

Scholarly Project Proposal: Malignant Hyperthermia Online Learning Module

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Scholarly Project Proposal for Master's in Nursing Education

The sudden unexpected death of a healthy individual undergoing major or even minor surgery is a tragedy almost beyond comprehension in this day of medical research and technology. Yet, according to the Association of periOperative Registered Nurses (AORN) (2011), this still happens to patients susceptible to malignant hyperthermia (MH). MH described by Rosenberg et al. (2007) is a hypermetabolic reaction to potent inhalation agents used for initiating general anesthesia, the depolarizing muscle relaxant succinylcholine, and in rare cases to stresses such as vigorous exercise and heat. Rothrock (2011) presents that MH susceptibility is inherited with an “autosomal dominant inheritance pattern” and the exact incidence of MH is unknown. Although, according to Rosenberg et al. (2007), the rate of occurrence has been estimated to be as frequent as one in 5,000 to as rare as one in 65,000 administrations of general anesthesia with identified triggering agents. The AORN (2011) presents that the incidence of MH varies depending on the concentration of MH families in a recognized geographic area. High incidence regions in the United States include Wisconsin, Nebraska, West Virginia, and Michigan.

In identifying that time is crucial when the life threatening MH disorder is suspected and/or recognized AORN (2011) recommends that every facility should include MH training in the orientation plan for new members of the perioperative team and other teams involved in responding to MH crisis. Upon completing an assessment of the perioperative orientation plan and learning modules, at Genesys Hospital, it was concluded that education in reference to MH was not part of the perioperative orientation curriculum. Also an annual educational competency was not provided in order to maintain an awareness of assessment and treatment of this rare disorder. The purpose of this scholarly project proposal is to introduce the goals, objectives, and

evaluation plan for implementing an on-line learning module that can be utilized during orientation all new staff entering the perioperative arena This project proposal also identifies the project setting in which the educational project module will be completed. The scholarly project goals, objectives, activities and timeline are also identified within an attached project-planning guide (see appendix a). A Master's prepared nurse educator has also accepted the role of project preceptor to mentor and guide the learning experience of educational project planning, implementation and evaluation (see appendix B).

Project Setting

The malignant hyperthermia online learning module will be coordinated and implemented for Genesys Regional Medical Center (GMRC) targeted audience of the perioperative nursing staff. GMRC is a 425-bed acute care facility with recognition that other areas within the hospital, such as the Cardiac Cathetization Lab and Emergency Department are areas where staff could also benefit from MH education. Currently, the orientation plans for both pre and postoperative care units (PACU) and the operating room staff consist of both on-line learning and preceptor led skills training. The plan for this MH education will be to develop a computer-based learning module that can be accessed at any time and any place, such as the GMRC medical library, perioperative education room, and even from home. According to Billings and Halstead (2009) computer-based learning can be used to enrich or remediate learning. One advantage is that programs can be accessed at the student's convenience. In collaboration with our instructional design personnel the computer-based learning module will be integrated into Genesys's learning management system (LMS) for access. This learning management system will be utilized not only for accessing the education module but the LMS

will also track student progress, record test scores, and collect evaluation data for education improvement.

Project Goal and Objectives

According to the National League for Nursing (2007), standard of practice, competency IV for Academic Nurse Educator's states nurse educators are responsible for preparing program outcomes and creating curricula that replicate present health care trends and prepare students to function effectively in the health care environment. The goal of this scholarly project is to develop, implement, and evaluate a computer-based (on-line) malignant hyperthermia learning module for GRMC's perioperative nursing staff by August 10, 2012. In order to accomplish this goal several objectives were identified using the Specific, Measureable, Assignable, Realistic, and Time-related (S.M.A.R.T.) method for objective development. The following objectives will serve as milestones for evaluation of progress in completing this scholarly project:

- Review literature and organizational information related to the most up to date assessment and treatment for MH.
- Identify learning module objectives, utilizing cognitive development theories and Bloom's taxonomies for knowledge building
- Create MH learning module objectives, utilizing cognitive development theories and Bloom's taxonomies for knowledge building
- Identify computer programs compatible with GRMC's LMS for ease of integration
- Develop learning module content that addresses assessment, recognition, interventions, and post care of patients with MH.

- Identify a test for evaluation of content and learning effectiveness, supported by evidence
- Identify an evaluation for assessment of value for staff practice, supported by evidence
- Analysis content, test, evaluation and timing of educational module
- Launch the on-line MH learning module
- Analyze collected data

Identification of a Preceptor

Lisa Tedrow, RN, MSN has agreed to take on the professional role of being my preceptor for this MH on-line learning module project. Lisa obtained her Bachelor's in Nursing from Wayne State University and went on to complete her Master's in Nursing Education at Michigan State University. Presently, Lisa is the Clinical Nurse Educator for the Women and Children's unit, