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The Nurse Executive Role in Implementing Evidence Based-Practice (EBP) at the Point of Care

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In partial fulfillment of the requirements for the degree

Doctor of Nursing Practice

2016

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By

Kimberly A. Malcolm

2016

Executive Summary

Scientific knowledge is available to guide point of care practice. Due to reported barriers, however, implementation of evidence-based care is not the norm. Current literature supports that knowledge and beliefs about evidence-based practice are related to the extent nurses engage in evidence-based practice. Additionally, current literature describes the positive effects nurse administrators can have on employment of evidence-based practice. The focus of this student nurse executive's DNP scholarly project, therefore, was to improve use of evidence-based practice by nurses at the point of care using an evidence-based practice benchmark (at the rural Midwestern hospital where employed), specifically beta-blocker administration by providing evidence-based practice education to nurses and nursing leadership working in the intensive care and medical surgical units. Success of the project was measured by noting increased compliance with beta-blocker administration. Success of the project was also determined by a significant positive change in nurses' beliefs in the benefit of evidence-based practice utilization and cultural readiness to employ evidence-based practice within the organization as evidenced by post-education Evidence-Based Practice Beliefs scale and Organization Culture and Readiness for System-wide Integration of EBP scale scores.

The Nurse Executive Role in Implementing EBP at the Point of Care

Introduction

Problem Identification

Melnik and Fineout-Overholt (2015) noted that “although there is an explosion of scientific evidence available to guide clinical practice, the implementation of evidence-based care by health professionals is typically not the norm in many healthcare systems across the United States (U.S.) and globe” (p. 3). In fact, the Institute of Medicine (2001), has indicated that “Americans should be able to count on receiving care that meets their needs and is based on the best scientific knowledge yet there is strong evidence that this frequently is not the case” (p. 1).

Significance of the Problem to Nursing

Barriers continue to impede sustained implementation of evidence-based practice (EBP), including use of EBP by nurses at the point of care. Identified barriers include: poor technical skills; lack of access to relevant resources; lack of experience in critically evaluating and synthesizing research outcomes, particularly statistical analysis; nurses’ attitudes and beliefs (Hauck, Winsett, & Kuric, 2012) and misconceptions about EBP; negative attitudes about using research; lack of support and mentorship; time constraints; lack of basic research knowledge (Davidson & Brown, 2014).

Clinical Needs Assessment

At the rural eighty-three bed community hospital where this DNP student is employed, a specific benchmark for best practice, beta-blocker administration to surgical patients, has not been met by nurses at the point of care. That is 100% of surgical inpatients with a beta-blocker

listed on their home medication reconciliation form should receive the beta-blocker on the day of surgery if they did not take it the night before surgery, and also on the first and second post-operative day. The beta-blocker must be given per intravenous route if the patient is unable to take the medication by mouth.

Problem Statement

To date, the hospital's designated team of quality nurses has monitored this evidence-based benchmark concurrently and intervened in order to meet the benchmark (when nurses at the point of care have failed). As a result, the benchmark for beta-blocker administration is one-hundred percent. In identifying that nurses at the point of care are not meeting this benchmark metric (see Appendix A - tool for measuring compliance) for the delivery of evidence-based care (at least without quality nurses' interventions as able), the quality nurse team has requested assistance from nursing administration. The thinking of the quality nurse team is that even if beta-blocker administration is being missed due to process related issues (i.e., a physician not placing protocol order), if nurses and nursing leadership received formalized training on the EBP that supports beta-blocker administration prior to and following surgery, they would be more apt to ensure that administration occurs (i.e., obtaining needed orders for beta-blocker administration if missing). Knowing that all types of barriers (including process issues) exist in providing point of care EBP, this DNP nurse executive student will help identify and eliminate barriers that are preventing nurses at the point of care from implementing evidence-based care related to beta-blocker administration.

Background and Significance of Problem

EBP is associated with improved patient outcomes and cost-effective care (Thorsteinsson, 2013). Despite the importance of nursing practice based on robust evidence, nurses encounter considerable challenges to achieving and delivering evidence-based practice (Gerrish & Cooke, 2013). In fact, despite the push to implement evidence-based practice, Thorsteinsson (2013) found that nurses' use of evidence in practice is limited. These findings indicate that implementing evidence-based practice is a problem for nursing.

Many studies within a review of the literature provided several possible explanations for the lack of implementation of EBP by nurses at the point of care. In a descriptive study to determine the ability of Icelandic registered nurses (RNs) to provide care based on evidence as measured by their beliefs, perception of skills and access to resources, Thorsteinsson (2013), found that although RNs strongly believed in the value of EBP, they were not confident with their skills related to EBP. Within this study, eighty-two percent of nurses turned to peers to get information rather than a peer-reviewed resource, fifty-four percent of nurses indicated they had received instructions in using electronic databases, and only one-third indicated using those data bases successfully. In fact, the nurses within the study identified "lack of search skills" as their primary barrier. In a study by Dalheim, Harthug, Nilsen, and Nortvedt (2012), the researchers found that EBP skill level was among the most cited barriers to use of EBP.

In another descriptive study by Melnyk, Fineout-Overholt, Feinstein, Small, Wilcox, and Kraus (2004), researchers found that although participant beliefs about EBP were high, knowledge of EBP was relatively low. In addition, researchers noted a relationship between the use of EBP and nurses' knowledge and beliefs about benefits of EBP with findings that supported "that knowledge and beliefs about EBP are related to the extent nurses engage in

EBP” (p. 190). In a more recent descriptive study by Melnyk, Fineout-Overholt, Gallagher-Ford, and Kaplan (2012), researchers found that nurses continue to believe in EBP. Barriers to implementation, however, continue to include: time; organizational culture; lack of EBP knowledge and skills; lack of access to information; and lack of support of EBP by persons in leadership.

Another study cited in the literature was conducted by Davidson and Brown (2014), who explored nurses’ willingness to change practice. As noted previously, this study described the following barriers to changing practice: misconceptions about EBP; negative attitudes about using research; lack of support and mentorship; time constraints; lack of basic research knowledge. In a similar study by Brown, Wickline, Ecoff, and Glaser (2009), lack of time and nursing autonomy were identified as top barriers in providing evidence-based care.

A cross-sectional study done by Brown, Ecoff, Kim, Wickline, Klimpel, and Glaser (2010), had a unique finding in comparison to the afore-mentioned studies. When exploring relationships between perceived barriers to research and implementation of EBP by nurses, researchers found that barriers appear to have minimal influence over the implementation of EBP for most hospital nurses. This, however, was not considered a positive finding as researchers identified that evidence-based research information itself is so far removed from the daily practice of bedside nurses’, there was no strong opinion about what implementation barriers existed.

Regardless of barriers for EBP use, or lack of ability to even identify that barriers exist, nurse administrators can influence the use of evidence-based practice by nurses at the point of care. The American Nurses’ Association (2008), stated that nurse leaders are a “significant force in the success of EBP because they allocate the human and material resources that provide the

context for nurses' work environments and shape the culture for resource use" (p. 21). In a descriptive study by Melnyk, et al. (2012), participants ranked manager support sixth out of sixteen items as the "one thing that would help them implement EBP in their daily practice" (p. 414). The results of this study indicated that leadership support is needed by nurses to perform effectively at the point of care. Belden, Leafman, Nehrenz, and Miller (2012), investigated what relationships exist between rural RNs utilization of EBP and their perception of workplace empowerment. The results of this study uphold the premise that organizational support of innovation, can directly impact nurses' sense of empowerment to use EBP in the workplace. This suggests that nurse administrators amenable to a work environment grounded in EBP, increase nurses' empowerment and use of EBP in the workplace. In another prospective, descriptive, comparative study conducted by Hauck, Winsett, and Kuric (2012), the researchers evaluated the impact of leadership facilitation strategies on nurses' beliefs of the importance and frequency of using evidence in daily nursing practice and perception of organizational readiness. Researchers concluded that transformational nursing leadership drives organizational change because nurse administrators provide vision, human resources, and time that empower nurses to include evidence into practice.

Nurse administrators can be barriers to nurses using EBP at the point of care. For example, in a cross-sectional correlation pilot study by Belden et al. (2012), researchers identified a strong correlation between EBP use and workplace empowerment, noting that nurse administrators who fail to empower nurses in practice may prevent nurses from using or initiating EBP. In a descriptive study by Melnyk et al. (2012), participants listed leadership resistance "as one thing that prevents implementation of EBP" (p. 414). The results of this study reinforced the idea that leadership support is needed by nurses at the point of care to effectively

incorporate evidence-based care into practice. In addition, Wilkinson, Nutley, and Davies (2011) used a case study approach to explore the role of nurse managers (NMs) in EBP implementation. The results of their study found that nurse managers are only passively involved in implementing EBP.

