Linking evidence to practice: A clinical practice guideline project

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1. Introduction

More than ever, health care organizations seek nursing graduates, empowered through education, who are able to critique existing practices and initiate evidence-based changes resulting in better patient outcomes. This ability is a vital part of a nursing philosophy which focuses on evidence-based quality improvement. Evidence based practice is a problem-solving approach that incorporates the thorough use of up-to-date, quality data in decisions regarding patient care. It involves a systematic search for the most relevant evidence, as well as critical appraisal of this evidence to answer a clinical question (Melnyk & Fineout-Overholt, 2011). State and national organizations have issued credentialing directives specifying that evidence-based practice (EBP) in nursing is expected. Therefore, it is necessary to ensure that these abilities are firmly rooted in the education of future nurses (Heye & Stevens, 2009).

2. Review of the literature

McCormack (2011) reports that challenges related to the “theory-practice gap” have been “well-rehearsed in nursing” (p. 114). In health care education, where basing decisions on the ‘best’ available evidence is considered to be the core of an efficient, accountable and safe culture, the following question surfaces: how do “producers” get their knowledge to the “users” in the most effective way possible, and ensure it is actually used in practice? ” (p. 111). This author advocates applying the “engaged scholarship” (p. 115) model. A framework that provides a beneficial link between academia and practice, engaged scholarship extends well beyond research itself. As well as including the characteristics of research (vigilant investigation in the process of uncovering new information), engaged scholarship involves the responsibility to support these findings through learning, teaching and engagement (McCormack, 2011).

In spite of multiple attempts to apply scientific knowledge in clinical nursing practice, barriers exist that prevent full realization of this effort (Foss, Kevigne, Larsson, & Athlin, 2013). These barriers include nurses’ attitudes regarding scientific knowledge, lack of involvement in research activities, resistance to change, and unfamiliarity with or inexperience in utilizing research findings in their clinical work. Foss et al. (2013) describe the fallout from this reality: “students seldom meet nurses who would be valuable role models in this respect” (p. 397). Role models are crucial to student learning. The lack of evidence utilization in the clinical setting presents a significant challenge in educating future nurses about the importance of using evidence to guide best practice.

In strategizing to remove these barriers, Foss et al. (2011) highlight the significance of the role of nurse educators as change agents in improving the transfer of evidence to the clinical setting. The authors suggest that providing nursing students more opportunities to examine, appraise and incorporate research findings would increase their understanding and appreciation of an evidence-based nursing practice philosophy. With this premise, Foss and colleagues developed the “Collaboration Model of Best Practice” (CMBP), a joint effort between university and hospital organizations, designed “to improve nursing students’ research utilization in clinical placements” (p. 397). Rooted in this model were the seven steps of EBP: “step zero, cultivate a spirit of inquiry; step one, ask the burning question in PICOT format; step two, search and collect the most relevant and best evidence; step three, critically appraise the evidence; step four, integrate all evidence with one’s clinical expertise, patient preferences, and values in making a practice decision or change; step five, evaluate the outcome of the practice decisions or changes based on evidence; step six, disseminate EBP results (Melnyk, Fineholt-Overholt, Stillwell, & Williamson, 2010). Findings from the project revealed that both students and nursing staff reported valuable outcomes in the following areas: collaboration and facilitation; education about EBP; and a significant, positive impact on nursing care (Foss et al., 2011).

Dawley, Bloch, Supplee, McKeever, and Scherzer (2011) strongly recommend the use of inventive teaching methods in nursing education to foster students’ critical thinking and understanding of EBP. Such innovative strategies can counteract student feedback that the undergraduate nursing research course is “uninteresting” and “irrelevant”. Nursing faculty are in an opportune position here to use current evidence in restructuring and revitalizing a sagging curriculum. Dawley et al. (2011) pose the following questions for educators: “although we talk the talk of evidence-based practice, how do we model it for our students? How do we provide learning assignments that will reinforce it?” (p.117).

