Title:
Virtual Simulation in Nursing Orientation: A Strategic Bridge to Safer Patient Outcomes

Christine Ross, DNP
Nursing Department, Carthage College, Kenosha, WI, USA

Session Title:
Leadership Poster Session 2

Keywords:
Improved Patient Care Outcomes, Post partum Hemorrhage (PPH) and Virtual Simulation

References:

Abstract Summary:
“Expert-based Virtual Simulation” was used as a teaching strategy within an “OB Novice Nurse Orientation Program” with the potential to bridge the theory-practice gap in nursing—improving the quality and effectiveness of an OB orientation for nursing, and, thereby, the quality of nursing care and healthcare.

Learning Activity:

<table>
<thead>
<tr>
<th>LEARNING OBJECTIVES</th>
<th>EXPANDED CONTENT OUTLINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore the integration of virtual simulation, live simulation and a combination of both within a novice nurse orientation program.</td>
<td>Live and virtual simulation project description.</td>
</tr>
<tr>
<td>Compare the benefits of utilizing virtual simulation, live simulation and a combination of both within a novice nurse orientation program.</td>
<td>Live and virtual simulation comparison.</td>
</tr>
<tr>
<td>Synthesize information related to the use of virtual simulation, live simulation and a combination of both within a novice nurse orientation program.</td>
<td>Live and virtual simulation discussion.</td>
</tr>
</tbody>
</table>
combination of both within a novice nurse orientation program in transforming nurse orientation programs as a formative and summative evaluation tool and feedback tool in improving healthcare and healthcare outcomes.

Conclude the effectiveness of virtual simulation within a nursing orientation program in increasing correct nursing implementation and decrease time to correct nursing intervention/action in improving health care outcomes.

Live and virtual simulation evaluation and conclusion.

**Abstract Text:**

The Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine (IOM), “seeks to transform nursing as part of larger efforts to reform the health care system” (IOM, 2010) in the effort to improve healthcare outcomes. Simulation, as a teaching methodology, presents an option in helping nurses meet nursing competencies in a creative, effective manner that can meet the fascination of computer savvy Gen “X”ers, Gen “Y”ers, and Millennials who possess an inherent fascination with technology. At the same time, these technologies and strategies promote practice and mastery of nursing skills in a safe environment with immediate feedback and the potential for enhanced critical thinking skills and clinical decision-making skills for all obstetrical nurses. Comparisons in performance, clinical competence, critical thinking, and readiness for practice, as well as in satisfaction, confidence, and effectiveness and increased learning have been reported (Bambini, Washburn, & Perkins, 2009; Jeffries & Rizzolo, 2006; Lambton, O’Neill, & Dudum, 2008).

This project presents a strategy to increase the obstetrical competencies of novice obstetrical nurses at a large community hospital using the Lippincott Evidence-Based Obstetrical Virtual Scenarios involving Post-Partum Hemorrhage. The significance of the practice problem will be presented along with the PICOT question, theoretical framework, synthesis of the literature, practice recommendations, mission, vision, objectives, project plan, evaluation and data analysis, and plans to disseminate the project results.

The Joint Commission on the Accreditation of Healthcare Organizational Standards has stated that “inadequate training . . . was a major threat to patient safety (Fero et al., 2009). With a demand for improving nursing by decreasing errors, increasing safety, improving patient outcomes, and improving the quality of healthcare, nursing is forced to respond with implementation of evidence-based solutions to increase patient safety and improve healthcare outcomes. Nursing orientation programs are called upon to answer this call to improve healthcare outcomes by enhancing novice nurse experiences in preparing them for the challenges of working in their particular hospital setting.

The novice nurse or new nurse graduate can face significant obstacles and challenges as a new employee—especially in a specialized area of nursing. Every hospital institution is concerned with The Joint Commission (TJC) concerns regarding the above aforementioned problems and in providing improved “transition to practice” programs to address these problems as well as in addressing the needs of the new orientees and the needs of the patient as well as the healthcare team.

There are other organizations that express an interest in these same goals. In particular, the World Health Organization [WHO] (2012) updated their recommendations for the prevention and treatment of post-partum hemorrhage to reduce childbirth morbidity. According to the Association of Women’s Health, Obstetric and Neonatal Nurses [AWHONN] (2015), Obstetric hemorrhage is the leading cause of death in...
the United States with 54-93% of deaths being prevented if early and effective intervention is taken. The *AWHONN Postpartum Hemorrhage (PPH) Project* is an example of an evidence-based intervention that needs to be added to the orientation program of novice nurses in the attempt to answer this call to improved healthcare outcomes.

The purpose of this DNP project was to investigate the implementation of virtual simulation in a novice obstetrical nurse orientation program in order to improve the quality, correctness, and efficiency of novice nurses’ actions/interventions in response to an obstetrical emergency (postpartum hemorrhage [PPH]). "Expert-based Virtual Simulation" as a teaching strategy within an “OB Novice Nurse Orientation Program” that can bridge the theory-practice gap in nursing—improving the quality and effectiveness of an OB orientation for nursing, and, thereby, the quality of nursing care and healthcare. Virtual simulation allows for a learning environment with virtual patient situations wherein the nurse must implement a course of action to keep the patient alive. Immediate feedback is provided, and with the addition of “determined practice”, the nurse is allowed to repeat the virtual simulation until mastery is reached. This allows the nurse to practice in a risk-free environment, make mistakes in a risk free environment, analyze the patient situation, and become better equipped with the interventions necessary to implement a plan of care when a similar situation comes about in real life. This strategy not only improves the quality of nursing, but also improves and transforms nursing, the nurse, nursing care, patient care, the nursing profession, and healthcare (and saves patient lives, reducing patient mortality) (Ross, 2015)—aligning with the goals of this conference by influencing change through leadership.

A one-group pretest-posttest design was used to measure the time in which correct actions/implementation occurred pre and post achieving a 95-100% on a PPH virtual scenario. Preliminary results indicated that virtual simulation can decrease the time to correct action/intervention in the care of a PPH patient.