be accessible to the greatest number of nurses possible in a busy medical facility with staffing shortages. All activity planning, case preparation, and rounds were conducted in Haitian Creole.

Rounds were first piloted on the Surgery ward and began with a once a week schedule. Nurse educators were responsible for creating the program calendar. The charge nurses designated which staff nurse would present during their ward's rounds. Following implementation on the Surgery ward, rounds were expanded to other wards in the hospital, including Internal Medicine, Pediatrics, and Maternity and increased to three times weekly. All nurses and nursing students throughout the hospital were invited to attend.

As more nurses became increasingly self-sufficient with case preparation and presentation, they adjusted the case preparation process to fit their needs. For example, on some wards, nurses chose to work in small groups, dividing the tasks of preparing and presenting patient cases, thereby reducing the time any one person spent on preparation and accompanying those who were less experienced as they learned the process. Nurses also began to work with fellows and nurse educators to find images online as visual aids to display on a tablet or laptop during rounds. Rounds were frequently adjusted, adapted, and improved through these incremental changes.

Rounds eventually became an embedded activity at the hospital, such that they continued during periods when there were no fellows on site. Nurses incorporated rounds into the daily routine and used information they learned to guide patient care.

At every rounds during the 2015-2016 fellowship year, fellows and nurse educators counted the number of participants. The fellowship year was divided into four quarters, lasting three months each. During the fourth quarter, there were no fellows in country. The number of nurses attending rounds ranged from five to twenty-five, with an average of 12 nurses in the first quarter, 16 nurses in the second quarter, and 13 nurses in the third quarter.

Fellows conducted an assessment survey of participants on a quarterly basis during this period to monitor implementation of the project and to understand the experience of the nurses participating. Its purpose was first to help identify ways to improve the activity and second to assess whether the project was moving towards meeting its goals. It was also meant to help inform future planning for the project.

Surveys were de-identified while being conducted and during analysis to create a sense of anonymity and minimize bias. Questions were multiple-choice, open-ended, or used a Likert scale. Nurses were asked about the case presentation process and their ability to apply new knowledge to their practice, as well as their level of satisfaction with rounds and how the program could be improved. MS Excel was used to analyze the survey results. Every quarter, a report

summarizing the survey results was presented to hospital nursing leadership. A flyer containing a relevant selection of survey results was also posted on the wards.

3. Results

A portion of the results from the first and second quarter surveys from the 2015-2016 fellowship year are presented here. Twenty-six nurses participated in the first quarter survey and twenty-five participated in the second quarter survey. A variety of topics were covered in rounds during the first and second quarters, as shown in Figure 1. As illustrated in Figure 2, a greater number of nurses presented cases during rounds over time.

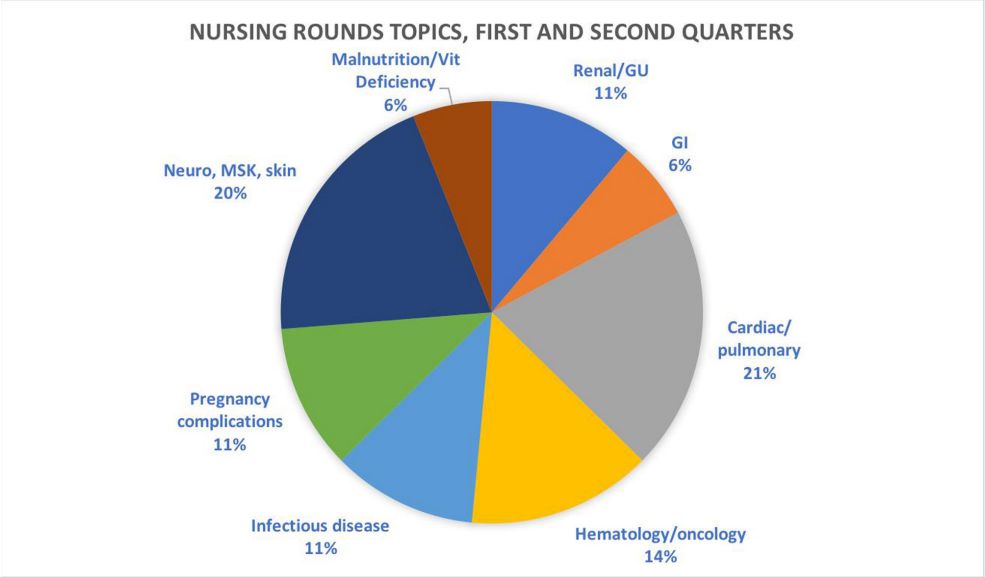

Figure 1. Categories of topics covered during nursing rounds. (Key: Vit = vitamin, GU = genitourinary, GI = gastrointestinal, Neuro = neurology, MSK = musculoskeletal)