Dawley et al. (2011) reported that nursing students often handed in written work with no reliable references, demonstrating little understanding of the required skills necessary to carry out a literature search.. With the goal of better preparing students for an evidence-
based thought process, the authors incorporated a “learning by design” model into the nursing curriculum. An assignment was designed which required students to keep a journal of questions identified during their clinical experiences, followed by examining the literature for published evidence to answer their questions. Feedback afforded insight regarding students’ abilities to acquire the appropriate EBP skills (asking a relevant question, accessing the literature, and citing the evidence). Submitted by students to faculty in the form of clinical journals, a review of the assignment yielded powerful evidence of its value (Dawley et al., 2011).

2.1. Course introduction and overview

From the literature search came inspiration. Empowered with this knowledge, junior baccalaureate nursing faculty at our university created an interactive project to involve students in the entire EBP process, with the intent of increasing their understanding and value of its impact on nursing quality. The undergraduate nursing faculty came together to examine our junior-level course’s teaching and evaluation strategies for the class Evidence Based Practice in Nursing. Upon review of various texts, as well as the course curriculum and outline, it was discovered that content concentrated on competencies in research activities, rather than a focus on the importance of finding current evidence as a necessary tool for best practice. Faculty discussion and student feedback from prior course evaluations revealed that content of this course should integrate evidence based strategies related to clinical practice.

Expectations for new nursing graduates require EBP expertise for quality improvement in the present and future settings of complex care delivery systems. Students now must demonstrate experience navigating diverse information technology systems, as well as possess technical skill competencies for timely retrieval of current, relevant information necessary for the multifaceted care of patients (IOM, 2010). With the goal of employing an interactive approach in teaching an evidence based undergraduate nursing course, as well as aligning the curriculum to reflect the current AACN Essentials (2008), the Evidence Based Practice in Nursing course description was revised: “This course will introduce the student to the implementation of evidence-based learning strategies. By the end of this semester, the student will be able to identify a question, examine and appraise current literature, and evaluate practice protocols” in furthering quality improvement. As well, course outcomes were modified to reflect the following skills acquisition by nursing students:

Course Outcomes. At the completion of Evidence Based Practice in Nursing, the student will:

1. Incorporate intellectual inquiry and critical thinking in the appraisal of clinical nursing research to promote safe and effective client centered care
2. Examine the role of organizational leadership from a systems perspective into the nursing research process and its relationship to providing safe and quality care to patients
3. Examine leadership and management roles in the nursing research process and its relationship to the management of client care grounded in evidence based practice
4. Determine the scientific rigor and merit of electronic and non-electronic information sources to improve client outcomes
5. Evaluate the role of health care policy, financial and regulatory institutions, as well as stakeholders in nursing research and its impact on improved client care
6. Demonstrate understanding of the research process starting with identification of research problems to dissemination of findings for the improvement of evidence-based patient care
7. Identify methods of integrating nursing research, theory, and practice to enhance wellbeing and quality of life in a culturally diverse global community
8. Incorporate legal and ethical guidelines in conducting and applying nursing research for client care.

3. Methodology

Prior to the start of the semester, Evidence Based Practice in Nursing course faculty met with nursing educators from the medical center where our university nursing students complete their clinical experience. Both groups discussed ways to foster both nurses’ and nursing students’ use of current evidence in the clinical setting. The idea for a collaborative strategy used to demonstrate the importance of actively linking evidence to practice in nursing education was generated. As part of an interactive, collaborative component to the Evidence Based Practice in Nursing course, students would select specific clinical practice guidelines (CPGs) in need of current review, as recommended by medical center nursing staff educators. Nursing student competencies for EBP, national health care improvement priorities, evidence rating systems, and a model of knowledge transformation for EBP provided the impetus for the establishment of such a venture. Students examining the clinical practice guidelines would appraise the evidence supporting the recommendation for change in health care practice, and compare the recommendation to actual practice. The idea for a future forum during which students could exhibit their work to staff nurses (poster presentations) was considered and a preliminary plan created (Ilic & Rowe, 2013).

