PATIENT CARE SIMULATIONS: Role Playing to Enhance Clinical Understanding
[Featured Articles]

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ABSTRACT

Role-play techniques can serve as an effective substitute for, and supplement to, simulation technology when teaching clinical nursing skills. They provide risk-free opportunities to practice clinical skills and develop clinical judgment. A hospital patient care simulation program, performed in real time, is described. Students are presented with a scenario and work cooperatively in role-playing appropriate care, with one student using a prepared script to assume the role of patient. The class functions as a resource for four students who assume the nursing role. Students reported increased understanding of course material as a result of participation in the clinical simulation scenario. Faculty observed a decreased failure rate on the corresponding course examination.

HUMAN PATIENT SIMULATORS are increasingly used to teach clinical skills in health care education programs. Specialized manikins that simulate patient responses, such as heart sounds, lung sounds, and verbal responses, allow students to practice a variety of clinical nursing skills. Although this teaching tool has benefited many educational programs, the price of simulator technology, plus maintenance and upgrades, exceeds the resources of many nursing programs.
Fortunately, clinical simulations can be effectively accomplished using role-playing techniques. Even for those educational programs that have the means to acquire a simulator, clinical scenarios must be developed to use the manikin to its fullest potential. Scenarios can be constructed to emphasize specific course content or to evaluate the performance of a particular nursing skill (2). They can be easily incorporated into course content and can be performed in any setting. This article describes an ungraded, two-phase simulation scenario prepared for a critical care course in an associate degree program. The class size was approximately 30 students per semester. This scenario can be used in the classroom, nursing resource laboratory, or during pre- and postconference meetings to reinforce lecture content and help students process the didactic information.

The Benefits of Clinical Simulations Gaberson and Oermann (3) state that what nursing students do in their clinical practice is more important than what they can demonstrate in the classroom. Unfortunately, it is often difficult to provide students with clinical experiences that match classroom content. Clinical simulations of real-life patient care situations that relate directly to classroom material allow students to build patient care skills while applying theoretical knowledge in a controlled setting. Such simulations reinforce material learned in lectures and promote an active learning environment (4).

A further benefit is that simulations create opportunities for students to develop essential skills and meet outcomes required for clinical practice in a nonthreatening environment, without the demands of caring for an actual patient (3). Role-playing simulations can be closely controlled by the instructor and developed with increasing levels of difficulty to match student readiness (2). Morgan and colleagues found that the use of simulations significantly improved students' clinical skills (5). Students have also reported that more creative teaching techniques helped them develop better critical thinking skills (6).

Patient care clinical simulations encompass the cognitive, psychomotor, and affective domains of learning (1) and effectively accommodate the learning preferences of all nursing students. Like the majority of the population, most nursing students are visual learners who prefer to learn new material through graphs, videos, and pictures. Simulations and role-play, being real-time, interactive experiences, provide visual learners with opportunities to observe participation in clinical situations (7).

Auditory learners, those who learn best by listening to words and lectures, respond to the verbal communications that take place between participants and observers during the role-play portion of the simulation. Kinesthetic, or tactile learners, prefer to work through problems in a hands-on manner (8) and benefit from the use of equipment and the demonstration of assessment skills role-played during the simulation. Kolanko (9) has reported that the kinesthetic learning style is the preferred method of learning for nursing students with learning disabilities.

Clinical Simulations for an Associate Degree Program Students are selected by a random draw of names. Once they have participated in a simulation, their names are removed from further drawings. Two students are selected to act as nurses during the simulation. They, in turn, select two others who will act as ancillary personnel to assist them with the hands-on...
portions of the simulation and perform delegated tasks. By having four students perform the nursing functions, no single student is responsible for adequately caring for the patient in front of peers. The remaining students in the class serve as a resource and may offer suggestions when asked by the four participants or when prompted by the instructor.

