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Evidence-based practice enrichment for nurse leaders

Jay Michelle Bland

EVIDENCE-BASED PRACTICE ENRICHMENT FOR NURSE LEADERS

by

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A DNP PROJECT

Submitted in partial fulfillment of the requirements for the
Degree of Doctor of Nursing Practice
to
The School of Graduate Studies
of
The University of Alabama in Huntsville

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Jay Michelle Board 4-4-19

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DNP PROJECT APPROVAL FORM

Submitted by Jay Michelle Bland in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice and accepted on behalf of the Faculty of the School of Graduate Studies by the DNP project committee.

We, the undersigned members of the Graduate Faculty of The University of Alabama in Huntsville, certify that we have advised and/or supervised the candidate on the work described in this DNP project. We further certify that we have reviewed the DNP project manuscript and approve it in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice.

4/5/19 _____ Committee Chair
(Date)

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Marsh W. Adams _____ College of Nursing, Dean

_____ Graduate Dean

ABSTRACT
The School of Graduate Studies
The University of Alabama in Huntsville

Degree: Doctor of Nursing Practice College: Nursing

Name of Candidate: Jay Michelle Bland

Title: Evidence-Based Practice Enrichment for Nurse Leaders

A for profit level II trauma designated community hospital, licensed for 600 beds with an average daily census of 440 patients had quality and safety challenges and a nursing leader workforce that was not well versed in evidence-based practice. This was identified when the nurse leaders completed a self- assessment from the American Organization of Nurse Executives. All leaders in the facility (22) scored themselves as novice to advanced beginner on the Evidence-Based Practice/Outcomes Measurement and supported the assessment that nursing leaders in the clinical site were not using clinical evidence to make decisions within their units. These challenges led to the development of a project that introduced to the nurse leaders the available clinical site resources, tools for managing an evidence-based clinical project and sharing a real life example of an evidence-based project that had a direct impact on patient care and satisfaction. This project included an Adobe presentation with narration that was loaded into the facility learning management system. The nurse leaders were asked to complete the learning module on a voluntary basis and while only 8 completed the learning module, those participants showed statistically significant increases in survey scores from pre-intervention ($M = 38.38$, SD = 4.31) to post-intervention ($M = 45.88$, SD = 3.23), $t\,(7) = -6.71$, $p < 0.001$ utilizing the repeated-measures t-test to assess the change in survey scores from pre-intervention to post-

intervention. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25 (Armonk, NY: IBM Corp.).

Keywords and phrases: evidence-based practice in nursing, nurse leader, implementation, the state of evidence-based care, and health care quality

ACKNOWLEDGMENTS (if desired)

A special thanks to my faculty chair (Dr. Kristen Herrin) and my clinical mentor (Dr. Dorothy Alford). A huge thank you to my extremely supportive husband (Craig Bland), my understanding children (Tyler, Laney, Sydney, and Garrett), my mom (Debra Carter), my sister (Amy Whitaker), my Aunt (Mary Ann Jones), and my supportive classmate Robyn Jackson Barriffe who was the best academic partner an individual could have.

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Identification of the Problem

The Institute of Medicine Roundtable of Evidence-Based Medicine conducted a workshop titled "The Learning Healthcare System" in an effort to establish a vision for the future of healthcare where the best evidence is used to determine decisions about patient care (Olsen, Aisner, & McGinnis, 2007). One goal of the roundtable was "By the year 2020, 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence" (Olsen, Aisner, & McGinnis, 2007, pg. ix). According to Melnyk, Gallager-Ford, Long & Fineout-Overholt (2014), evidence-based practice is an unceasing problem-solving approach for healthcare practitioners that incorporate the best evidence along with a patient's wishes and the practitioner's expertise to guide their healthcare.

The World Health Organization Department of Statistics (2011) reported an estimated 2.9 million nurses practice in the United States, which is the equivalent of 98.2 nurses per 10,000 people (WHO, 2011). As such, nursing is a large portion of the healthcare sector, the use of evidence-based practice in nursing has the potential to greatly improve the quality and cost of healthcare (Melnyk, Fineout-Overholt, Gallagher, & Kaplan, 2012). According to Melnyk (2016), evidence- based practice in nursing is not well applied and opportunities for improvement exist.

A barrier noted in the literature is nursing leadership lacks knowledge and skills necessary to facilitate and lead evidence-based practice (Melnyk et al., 2016). Both nationally and locally the need to provide patient care that is safe, effective, and efficient while also containing costs is imperative in today's healthcare arena. Evidence-based practice uses nursing

science to impact nursing practice, patient outcomes, and the financial bottom line (Stevens, 2013; Warren, et al., 2016).

The clinical site of the DNP project faced challenges in quality and safety. Nursing leaders in the clinical site were not using best evidence to make clinical decisions within their units. It was apparent that Nurse Leaders were not well versed in evidence-based practice and were unaware of facility resources available to support them such as databases and clinical decision support resources. When faced with quality and safety concerns, decisions were routinely made that were not supported by evidence-based practice; therefore, attempted changes to improve patient care failed. These challenges led to the development of a project that would introduce evidence-based practice, clinical site resources and tools available to manage an evidence-based clinical project. This project needed to share a real life example of evidence-based project in order to help them understand the process and how it impacts healthcare outcomes. The facility had an excellent example that occurred in the Cardiac Cath lab that was used to demonstrate the process and successful outcomes that impacted patient's within the facility.

The purpose of this DNP project was to provide a foundational instruction of evidence-based practice to nursing leaders that would improve their knowledge and understanding of evidence-based practice through education and exposure to resources and best- practice protocols. The corollary would elevate the level of nursing practice across the continuum of care. The objectives include: 1) The learner will be able to recall the difference between evidence-base practice, quality improvement, and research, 2) The learner will be able to locate, access, and use available databases, 3) The learner will be able to apply search strategies for a

review of literature, and 4) The learner will be able to use the Johns Hopkins evidence-based practice tools.

PICOT Question

Within the nurse leader population of a for-profit level II trauma designated community hospital, will initiating an evidence-based practice enrichment course for leadership development improve the nurse leaders' knowledge, skills, and abilities for searching, appraising and applying evidence compared to having no evidence-based practice education program available?

Synthesis of Evidence

A review of the evidence using CINAHL Plus with full-text database (CINAHL) was conducted, along with reviewing the websites of The National Academies of Press (NAP) and the WHO. The keywords and terms searched are evidence-based practice in nursing, nurse leader, implementation, the state of evidence-based care, healthcare quality, and leader. The first literature search with "evidence-based practice in nursing" resulted in 7,662 articles; the addition of the Boolean Operator "AND" along with key words," nurse leader" narrowed the results to 120 articles. To further limit the results the use of the Boolean Operator "AND" was again used with key word "implementation" which resulted in 24 articles. Finally, the use of a date range limiter of 2012-2017 further narrowed the result to 16 remaining articles, 9 of which after cursory review were relevant to the project.

A second literature search was performed using CINAHL and "the state of evidence-based care" which resulted 52 articles, the Boolean Operator "AND" was used with the terms "health care quality" and the results increased to 67 articles. A final search adding the Boolean Operator "AND" in addition to the term "leader" was performed which narrowed the results to 5 articles, all of which were relevant to review. The articles reviewed included primary and

secondary sources, expert opinions and level II research comprised of qualitative and quantitative descriptive studies, retrospective descriptive studies, and cross-sectional descriptive studies.

The Role of the Nurse Leader in Evidence-Based Practice

A healthy practice environment is a requisite to evidence-based practice implementation; the nurse leader must recognize threats to evidence-based practice within their units such as inadequate staffing, lack of nurse knowledge and competency, inefficient workflows, and toxic behaviors that have a negative impact on teamwork and safe patient care (Kelly, Harrington, Matos, Turner, & Johnson, 2016; Grindel, 2016). The ability of the nurse leader to facilitate and lead the evidence-based practice work of their team members is a crucial competency for all nurse leaders to acquire (Grindel, 2016; Ryan, et al, 2015). Research shows that chief nursing officers (CNO) and chief nursing executives (CNE) believe there is a lot of value in evidence-based practice; however, they themselves are not well versed in working an evidence-based practice project (Melnyk, et al. 2016; Fleiszer, Semenic, Ritchie, Richer, Denis, 2015). The study performed in 2016 by Melnyk et al. showed that 25% of CNOs/CNEs studied reported that they were not clear on the steps of evidence-based practice and that 44% reported they were not sure they could implement evidence-based practice in an efficient manner. The same study identified a new barrier to evidence-based practice, it found that manager/leader resistance to evidence-based practice was a barrier, and the respondents expressed a need for support from their leaders to implement evidence-based practice (Melnyk, et al., 2016). This finding may be in part due to the leader's lack of knowledge, skills, and abilities to implement evidence-based practice and is a significant gap to close in order to achieve high quality nursing care and improved outcomes within the healthcare environment (Warren, et al., 2016). The nurse leader

regardless of level of position has the ability to affect the work environment for which he/she has supervisory responsibility and must establish the value of evidence-based practice among their team members and create a culture that is supportive and conducive to implementing evidence-based practice (Grindel, 2016; Quatrara, Rea, Wilkins, & Facteau, 2017).

Implications to practice

The current state of healthcare in the United States is one of value-based purchasing which focuses on quality improvement and cost containment (Warren, et al., 2016). A nursing workforce that has knowledge, skills, and abilities to implement evidence based best practices within their organization is invaluable as it leads to improved patient outcomes and cost savings. Emparanza et al., 2015 demonstrated that evidence-based practice improves patient outcomes by decreasing patient mortality. The hospital reorganized to create an evidence-based practice unit staffed by physicians that used evidence-based practice in their practice. This natural experiment left the rest of the units and service unchanged. Following the unit's establishment, the mortality of patients being treated by evidence-based practice doctors compared with their previous performance dropped from 7.4% to 6.3% ($P < 0.02$) and length of stay from 9.15 to 6.01 days ($P = 0.002$). Leaders that are trained in implementing evidence-based practice are pivotal in impacting patient care and outcomes.

Nurse leader self-assessment

The clinical site for the DNP scholarly project is a for-profit level II trauma designated community hospital and has varying levels of education and training in the nurse leader group. The educational degree preparation in this population includes Associate degree in Nursing, Bachelor of Science degree in Nursing, Master of Science degree in Nursing and Master of Business Administration degree. There is also a wide range in years of experience in both

nursing and nursing leadership in this group. The facility conducted a baseline assessment in June of 2017 by requiring the nurse leaders to complete the American Organization of Nurse Executives (AONE) Nurse Executive Competencies self-assessment tool. The compiled results revealed an opportunity for improvement in evidence-based practice and outcomes as the nurse leaders assessed themselves as novice or advanced beginner in utilizing and understanding evidence-based practice. The purpose of this proposed project was to address the identified gap by providing a foundation for utilizing evidence- based practice when making changes to improve the quality of patient care outcomes. The ability of the nurse leader to use data and other sources of evidence to make informed decisions and establish evidence-based best practices within the facility is vitally important to the patients it serves.

Strategies for Increasing the Use of Evidence-Based Practice

The literature suggested several strategies to have a positive impact on the implementation of evidence-based practice in patient care. Those strategies include education and development of clinical inquiry, evidence-based practice councils, journal clubs, incorporating evidence-based practice into job descriptions and competencies, partnerships formed with schools of nursing, as well as mentors within the organization to guide and lead evidence-based projects (Warren, Montgomery, & Friedman, 2016; Muller, McCauley, Harrington, Jablonski, & Strauss, 2011). The strategy most often cited in the literature was education and staff development. The development of educational modules that focus on the process steps of evidence-based practice is powerful; this level of training exposes the nurse leader cohort at the facility to the same content and approach. There are several frameworks for evidence-based practice available; this learning module introduced the Johns Hopkins Nursing Evidence-Based Practice Model to the nurse leaders for use throughout the organization.