For the 2014–2015 semester, the following clinical practice guidelines were reviewed: Catheter Associated Urinary Tract Infections (CAUTI); Central Line Associated Bloodstream Infections (CLABSI); Flushing of Central Lines; Suicide Prevention; Hourly Rounding to Enhance Fall Prevention, and Blind Insertion vs X-ray Confirmation for Enteral Tube Feeding. For the 2015–2016 semester, students chose to examine Rapid Response; Pediatric Early Warning System (PEWS); Breastfeeding and Neonatal Abstinence Syndrome (NAS); Workplace Violence; Family Presence During Invasive Procedures/Resuscitation; Handoffs/Bedside Reporting; and Adolescent Suicide Prevention: A Community Approach.

In the first class meeting, junior baccalaureate students were introduced to the course and presented with an overview of content and expectations. In this detailed review, course faculty provided an explanation of how each concept presented in the weekly three hour class would build upon the next. The intent was to reinforce foundational knowledge from liberal arts and sciences and introductory nursing courses, clarify how course outcomes are threaded throughout the course and curriculum, and illustrate the course’s alignment with the AACN Essentials (2008).

4. Developing a PICOT question

For students, a crucial component of the CPG project concentrated on framing a clinical question in preparation for performing a literature review. To foster this understanding, the “PICOT” model was employed. An efficient framework for searching electronic databases, the model is intended to find those articles relevant to the clinical question (Melnyk, Fineholt-Overholt, Stillwell, & Willianson, 2010). The authors encourage asking clinical questions in the PICOT format, outlined as follows:

P-Patient Population: A clear description of the patient population and setting is necessary to retrieve the most relevant evidence.
I-Intervention of Interest: The intervention of interest may include, but is not limited to, any treatment, patient perception, exposure or diagnostic test. The more defined the intervention, the more focused the search for evidence will be.
C-Comparison Intervention: The comparison intervention usually is the standard of care compared to a new treatment or procedure. The comparison also can be a true control, such as a placebo.
O-Outcome: Specific identification of the outcome variable facilitates the search for evidence that has investigated the same outcome.

T: Time: time it takes to demonstrate an outcome (the time for an intervention to achieve an outcome).

According to Titler (2006) once a problem is identified and its importance established, the second step is to find, examine and critique related literature. If enough evidence exists, the third step includes identifying research that supports a change in practice. Final steps involve effecting a change in practice and monitoring the outcomes. In this change process, Titler (2006) states that commitment to EBP must be met at multiple system levels, from nursing staff through administration, suggesting success lies in linking EBP and quality improvement initiatives.

4.1. The library experience

During subsequent class sessions in the Evidence Based Practice in Nursing course, a “library day” was scheduled in order to ascertain students’ understanding of and skills in electronic data base search strategies. In the following weeks, the university librarian and faculty member assisted students in refining their PICO/T questions, beginning their literature searches, as well as creating a “data search” table. Making sense of the data requires presentation and clear organization. A data search table provides a summary of important information from multiple research studies that can capture underlying similarities or differences to illustrate trends in the data, and can support the next steps. Incorporating multiple studies into a single table allows entire subsets of the literature to be summarized and compared. Appropriately constructed evidence tables effectively convey results and provide an overview of the literature (AHRQ, 2013).

An “embedded librarian” section placed on “Blackboard”, the university virtual learning environment and course management system, was frequently accessed by students. In addition to the online tool, the university’s librarian proved to be a continual, consistent source of support and inspiration for students. With her open door policy and hands-on approach with search strategies in locating and examining evidence, she met with individual students multiple times over the course of the semester.

4.2. The classroom setting

Class discussion, power point presentations, rapid critical appraisals of articles, and quizzes reinforced the content with assigned textbook chapters and relevant articles. Supported by the work of Fineout-Overholt, Melnyk, Stillwell, and Williamson (2010), these activities were planned not only to ensure students’ completion of required readings, but to strengthen understanding of the knowledge and skills needed to implement EBP consistently, one step at a time, as work on the Clinical Practice Guideline (CPG) project progressed (Fineout-Overholt et al., 2010).