In summary, current literature describes persistent barriers to the use of EBP by nurses at the point of care and the positive effects nurse administrators can have on employment of EBP. For this reason “active engagement of nurse leaders is needed for practice change to occur” (Davidson & Brown, 2014, p. 43). This project, therefore strived to identify “factors at the individual, environmental, organizational, and cultural level that influence facilitation of EBP” in real situations (i.e., beta-blocker administration) at the point-of-care (Dougherty, Harrison, Graham, Vandyk, & Keeping-Burke, 2013, p.129).

Project Implementation and Measures

Theoretical Framework

To evaluate the transition to effective use of EBP at the point of care, Everett Rogers’ (2003), theory of diffusion of innovations was chosen to guide this project. “Diffusion of innovations is a kind of universal process for social change” (Rogers, 2003, p. xvi). More specifically, diffusion is “the process in which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003, p. 5).

Innovation is defined as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers, 2003, p. 12). The rate of adoption of innovation is influenced by individual perception. The characteristics include: “relative advantage or perception that the innovation is better than the preceding idea; compatibility with existing values, past experiences, and needs of potential adopters; complexity or degree of perceived

difficulty to understand and use; trialability or ability to experiment with on a limited basis; observability or visibility of results to others” (Rogers, 2003, p. 16). These five qualities are the most important characteristics in explaining the rate of adoption of an innovation.

In this theory, communication is defined as the “process by which participants create and share information with one another in order to reach a mutual understanding” (Rogers, 2003, p. 5) and diffusion is described as a “particular type of communication in which the message content that is exchanged is concerned with a new idea” (Rogers, 2003, p. 18). When an innovation is being introduced, the person who has knowledge about the innovation communicates the information to another who does not have the knowledge. The communication channel may take various forms: word of mouth; various forms of media; the written word.

Time is a factor in the diffusion process. Time relates to the innovation-decision process as the individual passes through the phases of having first knowledge to adoption of the innovation. Rogers (2003) listed five steps of the innovation-decision process: “Knowledge; persuasion; decision; implementation and confirmation” (p. 20). Time is also related to the individual’s innovativeness or how early or late the individual adopts the innovation and is associated with the “relative speed with which an innovation is adopted by members of a social system” (Rogers, 2003, p. 23).

Rogers (2003) defined a social system as a “set of interrelated units that are engaged in joint problem solving to accomplish a common goal” (p. 23). The social systems’ structure affects diffusion thus facilitating or impeding innovation. Finally, Rogers noted that individuals being introduced to an innovation do not adopt the innovation at the same rate. Rogers (2003) proposed five adopter categories that describe individuals based on when they first begin using

the innovation. The categories include: Innovators are “venturesome” (p. 282) and have an interest in new ideas; early adopters respect how new ideas can lead to change and adopt innovation early-on; early majority adopters “deliberate for some time before completely adopting a new idea” (p. 284); late majority adopters take a “skeptical and cautious” approach to innovation (p. 284); laggards have traditional viewpoints and adopt innovation based on the past if at all and are often suspicious of innovations and change agents.

Having just defined Rogers’ “diffusion of innovations” theory, one can see how this doctoral student will take the idea of actually implementing EBP at the point of care (after removing barriers) by communicating EBP protocols over time to nurses at the point of care in order to establish optimal care. The discussion of the project purpose, method and target populations that follow, further scaffold this EBP implementation project.

Project Purpose

The purpose of this project was to identify and eliminate barriers that are preventing nurses from using EBP related to beta-blocker administration at the point of care in the rural hospital where this nurse executive student is employed. Therefore, the first objective was to further evaluate point of care nurses’ performance related to the specific EBP benchmark (beta-blocker administration) before and after a planned EBP education intervention. The second objective was to develop and implement an education intervention to facilitate the use of beta-blocker EBP by nurses at the point of care based on information from the literature. The third objective was to gauge nurses’ perceptions regarding whether they believe the hospital is ready to employ EBP at the point of care and what perceived barriers exist in routinely implementing EBP.

Methods

This descriptive comparative project used quantitative data to determine the current state of beta-blocker EBP implementation by nurses at the point of care (using the tool identified in Appendix A). Initially, the administration of beta-blockers was measured for a 31-day period preceding EBP education intervention. EBP administration of beta-blockers was then measured again for a 59-day period after the EBP education intervention. To measure the difference between nurses' use of EBP at the point of care before and after EBP education intervention, a Two-Sample t-Test was used to determine whether the means of two independent groups differ (Minitab, 2015).

The hospital designated the planned EBP education intervention as a hospital project. The planned classroom-based EBP education was offered 12 times over a one-month period, lasted four hours in length and attendance was mandated for all intensive care and medical surgical nursing staff and nursing leadership of these units, however, participation in the surveys was voluntary. Although the EBP educational training was required, incentives were continuing education hours that were granted through the hospital's continuing education provider unit. The EBP education session covered the following content:

- What is EBP
- When and how to use electronic and other resources
- Review order sets and EBP guidelines for surgery patients who are prescribed beta-blockers Identify the point of care nurses' role in meeting the benchmarks and what intervening practice could be initiated when EBP criteria is found to be noncompliant
- Identify nurses who would be interested in becoming EBP mentors
- What nurse leaders can do to develop a culture for EBP

The following instruments were used before and after the EBP education intervention: 1) The Melnyk and Fineout-Overholt Evidence-Based Practice Beliefs (EBP-B) scale (see Appendix B) was used to assess nurses' beliefs regarding the difficulty in using and understanding EBP and assessed nurses' confidence in using EBP (Melnik and Fineout-Overholt, 2015, p. 597) and was administered on the same day of the EBP education intervention (before and after); 2) The Fineout-Overholt and Melnyk Organization Culture and Readiness for System-wide Integration of EBP (OCRSIEP) scale (see Appendix C) was used to assess nurses' perceptions of hospital readiness for EBP and was completed prior to the EBP education intervention and within one week after the education intervention (Melnik and Fineout-Overholt, 2015, p. 594). Permission to use the scales was obtained from the authors (see Appendix D). Each of the scales took fifteen minutes to complete. To measure the impact the EBP education had on nurses' beliefs and confidence in using EBP and nurses' perceptions of hospital readiness for EBP, the paired t-test calculated the difference within each before-and-after pair of measurements, determines the mean of these changes, and reports whether this mean of the differences is statistically significant (Minitab, 2015).

Target Population and Sample

A purposive and convenience sampling technique was used for this project so that nurses within the organization who had the potential to impact the beta-blocker benchmark would be invited to participate in the study. The target population consisted of nurses and nursing leadership working in the intensive care and medical surgical units of the hospital. The nurses in those departments have the potential to receive surgical inpatients with a beta-blocker on their home medication reconciliation form and have the potential to implement beta-blocker EBP.. Due to the limited number of nurses in those areas, a convenience sample was used so that all

nurses and nursing leadership working in the intensive care and medical surgical units of the hospital could participate. Thus, inclusion criteria were nurses that worked in the designated areas and nursing leadership responsible for the operation of these units. In addition, nursing leadership from emergency services, peri-operative services, and the mother infant unit were invited to attend the EBP education intervention as able. The target sample size for the study was 50 participants. The convenience and purposive sample of fifty participants was a substantial representation of the full-time, part-time, and contingent nurses in the Medical Surgical and ICU units. The larger the sample size is, the greater the confidence that the survey results are representative of the population (Gordis, 2014).

Tools and Instruments

A quantitative data collection tool developed by this nurse executive student in conjunction with quality team nurses (see Appendix A) was used to obtain data on the current state of effective implementation of beta-blocker EBP by nurses at the point of care. This tool measured the ratio of failed opportunities to implement beta-blocker EBP to the total number of at risk patients and was an adaptation of proven ways to measure frequency and ratio (Sylvia, 2014). As previously indicated, a Two-Sample t-test was used to measure the difference between nurses' use of EBP at the point of care before and after EBP education intervention.

In addition and as previously noted, Melnyk and Fineout-Overholt's (2008) Evidence-Based Practice Beliefs (EBP-B) scale was used to assess nurses' beliefs regarding the difficulty in using and understanding EBP and assess nurses' confidence in using EBP (see Appendix B) before and immediately after the EBP education intervention. Validity and reliability of this scale was established with Cronbach alpha and Spearman-Brown reliability coefficients that exceeded 0.85 (Melnik & Fineout-Overholt, 2015). The Organization Culture and Readiness for

System-wide Integration of EBP (OCRSIEP) scale developed by Fineout-Overholt and Melnyk was used to assess nurses' perceptions of hospital readiness for EBP (see Appendix C) before and within one week after the EBP education intervention. Reliability of this scale has been established with Cronbach measurements of $> .85$ across various samples (Melnik & Fineout-Overholt, 2015).