Theoretical Framework: Roger's Diffusion of Innovation

The design of this scholarly project was constructed on Roger's Diffusion of Innovation theory. Roger's theory consists of "diffusion as a process by which (1) an innovation (2) is communicated through certain channels (3) over time (4) among the members of a social system" (Rogers, 1983 pg. 11). For the purposes of the proposed scholarly project the methodology of evidence-based practice was viewed as an innovation. The aim of the innovation was to change the culture within the facility from a "how it has always been done mentality" to a culture of inquiry within the nursing workforce. By focusing on the nurse leader group and providing them with the tools and resources to incorporate evidence-based practice into their units, the innovation would then be communicated through the social system by way of the leaders. The need and expectations of the nurse leader to utilize evidence-based practice within their respective units to drive quality improvement and improve patient outcomes was clearly explained in the intervention. The idea was that the cascade effect would occur through the nursing workforce social system as nurse leaders begin to frame quality improvement utilizing what they learned in the module as well as role modeling the behavior of clinical inquiry. Rogers explains "the essence of the diffusion process is the information exchange by which one individual communicates a new idea to one or several others" (1983, p. 17). The process of the facility becoming a learning organization will take time and does not occur overnight. The diffusion of this innovation, using evidence-based practice to inform nursing practice, will take time to evolve and become accepted as the "norm".

Implementation

Following IRB approval at the UAH and clinical site, implementation of the DNP project commenced. See Appendix A and B. The DNP project outline was developed and a 25-minute

facility specific learning module was created utilizing Adobe with narration that was uploaded into the facility learning management system. See Appendix C and D. The DNP project module content was developed utilizing the primary investigator's knowledge of the evidence-based practice processes learned through advanced education curriculum in the Master of Science in Nursing and Doctorate of Nursing Practice formal education preparation and in conjunction with the primary investigator's research and findings in the literature review. The learning module content included a call to action, definition and explanation of evidence-based practice, historical nursing practice and decision making, clinical inquiring including the differentiation between evidence-based practice, Quality Improvement, and Research. The module also included an example of an evidence-based practice project, introduction of the Johns Hopkins EBP model, how to conduct a literature review including key words, Boolean Operators, search strategies and hospital resources such as CINHAL, PUBMED, UptoDate, HCA Knowledge Center, Lippincott, the Nutritional Care Manual. See Appendix E. The target population was the 22 nurse leaders at the director of nursing position level. Inclusion criteria included working for the clinical site and being a nurse leader at the director level. Exclusion criteria included director level employees that were not nurses and anyone not currently working in the facility at the time of meeting. For this DNP project a convenience sample was obtained by introducing the learning module at the leadership monthly meeting and passing out a recruitment flyer with a request for the nurse leaders to complete it. See Appendix F. Despite multiple reminders and conversations with nurse leaders, participation was voluntary and only 8 nurse leaders participated. Participants were able to access the content from their desktop. Participants were consented within the learning management system. See Appendix G. Participant confidentiality and anonymity was

maintained by limiting the access to completion reports and pre/post assessment scores to the principal investigator and the learning management system facilitator.

Evaluation Plan

The principle investigator designed a self-assessment that utilized a Likert scale to assess nurse leader's confidence in their ability to design and lead an evidence-based practice project in their unit pre and post intervention. Each participating nurse leader completed these self-assessments prior to the learning module and immediately following completion. See Appendix H & I. It included the learner's self-assessments of their knowledge and ability to translate evidence into practice, ability to craft a PICOT question, ability to effectively utilize databases and search strategies, knowledge of the levels of evidence, and the differentiation between evidence-based, QI, and research. The principle investigator worked with the learning management system facilitator to run a report of the results for the pre and post assessments. This was used to determine if the evidence-based practice learning module resulted in knowledge improvement in the nurse leader group.

Results

Participant demographics included a range in years of nursing experience between 11 and 35 years of experience, levels of education of participants were Associate Degree Nurses (3), Bachelor of Science Degree Nurses (3) and Master of Science Degree Nurses (2). They self-reported on the demographic questionnaire as having a level of understanding for leading and evidence-based practice project as unfamiliar (4), somewhat familiar (3), and expert (1).

The pre-intervention and post-intervention survey responses were calculated by adding the ten (10) survey items together. The survey responses for the two administrations were tested for the statistical assumption of normality using skewness and kurtosis statistics. If either the

skewness or kurtosis statistic was above an absolute value of 2.0, then the assumption was violated. Repeated-measures t-test was used to assess the change in survey scores from pre-intervention to post-intervention. Means and standard deviations for the pre-intervention and post-intervention survey scores were reported and interpreted. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25 (Armonk, NY: IBM Corp.). The survey responses were calculated using the aforementioned methods. The statistical assumption of normality was met for the pre-intervention and post-intervention survey responses. There was a statistically significant increase in survey scores from pre-intervention ($M = 38.38$, SD = 4.31) to post-intervention ($M = 45.88$, SD = 3.23), $t\ (7) = -6.71$, $p < 0.001$. See Appendix J.

Application to Practice

Improvement in patient outcomes requires the implementation of evidence-based practices within nursing. A nursing leader workforce that has a foundational knowledge of evidence-based practice, quality improvement, and research is equipped to elevate the level of nursing practice across the organization. The significance of the nurse leaders' ability to look to the evidence when opportunities for improvement arise within their units will lead to improved patient outcomes, cost containment and employee and patient satisfaction. The assumption is that after completing this educational module the nurse leaders will utilize the knowledge and tools in their improvement work within their units. To sustain the use of evidence-based practice and the Johns Hopkins evidence-based practice tool the online module will be remaining accessible to all leaders including those newly hired.

Anticipated Barriers and Project Cost

The population of nurse leaders in the director of nursing position within the clinical site was small with only 22 nurse leaders that met the inclusion criteria. A barrier to the success of this project achieving a positive impact on patient outcomes was nurse leader participation. The nurse leaders have multiple competing priorities in their daily role and many did not make it a priority to complete the learning module during the project timeframe. The module did remain available on their transcript therefore the expectation is there for the remaining nurse leaders to complete the module in the near future even though the project window has closed. There was no direct major project cost, the cost to the hospital was the hourly rate of the LMS administrator as she spent approximately one hour loading the consent, pre survey, narrated Adobe module, and post survey in the LMS system

Summary

The availability and completion of the evidence-based practice learning module equipped the nurse leaders within the DNP clinical site with foundational knowledge, skills, and abilities to seek out the best evidence to improve quality and safety within their clinical units. While only a small sample completed in the timeframe of the project, the leaning module will remain in the LMS catalogue and may be completed by anyone in the facility, potentially increasing the impact on healthcare quality and outcomes. The facility is supportive of continuing education on best practice and utilizing evidence to support future decision-making.

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Professional Journal Selection

WORLDviews on EVIDENCE BASED NURSING is an international professional nursing journal that disseminates actionable evidence-based subject matter to drive improvements for clinical practice, education, and policy. In a recent editorial, the editor made an urgent plea for nurse leaders to create a culture of evidence-based practice and intervention within their organizations (Melnyk, 2016). The challenge to nurse leaders and clinicians include understanding that evidence-based practices correlate with improved quality and outcomes. The editor expressed a need for improved evidence-based knowledge, skills and competencies in this population of professionals, and called for immediate action to close the gap.

The aim of the journal is to aid professional nurses in their grasp of the process of evidence-based practice via publication of demonstrated successful evidence-based initiatives in real life care situations. The journal concentrates on all levels of nursing from the bedside nurse clinician to administrators and policy makers. The editors of the journal publish manuscripts that advance the understanding of evidence-based practice in nursing and that focus on knowledge generation and needs of managers and administrators. A specific scope of the journal is to highlight different approaches to evidence-based practice. This project is in direct answer to the editor's urgent call to action and would be advantageous for the WORLDviews journal readers looking for ways to increase knowledge, skills, and competencies in their workplace. The WORLDviews journal has a current call for papers that focus on tactics for teaching evidence-based practice.

An Evidence-Based Practice Enrichment Module for Nurse Leaders

ABSTRACT

Background: Nurse Clinicians should base decisions on accurate, timely, and up-to-date clinical information while utilizing the best clinical evidence and a patient's wishes to inform patient care decisions. Nurse leaders and bedside clinicians are often unable to do so because they do not possess the skills to translate evidence into practice and do not know what resources and databases are available to them within the facility.

Aim: The aim of this study was to improve the Nurse Leaders knowledge in evidence-based practice that includes utilization of databases and search strategies, PICOT development, understanding levels of evidence, and differentiation between EBP, QI and research.

Method: Nurse leaders (22) were invited to participate in an Evidence-Based Practice Enrichment module in the facilities Learning Management System. The module included a pre- and post-assessment using a Likert scale.

Results: Repeated-measures t-test was used to assess the change in survey scores (10 Nurse Leaders participants) from pre-intervention to post-intervention. Means and standard deviations for the pre-intervention and post-intervention survey scores were reported and interpreted. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25 repeated-measures t-test to answer the research question.

Conclusion: In this study, there was a statistically significant increase in survey scores from pre-intervention ($M = 38.38$, SD = 4.31) to post-intervention ($M = 45.88$, SD = 3.23), $t(7) = -6.71$, $p < 0.001$.

Evidence to Action: Use of this Evidence-Based Practice Enrichment module to the entire nursing staff of the facility could generate increased clinical inquiry and ultimately improve the use the best evidence to inform patient care within the facility.

The Institute of Medicine Roundtable of Evidence-Based Medicine conducted a workshop titled "The Learning Healthcare System" in an effort to establish a vision for the future of healthcare where the best evidence is used to determine decisions about patient care (Olsen, Aisner, & McGinnis, 2007). One goal of the roundtable was "By the year 2020, 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence" (Olsen, Aisner, & McGinnis, 2007, pg. ix).

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This finding may be in part due to the leader's lack of knowledge, skills, and abilities to implement evidence-based practice and is a significant gap to close in order to achieve high quality nursing care and improved outcomes within the healthcare environment (Warren, et al., 2016).

Strategies for Increasing the Use of Evidence-Based Practice

The literature suggests several strategies to have a positive impact on the implementation of evidence-based practice in patient care. Those strategies include education and development of clinical inquiry, evidence-based practice councils, journal clubs, incorporating evidence-based practice into job descriptions and competencies, partnerships formed with schools of nursing, as well as mentors within the organization to guide and lead evidence-based projects (Warren, Montgomery, & Friedman, 2016; Muller, McCauley, Harrington, Jablonski, & Strauss, 2011). The strategy most often cited in the literature is education and staff development. The development of educational modules that focus on the process steps of evidence-based practice is powerful; this level of training exposes the nurse leader cohort at the facility to the same content

and approach and as such was the catalyst for creating the evidence-based practice learning module.

Detailed Description of Strategy

A learning module with narration was created for use in a for-profit, 600 bed level II trauma designated community hospital. Project execution included creating a facility specific learning module that was uploaded into the facility learning management system. The target population was the 22 nurse leaders at the director of nursing position level. A convenience sample was obtained by introducing the learning module at the leadership monthly meeting with a request for the nurse leaders to complete it. Inclusion criteria included working for the clinical site and being a nurse leader at the director level. Exclusion criteria included director level employees that are not nurses and anyone not currently working in the facility at the time of meeting.

The learning module was created by the primary investigator using Adobe Presenter and included narration. Adobe Presenter integrated with the learning management system and participants were able to access the content from their desktop, an important consideration for busy nurse leaders with multiple competing priorities. Participant confidentiality and anonymity was maintained by limiting the access to completion reports and pre/post assessment scores to the principal investigator and the learning management system facilitator.

Evaluation Plan

The principle investigator designed a self-assessment that utilized a Likert scale to assess nurse leader's confidence in their ability to design and lead an evidence-based practice project in their unit's pre-intervention and post- intervention. Each participating nurse leader completed these self- assessments prior to the learning module and immediately following the completion.

It included an assessment of the learner's knowledge and ability to translate evidence into practice, ability to craft a PICOT question, ability to effectively utilize databases and search strategies, knowledge of the levels of evidence, and the differentiation between evidence-based practice, QI, and research.