Interactive class dialogue served to measure student understanding of the concepts surrounding critical appraisal of evidence. Group work gave students the opportunity to discuss the content of evidence-based practice in a less threatening atmosphere, a classroom of their peers. During discussions, students were engaged in helping, listening to, and learning from each other. In evaluation of this activity, students credited lecture, group work, and interactive discussion at each step of the article appraisal as efficient, effective ways of learning to evaluate a scientific article.

4.3. The Iowa model

The Iowa Model (Doody, 2011) was incorporated into the students’ presentation of their work. This exemplar highlights the importance of considering the entire healthcare system, from provider to patient to organization, using research within these contexts to guide practice decisions. A number of steps have been identified in the Iowa model to facilitate engagement in problem identification and solution development as it relates to incorporating evidence findings into practice. Developed by Titler and colleagues (2001), the model describes knowledge transformation and guides implementation of research into clinical practice. The seven steps identified here guide staff in the appraisal of evidence: selection of a topic; forming a team; evidence retrieval; grading the evidence; developing an EBP standard; implementing the EBP; and evaluation (Doody, 2011).

For implementation to occur, evidence based aspects such as written policy, procedures and guidelines need to be carefully considered prior to execution. Collaboration among care providers, the organization, and leadership functions to support these changes. The manner in which the evidence is dispersed should focus on strengths and benefits. Positive approaches (Doody, 2011) credit in-service education sessions, as well as providing sufficient time for quality assessment and evaluation by team members, as social and organizational factors can impact effective implementation. The support of the entire health care team is vital in successful and timely application of research findings and integration of evidence into practice.

5. Summary of findings

The Clinical Practice Guideline (CPG) project, as part of the Evidence Based Practice in Nursing course, culminated in formal oral and power point presentations by each group at the end of the semester. Following the recommendations from the literature, specifically the works of authors Doody (2011) and Illic and Rowe (2013), and with faculty support, students applied and were invited to present their work as poster presentations in both April 2015 and 2016 at two events: Shared Leadership Day at the Medical Center, and Annual Student Research Day at the University. During both years, two student group earned awards for their poster submissions during Undergraduate Research Day.

Working collaboratively on this project provided an opportunity for students to discuss the significance, influence, and strength of the evidence supporting the recommendation to change health care practice. Student presentations and faculty perceptions of the project indicated that beginning competencies in EBP were achieved. Although students acknowledged that the work was labor intensive, they contributed the following statements regarding both the course and the capstone project.

6. Recommendations

It is critical that student nurses know when and how to practice using evidence-based research. As students, if they achieve the skills needed to ask sound research questions, acquire evidence based answers to their questions, and interpret their findings into practice, they will thrive in the profession. Through this process, students in the EBP class acknowledged the value of examining current, relevant literature. They developed an appreciation for the university’s library staff and the library's database resources, as well as the contributions of both nursing and multidisciplinary research for quality patient care. From this experience, students’ recommendations included: identification of hospital and nursing administration stakeholders in order to garner full support and encouragement in bringing the CPG project’s recommendations to fruition; frequent interdisciplinary communication to keep the health care team abreast of updates and changes; and ongoing staff in-services to focus on compliance with current guideline recommendations.

7. Implications for practice

Students gained skills in reviewing evidence, classifying references and applying data to recommend improvements in health care
practices. The project assisted students in recognizing the full process of change, from knowledge development to application in practice improvements. Collaborative experiential activities within student groups stimulated critical thinking and dialogue. Small group meetings held during the instructor’s scheduled office hours were beneficial in identifying potential gaps in knowledge during important intervals and due dates in student work progression. Moreover, student groups acquired knowledge and experience related to professional roles through poster presentations, peer review and feedback. Expectations regarding professional dress and comportment conveyed the significance of formal collegial atmosphere, research, requirements for poster presentations, and the role of peer review.

