

Engaging Students as EBP Ambassadors in a Rural Hospital

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Abstract

Purpose: A regional research consortium provided a forum to optimize resources and fill gaps in services for all stakeholders. Through the consortium, an academic practice partnership was formed with a state university's nursing program to assist a rural, critical access hospital's nursing staff gain evidence-based practice (EBP) knowledge and skills. The aim of this project was to create, implement, and evaluate the effectiveness of student led workshops to educate and empower critical access hospital staff nurses with EBP knowledge and skills.

Sample: A convenience sample of staff nurses who attended monthly staff meetings was used. Sixteen nurses completed the pre-test, and 19 nurses completed the post-test.

Method: The EBP Implementation Scale and EBP Beliefs Scale was used in a pretest/posttest design to evaluate staff nurse beliefs about EBP and implementation of EBP in their nursing practice.

Findings: The nurses reported increased knowledge and application of EBP. The students developed professional and leadership skills.

Conclusion: A healthcare research consortium provided a forum that connected academia and practice and fostered sharing of expertise and resources. Partnerships between nursing programs and rural, critical access hospitals may be an option for optimizing resources.

Keywords: critical access hospital, rural hospital, evidence-based practice, nursing students, academic-practice partnerships.

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Bedside nurses may lack knowledge and confidence with evidenced-based practice (EBP). This gap in knowledge is compounded in rural hospitals because of a lack of robust staff development resources (Friesen-Storms et al., 2015; Stavor et al., 2017). Hauck and colleagues (2013) note the necessity for staff nurse education regarding EBP and leadership support of EBP education to build a culture promoting EBP implementation. This manuscript describes an academic practice partnership that engaged BSN students as EBP ambassadors to increase nurses' knowledge of EBP and promote EBP utilization at a rural, critical access hospital.

Background

A regional Healthcare Research Consortium, under the auspices of the Community Patient Safety Coalition, was formed to empower nurses to lead research and utilize research outcomes to improve nursing practice, patient safety, and quality of life for our communities. Members of the consortium, including eight health care organizations and four nursing programs, established a regional nursing research agenda and combined their resources to mentor and educate nurse researchers.

Through the Consortium, a chief nursing officer of a rural hospital expressed a need for resources to educate the nursing staff regarding evidence-based practice. The hospital lacked resources for extensive staff training. This 25-bed hospital serves a rural, largely agricultural county of around 36,900 residents and meets with the Centers for Medicare and Medicaid Services designation of Critical Access Hospital (Deaconess, 2021; Gibson County, n.d.; Rural Health Information Hub, n.d.). To address the gap in resources, nursing faculty suggested using BSN students as evidence-based practice ambassadors. Faculty proposed that students were knowledgeable in searching for quality evidence and already had experience with EBP in their first medical -surgical clinical course through a collaborative evidence-based practice project assignment. As a result, an academic practice partnership was established to advance nurse EBP knowledge and skills and promote EBP in the critical access hospital.

Project Overview

Faculty called for student volunteers to participate in the project. Several students used their involvement in the project toward credit for an academic honors diploma. Others volunteered out of interest in EBP. The students, under the guidance of faculty, collaborated with the chief nursing officer to create a student-led educational model enhancing and empowering the nursing staff with knowledge about the evidence-based process. Over a two-year span, new student volunteers joined the project as seniors graduated for a total involvement of 12 students.

The nursing students reviewed the literature for information on utilization of EBP in rural hospitals and on best practices for EBP education. Several articles reported that nurses in rural settings were not confident with identifying research gaps or with implementing the EBP process (Friesen-Storms et al., 2015; Lenz & Barnard, 2009; Stavor et al., 2017). The literature also

provided evidence of barriers for rural nurses to implement EBP including lack of EBP knowledge and skills, lack of initiative to change current practice, and lack of institutional supports such as databases and journals (Friesen-Storms et al., 2015; Lenz & Barnard, 2009; O' Lynn et al., 2009; Stavor et al., 2017). Studies by Friesen-Storms and colleagues (2015) and Lenz and Barnard (2009) demonstrated that with education, rural nurse utilization of EBP improved. The literature review also informed the students of best practices for EBP education in a hospital setting (Lenz & Barnard, 2009; Winters & Echeverri, 2012).

Based upon the literature review, the students opted for an interactive learning approach to EBP instruction to empower the nurses with EBP confidence and skills. Topics included the definition of EBP, the process of EBP, how to identify scholarly sources, how to conduct a literature search, and how to appraise the evidence for a total of five educational sessions. Each session included a one-page hand out with bulleted summary of information and a brief, student-led overview of the content. After the overview, the students facilitated interactive learning activities that fostered hands on application of content. For example, the session about the process of EBP included an interactive discussion among the nurses as they developed a PICOT question that applied to nursing practice within their home unit. The session about how to conduct a literature search included a tutorial on how to navigate the hospitals database with each nurse charged with finding one high evidence article for their respective PICOT question. On another occasion, the students assisted the nurses to conduct a rapid critical appraisal of one of their articles. The five learning sessions were hosted during scheduled staff meetings. Students facilitated one or two sessions per semester over a 2-year period.

Melnyk, Fineout-Overholt, and May's (2008) EBP Implementation Scale and EBP Beliefs Scale were selected to evaluate the effectiveness of the interactive learning sessions. These scales contain 16 items assessing the individual's perceived value of EBP and an 18-item scale (respectively) evaluating their perceived ability to implement EBP. The Cronbach alpha for both scales was $>.90$. In the original study, Melnyk et al. (2008) found that education increased both the value and implementation of EBP.