The principle investigator worked with the learning management system facilitator to run a report of the results for the pre and post assessments. To determine if the evidence-based practice learning module resulted in knowledge improvement in the nurse leader group the principle investigator used the repeated-measures t-test to answer the research question. This statistical test does not assume normality in the data and is used to compare two sets of scores, the pretest and the posttest, that come from the same participants.

Results

The pre-intervention and post-intervention survey responses were calculated by adding the ten (10) survey items together. The survey responses for the two administrations were tested for the statistical assumption of normality using skewness and kurtosis statistics. If either the skewness or kurtosis statistic was above an absolute value of 2.0, then the assumption was violated. Repeated-measures t-test was used to assess the change in survey scores from pre-intervention to post-intervention. Means and standard deviations for the pre-intervention and post-intervention survey scores were reported and interpreted. Statistical significance was assumed at an alpha value of 0.05 and all analyses were conducted using SPSS Version 25 (Armonk, NY: IBM Corp.). The survey responses were calculated using the aforementioned methods. The statistical assumption of normality was met for the pre-intervention and post-intervention survey responses. There was a statistically significant increase in survey scores from

pre-intervention ($M = 38.38$, SD = 4.31) to post-intervention ($M = 45.88$, SD = 3.23), t (7) = -6.71, $p < 0.001$.

Conclusion

The availability and the completion of an evidence-based practice learning module will equip the nurse leaders with foundational knowledge, skills, and abilities to search professional literature and include best practices in their units. Nurse leaders will in turn role model these behaviors for bedside nurse clinicians in their units ultimately elevating the professional practice of nursing within the facility.

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APPENDIX A

IRB Expedited Review Approval Letter

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

☒ Expedited (see pg 2)
☐ Exempted (see pg 3)
☐ Full Review
☐ Extension of Approval

September 4th 2018

Kristen Herrin
Department of Nursing
University of Alabama in Huntsville

Dear Dr. Herrin,

The UAH Institutional Review Board of Human Subjects Committee has reviewed your proposal, *Evidence Based Practice Enrichment for the Nurse Leader* and found it meets the necessary criteria for approval. Your proposal seems to be in compliance with this institutions Federal Wide Assurance (FWA) 00019998 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46).

Please note that this approval is good for one year from the date on this letter. If data collection continues past this period, you are responsible for processing a renewal application a minimum of 60 days prior to the expiration date.

No changes are to be made to the approved protocol without prior review and approval from the UAH IRB. All changes (e.g. a change in procedure, number of subjects, personnel, study locations, new recruitment materials, study instruments, etc) must be prospectively reviewed and approved by the IRB before they are implemented. You should report any unanticipated problems involving risks to the participants or others to the IRB Chair.

If you have any questions regarding the IRB's decision, please contact me.

Sincerely,

Bruce Stallsmith

Bruce Stallsmith
IRB Chair
Professor, Biological Sciences

Expedited:

☐ Clinical studies of drugs and medical devices only when condition (a) or (b) is met. (a) Research on drugs for which an investigational new drug application (21 CFR Part 312) is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review. (b) Research on medical devices for which (i) an investigational device exemption application (21 CFR Part 812) is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

☐ Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows: (a) from healthy, nonpregnant adults who weigh at least 110 pounds. For these subjects, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week; or (b) from other adults and children, considering the age, weight, and health of the subjects, the collection procedure, the amount of blood to be collected, and the frequency with which it will be collected. For these subjects, the amount drawn may not exceed the lesser of 50 ml or 3 ml per kg in an 8 week period and collection may not occur more frequently than 2 times per week.

☐ Prospective collection of biological specimens for research purposes by noninvasive means. Examples: (a) hair and nail clippings in a nondisfiguring manner; (b) deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction; (c) permanent teeth if routine patient care indicates a need for extraction; (d) excreta and external secretions (including sweat); (e) uncannulated saliva collected either in an unstimulated fashion or stimulated by chewing gumbase or wax or by applying a dilute citric solution to the tongue; (f) placenta removed at delivery; (g) amniotic fluid obtained at the time of rupture of the membrane prior to or during labor; (h) supra- and subgingival dental plaque and calculus, provided the collection procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques; (i) mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings; (j) sputum collected after saline mist nebulization.

☐ Collection of data through noninvasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications).

☐ Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

☐ Collection of data from voice, video, digital, or image recordings made for research purposes.

☒ Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Exempt

☐ Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (a) research on regular and special education instructional strategies, or (b) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods. The research is not FDA regulated and does not involve prisoners as participants.

☐ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interviews, or observation of public behavior [1] in which information is obtained in a manner that human subjects cannot be identified directly or through identifiers linked to the subjects and any disclosure of the human subject's responses outside the research would NOT place the subjects at risk of criminal or civil liability or be damaging to the subject's financial standing, employability, or reputation. The research is not FDA regulated and does not involve prisoners as participants.

☐ Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement) survey procedures, interview procedures, or observation of public behavior if (a) the human subjects are elected or appointed public officials or candidates for public office, or (b) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter. The research is not FDA regulated and does not involve prisoners as participants.

☐ Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. The research is not FDA regulated and does not involve prisoners as participants.

☐ Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs;(iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs. The protocol will be conducted pursuant to specific federal statutory authority; has no statutory requirement for IRB review; does not involve significant physical invasions or intrusions upon the privacy interests of the participant; has authorization or concurrent by the funding agency and does not involve prisoners as participants.

☐ Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. The research does not involve prisoners as participants.

[1] Surveys, interviews, or observation of public behavior involving children cannot be exempt.

APPENDIX B

Clear Lake Regional
MEDICAL CENTER
An HCA Affiliated Hospital

500 Medical Center Boulevard • Webster, Texas 77598 • 281.332.2511 • clearlakermc.com

August 20, 2018

University of Alabama in Huntsville
Internal Review Board
301 Sparkman Drive,
Huntsville, AL 35899

Dear UAH IRB,

This letter is to communicate that J. Michelle Bland has approval to proceed with her DNP project at Clear Lake Regional Medical Center (CLRMC). A fully executed Business Affiliate Agreement (BAA) is on file with the education department.

Sincerely,

Todd Caliva

Chief Executive Officer

Sherry Camacho

Sherry Camacho

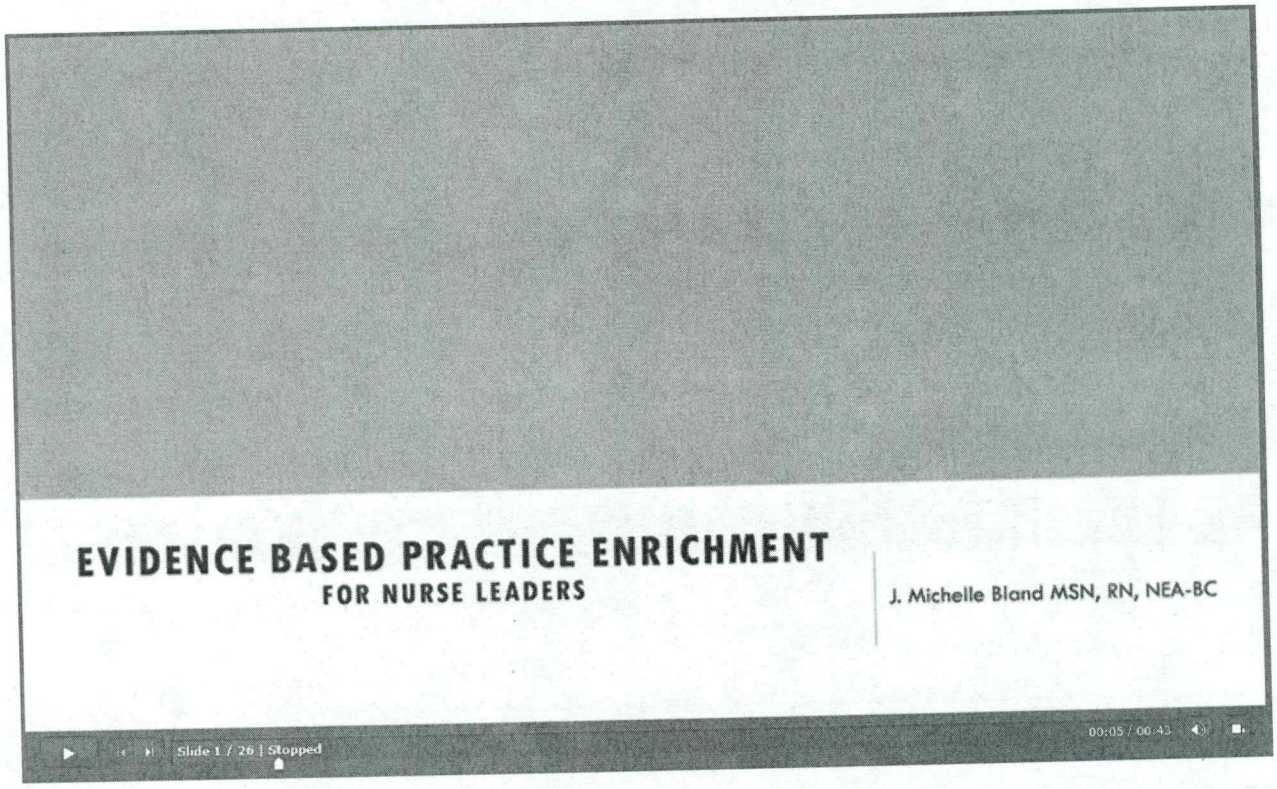
Chief Nursing Officer

APPENDIX C

Content Outline for Evidence Based Practice Enhancement for the Nurse Leader

1) Institute of Medicine "call to action"
2) Definition of Evidence-Based Practice
3) Historical nursing practice and decision making (Ritual/tradition/way we've always done it)
4) Clinical Inquiry and EBP
    a) Differentiation between EBP, QI, Research
5) EBP project example discussion
6) Johns Hopkins Model Introduction (Appendix D)
7) Create a project team (Appendix A)
8) Develop a practice question (PICOT format Appendix B)
9) Evidence (Appendix C)
    a) Literature review
    b) Scientific databases (specifically available at clinical site) , Professional Nursing Practice Standards
    c) Keywords, Boolean Indicators, search strategies and limiters
    d) Appraise the evidence (Appendix H)
        i) Research evidence appraisal tool (Appendix E)
        ii) Non-research evidence appraisal tool (Appendix F)
    e) Summary table (Appendix G)
10) Navigating to facility resources (CINAHL, PUBMED, Up To Date, Knowledge Center, Lippincott, Nutritional Care Manual