Tools to Analyze Data

Descriptive and inferential statistics were used to analyze the data. For example, comparative results of before and after-education EBP-B and OCRSIEP scales (see Appendices B and C) were reported. In addition, beta-blocker benchmark measurements were used to compare before and after education intervention benchmarks (see Appendix A).

Success of the project was measured by increased compliance in administering beta-blockers per EBP protocols. Success was also measured using scale data (improvement in before and after EBP-B and OCRSIEP scores) and the ability of this student to meet project plan timelines.

Timeline

A timeline for the project was developed (see Appendix E) as a guide for the phases of the project: initiation; planning; assessment; monitoring; evaluation; close of the project. The checkmarks indicate the expected months each item would be completed. The checkmarks were replaced with actual dates as the tasks were completed.

Budget

The project budget (see Appendix F), represented direct costs such as equipment and supplies and allocated costs such as salaries. There were no indirect costs that relate to the day-to-day operation of the organization and no anticipated revenues associated with this project

(Moran, Burson, and Conrad, 2014). The budget for the project was \$6600 and was on target and included: average hourly rate of participants; survey costs; EBP webinar; and copies.

Because the project was adopted by the hospital, the quality nurse data retrieval time and DNP nurse executive student time were not calculated.

Design

The study was conducted using a descriptive comparative design using quantitative data to compare nurses' performance of beta-blocker implementation at the point of care before and after the education intervention. The four-hour education intervention included: what is EBP; when and how to use electronic and other resources; reviewing order sets and EBP guidelines for surgery patients who are prescribed beta-blockers; identify the point of care nurses' role in meeting the benchmarks and what intervening practice could be initiated when EBP criteria is found to be noncompliant; identify nurses who would be interested in becoming EBP mentors; what nurse leaders can do to develop a culture for EBP. The education intervention was mandatory for all nurses in the ICU and medical surgical units. The course was offered twelve times over a one month period. Nurses attending the education intervention were asked to voluntarily complete the informed consent (see Appendix G) and to complete two surveys: the 16 – question Evidence-Based Practice Beliefs (EBP-B) scale was completed prior to and after the education intervention; the 19 – question Organization Culture and Readiness for System-wide Integration of EBP (OCSIEP) scale was completed prior to the education intervention and after the last education intervention was completed. Permission to use the scales was obtained from the authors (see Appendix D).

Oral and written instructions for the project were provided to each participant. The participants were assured that no data would be identified with individual participants.

Participants in the mandatory education intervention were awarded four contact hours and hours were awarded regardless of completion of the voluntary surveys.

Protection of Human Subjects

Approval for this project was obtained through the Institutional Review Board (IRB) at Otterbein University. The hospital where the project was conducted accepted the IRB from Otterbein University. Because the research was conducted in established or commonly accepted educational settings, involving normal educational practices such as research on regular and special education strategies and the research involved survey or interview procedures except where responses are recorded in such a manner that the human subjects can be identified, directly or through identifiers linked to the subjects this project qualified for exemption. The IRB approval included an informed consent and oral and written instructions. All data were kept confidential.

Analysis and Outcome Evaluation

Data collection beta-blocker benchmark

Three sets of data were collected for this project. The first set of data was collected to determine the effect of the education intervention on nurses' performance of administering beta-blockers to surgical patients according to EBP (the night before or day of surgery and each day on the first and second post-operative day). Data were abstracted concurrently from surgical inpatient electronic records with beta-blockers noted on the home medication reconciliation form for a 31-day period pre-education intervention (nine patients) and for a 59-day period post-education intervention (fifteen patients).

Data analysis beta-blocker benchmark

A total of nine, surgical inpatient electronic medical records met the criteria to be included in the data abstraction before the education intervention (had a beta-blocker on the home medication reconciliation form). A review of this data revealed that nurses at the point of care failed 56% and succeeded 44% of the time to ensure that surgical inpatients with a beta-blocker listed on the home medication reconciliation received a beta-blocker the night before or day of surgery and each day on the first and second post-operative day. A total of fifteen surgical inpatient electronic medical records met the same criteria to be included in the data abstraction post-education intervention. A review of the data after EBP education showed that nurses at the point of care failed 20% and succeeded 80% of the time to ensure that surgical inpatients meeting the criteria received a beta-blocker the night before or day of surgery and each day on the first and second post-operative day. When comparing the before and after education intervention benchmark performance, there was a 64% reduction in the failure to administer beta-blockers and an 82% increase in the successful administration of beta-blockers per EBP (see Table 1).

Table 1

Number of surgical inpatients with beta-blockers noted on home medication reconciliation forms (receiving a beta-blocker the night before or day of surgery and on the first and second post-operative day)

Opportunities	Pre-education Intervention N = 9	Post-education Intervention N = 15	Percent Change
Opportunities (Failures)	N = 5 % Failure: 56%	N = 3 % Failure: 20%	64% (Reduction)
Non-opportunities (Successes)	N = 4 % Success: 44%	N = 12 % Success: 80%	82% (Increase)

Note. *p > 0.05

Data Analysis Two-Sample t-Test

A more in depth analysis of the data using Minitab showed improvement in point of care nurses' performance in administering beta-blockers according to EBP as can be seen in the before and after education data distribution graphs. However, since this project had smaller sample sizes, the analysis cannot conclusively indicate a significant improvement. The expectation would be that as the sample size increased, the ability to conclusively determine significance would increase (see Figure 1).

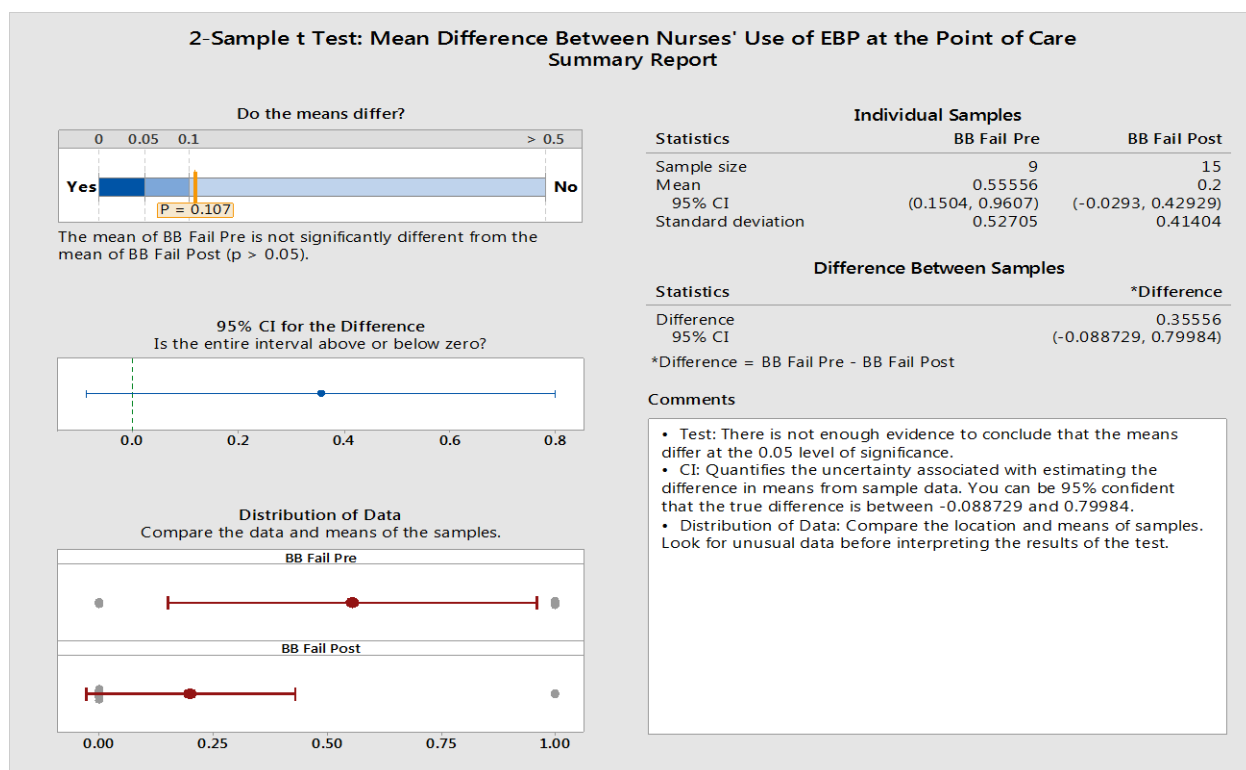


Figure 1: Small sample sizes led to evidence insufficient to conclude significance.