8. Conclusion

Although EBP can be taught formally in a lecture format, providing students with active learning assignments can reinforce these skills and fortify learning (Dawley et al., 2011). Nursing students need to be actively involved in the scholarship of EBP in order to develop a systematic way of thinking through clinical situations to provide optimal patient care. If these skills are developed early on in their education and incorporated, practiced and refined through each course in the nursing curriculum, it becomes “second nature” to them, leading ultimately to a lifelong nursing career and philosophy that bases everyday practice on evidence.

Stevens (2013) reports that implementation of evidence based practice is “our best chance to redesign care that is effective, safe and efficient” (p. 1). As the largest group providing care, with the most patient contact, nurses have a significant opportunity to impact the course of illness and recovery. Therefore, nurses must actively engage in reading, critiquing and grading evidence to continually challenge the profession. For evidence-based practice to be implemented, this value system must be considered a priority by all nurses in all situations. Equipping future nursing leaders with these transformative tools is an important first step.

Appendix A

Fitchburg State University.
Department of Nursing.
Student Evaluation of the Clinical Practice Guideline (CPG) Project.
Please check the appropriate box using the four-point Likert scale.
KEY: Strongly Agree (SA); Agree (A); Disagree (D); Strongly Disagree (SD).
Please rate how the following areas helped in your understanding of the concepts covered in NURS3710's Clinical Practice Guideline (CPG) Project (return to Nancy Daphily TH 316).

<table>
<thead>
<tr>
<th>N=24</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
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<tbody>
<tr>
<td>Developing a PICOT question/field trip to library</td>
<td>83%</td>
<td>17%</td>
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<tr>
<td>a. Choosing a particular CPG to study</td>
<td>83%</td>
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<tr>
<td>b. Conducting a literature search</td>
<td>83%</td>
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<tr>
<td>c. Researching additional CPGs r/t your topic</td>
<td>79%</td>
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<td>d. Constructing a data template</td>
<td>79%</td>
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<tr>
<td>e. Examining strategic models for change (eg. Iowa, Stetler model)</td>
<td>79%</td>
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<tr>
<td>f. Designing a powerpoint presentation</td>
<td>79%</td>
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<tr>
<td>g. Delivering an oral group presentation</td>
<td>79%</td>
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<tr>
<td>h. Working together as a group</td>
<td>79%</td>
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<tr>
<td>i. Designing a poster</td>
<td>79%</td>
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<tr>
<td>j. Presenting at a conference ( UMMC Shared Leadership/FSU Undergraduate Research)</td>
<td>79%</td>
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1. How did participating in this project help you to understand an evidence based philosophy in nursing practice? Explain your answer.
2. Would you recommend a project (or components of a project) such as this be integrated into the NURS3710 course?

| Library Day | 83% | 17% |
| Conducting a literature search | 83% |
| Constructing a data search template | 79% |
| Rapid Critical Appraisal of a Qualitative study | 79% |
| Rapid Critical Appraisal of a Quantitative Study | 79% |
| Developing a power point presentation | 17% |
| Working together as a group | 92% |
| Quizzes | 21% |
| Creating a poster | 96% |
| Presenting at a conference | 100% |
| This project helped me to understand the importance using current evidence in daily nursing practice | 100% |
| Presenting findings at the two conferences made me feel that our group’s work made a difference | 96% |
| I would be willing to participate in a project such as this in the future | 100% |
| The CPG project be included yearly as part of the NURS3710 course content | 100% |
Overall, this project proved to be a valuable learning experience for me. 100%

COMMENTS: The project course showed me how much effort goes into changing practice; I thought the conference was a fantastic addition to the course; helped me to understand EBP by exploring principles & how they affect patient care; both course & project helped me to understand why evidence is necessary to effect best nursing practices; the project brought together all the different components of the course; I enjoyed presenting our hard work at two conferences; I feel that as a future nurse you need to be able to keep up with evidence to improve care; it would be beneficial to give upcoming juniors have this opportunity; even though we are just students, we can make a difference by keeping updated on the latest research.