APPENDIX D


EVIDENCE BASED PRACTICE ENRICHMENT
FOR NURSE LEADERS
J. Michelle Bland MSN, RN, NEA-BC
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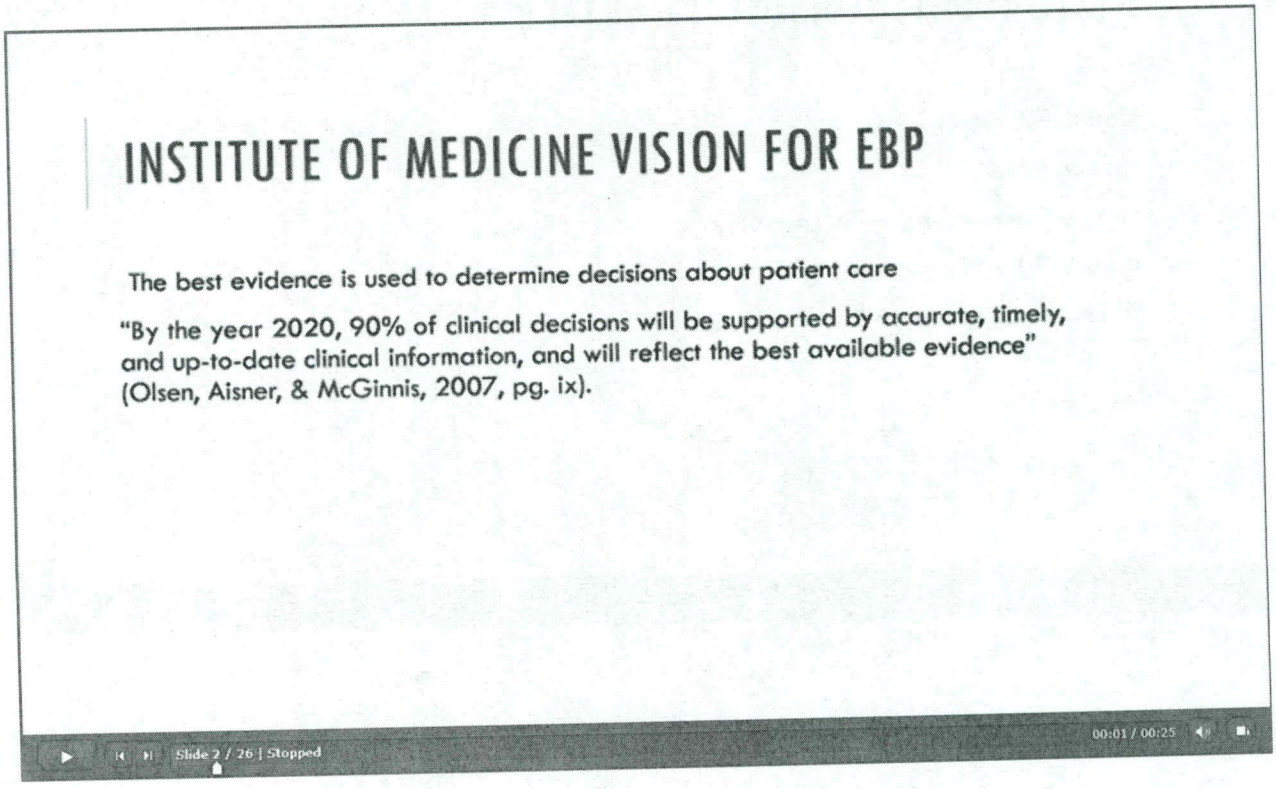
INSTITUTE OF MEDICINE VISION FOR EBP
The best evidence is used to determine decisions about patient care
"By the year 2020, 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence" (Olsen, Aisner, & McGinnis, 2007, pg. ix).
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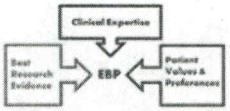
DEFINITION OF EBP

Evidence-based practice is an unceasing problem-solving approach for healthcare practitioners that incorporate the best evidence along with a patient's wishes and the practitioner's expertise to guide their healthcare. (Melnyk, Gallager-Ford, Long & Fineout-Overholt , 2014).



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HISTORICAL NURSING PRACTICE

Traditional/ritual

Task oriented

"way we've always done it" mentality

It works, why change it

"that is how I was taught"

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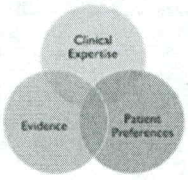
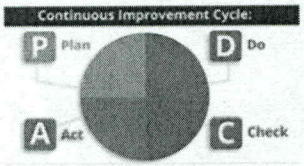
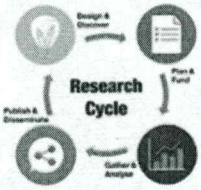
DIFFERENTIATING BETWEEN EBP, QI, & RESEARCH



Evidence Based Practice



Quality Improvement



Research

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NURSE LEADERS

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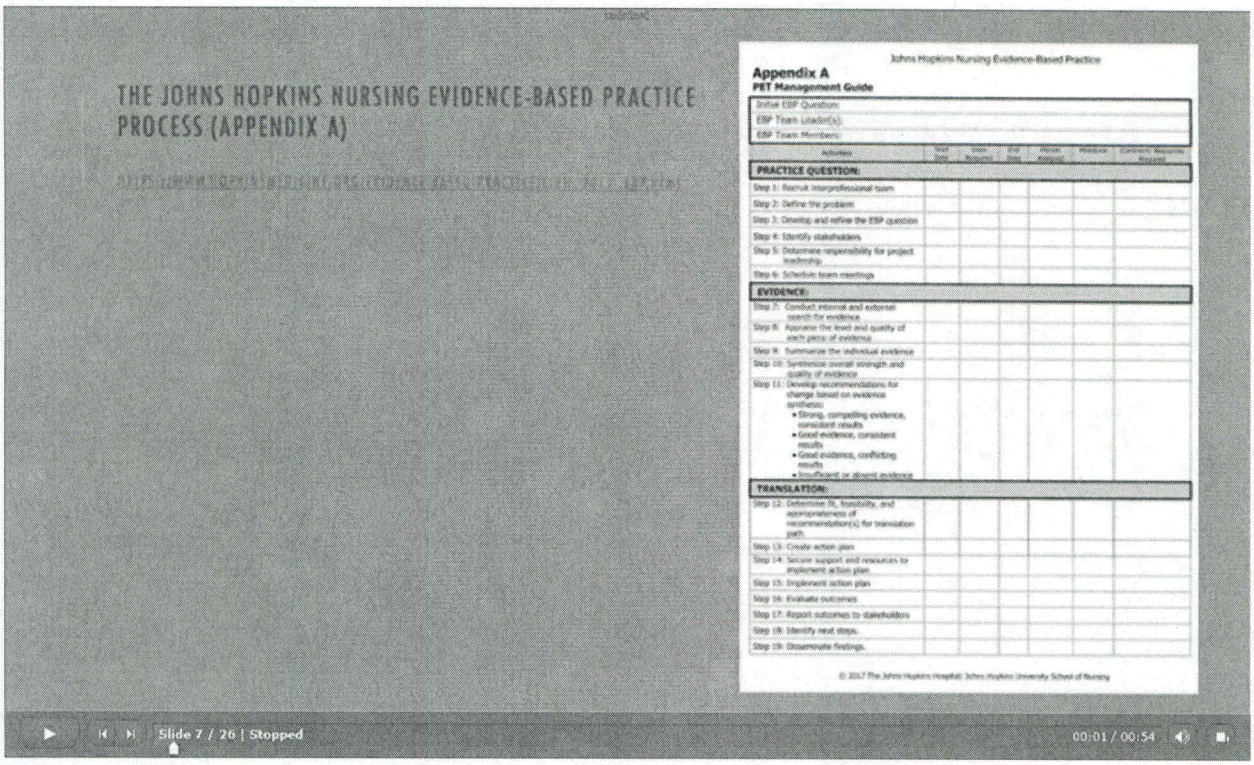
THE JOHNS HOPKINS NURSING EVIDENCE-BASED PRACTICE PROCESS (APPENDIX A)
Johns Hopkins Nursing Evidence-Based Practice
Appendix A
PET Management Guide
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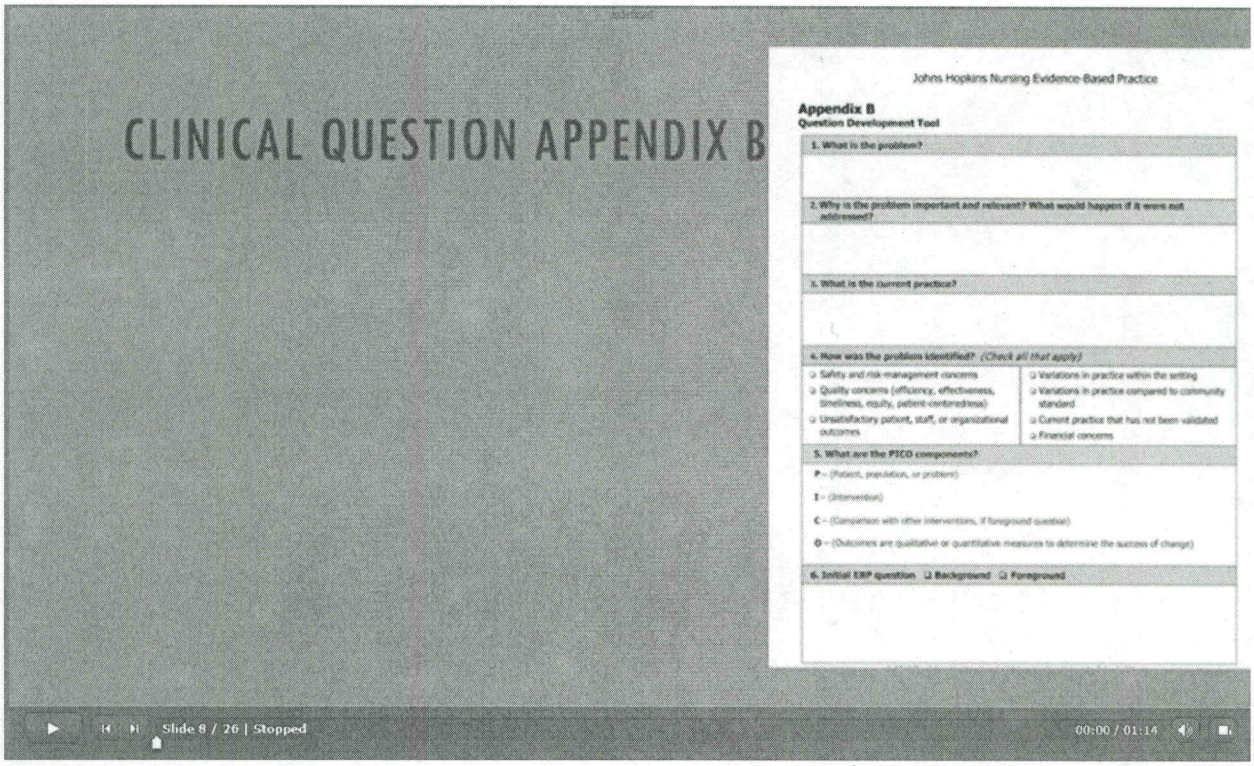
CLINICAL QUESTION APPENDIX B
Johns Hopkins Nursing Evidence-Based Practice
Appendix B
Question Development Tool
1. What is the problem?
2. Why is the problem important and relevant? What would happen if it were not addressed?
3. What is the current practice?
4. How was the problem identified? (Check all that apply)
Safety and risk management concerns
Quality concerns (efficiency, effectiveness, timeliness, equity, patient-centeredness)
Unsatisfactory patient, staff, or organizational outcomes
Variations in practice within the setting
Variations in practice compared to community standard
Current practice that has not been validated
Financial concerns
5. What are the PICO components?
P – (Patient, population, or problem)
I – (Intervention)
C – (Comparison with other interventions, if foreground question)
O – (Outcomes are qualitative or quantitative measures to determine the success of change)
6. Initial EBP question Background Foreground
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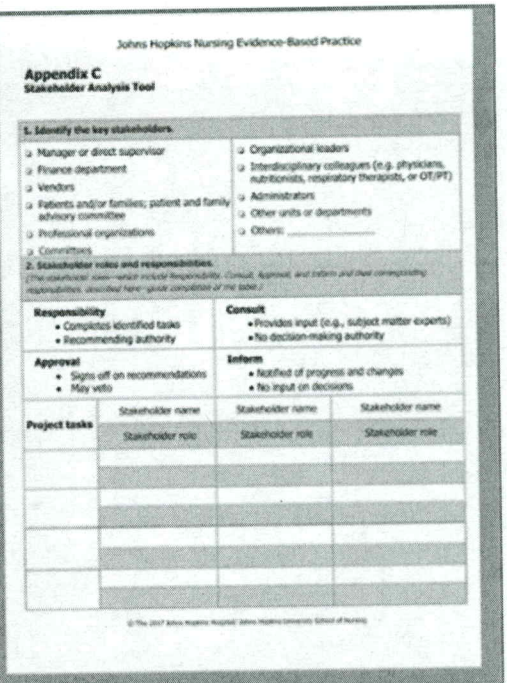
STAKEHOLDER ANALYSIS TOOL (APPENDIX C)



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Appendix C
Stakeholder Analysis Tool

1. Identify the key stakeholders.

- Manager or direct supervisor
- Finance department
- Vendors
- Patients and/or families; patient and family advisory committee
- Professional organizations
- Committees
- Organizational leaders
- Interdisciplinary colleagues (e.g. physicians, nutritionists, respiratory therapists, or OT/PT)
- Administrators
- Other units or departments
- Others: _____