Data Collection EBP-B and OCRSIEP Scale surveys

The sixteen question Evidence-Based Practice Beliefs (EBP-B) 1-5 Likert scale (1-Strongly disagree; 2-Disagree; 3-Neither agree or disagree; 4-Agree; 5-Strongly agree) was used to assess nurses' beliefs regarding the difficulty in using and understanding EBP and assess

nurses' confidence in using EBP (see Appendix B). The twenty-five question Organization Culture and Readiness for System-wide Integration of EBP (OCRSIEP) 1-5 Likert scale (1-None at all; 2- A little; 3 –Somewhat; 4-Moderately; 5-Very much) was used to assess nurses' perceptions of hospital readiness for EBP. Participants were given the EBP and OCRSIEP surveys before and after education intervention. The EBP survey was given immediately before and after the education intervention. The OCRSIEP survey was given immediately before the education session and within one week of the education intervention. Prior to completing the surveys, participants signed a consent form to voluntarily complete the surveys.

Data Analysis EBP-B and OCRSIEP Scale Surveys

Fifty nurses from the Medical Surgical and ICU units were recruited to complete the surveys. All fifty nurses completed the surveys and answered all questions. The demographics are summarized (see Table 2).

Table 2

Demographics

Professional Designation	ICU/CPU	Medical Surgical
	N = 20	N= 30
RN	N = 20	N = 29
LPN	N = 0	N = 1

Note. n=50

Each participant was assigned an identification number. The participant's identification number and responses were entered into an excel spreadsheet and Minitab. Excel was used to compare differences and percent of change before and after education intervention. Minitab was used to calculate and compare the overall before and after education weighted averages for each scale. Paired t-tests were used to evaluate each pair of scores per question on each scale (before

and after education intervention) to determine if the difference between scores was meaningful and significant toward a positive change.

EBP-B Scale Survey Results

The survey results for the EBP-B scale had a pre-education intervention Likert scale average of 3.5 and a post-education intervention Likert scale average of 4.19 (increased by 19.7%). EBP-B survey results (see Table 3 in Appendix H) indicated that the education intervention positively impacted nurses' beliefs regarding the difficulty in using and understanding EBP and assessing nurses' confidence in using EBP as evidenced by an increase in nurses' beliefs that:

- EBP is the best clinical care for the patient (13%)
- EBP guidelines improve clinical care (15%)
- The care they deliver is evidence-based (20%)
- Are clear about the steps of EBP post-education intervention (49.3%)
- Know how to implement EBP sufficiently enough to make practice changes (43.7%)
- Can overcome barriers in implementing EBP (17%)
- Can implement EBP in a time efficient manner (17%)
- How to search for best evidence to answer questions in a time efficient way (24%)
- Nurses knowledge about how to access the best resources in order to implement EBP (34%)
- How to measure the outcomes of clinical care (29%)
- Implement EBP where they work (31%)
- Led to a reduction in nurses' beliefs that EBP takes too much time (10%)
- Led to a reduction in perceived difficulty (18%).

The results indicated that the percent of change was significant, meaning that the education intervention positively impacted nurses' beliefs regarding the degree of difficulty in using and clarity of understanding EBP and nurses' confidence in using EBP. The paired t-test analysis reflects a 95% confidence level which means if this project were to be replicated, the outcome would be similar. When analyzing a comparison of Likert scale results, the paired t-test utilizes the difference between before and after scores. To indicate improvement on a Likert scale, the post-education intervention values should be higher, meaning a positive difference will show as a positive data point. Minitab also considered the distribution of before and after data by displaying a histogram of the differences of data. The values on the histogram were equal to or greater than zero indicating the post-education intervention scores were higher than the pre-education intervention scores (up to one point on the Likert scale), (see figure 2).

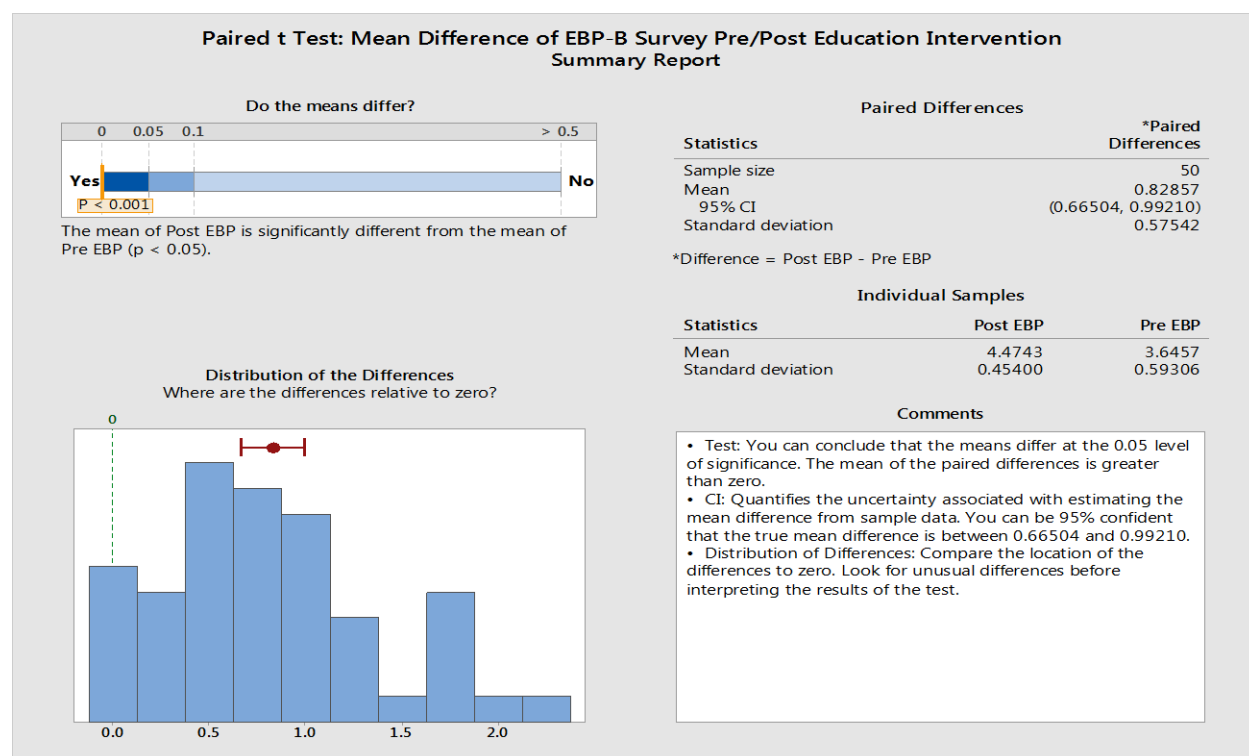


Figure 2: Mean difference scores were significant between before and after education intervention scores.

OCRSIEP Scale Survey Results

The survey results for the OCRSIEP scale had a pre-education intervention Likert scale average of 2.86 and a post-education intervention Likert scale average of 4.12 (increased by 44%). OCRSIEP survey results indicated that the education intervention positively impacted (increased) nurses' perceptions that EBP is:

- Central to the mission and philosophy of the organization improved (31%)
- Practiced in the institution (23%)
- The nursing staff is committed to EBP (29%)
- The physicians are committed to EBP (27%)
- Administration is committed to EBP (30%)
- Critical masses of nurses have strong EBP knowledge and skills (38%)
- APNs are mentors for staff nurses and other APNs (62%)
- Practitioners are modeling EBP in the clinical setting (49%)
- There are EBP champions (34-66%)
- Fiscal resources are used to support EBP (59%)
- Nurses have proficient computer skills (17%)
- Have access to quality computers and electronic databases (increased by 60%)
- Decisions are generated from direct-care providers (37%); Administrators (20%); physicians (23%)
- Cultural and readiness for implementation of EBP system-wide (45%); with significant movement noted in the last six months (increased by 60%).

There were findings that were inconsistent with the structure of the organization. For example, nurses indicated improvement in perceptions that there are nurse scientists to generate

evidence (increased by 49%) when this hospital does not have nurse scientists on staff. In addition, the survey questions regarding a librarian having EBP knowledge and skills (increased by 147%); and the librarian is used to search for evidence (increased by 147%) were answered by participants from the perspective that they considered this nurse executive DNP student the librarian for the organization (see Table 4 in Appendix I).

The OCRSIEP results were consistent with the EBP-B results which indicated that the percent of change was significant, meaning that the education intervention positively impacted nurses' perceptions of hospital readiness for EBP. The paired t-test analysis confirmed a 95% confidence level that if this project were replicated, the outcome would be similar. Like the EBP-B survey findings, the OCRSIEP data in Minitab was evaluated by focusing on differences between before and after scores. This means that a positive difference indicates a positive improvement in before and after education Likert scores. The distribution of differences between before and after education data displayed on the histogram shows a shift of the majority of the post education data moving from two to four on a Likert scale (see figure 3).

