

Using Simulation to Engage Learning: PostOperative Surgical Bleed

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Type of Strategy: Active Learning

Purpose, Goal(s), or Learning Outcomes for Strategy: The purpose of this program is to enhance the understanding of perioperative nursing to nursing students in a real world environment and bridge the transition from student nurses to registered nurse in the operating room; supporting a nurse residency program before graduation.

Type of Course: Undergraduate

Name of Course: NRS 360: Perioperative Nursing Didactic Content

Typical number of students in course: 10

Ease in which strategy could be modified and/or applied to other course: Easy

Brief Overview of Strategy: An innovative, perioperative program that incorporates simulation and flipped classroom course is offered to senior nursing students in collaboration with area hospitals. Due the shortage of nurses in the Perioperative Area, especially the Operating Room, there is a need to hire new graduates (not traditionally done in the past). We have aligned the curriculum with the needs of the institution in hopes to decrease orientation time (6 to 12 months long). The simulation is focused on a post-operative patient who has internal bleeding resulting from surgery. Simulation has rarely used in perioperative training. Students will gain confidence in patient care during a simulated experience in a safe and non-threatening environment. Students are expected to display evidence of critical thinking, decision-making, prioritization, organization, problem solving, accurate physical assessment and clinical judgment to carry out the assigned objectives of the simulated experience.

Step-by-Step Instruction of Strategy:

1. Students will be given perioperative materials to read prior to the simulation experience. Power Point slides will also be provided (flipped classroom) related to care of the surgical patient (abdominal surgery) and assessment/evaluation of post-operative complications.
2. On the day of the simulation, students will be provided information regarding the patient that nurses' would normally find in a patient chart.
3. Students will complete a pretest regarding information related to the postoperative diagnosis and care of a postoperative bleeding patient.
4. Formalized report is given to the students from the OR nurse to the unit nurse. The SBAR (situation, background, assessment and recommendation) method of communication, which enables nurses to communicate clearly to each other regarding patient's condition and needs, will be reviewed.

5. The simulation will begin with students caring for a patient (a high fidelity simulation mannequin) whose condition deteriorates.
6. Groups of 3 students are expected to work as a team to care for a postoperative patient who is bleeding; each student has an assigned role.
 - a. Student #1 will be the team leader and is responsible for collecting assessment data and calling the physician.
 - b. Student #2 completes the patient's physical assessment.
 - c. Student #3 is responsible for assessing the patient's IV lines, vital signs and surgical dressing.
7. As students assess their simulated patient, the simulator will tell the students she is feeling lightheaded and "funny."
 - a. As the patient continues to complain of feeling dizzy and lightheaded, the vital signs and other important monitoring signs will begin to change.
 - b. The students will then need to determine why the patient is lightheaded through the proper assessment techniques that they learned through their assigned readings.
 - c. There are several specific assessment areas that need to be identified such as the patient's oxygen is not connected to the oxygen wall outlet, the patient's dressing is saturated with blood and the wrong IV solution is hanging.
8. Students will be expected to call the surgeon on the phone to discuss concerns and receive orders using the SBAR communication model.
9. Students will implement orders.
10. If students do not determine the correct course of action, the patient's condition will continue to deteriorate.
11. Students will formulate a correct diagnosis and action plan to prevent patient from continued deterioration and implement corrective actions and care.
12. At the end of the simulation, students will group with faculty for a debriefing session. During the debriefing, dialogue will take place among the participants regarding their interpretation of the experience and what they felt they learned from the simulation. We also discuss critical thinking skills, best actions to be taken first and overall performance of the group during an emergency situation. Debriefing is conducted in a nonthreatening manner.

Additional Comments:

- Pedagogical strategies to empower students to learn.
- The Institute of Medicine (IOM) has identified patient safety, teamwork and collaboration, and informatics as 3 of the 6 competencies of quality and safety education for nurses [QSEN] (Cronenwett, et al, 2007). Hence, educating student nurses in practices that promote safety and effective patient care in perioperative care is essential. Subtle and rapid changes in the post-operative patient are not uncommon and thus accurate physical assessment skills are imperative. The nurse is a key member of the health care team who must be able to rapidly identify a patient's changing health status and communicate effectively to the surgeon and

anesthesiologist in order to facilitate positive patient outcomes. The use of simulation has been strongly supported as an effective teaching/learning strategy to promote safe patient care, critical thinking, psychomotor skills, and sound decision-making resulting in decrease errors. A positive relationship between patient safety and effective teamwork has been demonstrated at the point of care via the use of high-fidelity simulation training. The use of high-fidelity simulation also meets the needs of using technology within the nursing curriculum in a highly effective manner. Students must learn how to use the high-fidelity simulator and computerized equipment. Thus, the program effectively addresses patient safety, teamwork and collaboration, and informatics as primary competencies stated by IOM.

- The proposed simulation will empower students to become the responsible for learning content and then actually applying that information to an almost live situation. They will begin to understand the link between nursing knowledge for the perioperative nurse and application to a post-operative patient's complication.

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