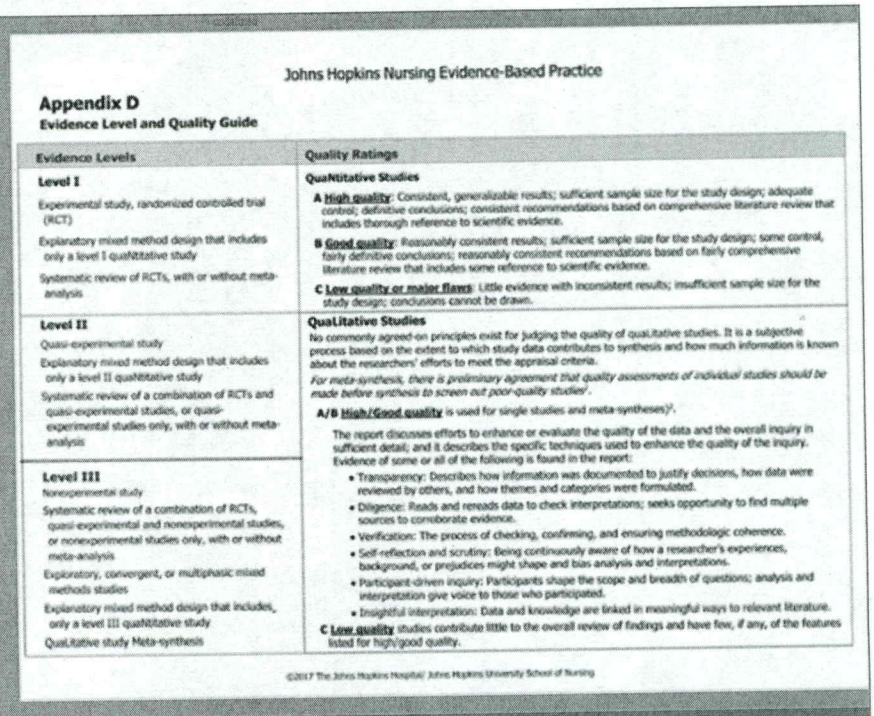
2. Stakeholder roles and responsibilities.

(The stakeholder roles—which include Responsibility, Consult, Approval, and Inform and their corresponding responsibilities described here—guide completion of the table.)

Responsibility • Completes identified tasks • Recommending authority	**Consult** • Provides input (e.g., subject matter experts) • No decision-making authority
Approval • Signs off on recommendations • May veto	**Inform** • Notified of progress and changes • No input on decisions

Project tasks	Stakeholder name Stakeholder role	Stakeholder name Stakeholder role	Stakeholder name Stakeholder role

EVIDENCE (APPENDIX D)



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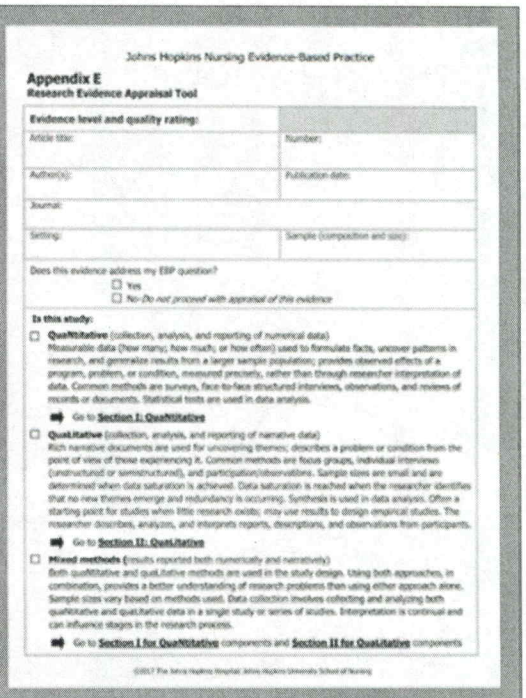
Appendix D
Evidence Level and Quality Guide

Evidence Levels	Quality Ratings
Level I Experimental study, randomized controlled trial (RCT) Explanatory mixed method design that includes only a level I quaNtitative study Systematic review of RCTs, with or without meta-analysis	**QuaNtitative Studies** **A High quality**: Consistent, generalizable results; sufficient sample size for the study design; adequate control; definitive conclusions; consistent recommendations based on comprehensive literature review that includes thorough reference to scientific evidence. **B Good quality**: Reasonably consistent results; sufficient sample size for the study design; some control, fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence. **C Low quality or major flaws**: Little evidence with inconsistent results; insufficient sample size for the study design; conclusions cannot be drawn.
Level II Quasi-experimental study Explanatory mixed method design that includes only a level II quaNtitative study Systematic review of a combination of RCTs and quasi-experimental studies, or quasi-experimental studies only, with or without meta-analysis	**QuaLitative Studies** No commonly agreed-on principles exist for judging the quality of quaLitative studies. It is a subjective process based on the extent to which study data contributes to synthesis and how much information is known about the researchers' efforts to meet the appraisal criteria. *For meta-synthesis, there is preliminary agreement that quality assessments of individual studies should be made before synthesis to screen out poor-quality studies*[1]. **A/B High/Good quality** is used for single studies and meta-syntheses[1]. The report discusses efforts to enhance or evaluate the quality of the data and the overall inquiry in sufficient detail; and it describes the specific techniques used to enhance the quality of the inquiry. Evidence of some or all of the following is found in the report: • Transparency: Describes how information was documented to justify decisions, how data were reviewed by others, and how themes and categories were formulated. • Diligence: Reads and rereads data to check interpretations; seeks opportunity to find multiple sources to corroborate evidence. • Verification: The process of checking, confirming, and ensuring methodologic coherence. • Self-reflection and scrutiny: Being continuously aware of how a researcher's experiences, background, or prejudices might shape and bias analysis and interpretations. • Participant-driven inquiry: Participants shape the scope and breadth of questions; analysis and interpretation give voice to those who participated. • Insightful interpretation: Data and knowledge are linked in meaningful ways to relevant literature. **C Low quality** studies contribute little to the overall review of findings and have few, if any, of the features listed for high/good quality.
Level III Nonexperimental study Systematic review of a combination of RCTs, quasi-experimental and nonexperimental studies, or nonexperimental studies only, with or without meta-analysis Exploratory, convergent, or multiphasic mixed methods studies Explanatory mixed method design that includes, only a level III quaNtitative study QuaLitative study Meta-synthesis	

APPRAISE RESEARCH (APPENDIX E)



Johns Hopkins Nursing Evidence-Based Practice

Appendix E
Research Evidence Appraisal Tool

Evidence level and quality rating:	
Article title:	Number:
Author(s):	Publication date:
Journal:	
Setting:	Sample (composition and size):

Does this evidence address my EBP question?
☐ Yes
☐ *No-Do not proceed with appraisal of this evidence*

Is this study:

☐ **QuaNtitative** (collection, analysis, and reporting of numerical data)
Measurable data (how many; how much; or how often) used to formulate facts, uncover patterns in research, and generalize results from a larger sample population; provides observed effects of a program, problem, or condition, measured precisely, rather than through researcher interpretation of data. Common methods are surveys, face-to-face structured interviews, observations, and reviews of records or documents. Statistical tests are used in data analysis.

➡ Go to **Section I: QuaNtitative**

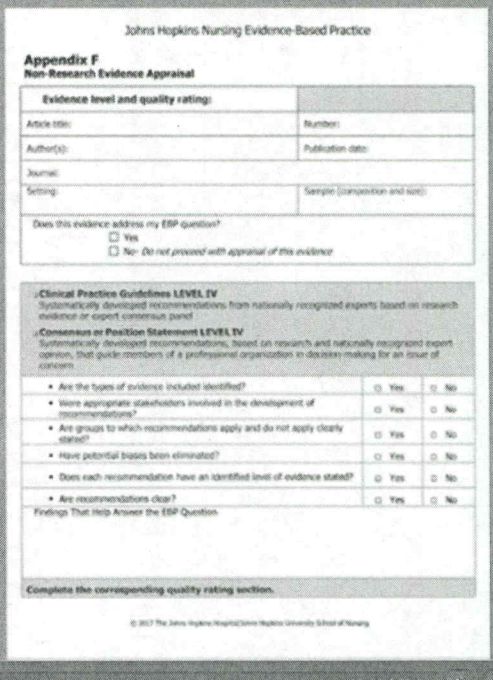
☐ **QuaLitative** (collection, analysis, and reporting of narrative data)
Rich narrative documents are used for uncovering themes; describes a problem or condition from the point of view of those experiencing it. Common methods are focus groups, individual interviews (unstructured or semistructured), and participation/observations. Sample sizes are small and are determined when data saturation is achieved. Data saturation is reached when the researcher identifies that no new themes emerge and redundancy is occurring. Synthesis is used in data analysis. Often a starting point for studies when little research exists; may use results to design empirical studies. The researcher describes, analyzes, and interprets reports, descriptions, and observations from participants.

➡ Go to **Section II: QuaLitative**

☐ **Mixed methods** (results reported both numerically and narratively)
Both quaNtitative and quaLitative methods are used in the study design. Using both approaches, in combination, provides a better understanding of research problems than using either approach alone. Sample sizes vary based on methods used. Data collection involves collecting and analyzing both quaNtitative and quaLitative data in a single study or series of studies. Interpretation is continual and can influence stages in the research process.

➡ Go to **Section I for QuaNtitative** components and **Section II for QuaLitative** components

APPRAISE NON RESEARCH (APPENDIX F)



Johns Hopkins Nursing Evidence-Based Practice

Appendix F
Non-Research Evidence Appraisal

Evidence level and quality rating:	
Article title:	Number:
Author(s):	Publication date:
Journal:	
Setting:	Sample (composition and size):

Does this evidence address my EBP question?
☐ Yes
☐ *No- Do not proceed with appraisal of this evidence*

☐ **Clinical Practice Guidelines LEVEL IV**
Systematically developed recommendations from nationally recognized experts based on research evidence or expert consensus panel

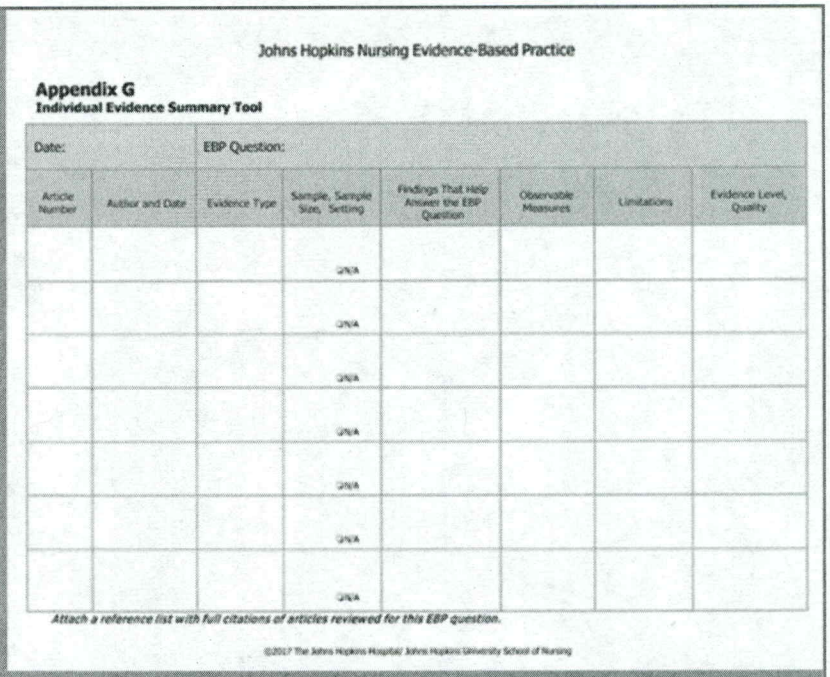
☐ **Consensus or Position Statement LEVEL IV**
Systematically developed recommendations, based on research and nationally recognized expert opinion, that guide members of a professional organization in decision-making for an issue of concern

• Are the types of evidence included identified?	☐ Yes	☐ No
• Were appropriate stakeholders involved in the development of recommendations?	☐ Yes	☐ No
• Are groups to which recommendations apply and do not apply clearly stated?	☐ Yes	☐ No
• Have potential biases been eliminated?	☐ Yes	☐ No
• Does each recommendation have an identified level of evidence stated?	☐ Yes	☐ No
• Are recommendations clear?	☐ Yes	☐ No

Findings That Help Answer the EBP Question

Complete the corresponding quality rating section.