Appendix B

Fitchburg State University.
Department of Nursing.
Student Evaluation of the Clinical Practice Guideline (CPG) Project.
Please check the appropriate box using the four-point Likert scale.
KEY: Strongly Agree (SA); Agree (A); Disagree (D); Strongly Disagree (SD).
Please rate how the following areas helped in your understanding of the concepts covered in NURS3710's Clinical Practice Guideline (CPG) Project.

<table>
<thead>
<tr>
<th>Area</th>
<th>SA</th>
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<tbody>
<tr>
<td>Developing a PICOT question/question</td>
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<tr>
<td>a. Field trip to library</td>
<td>90%</td>
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<td>b. Choosing a particular CPG to study</td>
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<td>c. Conducting a literature search</td>
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<td>d. Researching additional CPGs r/t your topic</td>
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<td>e. Constructing a data template</td>
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<td>f. Examining strategic models for change (eg. Iowa,Stetler model)</td>
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<td>g. Designing a powerpoint presentation</td>
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</table>

3. How did participating in this project help you to understand an evidence based philosophy in nursing practice? Explain your answer.

4. Would you recommend a project (or components of a project) such as this be integrated into the NURS3710 course?

Library Day 90% 10%
Conducting a literature search 86% 14%
Constructing a data search template 86% 7% 7%
Rapid Critical Appraisal of a Qualitative study 50% 50%
Rapid Critical Appraisal of a Quantitative Study 50% 50%
Developing a power point presentation 64% 26%
Working together as a group 92% 8%
Quizzes 86% 14%
Creating a poster 92% 8%
Presenting at a conference 100%
This project helped me to understand the importance using current evidence in daily nursing practice 100%
Presenting findings at the two conferences made me feel that our group’s work made a difference 100%
I would be willing to participate in a project such as this in the future 100%
The CPG project be included yearly as part of the NURS3710 course content 100%
Overall, this project proved to be a valuable learning experience for me. 100%

COMMENTS: this project showed me the need for continuous reevaluation of the evidence; it gave us an inside look to see how protocols are formed & how important they are to nursing practice; we were able to fully engage in EBP; it really helped to incorporate what we were learning in class & to bring everything together in one project; having the chance to present my work to practicing nurses gave me a great sense of accomplishment; participating in this project gave our group a chance to look at different protocols across the country; allowed me to explain evidence to practicing nurses; our group easily fielded questions during both poster presentations.
Appendix C

Data Search Template

Group #4 Members:

PICOT Question: For deteriorating cardiac patients, does initiating a rapid response, as opposed to nursing assessments and monitoring, decrease mortality for patients during hospitalization?

P: deteriorating cardiac patients.

I: initiating a rapid response.

C: nursing assessments and monitoring.

O: decrease mortality.

T: during hospitalization.