In the first phase of the simulation, the participants are expected to identify a clinical condition, such as hypoxia, and determine the appropriate nursing interventions. The second phase is structured to build on the first. Here, participants are presented with deterioration in the patient's condition, such as hypoxia leading to respiratory failure, and must simulate the nursing care that would be provided in this clinical situation. Actual IV poles and solutions are available along with tubing and masks for supplying oxygen to the simulated patient. Chest tubes, suction, simulated medications, pulse oxymeters, glucometers, thermometers, and blood pressure cuffs are also available. Participants are encouraged to use the equipment appropriately.

In place of an actual patient or simulator manikin, a student assumes the patient role and is given a script to follow to simulate patient responses to care. The patient is prompted by the instructor to provide responses from the script. For example, if the nurse fails to assess an important system, the instructor may say "5," which will prompt the patient to read statement 5. If that statement is, "I just can't catch my breath," that should prompt the nurse to assess the respiratory system. In this way, the instructor can facilitate the simulation's progression.

The scenario is either read to the students or projected by overhead or LCD projector. Projection of the scenario is preferred, as this allows the entire class to process the information as a group (10). The student nurses, provided with copies of the scenario on large index cards for quick reference, must address such questions as, "What is your first priority in this situation?" or "What information do you need?"

Participants are encouraged to ask for the information they need to progress through the scenario. For example, they may need further assessment data, they may need to call the primary health care provider, or they may need diagnostic results. As they ask for information, it is given to them verbally, on the overhead, or on the LCD projector. If they find themselves unable to progress within the simulation, the instructor can either prompt the patient to make a verbal response or prompt the class to offer suggestions.

These simulations are designed to last no longer than 20 minutes to reduce stress and maximize retention of nursing knowledge. They are performed in a supportive, pleasant environment and participants are thanked and praised for their work. A debriefing takes place after each simulation to emphasize key points and reinforce students' critical thinking and clinical judgment skills (3). All students in the class are expected to understand the patient care issues raised by the simulation. They discuss what they learned, how they felt, and what they would do differently in a similar situation (1).

The scenario outlined in the Sidebar involves a patient who presents to a telemetry floor as a direct admission with a chief complaint of shortness of breath. The participants must first recognize the patient's hypoxia related to pulmonary emboli and simulate the appropriate nursing
care for this patient. Once the first phase has been completed, the patient indicates deterioration in her condition from hypoxia to respiratory failure. Phase 2 represents a more acute level of care. It ends when the patient is successfully transferred to the intensive care unit.

Sidebar. Hypoxia Simulation

The success of a simulation depends on the ability of faculty to design scenarios that are relevant to current course content. To be able to guide the activity in the intended direction, faculty must be thoroughly familiar with the content and expected outcomes. Students should be allowed to make wrong decisions to appreciate the consequences of an incorrect intervention, but faculty must be able to redirect the activity as necessary.

Student Responses The hypoxia scenario described in this article was developed in an attempt to address a chronic problem in this critical care course. Historically, at least 10 of the approximately 30 students have failed the first exam, which covers respiratory failure, burns, head, chest, and abdominal trauma, and cerebral vascular accidents. Clinical simulations were developed for hypoxia and hypovolemic shock related to chest trauma in an attempt to enhance the students' understanding of the material. During the semester the simulations were introduced, the failure rate on the first exam dropped to five of the 30 students.

In general, students responded favorably to the clinical simulations as a means of reinforcing lecture content. Ninety-six percent of the class returned favorable responses on an informal questionnaire. They wrote of enjoying the activity and finding it a better way to learn nursing interventions. Some students stated that they were not ready and needed to reread the lecture material before really understanding the topic.

During the debriefing sessions, a few students expressed frustration, stating that they felt
they had not been given sufficient time to prepare for the activity. These students asked that the simulation be repeated at a later date. Faculty agreed to offer the simulation a second time during a voluntary review session, which was well attended by those who had initially expressed concern. All students in this group gave favorable feedback. Only one student who spoke of feeling unprepared failed to return for the voluntary session.

References


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