INDIVIDUAL EVIDENCE SUMMARY TOOL (APPENDIX G)



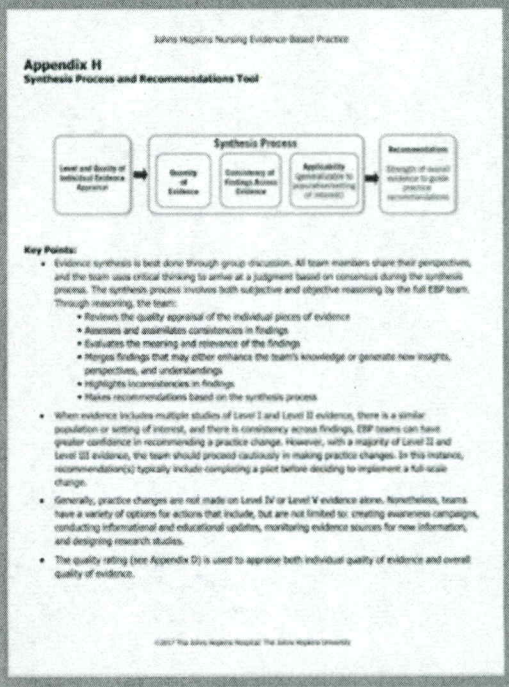
Johns Hopkins Nursing Evidence-Based Practice

Appendix G
Individual Evidence Summary Tool

Date:		EBP Question:					
Article Number	Author and Date	Evidence Type	Sample, Sample Size, Setting	Findings That Help Answer the EBP Question	Observable Measures	Limitations	Evidence Level, Quality

Attach a reference list with full citations of articles reviewed for this EBP question.

SYNTHESIS PROCESS AND RECOMMENDATION TOOL (APPENDIX H)



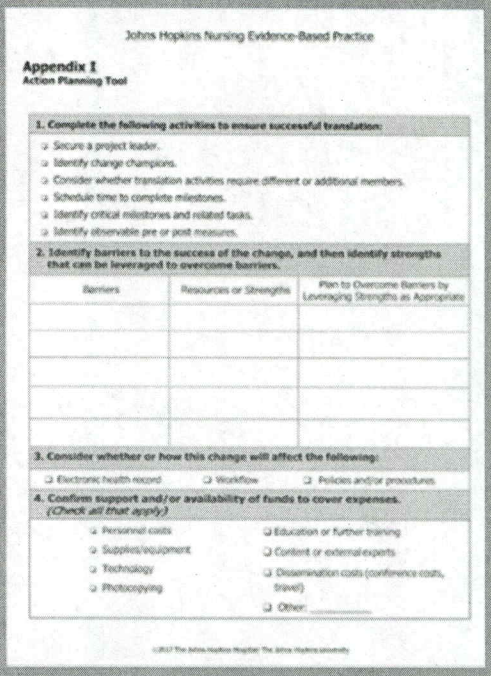
Johns Hopkins Nursing Evidence-Based Practice

Appendix H
Synthesis Process and Recommendations Tool

Key Points:

- Evidence synthesis is best done through group discussion. All team members share their perspectives, and the team uses critical thinking to arrive at a judgment based on consensus during the synthesis process. The synthesis process involves both subjective and objective reasoning by the full EBP team. Through reasoning, the team:
  - Reviews the quality appraisal of the individual pieces of evidence
  - Assesses and assimilates consistencies in findings
  - Evaluates the meaning and relevance of the findings
  - Merges findings that may either enhance the team's knowledge or generate new insights, perspectives, and understandings
  - Highlights inconsistencies in findings
  - Makes recommendations based on the synthesis process
- When evidence includes multiple studies of Level I and Level II evidence, there is a similar population or setting of interest, and there is consistency across findings, EBP teams can have greater confidence in recommending a practice change. However, with a majority of Level II and Level III evidence, the team should proceed cautiously in making practice changes. In this instance, recommendation(s) typically include completing a pilot before deciding to implement a full-scale change.
- Generally, practice changes are not made on Level IV or Level V evidence alone. Nonetheless, teams have a variety of options for actions that include, but are not limited to: creating awareness campaigns, conducting informational and educational updates, monitoring evidence sources for new information, and designing research studies.
- The quality rating (see Appendix D) is used to appraise both individual quality of evidence and overall quality of evidence.

ACTION PLANNING TOOL (APPENDIX I)



Johns Hopkins Nursing Evidence-Based Practice

Appendix I
Action Planning Tool

1. Complete the following activities to ensure successful translation:

- ❑ Secure a project leader.
- ❑ Identify change champions.
- ❑ Consider whether translation activities require different or additional members.
- ❑ Schedule time to complete milestones.
- ❑ Identify critical milestones and related tasks.
- ❑ Identify observable pre or post measures.

2. Identify barriers to the success of the change, and then identify strengths that can be leveraged to overcome barriers.

Barriers	Resources or Strengths	Plan to Overcome Barriers by Leveraging Strengths as Appropriate

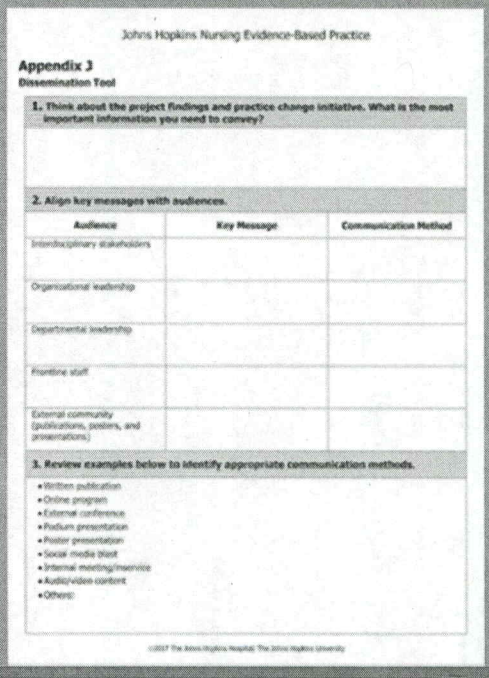
3. Consider whether or how this change will affect the following:

❑ Electronic health record ❑ Workflow ❑ Policies and/or procedures

4. Confirm support and/or availability of funds to cover expenses. *(Check all that apply)*

- ❑ Personnel costs
- ❑ Supplies/equipment
- ❑ Technology
- ❑ Photocopying
- ❑ Education or further training
- ❑ Content or external experts
- ❑ Dissemination costs (conference costs, travel)
- ❑ Other: _____

DISSEMINATION TOOL (APPENDIX J)



Johns Hopkins Nursing Evidence-Based Practice

Appendix J
Dissemination Tool

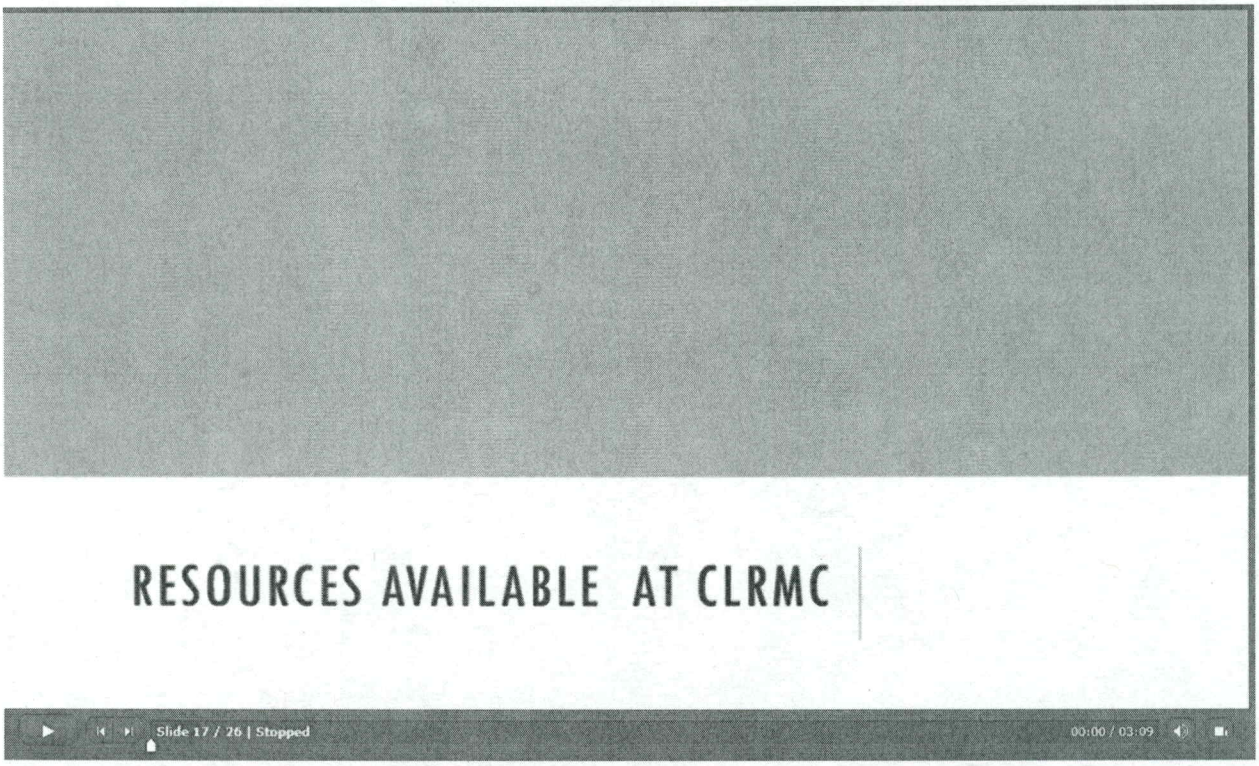
1. Think about the project findings and practice change initiative. What is the most important information you need to convey?

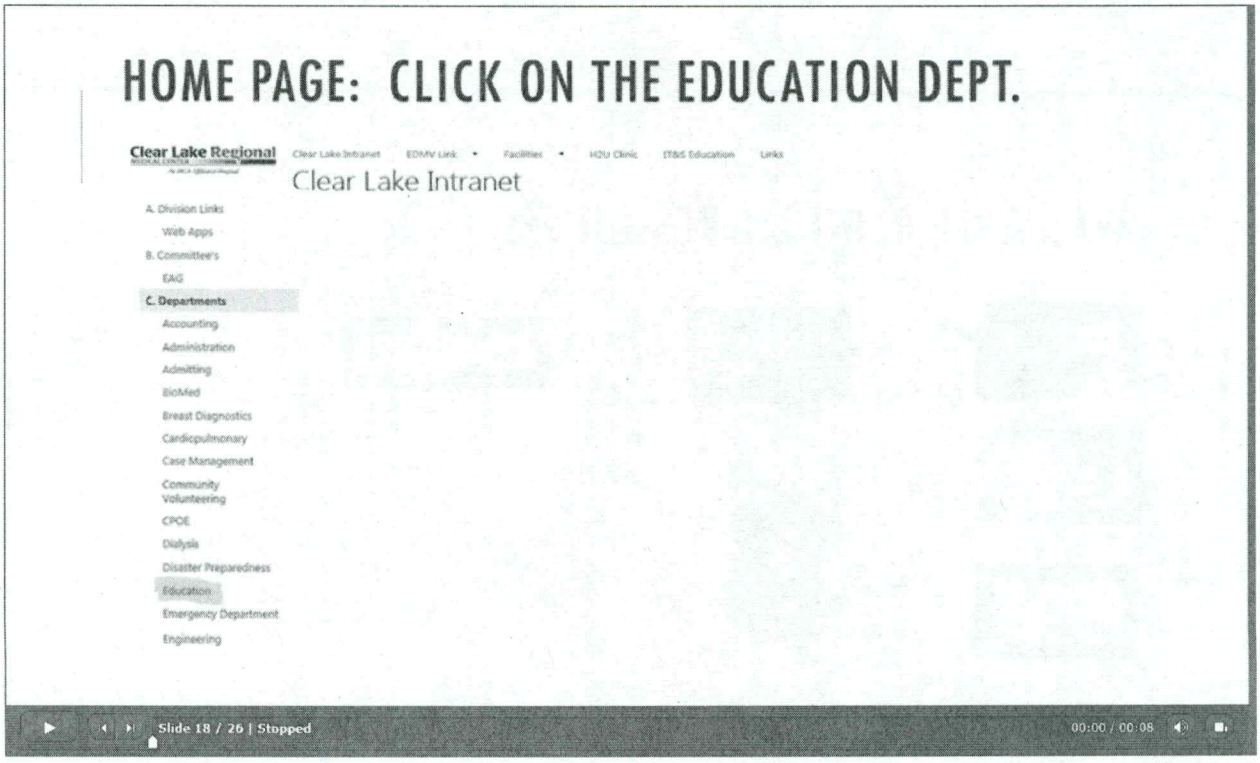
2. Align key messages with audiences.