<table>
<thead>
<tr>
<th>Author, Date</th>
<th>Questions, Variables, objectives, hypotheses</th>
<th>Design, Sample, Setting</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>Student Name:</td>
<td>Question: How does a rapid response team function effectively? Variables: The functioning of each team member in his or her specific role and the interactions of the team members as the Rapid Response Team event progresses</td>
<td>Design: Qualitative, Interviews with 17 informants and observation of 9 RRT events</td>
<td>RRT’s functioned well in managing patients at risk, but there were challenges in team skills and relationships which needed to be improved upon. Some areas that needed improvement were organization, team structure, expertise and knowledge, communication, and teamwork.</td>
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<tr>
<td>Article #1: Rapid Response Teams: Qualitative Analysis of their Effectiveness</td>
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<tr>
<td>Author: Linda Searles Leach, RN, PhD, NEA-BC, CNL</td>
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<tr>
<td>Ann Mayo, RN, DNSc Date: May 2</td>
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<td></td>
<td>Objectives: Evaluate the effectiveness of a rapid response team in a large hospital setting Initiating a Rapid Response Team is most effective when the team members are performing their specific roles as well as interacting with each other</td>
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<tr>
<td>Student Name:</td>
<td>Question: Does the decision making model used by nurses to activate the rapid response team (RRT) influence the frequency of RRT activation? Variables:</td>
<td>Design: Mixed Methods</td>
<td>Research indicated a correlation between nurses’ decision-making model and frequency of RRT. Analytical decision maker activated RRTs more frequently than intuitive or mixed decision makers. The choice of decision making model was dependent on age, years of experience as an RN, and length of time in current unit.</td>
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<td>Article #2: Decision-Making Models Used by Medical Surgical Nurses to Activate Rapid Response Teams</td>
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<tr>
<td>Author: Carlo G. Parker, PhD, RN,CNL</td>
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<tr>
<td>Date: 2014</td>
<td>Objectives: Decision model used Frequency of RRT activation Outcome for patient</td>
<td>Sample: 87 medical-surgical nurses who had activated the RRT at least once in the preceding 12 months.</td>
<td>Analytical decision making nurses tended to be older, had more years of experience and longer tenure.</td>
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<tr>
<td>Student Name:</td>
<td>Question: Is the activation of an RRS team associated with a reduction in hospital mortality and cardiopulmonary arrest? Variables: Activation of the RRS and the resulting outcome as well as timing of activation.</td>
<td>Design: Systematic review of published studies between January 1, 1990 and December 31, 2013. Studies must have included a comparison between control and intervention, as well as qualitative data about cardiopulmonary arrests and mortality rates.</td>
<td>The study found that RRS teams associate with a reduction in hospital mortality, cardiac arrest ICU admissions. Researchers were unable to show any benefit from having a doctor on the RRT, the initiation, or number of times the RRT system was activated. Researchers found many differences</td>
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<tr>
<td>Article #3: Rapid response systems: a systematic review and meta-analysis</td>
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in the composition of RRS teams, the response times, and how patients were evaluated. More research is required to determine factors that are likely to decrease effectiveness of RRS teams.

Author: Ritesh Maharaj, Ivan Raffaele, Julia Wendon
Date: 2015

A systematic review and meta-regression was undertaken to assess the effect of the RRS on hospital mortality and cardiopulmonary arrest outside the ICU and to evaluate the potential relationship between the number of RRS team activations per 1000 admissions, the presence of a physician in the RRS team and the duration of the implementation phase and the effectiveness of RRS teams.

Hypotheses:
Variations in activation potentially influence the effectiveness of RRSs. Non-activation and delays in activation are associated with harm and too liberal activation are associated with system fatigue.

Sample: Sample size of 2,160,213 patients from multiple studies

Date 2015 Sample: 1,107,492 in intervention group 1,108,380 in control group

Setting: Studies must have been conducted in inpatient hospitals in the United States

Student Name
Article #4
Qualitative exploration of nurses’ decisions to activate rapid response teams

Question
What are the barriers and facilitators of nurses’ decisions regarding activation of rapid response teams (RRTs) in hospitals?

Design
Qualitative, open ended Q- interviews

Variables
-Independent variable: RRT characteristics, Unit culture.

Sample
15 registered medical/surgical nurses, volunteering from three medical/surgical floors, from all shifts

Objectives
To determine the relationship and types of barriers and facilitators in nurses’ decision making processes when initiating RRTs.

Setting
Midwestern community hospital in the US

Barriers to initiating RRTs included:
- RRT characteristics: poor RRT communication style, poor RRT past experience.
- Unit culture: perceived busyness of ICU, fear of unnecessary RRT activation, belief to call physician first.

Education
Updated instruction, poor instruction, dated instruction, instruction absence.

Astroth, K., Wioth, W., Stapleton, S., Degitz, R., & Jenkins, S.
Date 2013

Barriers to initiating RRTs included:
- RRT characteristics: supportive RRT, successful past RRT experience, perceived effectiveness of RRT.
- Unit culture: positive/supportive unit, large nurse insistence on calling RRT, encouraging practices (hourly rounding, sepsis assessment tool, attunement to clinical cues)
Appendix D. : The Iowa model
References