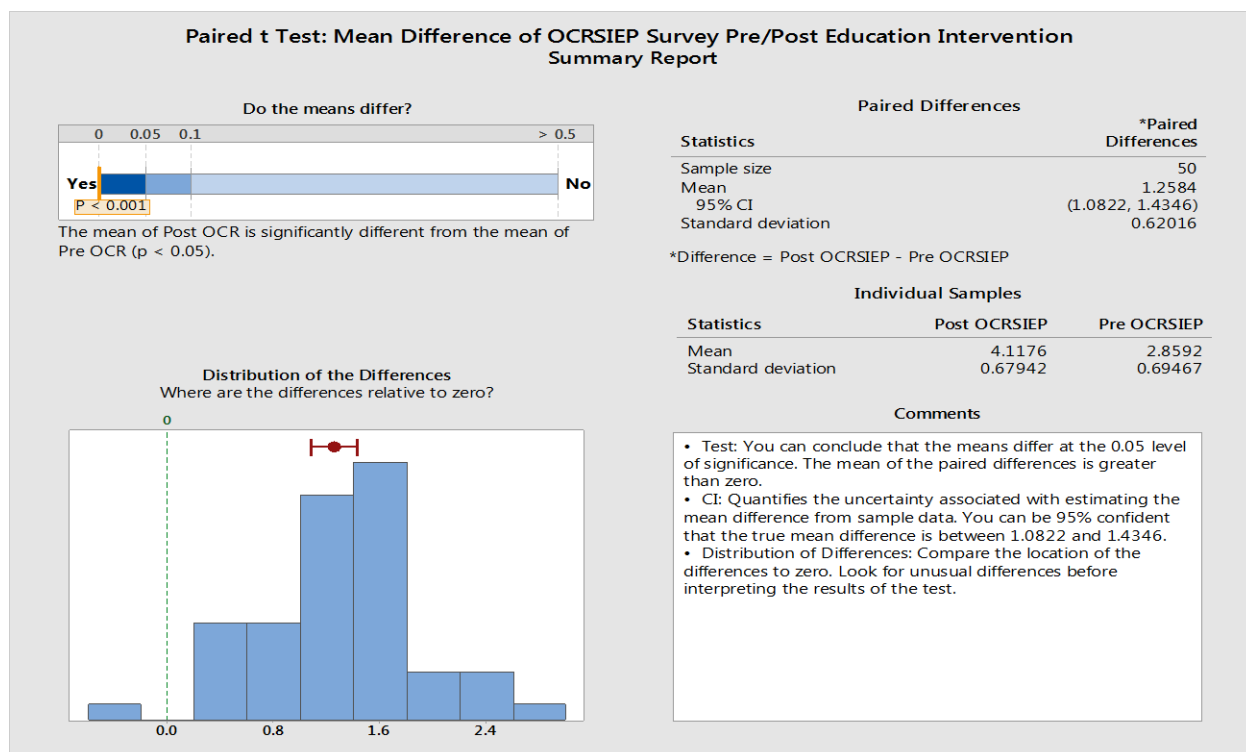


Figure 3: Mean difference scores were significant between before and after education intervention scores.

Limitations

Some of the study limitations were anticipated and included: A convenience and purposive sample does not avoid “selection bias as would a random sample” (Glantz, 2012, p. 12); sample size was adequate for the study in this organization but was not adequate to generalize the findings to the nursing population as a whole. Also the sample of nurses on the Medical Surgical and ICU units did not represent the whole population from these areas. Nursing leadership did not attend the education intervention, even though the nursing leaders of these departments were asked by the Chief Nursing Officer to assist with this hospital project by facilitating staff member and their own attendance at the EBP education intervention. According to Hauck, Winsett, and Kuric (2012), “facilitating the enculturation of EBP in the hospital setting is a leadership responsibility” however, leadership support for EBP continues to be a barrier to

the use of EBP (p. 665). In addition, using the EBP-B and OCSIEP scales presented an unanticipated limitation in that the scale options did not include “does not apply” or “I don’t know” option. Participants were forced to choose an answer that did not apply to the organization.

Conclusion and Recommendations

Financial Implications

Healthcare reform is driving transformational change in reimbursement strategies from volume-based to a value-based purchasing (VBP) paradigm. The measure of reimbursement is being determined by patient outcomes versus individual fees for services rendered. Healthcare costs in the United States (U.S.) are about \$2.6 trillion annually, however the “U.S. ranks poorly among Organization for Economic Co-Operation and Development (OECD) countries in terms of outcomes achieved per dollar spent” (Venkataraman, 2015, p.38). To impact health care outcomes, the Centers of Medicare and Medicaid Services (CMS) linked the Medicare payment system to improved health care quality performance. “The VBP program gives the provider incentives to eliminate the occurrence of adverse events, adopt evidence-based care standards, and re-engineer hospital processes to improve the patient experience” (Lawler & Floyd, 2013, p.338).

The premise of the VPM program is that a portion of current reimbursement funds are withheld and may be “earned” back in the future based on performance on clinical process of care measures and patient experiential care scores. The clinical and experiential measures that VBP will use and the time frame for the measures are determined. Based on the weighted score of the measure and performance over the time frame, “incentive payments are rewarded on relative achievement (performance compared to similar hospitals nationwide), or degree of

improvement, whichever is greater” (Lawler & Floyd, 2013, p. 338). There was a 1% withhold in 2013 with subsequent year increasing by 0.25% and will cap out at 2% by 2017. High-performing organizations have the opportunity to qualify for additional reimbursement based on relative achievement.

The performance measures (benchmarks) include both clinical (conformance) and experiential quality outcomes. Clinical outcomes may include; mortality rates, readmission rates, acute myocardial infarction, pneumonia, and surgical care improvement project (SCIP) measures. The EBP benchmark being used for this project is a performance measure for the SCIP measure set. The performance measure is described as surgery patients on beta-blocker therapy during the perioperative period (on home medication reconciliation form) must receive the beta-blocker on the day of surgery if they did not take it the night before surgery and on the first or second post-operative day unless reasons for non-administration are documented (Specifications Manual for National Hospital Inpatient Quality Measure, 2015). The beta-blocker may be given per intravenous route if the patient is unable to take the medication by mouth. Calculation of performance is done by dividing the numerator which represents the number of surgery patients on beta-blocker therapy prior to arrival who received beta-blocker during the perioperative period by the denominator which represents all surgery patients on beta-blocker therapy in the perioperative period.

The implications for conformance to the benchmark extend beyond the financial reward. In a study by Shammash, Trost, Gold, Berlin, Golden, and Kimmel (2001) of 140 vascular surgery patients receiving beta-blockers in the perioperative period, 8 patients had the beta-blocker discontinued post-operatively resulting in a 50% mortality rate for those patients. Discontinuation was also associated with increased cardiovascular mortality and myocardial

infarction. In a study by Kwon, et al. (2012) it was determined that “beta-blocker withdrawal was associated with significantly higher rates of mortality, cardiac complications, and combined adverse events” (p. 8).

Adverse events may lead to delayed discharges and readmissions within thirty and extending to ninety days. Continuation of beta-blockers post-operatively may lead to decrease healthcare costs by preventing combined adverse events and reducing mortality rates. Hospital readmission rates contribute significantly to avoidable healthcare cost. Kirkham, Clark, Paynter, Lewis, and Duncan (2014) noted that “many re-hospitalizations occur soon after discharge, with 20% of Medicare beneficiaries being readmitted within thirty days of discharge and 34% readmitted within ninety days.” Graham, Wilker, Howell, Davis, and Marcantonio (2015) indicated that “one in five Medicare beneficiaries who have been discharged from a hospital will be readmitted within thirty days costing the United States (U.S.) health care system \$17.6 billion per year.” All of this to say that nurses at the point of care positively impact patient outcomes, occurrence of adverse events, and mortality by ensuring continued delivery of beta-blocker therapy in the post-operative period based on EBP guidelines.

Education Intervention Implications

The education intervention proved to be a facilitator to the use of EBP by nurses at the point-of-care. Nurses’ performance of the EBP beta-blocker benchmark improved from 44-80% post education intervention (increased by 82%). The purpose of this DNP project to reduce barriers to the use of EBP was achieved as evidenced by the change (improvement) of before and after education point of care nurses’ beta-blocker benchmark performance. Nurses’ post education intervention scores on the EBP-B scale increased by 43.7%, indicating there was significant positive change in their confidence of knowing how to implement EBP sufficiently

enough to make practice changes at the point of care. The nurses' post education perceptions scores on the OCRSIEP scale increased by 45% indicating there was significant positive change about cultural readiness for system-wide implementation of EBP.