Audience	Key Message	Communication Method
Interdisciplinary stakeholders		
Organizational leadership		
Departmental leadership		
Frontline staff		
External community (publications, posters, and presentations)		

3. Review examples below to identify appropriate communication methods.

- Written publication
- Online program
- External conference
- Podium presentation
- Poster presentation
- Social media blast
- Internal meeting/inservice
- Audio/video content
- Others:


RESOURCES AVAILABLE AT CLRMC
Slide 17 / 26 | Stopped
00:00 / 03:09


HOME PAGE: CLICK ON THE EDUCATION DEPT.
Clear Lake Regional
Clear Lake Intranet
EDMV Link
Facilities
H2U Clinic
IT&S Education
Links
Clear Lake Intranet
A. Division Links
Web Apps
B. Committee's
EAG
C. Departments
Accounting
Administration
Admitting
BioMed
Breast Diagnostics
Cardiopulmonary
Case Management
Community Volunteering
CPOE
Dialysis
Disaster Preparedness
Education
Emergency Department
Engineering
Slide 18 / 26 | Stopped
00:00 / 00:08

NEXT CLICK CLINICAL RESOURCES

Clear Lake Intranet

Departments

- Childbirth and Parenting Education
- Diabetes and Patient Education
- Staff and Clinical Education
- Clinical Resources
- Education Annual Report

Discussions

- Team Discussion

Slide 19 / 26 | Stopped 00:00 / 00:07

AVAILABLE CLINICAL RESOURCES

CINAHL Plus

NCM Nutrition Care Manual

Knowledge Center

Lippincott Procedures

UpToDate

Slide 20 / 26 | Stopped 00:00 / 00:20

CINAHL WITH PLUS FULL TEXT

Click on CINHAL

Slide 21 / 26 | Stopped 00:00 / 00:11

EBSCO HOST

EBSCOhost Research Databases

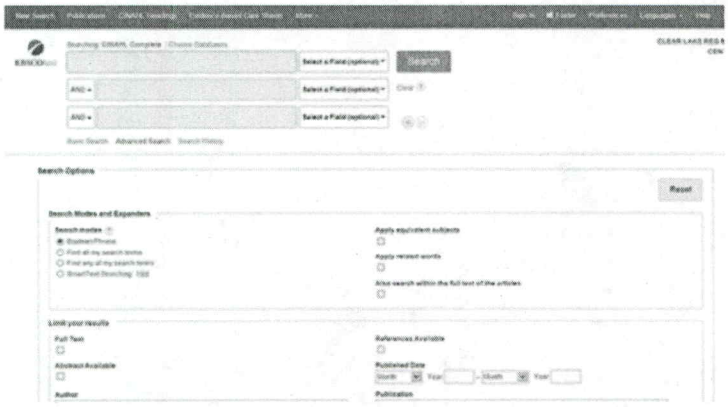
Slide 22 / 26 | Stopped 00:00 / 00:06

CINAHL COMPLETE

☐ CINAHL Complete

Slide 23 / 26 | Stopped

00:00 / 00:05



Slide 24 / 26 | Stopped

00:00 / 00:30

BOOLEAN OPERATORS AND SEARCH STRATEGIES

Advanced search strategies include setting "limits"

- Limit by year of publication
- Article
- Language
- Gender
- Age
- Date range (start with most recent 5 years and increase or decrease date based on number of articles retrieved)
- Don't limit to "full text articles" only to prevent missing relevant evidence important for decision making
- Search for articles published in the past 3-5 years to find the most current evidence available.
- Boolean Operators – "AND", "OR", and "NOT
- Truncation- for example "nurs*"
- Synonyms

The Johns Hopkins Nursing Evidence Based Practice tools
https://www.hopkinsmedicine.org/evidence-based-practice/ijhn_2017_ebp.html

Melnyk, B., Gallagher-Ford, L., Long, L., & Fineout-Overholt, E. (2014). The Establishment of Evidence-Based Practice Competencies for Practicing Registered Nurses and Advanced Practice Nurses in Real-World Clinical Settings: Proficiencies to Improve Healthcare Quality, Reliability, Patient Outcomes, and Cost. *Worldviews of Evidence-Based Nursing*, 11(1) 5-15.

Olsen, L., Aisner, D., McGinnis, J.M. (2007). Institute of Medicine Roundtable on Evidence-Based Medicine, The Learning Healthcare System Workshop Summary. *The Institute of Medicine of the National Academies*. The National Academies Press, Washington, D.C.

THANK YOU SO MUCH!

APPENDIX E

Slide 1- Introduction to the module and learner objectives

Provide foundational understanding of EBP in order to improve patient outcome within the nurse leaders unit of oversight

Learner will be able to recall the difference between Evidence based practice, quality improvement, and research

Learner will be able to Locate, access and use databases available within HCA

Learner will be able to apply search strategies within a liter review

The learner will be introduced Johns Hopkins evidence based practice tools

Slide 2-

This is relevant in today's healthcare arena because the IOM has a vision for EBP in healthcare. By the year 2020 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence.

Slide 3

What is evidence based practice? A popular definition from leading experts in 2014 Is that evidence based practice is an unceasing problem solving approach for healthcare practitioner that incorporate the best evidence along with the patient's wishes to guide healthcare decisions

Slide 4:

Historically over the years nursing has passed down information from generation to generation as they serve as preceptors and mentors for students, grad nurses and nurses transitioning into new practice settings based on what they have learned thru education and experience. This traditional approach to info sharing sometimes results in experienced nurses sharing what has worked for them in the past without confirming if more current evidence is available to potentially achieve an even better outcome. Nurses should be able to justify their practice and decision making by citing the most current evidence and the best practice recommendations available.

Slide 5

Differentiating between EBP, QI, & Research and so what is the difference between these three and why does it really matter. It is important to remember that these three things are unique and all serve a different purpose. As previously stated evidence based practice is an unceasing problem solving approach for healthcare practitioners that incorporate the best evidence along with the patients wishes and that practitioners experise to guide heatlthcare decisionsAccording to the agency for heathcare resarch and quality -quality improvement is an organziational strat that formaly involves the analysis process and outcomes data and the application of systematic efforts to improve performance it can also be described as carrying out a systematic process of baseline data collection, intervention and

implementation and additionally collecting more data to achieve a speedy improvement also known as the PDCA cycle. And lastly research- research is a systematic investigation designed to develop and contribute to generalizable knowlege, the research proces is very regimented and follows organized sequential steps to collect data an support hypothesis, answers questions or determine or test outcomes this includes conducting studies that build on or extend finding of prior work to gain valuable insights. Nursing resarch according to Burns and Grove is a scientific process that validates and refines existing knowlege and genertérates new knowledege that directly and indirectly influence nursing practice. Now that we have discussed the difference between EBP, QI and research the next several slides will introduce a nice set of tools from Johns Hopkins School of Nursing that are free to the public. They are a wonderful way to maintain a projects organziation while having a well constructed ebp project. Before we move on to those I want to share with you an evidence based practice project done at Clear Lake Regional Medical Center in the last year.

Slide 6

Here at CLRMC the cardiac cath lab nurses were able to conduct an evidence based practice project surroundings bed rest times for patients post catheterization. After reviewing the literature they were able to make a recommendation to reduce the bedrest time for these patients. The recommendation was to reduce the bedrest post cath from 4-6 hours down to a standard 2 hours. The nurses empowered by the evidence went to the cardiology service meeting and presented their findings and secured a change in practice. This improved the patient's pain, the patient's experience, the patient's recovery, and throughput, it is an excellent example of having a spirit of inquiry and challenging the status quo. So nurse leaders next time you have an opportunity for improvement in your unit and have exhausted all you know to do consider going to the evidence to see what others in similar situations have done to create a positive impact.

Slide 7

Understanding how to organize and conduct an EBP is relevant for Nurse Leaders in today's healthcare arena. Healthcare focuses constantly on improving efficiencies, improving quality and improving services for our patients. As mentioned earlier the Johns Hopkins Nursing EBP process is a set of appendices that organize and help guide your EBP project. They have simplified the process and divided it into 3 easy steps. The practice question or "P" -the evidence or "E" and translation or transition into practice "T". Appendix A is a summary of all the steps from crafting a PICOT question to reviewing the evidence to transition into practice or plans for implementation. The link to the tool is here for you as well as and there is also a short tutorial available on their website.

Slide 8

Appendix B is the clinical question tool that helps you draft a well-developed PICOT question. For instance the clinical question for this project when working to creating a EBP enrichment mod for nurse leaders was the following:

Within the nurse leader population of a for profit level II trauma designated community hospital will initiating an EBP enrichment course for NLs improve nurse leaders knowledge, skills and abilities for searching, appraising and applying evidence compared to having no EBP educational program available.

The "P" is nurse leaders in a level II trauma designated community hospital

The "I" is the intervention- An evidence based practice nurse leader enrichment course for nurse leader development

The "C" comparison- no EBP nurse leader enrichment course available

The "O" outcome- improve Nurse Leaders knowledge skills and abilities in searching and appraising and applying the evidence

Slide 9

Appendix C is the stakeholder analysis tool. As with all important projects it is always a good idea to identify the stakeholders and consider who will be impacted. Appendix C helps with that. It helps to determine important stakeholders in the project understanding that these stakeholders may change as the project develops.

Slide 10

Appendix D levels of evidence and quality guide. It is extremely important to understand what level of evidence each article is. Keep in mind that whenever possible it is best to use highest level of evidence available to guide practice. Some journals include level of evidence in the header of the article but many do not. If you are unable to recall which level of evidence an article is you can always do a literature search after you reading the design and methods section of the article.

Just a quick reminder the levels of evidence are from level 1 being best or highest to level 7

Level 1 evidence is a systematic review or meta-analysis of randomized control trials or evidence based clinical practice guidelines that have been based on systematic reviews of randomized control trials

Level 2 evidence is obtained from at least one well designed randomized control trial

Level 3 evidence is obtained well designed control trial without randomization

Level 4 evidences comes from well-designed case control or cohort studies

Level 5 evidence of descriptive or qualitative study

Level 6 evidence of a single descriptive or qualitative study

Level 7 evidence opinions or authorities and or reports of expert committees

Slide 11

Appendix E is another one that helps you appraise the research found in relation to your project and PICOT question. It directs you to determine whether it is quantitative, qualitative, or mixed method research. Keep in mind that mixed method research methodologies are increasing in nursing research. They combine quantitative and qualitative elements into research design which has the potential to develop a deeper understanding of what is being researched'

Slide 12

There is often other article types available that may contribute to your evidence based practice project--for instance expert opinions. A lower level of evidence but none the less one that may add value to EBP project. Appendix F is helpful in appraising non research evidence.

Slide 13

Appendix G is a tool that helps you stay organized as it functions as a summary for every article reviewed. This individual evidence summary tool should be updated after you review each of the articles related to your topic of interest.

