

Faculty Innovation in Learning Project Proposal
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Project Description

Cardiac Resuscitation is a difficult concept to teach in the traditional lecture format. In the past 2 years I have added case studies, a fill-in-the-blank worksheet and group activities along with a discussion format to assist the students in grasping the concept of priority assessment and intervention for a patient who is not breathing, nor has a pulse.

Along with the difficult concept is the challenge of preparing students on how they would respond to a medical emergency without becoming overwhelmed with anxiety and fear. As 4th semester students, they are cognitively ready to take on the challenge of medically complex patients, yet hesitate because of lack of experience. This was the basis for seeking an innovative way to bring a theory based topic to an experiential learning experience.

The acquisition of a mannequin that can display blood pressure, respiratory rate, and EKG monitoring brought the possibility of “reality” based learning to nursing students.

Project Outcomes

- Meet the objectives of the class outside of the traditional classroom.
- Include an affective objective to the topic objectives—“Decrease student anxiety related to the cardiac resuscitation by a safe exposure to the scenario through a simulation”
- Provide a safe environment for students to learn through hands-on experience.
- Assist students in providing informal evaluation of each others performance during the scenario.

Assessment Strategies

- Completion of fill-in-the blank worksheet based upon the students required reading.
- Demonstrate appropriate knowledge and skill during the patient simulation through teacher observation.

-Evaluate other students and self through the use of a documentation form, as well as during a time of debriefing.

-Verbally state emotional responses to the high anxiety of a medical emergency.

Project Implementation Timeline

The project was implemented in February of 2007 and is integrated as part of the course outline and objectives each semester (see Project Summary). I have attached class objectives PRIOR to project implementation and POST implementation for your review.

Faculty Responsible for Development and Implementation

Carrie Dameron designed the scenario, student preparation, and in-class activities for the students. Kathy Dewan assisted with programming the scenario into the software and running the program once attached to the mannequin. Susan McMahon, skills lab coordinator, assisted in lab preparation of the mannequin and supplies

Technology and Software Requirements

Technology used is the low fidelity simulation mannequin with accompanying computer software. The program connects to the mannequin and includes sounds of breathing, blood pressure, pulses, and programmable heart rhythms. The mannequin can have intravenous therapy for medication administration. The resuscitation also used an Automatic External Defibrillator (AED) Trainer. This prompted the students if the patient was in a “shockable” rhythm, to continue to CPR, as well as initiate defibrillation or “shock”. Both the mannequin and the AED Trainer were acquired through Nursing Department funds.

Project Summary

Project Activity

As mentioned the project was implemented in February, 2007. The students arrived at the Washington Hospital Skills Lab with their preparation completion. They were excited, yet apprehensive about providing cardiac resuscitation for the first time with the mannequins.

The students were divided into 2 large groups. One group would participate in the scenario first, while the other group would watch a video and complete a worksheet on “Ethical Issues in Nursing”.

The cardiac resuscitation group was further divided into 2 small groups of 7 and 8. The group of 7 drew “nursing roles” out of a bag. With each role was a list of responsibilities. The remaining students of 8 were to be “Observers” and complete a “documentation” form to record the events that occurred during the resuscitation.

Once the students had their roles and the observers were seated, the simulation began. An alarm sounded on a bedside monitor—alerting the students to a problem with the patient (the mannequin).

Immediately the students went to work, using the information they had studied, the supplies in the lab, and myself as the facilitator they provided resuscitation to the patient. The scene lasted 15 minutes with the conclusion being the patient is “brought back to life” through CPR, medications, and expert nursing skill performed by students. The students “observing” documented the resuscitation events per hospital routine.

Upon conclusion of the simulation a short debriefing was provided. This is where both the nurses and the observers can discuss and share their thoughts, ideas, and comments about the

simulated resuscitation. Both groups actively engaged in the events, feelings, and comments related to the activity.

At the conclusion of the debriefing, the large groups switched—those that were in the cardiac resuscitation activity moved to the video area, and those who completed the “Ethics in Nursing” activity became the cardiac resuscitation group. The process was repeated with the second group of students.

Outcomes

The outcomes of the project were met with the additional support of the students’ personal experience and comments. The students enjoyed the cardiac resuscitation for it gave them an opportunity to have hands-on experience in a safe environment. When the students were asked specifically whether they would prefer this as a class activity or the simulation, even with the increase responsibility and preparation—they resounded with supporting the simulation instead of the classroom.

The students who were observers and not able to have a more active role verbalized disappointment and would have like to have been part of the group who could practice their nursing skills.

Recommendations

This project will continue to meet the objectives for the class “Cardiac Resuscitation—The Nurse’s Responsibility”. After two years of struggling to find the appropriate teaching-learning methodology, I feel that the simulation works the best and provides students with additional confidence beyond the specific class objectives.

Because of time constraints, faculty energy, and supplies it is difficult for all 30 students to have a hands-on experience with the resuscitation. I am exploring different avenue of meeting

the student requests. The role of an observer is an acceptable role in simulation, thus will continue to play a part in the cardiac resuscitation. One way to modify the role, may be to have the observers have assigned tasks they record and evaluate, thus providing them with a more active role.