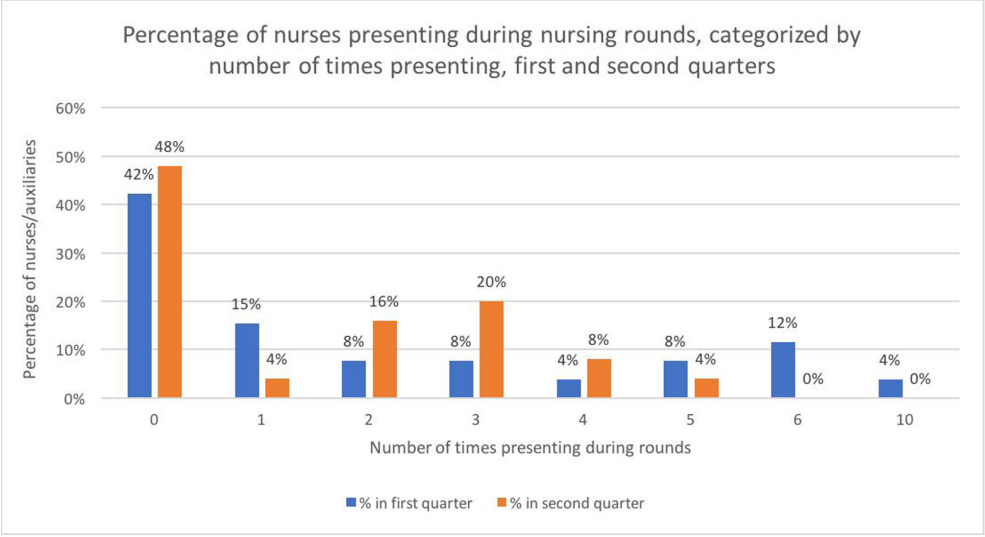

Figure 2. Percentage of nurses presenting during nursing rounds, categorized by number of times presenting, first and second quarters

In both the first and second quarters, the majority of nurses were either satisfied (35% and 64%, respectively) or very satisfied (65% and 28%, respectively) with rounds. No nurses were unsatisfied with rounds during the two quarters. Most nurses felt they learned something valuable almost every time (8% in the first quarter and 28% in the second quarter)

or every time (77% in the first quarter and 52% in the second quarter) they attended rounds. One respondent in the first quarter and two respondents in the second quarter stated that they almost never learned something valuable during rounds.

About 16% of respondents in the first quarter and 24% in the second quarter reported learning information that improved their patient care almost every time they attended rounds. Whereas 72% of respondents in the first quarter and 60% in the second quarter reported learning information that improved their patient care every time they attended rounds. One respondent each quarter reported almost never learning information at rounds that improved patient care.

In order to learn how knowledge gained at rounds specifically affected their patient care, nurses were asked to provide examples in the survey. Some examples include:

"The part about pharmacology helps me understand drug-drug interactions." "I learn about side effects of medications." "It helps with giving patient and family education." "...rounds on the maternity ward talked about things I have forgotten. When we had the case on abruptio placentae, that helped me." "It helped me with a baby who had a heart problem."

Nurses found that rounds helped them refresh their clinical knowledge. It also made them aware of patient safety issues and allowed them to learn new techniques for patient and family teaching.

Suggestions for improvement included a desire for greater participation among nursing staff, more access to resources for researching rounds topics, including books, more visual aids, and a greater focus on patient and family education. One nurse stated that she wanted doctors to begin attending rounds and that there should be greater participation from the patient and family. Other nurses expressed a desire for rounds to start on time, for the presenters to speak more loudly, and for more chances to participate in the discussion.

4. Discussion

In addition to formal and informal project assessment findings, fellows reflected on challenges to project implementation and what features of the project led to the successful adaptation, integration, and sustainability of patient and family centered nursing rounds at this rural Haitian hospital.

The nursing leadership and staff have continued patient and family centered nursing rounds even without fellows on the ground. Overall, rounds appeared to increase opportunities for continuing education, promote patient and family centered care, and encourage inter-professional collaboration. As Covell's Theory of Nurse Intellectual Capital explains, continued professional development increases nursing knowledge, which can translate to positive impact on patient and organizational outcomes.[22] Nurses were observed during rounds practicing critical thinking skills, expressing their ideas in a systematic, clear, and concise manner, and developing their leadership abilities. These behavior changes benefited patient care and healthcare team dynamics, as described below.

Qureshi identifies improved personal and professional interaction with patients as a benefit of bedside teaching.[20] The emphasis rounds placed on patient and family education helped nurses become more aware of their role as educators and improved their communication with patients and families. Some nurses struggled with this aspect of rounds because they were accustomed to adopting a paternalistic attitude when it came to patient teaching. Rounds quickly became the primary setting in which nurse educators and fellows provided instruction on therapeutic communication and led by example. Patients and family members would often thank nurses for presenting their cases and providing patient education. Most patients and their family members appeared to be grateful for the increased attention and care from nursing staff, the chance to ask questions, and the opportunity to share their stories with rounds attendees.

As Henkin et al. conclude based on an interprofessional bedside rounds quality improvement project, rounds increase face-to-face communication between physicians and nurses, which can improve teamwork and influence patient outcomes.[23] The preparation of case presentations for rounds often required speaking with physicians about the patient's diagnosis and treatment plan. Nurses were found not only to ask questions of their physician colleagues but also to share important insights and give suggestions for how to improve patient care. At times these conversations led physicians to make changes to a patient's treatment plan. Such interactions were empowering for nurses and added to their sense of self-confidence and worth.

