Title: SPECIAL SESSION: The Nurse Scientist in a Practice Organization

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Type: Oral

Keywords: Mentoring, Patient care outcomes and nursing research in a practice organization

Summary: This educational activity will describe the role of the nurse scientist in creating a spirit of inquiry, designing clinical meaningful projects to answer research questions with nurses, testing interventions to improve patient outcomes, and disseminating research findings.

Final Number: K 02
Slot: K 02: Saturday, 29 July 2017: 3:30 PM-4:00 PM

References:


Learning Activity:

| LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE |
Abstract:

The advancement of nursing research outside of the academic environment continues to grow. In a practice organization, the demands of patient care often challenge the ability of the nurse to generate nursing knowledge. Strategies to promote a culture of inquiry, to support the implementation of research projects, and to disseminate the findings that impact patient outcomes are required. The organization that welcomes and rewards those who develop and implement a nursing research agenda have the support from the Chief Nurse and nursing leadership. And the presence of a nurse scientist demonstrates this commitment to advancing a nursing research agenda within this setting.

The nurse scientist advances a culture of clinical inquiry by focusing the nurse on their practice. Connecting research to clinical practice makes every nurse a potential investigator, and patients who receive research-based care have better outcome. Clinical triggers from the bedside can be constant reminders of opportunities for nurses to examine their practice. These triggers are gathered from the patient/family healthcare experience, current practices that improve illness management, quality and safety goals, and designing or implementing innovative technology to improve care. These triggers can create a nursing research agenda that develops nursing science.

Nurses are charged with using the research process to generate and disseminate new knowledge that may lead to innovations in nursing practice. Key to the development of nursing research in a practice organization is to reduce perceived barriers to undertaking a research project, development of the skills and confidence in the nurse, and passion to ask and answer the research question. The nurse scientist, in her/his unique role, can support research activities by educating and mentoring the nurse in the conduct of research.

The nurse scientist uses various strategies, as a part of a clinical research model, to capture clinical research questions, to evaluate the questions in relation to organizational priorities, assist in the identification of a research workgroup that can include members of the multidisciplinary healthcare team, and verify that the project has measurable patient outcomes. Acting as a mentor, the nurse scientist can create the spirit of inquiry, reduce system barriers, create capacity and guide the research workgroup through the process. The workgroup members must be willing to attend meetings, review the literature gathered by the librarians, write and edit the research proposal, participate in the implementation of the research project, and work on the final
research report. This model is practice driven using a team approach, and utilizes a research mentor, the nurse scientist.

One example of a practice-driven research projects that used this model is the project: 'Improving Venous Thromboembolism Prophylaxis with mechanical modalities in a Surgical Intensive Care Unit'. Paula Restrepo, a staff nurse, was the principal investigator with a research librarian and a nurse scientist. This project was published in 2015 in *Journal of Nursing Care Quality*.

Venous thromboembolism (VTE) remains a significant source of morbidity and mortality in the surgical population. Surveillance for signs/symptoms of VTE is a part of nursing care. Non-invasive mechanical devices, graduated compression stockings (GCS) and intermittent pneumatic compression (IPC) devices, are widely used as the sole or adjunct method of VTE prophylaxis in the Surgical ICU (SICU). The success of the GCS and IPC devices relies on actual use and compliance with these mechanical devices. The purpose of this study is to measure the compliance rate of VTE prophylaxis with GCS and IPC devices pre/post the development of a VTE prophylaxis guideline in a SICU. This pre/post observational study used a VTE prophylaxis guideline development as the intervention. During each observation period (3 weeks), data were collected, twice a day, on the presence of a physician order for VTE prophylaxis mechanical devices, and correct application of these devices on all patients in SICU. Following the pre-observation period an intervention of a written guideline was completed and approved, and initial implementation occurred. A follow-up post-observational period (3 weeks) occurred 3 months after guideline implementation. A compliance score was calculated by dividing the number of compliant evaluations by the total number of evaluations of mechanical device use. There were 610 pre and 602 post observations made during these 2 three-week periods. There were 95 pre and 92 post subjects, mean age 61.4-60.9 years respectively, with a total of 123 males and 64 females. The majority (58%) were trauma/general surgical patients. Using observation data, the compliance rate pre was 80% and post was 78% of all mechanical device evaluations (p=>.79). These results are comparable to other compliance studies. In the surgical patient, were VTE prophylaxis is limited to mechanical devices, monitoring of compliance with VTE mechanical devices is essential.

With a comprehensive review of the literature completed as a part of this project and the SICU guideline, the investigators discussed results with the interdisciplinary surgical quality team. They supported a change in practice that the IPC device is the mechanical device of choice. With this decision, the GCS were removed from the surgical order template and there was a cost saving of about $45 000 per year on reductions in GCS use. With support from the American Academy of Nursing's Expert Acute and Critical Care Panel, a Choosing Widely campaign was initiated to share the knowledge of IPC devices as the mechanical method of choice. Nurses play an important role in risk assessment, application of correctly sized IPC devices, and evaluation of signs and symptoms of VTE. They also can impact practice to provide safe quality patient care.
Nurses are an integral component to the advancement of patient care, the enhancement of the practice environment, and the culture of care. The role of the nurse scientist is to explore and engage nurses in the pursuit of knowledge through inquiry. Knowledge-based care is safe, efficient, and promotes high quality patient outcomes that can be leveraged to improve the health care delivery system globally.