Title:
A Simulated Multi-Patient Medication Administration Experience: Evaluating Senior Level Nursing Students’ Proficiency

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Session Title:
Poster Presentations

Slot (superslotted):
PST: Friday, April 8, 2016: 10:00 AM-10:45 AM

Slot (superslotted):
PST: Friday, April 8, 2016: 12:00 PM-1:15 PM

Slot (superslotted):
PST: Friday, April 8, 2016: 2:30 PM-3:15 PM

Slot (superslotted):
PST: Friday, April 8, 2016: 6:00 PM-7:00 PM

Slot (superslotted):
PST: Saturday, April 9, 2016: 7:30 AM-8:30 AM

Slot (superslotted):
PST: Saturday, April 9, 2016: 10:00 AM-10:45 AM

Slot (superslotted):
PST: Saturday, April 9, 2016: 12:00 PM-1:15 PM

Keywords:
Medication Administration, Simulation and Student nurse proficiency

References:

Abstract Summary:
A high fidelity simulation with three acutely ill standardized patients was used to replicate a typical nursing assignment on a medical surgical unit. Students attended to patient teaching, provided timely delivery, and appropriately prioritized, but their lapse in clinical judgment and basic safety procedures is a cause for concern.

Learning Activity:

| LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE |
1) The learner will be able to assess the ability of students to accurately administer medications, utilize clinical judgment, prioritize appropriately, manage time efficiently, and engage in patient teaching about the medications being administered, as a way to drill down to the specific details of underachieving practice.

• The development and design of a multipatient medication administration simulated event and the logistics of how to manage multiple patients and students are described. • Each case scenario is discussed and how “accuracy”, “clinical judgment”, “prioritizing”, “efficiency”, and “patient education” are incorporated into the scenarios. • Measurement tools to assess the student’s performance are explained. • The results of the high fidelity simulation are shared. • Implications for curriculum change are reviewed.

2) The learner will be able to discuss the complexity of a typical acute care medication pass, the known risk of error, nursing students’ role expectations and the essential need to evaluate performance.

• Background information about the complex issues of medication administration in acute care is reviewed. • Current literature, ongoing research, and evidence are shared about medication administration, student nurse performance and curriculum designs. • A review of the Baccalaureate Essential Education for Professional Nursing is reviewed as it relates to administration of medications.

Abstract Text:

**Background:** The administration of medications in the acute care environment requires numerous skills, as the process is extraordinarily complex and vital to patient safety. Senior level nursing students are expected to safely and efficiently pass medications to multiple patients under direct supervision as a way to competently engage in this aspect of the professional nurse role. However, it is not uncommon for student nurses to fall short of the necessary skills required to meet this expectation. Reid-Searl, Moxham, and Happell (2010) found nearly one third of nursing students in their final year reporting an actual medication error or near miss. This should not be surprising as the Institute of Medicine’s landmark report (2006) noted errors to be common during every step of the medication process from prescribing, procuring, dispensing, administrating, and monitoring, with the majority of errors during prescribing and administering steps. Statistically a hospitalized patient can expect one medication error a day (Institute of Medicine, 2006). Given this evidence it is essential that professional nursing programs focus greater attention on teaching skills required for complex medication administration. High fidelity simulation is one method that offers a safe and effective manner for assessing performance and teaching medication administration and can replicate complex situations such as multiple patients on a medical surgical unit (Agi et al., 2013).

Our baccalaureate nursing program identified gaps in senior nursing students’ ability to pass medications in the practice setting during their last semester of the program. Anecdotal feedback from clinical faculty and agency preceptors suggested students were unable to efficiently and safely pass multiple medications to their assigned groups of patients. Faculty met and established a taskforce to further explore this issue. The first step was to validate the perceptions of the clinical faculty and preceptors regarding student skill level in multiple patient medication administration. The taskforce decided to design and implement a simulated multi-patient medication administration experience that is typical of a medical surgical patient assignment.
Objective: The goal of this experience was to assess the ability of students to accurately administer medications, utilize clinical judgment, prioritize appropriately, manage time efficiently, and engage in patient teaching about the medications being administered, as a way to drill down to the specific details of student's proficiency in a complicated medication pass.

Design: A high fidelity simulation with three acutely ill standardized patients was used to replicate a typical nursing assignment on a medical surgical unit. Each patient was designed to have several medications with multiple routes including IV pushes and piggybacks. The students were expected to prioritize and manage the multiple medication needs of their patient assignment. Critical thinking points were embedded in the scenarios such as when to hold medications and call a physician. The simulations were video and audio recorded in order to be analyzed by the task force. In addition, students were debriefed post experience and provided the opportunity to view and reflect on their own performance.

Setting / Subject: The setting was in a simulated hospital using live actors as patients. The subjects were 49 senior level nursing students.

Measurement: A tool was developed based upon the objectives and four faculty members reviewed a sample of videos to determine inter-rater consistency. A total of 84 videos were analyzed. Descriptive measures using SPSS were used to calculate the findings.

Results: The following is a brief summary of those findings: 1) 46% did not use two patient identifiers, 2) 52% did not utilize the “Five Rights”, 3) 93% did not assess allergies prior to medication administration, and 4) 94% performed patient teaching. In addition 100% of students delivered medications on time and prioritized patients appropriately. To assess critical thinking and clinical judgment students were required to make critical decisions regarding the holding or giving of select medications. The student’s ability in this area varied significantly. Depending on the scenario, between 10% and 38% of students did not perform the expected intervention to ensure patient safety.

Limitations: The study did not provide a measure of students’ level of self-confidence, a variable that impacts student performance.

Summary: The results of the analysis supported anecdotal comments of faculty and preceptors and confirmed a need for curricular revision. Though students attended to patient teaching needs, delivered medication in a timely manner, and were good at prioritizing, their lapse in clinical judgment and basic safety procedures is a cause for concern.

Implications for nursing education: Initial strategies to improve student competency include: 1) using this simulation as a required part of the course, 2) incorporating a medication component in all simulated experiences throughout the curriculum, 3) adding additional opportunities for students to pass medications in prior clinical courses, and 4) maintaining the task force with the goal of continuing the conversation with faculty to strengthen this component of the undergraduate program.