Summary

EBP is the expected standard for providing care to patients. Removing EBP barriers for nurses at the point of care and infusing a system-wide EBP culture leads to quality of care and financial benefits to patients and to the healthcare organization. Organizational EBP context has emerged as "critical to success" for implementation and sustainability of EBP (Gallagher-Ford, 2014, p. 72). EBP context is defined as "the specific environment in which implementation, utilization, and creation of evidence may take place" and includes three characteristics: organizational culture; leadership; measurement or evaluation (Gallagher-Ford, 2014, p. 72). Although there was improvement in the beta-blocker benchmark and assessment scores for the EBP-B and OCRSIEP scales before and after education intervention, further projects should be conducted to investigate the direct impact that system-wide, organizational and department level leadership has on EBP context and in turn, the effect on sustainability of EBP practice by nurses at the point of care. Leadership facilitation and support is vital to sustain the use of EBP in healthcare organizations. Thus, continued leadership initiatives (similar to the DNP nurse executive project) are needed to reduce barriers and promote continued use of EBP by nurses at the point of care.

References

- American Nurses Association (2008). *Nursing administration: Scope and standards of practice*. Silver Spring MD: Nurses-book.org.
- Beldon, C., Leaman, J., Nehrenz, G., & Miller, P. (2012). The effect of evidence-based practice on workplace empowerment of rural registered nurses. *Journal of Rural Nursing and Health Care*, 12(2), 64-76.
- Brown, C., Ecoff, L., Kim, S., Wickline, M., Rose, B., Klimpel, K., & Glaser, D. (2010). Multi-institutional study of barriers to research utilization and evidence-based practice among hospital nurses. *Journal of Clinical Nursing*, 19, 1944-1951. Doi:10.1111/j.1365-2702.2009.03184.x
- Brown, C., Wickline, M., Ecoff, L. & Glaser, D. (2009). Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center. *Journal of Advanced Nursing*, 65(2), 371–381.
doi: 10.1111/j.1365-2648.2008.04878.x
- Dalheim, A., Harthug, S., Nilsen, R., & Nortvedt, M. (2012). Factors influencing the development of evidence-based practice among nurses: A self-report survey. *BMC Health Services Research*, 12, 367. doi: 10.1186/1472-6963-12-367. Retrieved from <http://www.biomedcentral.com/content/pdf/1472-6963-12-367.pdf>
- Davidson, J., & Brown, C. (2014). Evaluation of nurse engagement in evidence-based practice. *AACN Advanced Critical Care*, 25(1), 43-55.

- Dougherty, E., Harrison, M., Graham, I., Vandyk, A., and Keeping-Burke, L. (2013). Turning knowledge into action at the point-of-care: The collective experience of nurses facilitating the implementation of evidence-based practice. *Worldviews on Evidence-Based Practice*, 10(3), 129-139. doi: 10.1111/wvn.12009
- Gallagher-Ford, L. (2014). Implementing and sustaining EBP in real world health settings: A leader's role in creating a strong context for EBP. *Worldviews on Evidence-Based Nursing*, 11(1), 72-74. doi: 10.1111/wvn.12022
- Gerrish, K., & Cooke, J. (2013). Factors influencing evidence-based practice among community nurses. *Journal of Community Nursing*, 27(4), 98-101.
- Glantz, S. (2012). *Primer of Biostatistics* (7th ed.). New York, NY: McGraw-Hill.
- Gordis, L. (2014). *Epidemiology* (5th ed.). Philadelphia, PA: Elsevier Saunders.
- Graham, K., Wilker, E., Howell, M., Davis, & Marcantonio, E. (2015). Differences among early and late readmissions among patients. *American College of Physicians*, 162(11), 741-749.
- Hauck, S., Winsett, R., & Kuric, J. (2012). Leadership facilitation strategies to establish evidence-based practice in an acute care hospital. *Journal of Advanced Nursing*, 69(3), 664-674. doi: 10.1111/j.1365-2648.2012.06053.x
- Institute of Medicine (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, D.C: National Academy Press
- Kirkham, S., Clark, B., Paynter, J., Lewis, G., & Duncan, I. (2014). The effect of a collaborative pharmacist-hospital care transition program on the likelihood of 30-day readmission. *American Journal of Health System Pharmacists*, 71, 739-745. doi: 10.2146/ajhp130457

- Kwon S, Thompson R, Florence M, Maier R, McIntyre L, Rogers T, Farrohkhi E, Whiteford M, Flum D; Surgical Care and Outcomes Assessment Program (SCOAP) Collaborative (2012). β -blocker continuation after noncardiac surgery: A report from the surgical care and outcomes assessment program. *Archives of Surgery Journal* 147(5), 467-73. doi: 10.1001/archsurg.2011.1698.
- Lawler, S., & Floyd, B. (2013). Laying a foundation for success in the Medicare hospital value-based purchasing program. *North Carolina Medical Journal*, 74(4), 338-342.
- Melnyk, B. & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing & healthcare: A guide to best practice*, 3rd ed. Philadelphia, PA: Wolters Kluwer.
- Melnyk, B., Fineout-Overholt, E., Feinstein, N., Small, L., Wilcox, L., & Kraus, R. (2004). Nurses' perceived knowledge, beliefs, skills, and needs regarding evidence-based practice: Implications for accelerating the paradigm shift. *Worldviews on Evidence-Based Nursing*, 1(3), 185-193.
- Melnyk, B., Fineout-Overholt, E., Gallagher-Ford, L., & Kaplan, L. (2012). The state of evidence-based practice in US Nurses: Critical implications for nurse leaders and educators. *Journal of Nursing Administration*, 42(9), 410-417.
doi: 10.1097/NNA.0b013e3182664e0a
- Minitab (2015). Why should I use a 2 sample t test? Retrieved from:
<http://support.minitab.com/en-us/minitab/17/topic-library/basic-statistics-and-graphs/hypothesis-tests/tests-of-means/why-use-2-sample-t/>
- Moran, K., Burson, R., & Conrad, D. (2014). *The doctor of nursing practice scholarly project: A framework for success*. Burlington, MA: Jones & Bartlett Learning.
- Rogers, E. (2003). *Diffusion of Innovations*, (5th ed.). New York, NY: The Free Press.

Shammash, J., Trost J., Gold, J., Berlin, J., Golden M., Kimmel, S. (2001). Perioperative beta-blocker withdrawal and mortality in vascular surgical patients. *American Heart Journal*, 141(1), 148-153.

Specifications Manual for National Inpatient Quality Measures (2015). SCIP-Card-2-1.

Retrieved from:

http://www.jointcommission.org/specifications_manual_for_national_hospital_inpatient_quality_measures.aspx

Sylvia, M. (2014). Basic statistical concepts and power analysis. In M. Sylvia & M. Terhaar (Eds.), *Clinical analytics and data management for the DNP* (pp. 7-20). New York, NY: Springer Publishing.

Thorsteinsson, H. (2013). Icelandic nurses' beliefs, skills, and resources associated with evidence-based practice and related factors: A national survey. *Worldviews on Evidence-Based Nursing*, 10(2), 116-126. doi:10.1111/j.1741-6787.2012.00260.x

Venkataraman, S. (2015). Cost-quality tradeoff in healthcare: Does it affect patient experience? *Quality Management Journal*, 22(3), 338-342.

Wilkinson, J., Nutley, S., & Davies, H. (2011). An exploration of the roles of nurse managers in evidence-based practice implementation. *Worldviews on Evidence-Based Nursing*, 8(4), 236-246. doi: 10.1111/j.1741-6787.2011.00225x

Data Collection Tool

[illegible]

Appendix B

Evidence-Based Beliefs Scale (EBP-B) Scale



Below are 16 statements about evidence-based practice (EBP). Please circle the number that best describes your agreement or disagreement with each statement. THERE ARE NO RIGHT OR WRONG ANSWERS.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I believe that EBP results in the best clinical care for patients ¹ .	1	2	3	4	5
2. I am clear about the steps of EBP.	1	2	3	4	5
3. I am sure that I can implement EBP.	1	2	3	4	5
4. I believe that critically appraising evidence is an important step in the EBP process.	1	2	3	4	5
5. I am sure that evidence-based guidelines can improve clinical care.	1	2	3	4	5
6. I believe that I can search for the best evidence to answer clinical questions in a time efficient way.	1	2	3	4	5
7. I believe that I can overcome barriers in implementing EBP.	1	2	3	4	5
8. I am sure that I can implement EBP in a time efficient way.	1	2	3	4	5
9. I am sure that implementing EBP will improve the care that I deliver to my patients.	1	2	3	4	5
10. I am sure about how to measure the outcomes of clinical care.	1	2	3	4	5
11. I believe that EBP takes too much time.	1	2	3	4	5
12. I am sure that I can access the best resources in order to implement EBP.	1	2	3	4	5
13. I believe EBP is difficult.	1	2	3	4	5
14. I know how to implement EBP sufficiently enough to make practice changes.	1	2	3	4	5
15. I am confident about my ability to implement EBP where I work.	1	2	3	4	5
16. I believe the care that I deliver is evidence-based.	1	2	3	4	5

¹ patients can be an individual or family, a community, or system

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Appendix C

Organizational Culture & Readiness for System Wide

Integration of Evidence-Based Practice (OCSIEP) Survey



**Fineout-Overholt
& Melnyk**

**Organizational Culture &
Readiness for System Wide
Integration of Evidence- based
Practice Survey**

Below are 19 questions about evidence-based practice (EBP). Please consider the culture of your organization and its readiness for system wide implementation of EBP and indicate which answer best describes your response to each question. There are no right or wrong answers.