Another change I will make will be with the debriefing post the resuscitation. This was my first-time providing debriefing after a simulated clinical event, thus I was hesitant to allow the students to point-out each others mistakes—I felt quite protective. I guided the debriefing time to be one of only positive and reflective comments, without pointing out errors.

Since this project, I have had additional training and would allow students to point out their own mistakes in a productive way. This would expand the opportunity for self-reflection and learning for all the students, even the one would did not make an error.

OHLONE COLLEGE (OLD OBJECTIVES)
NURSING 107 Fall 2006

FOCUS: **Cardiac Resuscitation—Nurse’s Responsibility**

REQUIRED PREPARATION:

1. Ignatavicius, review appropriate portions Ch. 34 (4th ed.) that deal with interventions.
2. Haddad, A. (2002). Ethics in action: Family presence during codes RN, 65(11), 31-34.
3. Klein, D.G. (2005) Code Management in Introduction to Critical Care Nursing, p. 215-246. Elsevier.—E-Reserves
4. Elkin, Perry, Potter (2004). Ch. 37 Emergency Measures for Life Support in the Hospital Setting. In, Nursing Interventions & Clinical Skills (3rd ed).

STUDENT OBJECTIVES

1. Support the use of defibrillation in a code situation.
2. Diagram the treatment protocols used when defibrillating a patient.
3. Relate the purpose of and procedure for operation of an automated external defibrillator (AED).
4. Examine the use of cardio version in an emergent and elective situation.
5. Diagram the treatment protocols used when cardioverting a patient.
6. **Prepare a discussion with your peers which examines the use of the following medications: Vasopressin, Epinephrine, Amiodarone, Atropine, Adenosine.**
7. Identify the defining characteristics of PEA and list at least six possible causes.
8. Discuss the treatment modalities (Pharmacologic and otherwise) when PEA is suspected.
9. **Briefly support the use of the following medications: Procainamide, Magnesium Sulfate and Sodium Bicarbonate.**
10. **Name four drugs that can be given through an endotracheal tube in an emergency situation and demonstrate the steps involved in administration.**
11. Choose eight steps a nurse should follow when a patient codes and explain why.
12. Select the appropriate FiO₂ for a patient undergoing resuscitation attempts, and why.
13. Argue the importance of a collaborative process between health care professional, patients and families when making ethical decisions.
14. Explain what the nursing implications are for a “No Code” order.
15. Relate in detail the information that needs to be documented when a patient codes.
16. Propose therapeutic actions the nurse can take to support surviving family members emotionally and spiritually following unsuccessful resuscitation.
17. Predict quality of life issues that may emerge as a result of unsuccessful cardiac resuscitation.

OHLONE COLLEGE (NEW OBJECTIVES)
NURSING 107 Spring 2007

FOCUS: Cardiac Resuscitation—Nurse's Responsibility

*****This content will be with mannequins as scenario. Preparation is MANDATORY!*****

REQUIRED PREPARATION:

1. Ignatavicius, review appropriate portions Ch. 34 (5th ed.) that deal with interventions.
2. Klein, D.G. (2005) Code Management in Introduction to Critical Care Nursing, p. 215-246. Elsevier Available E-reserves
3. Meyers, Eichhorn, Guzzetta, Clark, Klein, Taliaferro, & Calvin "Family Presence During Invasive Procedures and Resuscitation" AJN, 100, (2), 32-42 (on WebCT).
4. ACLS guidelines [This is listed as "medications" in E-reserves
5. Cardiac Resuscitation Worksheet (in WebCT) **Complete PRIOR to Scenario.**

STUDENT OBJECTIVES:

1. Support the use of defibrillation in a code situation.
2. Diagram the treatment protocols used when defibrillating a patient.
3. Relate the purpose of and procedure for operation of an automated external defibrillator (AED).
4. Recognize cardiac rhythms that require immediate intervention.
5. Identify an emergent patient scenario and proper CPR/BLS.
6. **Prepare a discussion with your peers which examines the use of the following medications: Vasopressin, Epinephrine, Amiodarone, Lidocaine, Atropine, Dopamine**
7. Identify the defining characteristics of PEA and list at least six possible causes.
8. Discuss the treatment modalities (Pharmacologic and otherwise) when PEA is suspected.
9. **Briefly support the use of the following medications: Magnesium Sulfate and Sodium Bicarbonate.**
10. Discuss and demonstrate effective communication during a cardiac resuscitation.
11. Recognize and demonstrate understanding of the multiple roles of the nurse during a code.
12. Select the appropriate FiO₂ for a patient undergoing resuscitation attempts, and why.
13. Recognize the importance of Quality Assurance and debriefing post cardiac resuscitation.
14. Discuss the collaborative process between health care professional, patients and families when making ethical decisions.
15. Demonstrate basic documentation after a Cardiac Resuscitation Scenario.
16. Propose therapeutic actions the nurse can take to support surviving family members emotionally and spiritually following unsuccessful resuscitation.
17. Predict quality of life issues that may emerge as a result of unsuccessful cardiac resuscitation.