Faculty maximized student involvement in the project by having them complete human subject's protection training, apply for the IRB approval, gather consents, and administer the surveys. With faculty supervision, one of the students contacted the authors of the EBP survey to seek permission for use, which allowed them to gain experience communicating with researchers and learn about the copyright process. Another student was mentored in and assisted with entering the data into a statistical software package.

Methods

Upon IRB approval, a pretest/posttest evaluation of a convenience sample was planned to assess the effectiveness of the workshops on the nurses' EBP Beliefs and ability to implement EBP. Nurses who worked in the medical/surgical, intensive care, and emergency departments were asked to complete the EBP Belief and Implementation scales before the first education workshop. Prior to completing the scales, nurses signed a consent form to allow for data analysis and outcome dissemination. The pre-workshop evaluation was completed in Spring 2016. Educational workshops were offered during each Spring and Fall semesters over a two-year period. Following the last educational workshop in the spring of 2018, a post-workshop assessment was completed using the same EBP Beliefs and EBP Implementation scales.

Project Outcomes

Sixteen nurses completed the EBP Beliefs and Implementation scales in the initial session. Following the delivery of all the education sessions, 19 nurses completed the EBP Beliefs and Implementation scales again. There were three nurses who completed the scales for the post-workshop evaluation who were not present during the inaugural session. The workshops were delivered over two years and more nurses attended the workshops as they were offered. Because the pre and post samples were not matched, the pre-workshop scale scores were used as a threshold to determine the initial state of EBP belief and implementation among the nurses. To evaluate the impact of the workshops, the pre-workshop threshold scores of the two scales were compared to the post-workshop scores using a one-sample t-test. The p value for statistical significance was set to be less than 0.05. Analysis of the data revealed eight statistically significant components suggesting the educational sessions did indeed have an impact on the nurses' belief and use of EBP. Table 1 details the results of the most significant findings.

Table 1

Survey Results

"In the past 8 weeks, I have . . . "	Pre (n=16)	Post (n=19)	Significance (p)
Used evidence to change my practice	2.20	2.42	0.036
Shared evidence from a study in the form of a report or presentation to 2 or more colleagues	1.69	2.53	0.002
Shared EBP guidelines with a colleague	1.81	2.37	0.003
Shared evidence from a research study with a client	1.75	2.05	0.027
Accessed the Cochrane database of systemic reviews	1.19	1.42	0.014
Accessed the National Guidelines Clearinghouse	1.25	1.58	0.002
Evaluated a care initiative by collecting client outcome data	1.69	2.32	0.011
Promoted the use of EBP to my colleagues	1.88	2.11	0.036

Practice change requires inquiry, investigation, and dissemination. The outcomes that were found to be significant support these elements of EBP. Nurses reported they were more likely to participate in the first steps, inquiry and investigation, after the education. Nurses indicated on the survey an increase in how often they accessed scholarly databases to search for evidence regarding nursing practice and used this evidence to support practice change. The survey results also suggested that the nurses were more likely to evaluate these changes following implementation. Three of the survey elements demonstrated that following the EBP education, nurses were more likely to share evidence with their colleagues or clients. In addition, the survey showed a significant increase in the nurses' likeliness to promote EBP to their colleagues. Sharing of current evidence is at the essence of practice change; therefore, this outcome may foster further EBP development.

The students also benefited from the experience of sharing their EBP knowledge. In addition to gaining experience with IRB approval, EBP, and research processes, the students developed other professional and leadership skills. Students experienced developing, facilitating, and evaluating educational offerings. They honed their collaboration and communication skills and gained confidence with creating and submitting abstracts. Consequently, they presented the project's successful design and findings at international, national, state, regional and local venues, some of which were peer-reviewed. Because of their extraordinary leadership with the project, faculty nominated the students as Rising Stars in Nursing through Sigma Theta Tau. Remarkably, one cohort of students was featured in Sigma's Reflections on Nursing Leadership online journal (Bell et al., 2019). Involvement and leadership in this project produced a dissemination history

that augmented the student's resumes and was an impressive point of discussion during their interviews for nursing positions.

Limitations and Future Research

Although the project's outcomes were favorable for all the stakeholders including the research consortium, the rural hospital, and the nursing students, some limitations exist. The number of participants was limited by the small numbers of nurses attending the staff meetings. Also, a formal study of participant knowledge, efficacy, and skills with EBP that matched participant pre-test scores with participant post-test scores would have been a more concrete evaluation of effectiveness on the part of the participants.

Opportunities for further studies may stem from this project. For example, future research is recommended to substantiate the effectiveness of student-led EBP initiatives in rural hospitals as a model to promote EBP. In addition, further development of a shared resource model involving regional research consortiums to assist rural hospitals with EBP and nursing research should be explored.

The critical access hospital and the nursing program plan to continue their partnership. The focus will shift to augmenting hospital EBP teams by including students and faculty in the development of PICOT questions, searching for evidence using University databases, and assisting in appraisal and analysis of findings. This continued partnership will enhance future students' appreciation for EBP by allowing them to witness and be a part of the EBP process and provide supportive resources to promote EBP utilization in the critical access hospital.

Implications and Conclusion

Because of the successful stakeholder outcomes, this project is an exemplar for other research consortiums, rural hospitals, and nursing programs. The Research Consortium served as a catalyst for optimizing regional resources in a way that promoted professional growth and development for nurses and future nurses. Collaboration across area hospitals and academic programs may be one solution to fill gaps in resources and expertise. In this case, the use of nursing students as EBP ambassadors was an innovative, effective option to optimize resources and enhance EBP knowledge a critical access hospital with limited educational resources. Rural hospitals may consider partnering with neighboring nursing programs to leverage faculty and student expertise. Furthermore, based on the project, opportunities exist to optimize BSN student knowledge and skills toward projects that may improve the quality of patients.

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