Item	None at All	A Little	Somewhat	Moderately	Very Much
1. To what extent is EBP clearly described as central to the mission and philosophy of your institution?	1	2	3	4	5
2. To what extent do you believe that EBP is practiced in your organization?	1	2	3	4	5
3. To what extent is the nursing staff with whom you work committed to EBP?	1	2	3	4	5
4. To what extent is the physician team with whom you work committed to EBP?	1	2	3	4	5
5. To what extent are there administrators within your organization committed to EBP (i.e., have planned for resources and support [e.g., time] to initiate EBP)?	1	2	3	4	5
6. In your organization, to what extent is there a critical mass of nurses who have strong EBP knowledge and skills?	1	2	3	4	5
7. To what extent are there nurse scientists (doctorally prepared researchers) in your organization to assist in generation of evidence when it does not exist?	1	2	3	4	5
8. In your organization, to what extent are there Advanced Practiced Nurses who are EBP mentors for staff nurses as well as other APNs?	1	2	3	4	5
9. To what extent do practitioners model EBP in their clinical settings?	1	2	3	4	5
10. To what extent do staff nurses have access to quality computers and access to electronic databases for searching for best evidence?	1	2	3	4	5
11. To what extent do staff nurses have proficient computer skills?	1	2	3	4	5
12. To what extent do librarians within your organization have EBP knowledge and skills?	1	2	3	4	5
13. To what extent are librarians used to search for evidence?	1	2	3	4	5
14. To what extent are fiscal resources used to support EBP (e.g. education-attending EBP conferences/workshops, computers, paid time for the EBP process, mentors)	1	2	3	4	5
15. To what extent are there EBP champions (i.e., those who will go the extra mile to advance EBP) in the environment among:					
a. Administrators?	1	2	3	4	5
b. Physicians?	1	2	3	4	5
c. Nurse Educators?	1	2	3	4	5
d. Advance Nurse Practitioners?	1	2	3	4	5
e. Staff Nurses?	1	2	3	4	5
16. To what extent is the measurement and sharing of outcomes part of the culture of the organization in which you work?	1	2	3	4	5
Item	None	25%	50%	75%	100%
17. To what extent are decisions generated from:					
a. direct care providers?	1	2	3	4	5
b. upper administration?	1	2	3	4	5
c. physician or other healthcare provider groups?	1	2	3	4	5
Item	Not ready	Getting Ready	Been Ready but Not Acting	Ready to Go	Past Ready & onto Action
18. Overall, how would you rate your institution in readiness for EBP	1	2	3	4	5
Item	None at All	A Little	Somewhat	Moderately	Very Much
19. Compared to 6 months ago, how much movement in your organization has there been toward an EBP culture.	1	2	3	4	5

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Note. Permission obtained from Authors B. Melnyk and E. Fineout-Overholt 2015, *Evidence-Based Practice in Nursing & Healthcare*, p. 594. Copyright 2005.

Appendix D

Permission to use EBP-B and OCRSIEP Scales

Kimberly Malcolm

From: Kimberly Malcolm
Sent: Sunday, March 20, 2016 6:07 AM
To: Kimberly Malcolm
Subject: FW: Barriers to use of EBP

From: Ellen Fineout-Overholt [<mailto:ellen.fineout.overholt@gmail.com>]
Sent: Saturday, March 19, 2016 8:38 PM
To: Kimberly Malcolm
Subject: RE: Barriers to use of EBP

Hi Kimberly...please use the email below as permission for use of the scales...thanks so much,
Ellen

Ellen Fineout-Overholt PhD, RN, FNAP, FAAN
Transforming Healthcare from the Inside Out
Join Me in Discovering the Wonder in Evidence-based Practice, Leadership and Innovation
ellen.fineout.overholt@gmail.com

From: Ellen Fineout-Overholt [<mailto:ellen.fineout.overholt@gmail.com>]
Sent: Thursday, July 09, 2015 8:02 PM
To: 'Kimberly Malcolm'
Subject: RE: Barriers to use of EBP

Hi Kim. I received your forms and fees by mail for student use of EBPB, EBPI and OCRSIEP in your DNP project - THANK YOU!!...here are hard copies of the scales for use solely in your academic project. Should you find the scales a good match for future project, please connect with me and I will send along the latest permission forms. Please note that electronic data collection is only conducted through ARCC Online Services.

If you need to submit these for your IRB submission, please indicate that these are not for distribution.

Please let me know of any questions you may have....happy to answer! I look forward to your insights about the scales and their performance in your population.

All the Best,
Ellen

Ellen Fineout-Overholt PhD, RN, FNAP, FAAN
Partner & General Manager, ARCC llc
ellen.fineout.overholt@gmail.com

From: Kimberly Malcolm
Sent: Thursday, July 02, 2015 3:03 PM

Appendix E

DNP Project Timeline

Project Phase	Milestone	Who	June July 2015	Aug Sep 2015	Oct Nov 2015	Dec 2015	Jan Feb 2016	Mar Apr 2016
Initiation	Project Approved	Advisor	6/17					
IRB	Submitted	DNP student	7/30					
IRB	Approved	Otterbein IRB committee Advisor		9/15				
Project Plan	Planning meeting	DNP student Project Committee	6/17					
Project Plan	Planning meeting with Nursing leaders target departments	DNP student CNO Nursing leaders	7/31					
Project Plan	Complete EBP webinar	DNP student		9/15				
Project Plan	Outline Training Modules	DNP student		7/26- 8/20				
Project Plan	Completed	Kim	7/31					
Assessment	Data collection set Pre-intervention Beta Blocker Benchmarks Completed	Kim Quality nurse	6/22- 7/22					

Project Phase	Milestone	Who	June July 2015	Aug Sep 2015	Oct Nov 2015	Dec 2015	Jan Feb 2016	Mar Apr 2016
Assessment	Data collection Beta-Blocker Pre-intervention	DNP student Quality nurse	6/23- 7/23					
Assessment	PRE-EBP-B OCSIEP Completed	DNP student			10/2 10/12 10/13 10/16 10/21 10/28 10/29 10/30 11/2			
Implementation	Intervention Training modules developed	DNP student		8/1- 9/30				
Implementation	Intervention Education Intervention Provided	DNP student			10/2 10/12 10/13 10/16 10/21 10/28 10/29 10/30 11/2			
Monitoring	Data sets Post-intervention Beta blocker benchmark Completed	DNP student Quality nurse			11/3 – 12/31	11/3 – 12/31		

Project Phase	Milestone	Who	June July 2015	Aug Sep 2015	Oct Nov 2015	Dec 2015	Jan Feb 2016	Mar Apr 2016
Monitoring	Data collection sets Post-intervention EBP-B OCSIEP Completed	DNP student			10/2			
					10/12			
					10/13			
					10/16			
					10/21			
					10/28			
					10/29			
					10/30			
					11/2			
					11/3			
					11/4			
					11/5			
					11/6			
					11/7			
Evaluation	Data analysis Completed	DNP student Statistician					2/4	
Evaluation	Report results	DNP student						4/4
Close project	Project meeting	Project committee						4/15