The project team's experience working in an international nursing partnership in a low resource setting revealed key elements for how projects may be successfully developed, handed over, and sustained in similar contexts. First, building a formal partnership with a reputable organization and its local leadership adds legitimacy to an initiative. Second, accompanying local colleagues in a peer-to-peer model deepens the partnership, provides valuable insight, and builds trusting relationships. For this approach to work, it is crucial that people working in country speak the local language. Lastly, encouraging flexibility to embrace incremental changes to the project over time can promote acceptance and project

sustainability.

4.1 Partnering with leadership

A key element for the success of the initiative was that the UCSF Global Health Nurse Fellowship had a formal partnership with PIH, a well-known organization in Haiti, and with the nurse leadership at the hospital. This partnership helped to legitimize the role of fellows among the nursing staff and facilitated a collaborative approach to project design and implementation. From the beginning, fellows considered nursing rounds to belong to their Haitian colleagues with the intent to hand this educational initiative off completely to the hospital's nurse educators. Not only were the nurse educators personally invested in the project early on, but it engaged dynamic, open-minded, and enthusiastic charge nurses, who first modeled presenting patient cases during rounds and then assisted their nursing staff to do the same. Furthermore, nurse leadership made this activity a regular, scheduled part of the workday for nursing staff, thereby contributing to its adoption and sustainability.

4.2 Accompaniment

Nursing fellows learned about the experience of nurses in Haiti as they worked side by side with local nurses on various wards throughout the hospital. Accompanying nurses in their daily work naturally led to knowledge exchange and helped fellows build trusting relationships with their Haitian colleagues. As fellows accompanied nurses to prepare and present case presentations during rounds, they were able to engage in more detailed discussions with their Haitian colleagues about how to improve the project. This meaningful collaboration may have contributed to increased participation in rounds.

It is important to emphasize here that in order to form the close working relationships with Haitian colleagues that made the project successful, fellows had to learn Haitian Creole. This was not only important for basic communication with colleagues, patients and their families, but also helped fellows show cultural humility. In response, hospital leadership embraced fellows and local nurses became more open to the knowledge and expertise fellows had to share with them. They also felt more comfortable sharing their own knowledge with fellows, thus creating a true exchange and making the partnership more effective.

4.3 Flexibility

A flexible approach to developing the initiative, including small tests of change and iterative adjustments, allowed it to continuously evolve and improve, contributing to its acceptance by nursing staff. Besides the participant survey, frequent conversations with nurses about how to improve the project allowed them to have an active voice in the project's development. Nurses also took the initiative to make changes to the case preparation and presentation process, thus adapting it to their needs.

4.4 Challenges

The challenges encountered by the project team while implementing nursing rounds in a Haitian hospital may be common to other low resource healthcare settings around the world. First, limited staffing made it difficult for nurses in some departments to attend rounds. The time commitment made it hard for some nurses to maintain their motivation and enthusiasm for rounds. Second, the level of education and literacy among Haitian nurses can vary significantly, making an activity like rounds challenging for some participants. Nurses collaborated to address this challenge. Those with greater reading, writing, and research skills helped their colleagues who struggled in these areas, making case preparation and presentation more manageable for them. Fellows and nurse educators also played a role in helping these nurses prepare, spending one-on-one time with them and showing them how to conduct research using the Internet. Finally, Haiti has unpredictable political, social, and natural climates, all of which can be disruptive to a project's implementation and sustainability. In April - May 2016, during the third quarter, the hospital medical staff joined a countrywide doctor's strike. Doctors at the national hospital in Port au Prince began the strike as a demand for higher pay. Many nurses chose to strike as well, both in support of their physician colleagues and to protest their own low wages. While a portion of the doctors and nursing staff were striking, some wards chose not to hold rounds. Situations of political instability, such as this one, can have an impact on the sustainability of a project. However, with support from nurse leadership, once the strike was over, rounds were reinstated and they quickly returned to their former status as a routine part of work.

5. Conclusion

While bedside teaching has been identified as a useful continuing education activity for nurses, its use is limited in low resource settings, including Haiti. Patient and family centered nursing rounds, a bedside teaching activity developed in partnership between the UCSF Global Health Nurse Fellowship and nurse leadership at a hospital in rural Haiti, seek to provide continuing education for nurses at the patient's bedside, which is built into nurses' work schedule and does not take them off duty. Based on observation by fellows, informal feedback, and responses to participant surveys, it appears that rounds increase opportunities for continuing education, encourage patient and family centered care, and promote inter-professional collaboration. The project is a

work in progress and continues to evolve without fellows on the ground.

Challenges to project implementation included limited staffing at the hospital, varying levels of literacy among nurses, and Haiti's unpredictable political climate. These were overcome by elements of the project, which contributed to its success. These included building a formal partnership with a reputable organization and its local leadership, accompanying local colleagues in a peer-to-peer model, and remaining flexible to embrace incremental changes to the project over time.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare that they have no competing interests.

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