Slide 14

Appendix H is helpful with synthesis and recommendation of information found in relation to your PICO question. This helps determine the fit and feasibility of the change before moving into the translation into practice stage. Let's face it there are times when a change is needed based on the evidence by it isn't practical in that setting or situation. It may be an issue with timing budget or even your human resources.

Slide 15

Appendix I is your planning tool it helps with organization from identifying a project leader, change champions, barriers etc. this helps with identifying important task or critical milestones that can be delegated to responsible parties and tracked on this form.

Slide 16

Appendix j is the dissemination tool all EBP projects have the potential to contribute to the greater good. This is the purpose of dissemination- sharing your findings and best practices with other healthcare providers in order to improve patient outcomes. Dissemination can be in many forms-internal presentations to peers, staff meetings, poster presentations at local conferences, podium presentations at a national conference or even a publication in a nursing journal. Share your knowledge, expertise and findings. You and your team have a professional obligation to Disseminate.

Slide 17

Now that you have been into to the Johns Hopkins Nursing evidence Based Practice Tools, the next step is knowing how to access current relevant literature that pertains to your EBP project. For instance when preparing for this EBP enhancement project I used the CINHAL database to harvest articles relevant to my topic in order to conduct my literature review. I also reviewed important websites like the National Academies of Press and the World Health Organization. As I mentioned earlier my PICO question was "Within the nurse leader population of a for profit level II trauma designated community hospital will initiating an EBP enrichment course for NLs improve nurse leaders knowledge, skills and abilities for searching, appraising and applying evidence compared to having no EBP educational program available." With this PICO question in mind I used keep words and terms in the CINHAL database, one of the terms I used was "evidence based practice in nursing", another was "healthcare quality" another was leader. The fsirs search with ebp in nursing resulted in 7,662 articles. There is no way anybody can sift thru that many articles to determine what is relevant and what is not to the project. The addition of Boolean Operators such as "and" along with key words like "nurse leaders" narrowed the results to 120 articles. This is still too many so to further limit the results I used the Boolean operator "and" again

along with the key words "implementation" this resulted in 24 articles. I then used date range limiters to narrow the articles in date range. I used the range 2012 to 2017 which resulted in 16 remaining articles. 9 of which were relevant to my project and picot question. A much more manageable number. The 2nd literature search I performed was also using CINHAL. I searched the "state of evidence based care". This immediately resulted in 52 articles much better than the 7,662 from earlier but still too many. I used the Boolean Operator "and" and the search term healthcare quality and that actually increased my article results to 67! The final search adding "and" in addition to the keyword "Leader" brought my search down to 5 articles again all very relevant to my picot question.

Slide 18

The next few slides will go over how to access the databases and the resources that are avail to you here at CLRMC. From the Education home page click on the education tab- highlighter here in yellow.

Slide 19

Next click on the clinical resources tab also highlighted her in yellow

Slide 20-24

You will then be taken to a page that displays all the available resources to you here at CLRMC. You have access to the CINHAL, Lippincott, Up To Date, Nutritional Care Man, the Institute of Medicine's Future of Nursing Report and the Knowledge center. Having all of those resource avail to you in HCA is a wonderful opportunity.

In order to get to the database you are going to click on CINHAL plus full text. Then EBSCO host to get to research database and finally clicking on CINHAL complete.

Once you clinic on CINHAL complete it will take you to this landing page to perform a lit search in the CINHAL database you will use key words, search terms and strategy's to harvest the research articles that are related to your PICO question. You will put your key word in the blank at the top. Notice the word "and" & the down arrow.

Slide 25

Boolean Operators and Search Strategies. Advanced search strategies include setting limits. You will want to consider setting limits to the year of publication, language, age, gender and date ranges. Consider starting with the most recent 5 years and increase or decreases the date based on the number of articles retrieved. Don't limit your search to full text articles only in order to prevent missing articles relevant or even important to your decision making. Boolean operators are those words like "and" "or" and "not" these words allow a search to either broaden or narrow depending on which term you use for instance the word not should be used sparingly because it might exclude items of interest. Use the word "and" to narrow a search and use the word "or" to expand your search results. Truncation also allows you to locate articles in the database with words that are similar to the base or root of the word so nurs* --N, U, R, S with an asterisk will locate words like nurse, nurses, nursing in the database and finally synonyms may be helpful when searching. For instance for the word "surgery" the words "operation" "surgical procedure" or "surgical treatment"

Slide 26

So next time you encounter a clinical issue in your unit and you have exhausted all you know to do to make an improvement, consider searching for the JOHNS HOPKINS Nursing evidence based practice tools and doing a literature search to see what's out there. Thank you so much.

Nurse Leader Participants Needed For Research Study!

Nursing Leaders are being sought to participate in a research study involving evidence based practice.

Who: All Directors of Nursing at CLRMC

What: An Evidence Based Practice Learning Module

When: To be completed by November 15, 2018

Where: Must use the internet explorer browser to access. Go to the intranet > Web Apps > healthstream

(**Don't use your single sign on toolbar to access because that uses Google Chrome!**)

THANK YOU!

APPENDIX G

Consent Form: Evidence Based Practice Enrichment for Nurse Leaders

You are invited to participate in a research study about evidence based practice. This study is designed to help us to better understand if an online learning module on evidence based practice improves nurse leaders' knowledge, skills and abilities in searching, appraising, and applying evidence.

The primary investigator is Jay Michelle Bland, from Sana Fe, Texas. Contact number is 409-739-6303.

PROCEDURE TO BE FOLLOWED IN THE STUDY: Participation in this study is completely voluntary. Your consent for participation will be obtained as the first step in the HealthStream online learning management system. Once consent is given; you will be asked to complete a demographics form and complete a pre-survey that gathers information about your experience and confidence in completing the steps of evidence based practice. Next you will listen to an online module in the HealthStream learning management system. Lastly you will complete a post survey. This entire process will take a total of 55 minutes.

DISCOMFORTS AND RISKS FROM PARTICIPATING IN THIS STUDY: There may be some discomfort in participation in this study. Participants may be uncomfortable disclosing their experience and confidence in evidence based practice. A potential risk in participating in this study is breach of data confidentiality and security in the event that participants' identities and survey responses are disclosed.

EXPECTED BENEFITS: Results from this study can benefit society by elevating the level of nursing practice across the continuum of care in the study site.

INCENTIVES AND COMPENSATION FOR PARTICIPATION: There are no incentives of compensation available for participation.

CONFIDENTIALITY OF RESULTS: Participant confidentiality will be maintained by limiting the access of completion reports to the principal investigator and the learning management system facilitator. This consent form will remain in the learning management system. The data from your session will only be released to Jay Michelle Bland.

FREEDOM TO WITHDRAW: You are free to withdraw from the study at any time. You will not be penalized because of withdrawal in any form. Investigators reserve the right to remove any participant from the session without regard to the participant's consent.

CONTACT INFORMATION: If you have any questions now or in the furture, please contact the Principal Investigator, Jay Michelle Bland in Santa Fe, TX at 409-739-6303 or by email at jay.bland@hcahealthcare.com. If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the Office of the IRB (IRB) at 256.824.6992 or email the IRB chair Dr. Bruce Stallsmith at irb.@uah.edu.

If you agree to participate in our research please sign and date below. If you are under the age of 18, please provide your parent or legal guardian's signature indicating consent.

This study was approved by the Institutional Review Board at UAH and will expire in one year from September 2018.

_____ _____

Name (Please Print) Signature Date

_____

Parent/Guardian Signature (if younger than 18)

Appendix

Evidence Based Practice Enrichment Module Pre-Survey					
Please provide your response to the below statements. Your response will be used to edit and revise course content for future use as well as determine if knowledge improvement was achieved. Once the survey is complete you will be prompted to close your browser and will be immediately taken to the certificate of completion. Proof of completion will be maintained in the LMS system but you may also print one for your records at that time.					
	Strongly Disagree 5	**Disagree 4**	**Neutral 3**	**Agree 2**	**Strongly Agree 1**
I have lead or participated in a project that translated evidence into practice.					
I have confidence in my ability to translate current best evidence into an action plan for quality improvement within my unit					
I am confident in my ability to write a searchable question using PICOT format					
I know where the links are to access CINAHL and PubMed on the hospital intranet and how to use the databases.					
I know how to use the available databases to search for literature related to my PICOT question?					
I am confident in my ability to critique and synthesize the literature found regarding my PICOT question					
I know how to use search strategies such as setting limits and using Boolean operators					
I understand what "Clinical Inquiry" means and how it has the potential to impact quality and contain costs					
I can verbalize the difference between evidence based practice, quality improvement, and research					
I am familiar with the levels of evidence and which level carries the greater "weight" or "importance"					

APPENDIX I

Evidence Based Practice Enrichment Module Post-Survey					
Please provide your response to the below statements. Your response will be used to edit and revise course content for future use as well as determine if knowledge improvement was achieved. Once the survey is complete you will be prompted to close your browser and will be immediately taken to the certificate of completion. Proof of completion will be maintained in the LMS system but you may also print one for your records at that time.					
	Strongly Disagree 5	**Disagree 4**	**Neutral 3**	**Agree 2**	**Strongly Agree 1**
I feel confident in leading or participating in a project that translates evidence into practice.					
I have confidence in my ability to translate current best practices into an action plan for quality improvement within my unit.					
I am confident in my ability to write a searchable question using PICOT format					
I know where the links are to access CINAHL and PubMed on the hospital intranet and how to use the databases.					
I know how to use the available databases to search for literature related to my PICOT question?					
I am confident in my ability to critique and synthesize the literature found regarding my PICOT question					
I know how to use search strategies such as setting limits and using Boolean operators					
I understand what "Clinical Inquiry" means and how it has the potential impact quality and cost containment					
I can verbalize the difference between evidence based practice, quality improvement, and research					
I am familiar with the levels of evidence and which level carries the greater "weight" or "importance"					
What portion of this module is the most helpful and why?					
Is there a portion of this module that is unclear or needs additional explanation to be clear?					

APPENDIX J

Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
q1pre	8	4.25	.886	-.615	.752	-1.481	1.481
q2pre	8	4.50	.535	.000	.752	-2.800	1.481
q3pre	8	3.13	.835	-.277	.752	-1.392	1.481
q4pre	8	4.13	.641	-.068	.752	.741	1.481
q5pre	8	3.75	.886	-1.026	.752	1.851	1.481
q6pre	8	3.75	.463	-1.440	.752	.000	1.481
q7pre	8	2.88	1.126	1.113	.752	.291	1.481
q8pre	8	3.87	.354	-2.828	.752	8.000	1.481
q9pre	8	4.25	.707	-.404	.752	-.229	1.481
q10pre	8	3.88	.835	.277	.752	-1.392	1.481
q1post	8	4.25	.707	-.404	.752	-.229	1.481
q2post	8	4.50	.535	.000	.752	-2.800	1.481
q3post	8	4.50	.756	-1.323	.752	.875	1.481
q4post	8	4.88	.354	-2.828	.752	8.000	1.481
q5post	8	4.63	.518	-.644	.752	-2.240	1.481
q6post	8	4.38	.744	-.824	.752	-.152	1.481
q7post	8	4.63	.744	-1.951	.752	3.205	1.481
q8post	8	4.50	.535	.000	.752	-2.800	1.481
q9post	8	4.75	.463	-1.440	.752	.000	1.481
q10post	8	4.88	.354	-2.828	.752	8.000	1.481
PreTotal	8	38.38	4.307	.630	.752	-1.115	1.481
PostTotal	8	45.87	3.227	-.293	.752	-1.394	1.481
Valid N (listwise)	8						

Neither violated the assumption of normality, so we can use the repeated-measures t-test to answer the research question.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTotal	38.38	8	4.307	1.523
	PostTotal	45.88	8	3.227	1.141

Here are the means and standard deviations for pre and post.

Paired Samples Test

		t	df	Sig. (2-tailed)
Pair 1	PreTotal - PostTotal	-6.708	7	.000

There was a statistically significant increase in survey scores from pre to post, $t(7) = -6.71$, $p < 0.001$.