Appendix F

DNP Project Budget

Program Expense		
Salary/Wages		
<i>Itemized human resource costs in this section (i.e., administrative, support, practitioner, etc.)</i>		
Expense Item	Monthly	Total
Investigator	\$ 0	\$.00
Quality nurses	\$ 0	\$.00
Participants		\$ 6000.00
Start-up Costs		
<i>Itemized start-up costs in this section (i.e., copies, charts, display board, etc.)</i>		
Expense Item		Total
Webinar - EBP	350	\$ 350.00
Survey fees	150	\$ 150.00
Inducements		\$
Total Start-up Costs		\$ 500.00
Capital Costs		
<i>Itemized capital costs in this section (i.e., hardware, equipment, etc.)</i>		
Expense Item		Total
None	0	\$ -
Total Capital Costs		\$ -
Operational Costs		
<i>Itemized operational costs in this section (i.e., electricity, heat, etc.)</i>		
Expense Item		Total
Copies	100	\$ 100.00
Total Operational Costs		\$ 100.00
Total Project Expenses		\$ 6600.00
Program Revenue		
Revenue Generation		
<i>Itemized potential revenue in this section</i>		
Revenue Item		Total
none	0	\$ -
Total Project Revenue		\$ -
Program Benefit/Loss		
Total Revenue		\$ -
Less Expense		\$ 6600.00
Total Program Benefit/Loss		\$ 6600.00

Appendix G

Informed Consent

Consent to participate in the Evidence-Based Practice Beliefs (EBP-B) and Organization Culture and Readiness for System-wide Integration of EBP (OCRSIEP) Surveys

Project Lead

The surveys and EBP Education Intervention will be conducted by Kim Malcolm, MSN, RN (DNP Student)

Otterbein University, 1 South Grove Street, Westerville, Ohio 43081

Email: kmalcolm@otterbein.edu

Invitation to Participate and Purpose

Participation in the Evidence-Based Practice (EBP) education intervention is mandatory; however, participation in the surveys is voluntary.

Thank you for voluntarily participating in and completing the Evidence-Based Practice Beliefs (EBPB) (used to assess nurses' beliefs regarding the difficulty in using and understanding EBP and assess nurses' confidence in using EBP) and Organization Culture and Readiness for System-wide Integration of EBP (OCRSIEP) scales (used to assess nurses' perceptions of hospital readiness for EBP) before and after EBP education intervention.

The purpose of the EBP education intervention is to identify and reduce barriers that prevent nurses at the point of care from employing EBP. I am excited that the survey results may help produce knowledge related to nurses' beliefs regarding the difficulty in using and understanding EBP and assess nurses' confidence in using EBP and perceptions of hospital readiness for EBP and may lead to improvements for providing EBP at the point of care.

Voluntary Participation

Participation in the surveys is voluntary. You may withdraw consent to participate at any time during the entire process. If you choose to withdraw at any time, the information supplied by you will be removed from the data and findings of the survey.

Methods/Procedures

The methods of data collection will be conducted as follows: nurses and nurse managers of the Medical/surgical and ICU units in a Midwest hospital in the state of Ohio will complete the surveys prior to and after the EBP education intervention. Survey results will be disseminated when data analysis has been completed. Survey results will be reported for the group of participants not the individual participant. Any information linking a specific nurse to the corresponding survey will be removed. No identifiable participant information will be shared.

Confidentiality

Your responses and participation in the surveys will be confidential. If you are willing to participate in the survey, you will not be identified by name or any other identifiable marker. Publications and reports from this project will not contain names or other identifiable information and will be reported in aggregate. The use of anonymous direct quotes may be used

to bring clarity to the context of the findings when reporting the study. You will be given the opportunity up to the reporting of the results to remove any stated material as a direct quote from the survey by contacting the survey advisor or project leader. Persons from the Otterbein Institutional Review Board and project team members may look at data from the surveys for quality assurance and regulatory functions, but will be unable to determine individual survey responses.

Risks and Inconveniences

The project leader does not anticipate any physical risks to participants. The anticipated time required to complete the surveys is fifteen minutes each for a total of one hour.

Benefits

The potential benefits of this study are that barriers to the use of EBP by nurses at the point of care may be identified, reduced or removed and participants will receive continuing education credit.

In Case of Injury

Otterbein University's policy is not to compensate or provide medical treatment to persons who participate in surveys. If you feel you have been injured as a result of these surveys, please contact

Robert Kraft, Chair of the Otterbein Institutional Review Board at: rkraft@otterbein.edu.

Questions

Should you have any questions regarding the EBP education intervention and/or the voluntary pre and post EBP intervention surveys being conducted by the student, please contact:

Jacqueline Haverkamp, DNP, RN, CNP, Principal Investigator

1 South Grove Street

Westerville, Ohio 43081

614-823-1628

or

Robert Kraft, Chair of the Otterbein Institutional Review Board at: rkraft@otterbein.edu.

If you would like additional information concerning this study before or after it is complete, please feel free to contact me by phone or mail.

Participant Name (Print)

Participant Name (Signature)

With my signature I affirm I am at least 18 years of age

Witness Name (Signature)

Appendix H

EBP-B Survey Results by Question

Table 3

EBP-B Survey Results by Question

EBP Scale Question	Pre- education intervention	Post- education intervention	Percent change
I believe that EBP results in the best clinical care for the patients	4.22	4.78	13%
I am clear about the steps of EBP	3.04	4.54	49%
I am sure that I can implement EBP	3.82	4.58	19%
I believe that critically appraising evidence is an important step in the EBP process	4.1	4.7	15%
I am sure that EB guidelines can improve clinical care	4.36	4.68	7%
I believe that I can search for the best evidence to answer clinical questions in a time efficient way	3.48	4.32	24%
I believe that I can overcome barriers in implementing EBP	3.7	4.34	17%
I am sure that I can implement EBP in a time efficient way	3.6	4.22	17%
I am sure that implementing EBP will improve the care that I deliver to my patients	4.1	4.7	15%
I am sure how to measure the outcomes of clinical care	3.36	4.32	29%
I believe that EBP <u>takes too much time</u>	2.46	2.22	10%
I am sure that I can access the best resources in order to implement EBP	3.16	4.24	34%
I believe EBP <u>is difficult</u>	2.56	2.1	22%
I know how to implement EBP sufficiently enough to make practice changes	3.02	4.34	44%
I am confident about my ability to implement EBP where I work	3.38	4.44	31%
I believe the care I deliver is evidence-based	3.7	4.44	20%

Note. n=50, Percent change indicated that the education intervention positively impacted nurses' beliefs regarding the difficulty in using and understanding EBP and nurses' confidence in using EBP.

Appendix I

OCRSIEP Survey Results by Question

Table 4

OCRSIEP Survey Results by Question

Question	Pre- education intervention	Post- education intervention	Percent change
To what extent is EBP clearly described as central to the mission and philosophy of your institution	3.24	4.26	31%
To what extent do you believe that EBP is practiced in your organization	3.44	4.26	23%
To what extent is the nursing staff with whom you work committed to EBP	3.12	4.02	29%
To what extent is the physician team with whom you work committed to EBP	3.26	4.14	27%
To what extent are administrators within your organization committed to EBP	3.38	4.38	30%
In your organization, to what extent is there a critical mass of nurses who have strong EBP knowledge and skills	2.76	3.82	38%
To what extent are there nurse scientists (doctorally prepared researchers) in your organization to assist in generation of evidence when it does not exist	2.28	3.4	49%
In your organization, to what extent are there APNs who are EBP mentors for staff nurses as well as other APNs	2.24	3.62	62%
To what extent do practitioners model EBP in their clinical settings	2.74	4.08	49%
To what extent do staff nurses have access to quality computers and access to electronic databases for searching for best evidence	2.74	4.38	60%
To what extent do staff nurses have proficient computer skills	3.72	4.34	17%
To what extent are librarians within your organization have EBP knowledge and skills	1.86	4.6	147%
To what extent are librarians used to search for evidence	1.78	4.4	147%
To what extent are fiscal resources used to support EBP	2.64	4.2	59%
To what extent are there EBP champions in the environment among Administrators	2.48	4.12	66%
To what extent are there EBP champions in the environment among Physicians	2.72	4.04	49%

Question	Pre- education intervention	Post- education intervention	Percent change
To what extent are there EBP champions in the environment among Nurse Educators	3.34	4.48	34%
To what extent are there EBP champions in the environment among Advanced Nurse Practitioners	2.8	4.08	46%
To what extent are there EBP champions in the environment among Staff Nurses	2.86	3.94	38%
To what extent is the measurement and sharing of outcomes part of the culture of the organization in which you work	3.16	4.2	33%
To what extent are decisions generated from - Direct care providers	2.82	3.86	37%
To what extent are decisions generated from - Upper Administration	3.34	4.02	20%
To what extent are decisions generated from - Physician or other healthcare provider groups	3.32	4.1	23%
Overall, how would you rate your institution in readiness for EBP	2.86	4.16	45%
Compared to 6months ago, how much movement in your organization has there been toward EBP culture	2.58	4.14	60%

Note. n=50, OCRSIEP survey results indicated that the education intervention positively impacted (increased) nurses' perceptions about EBP.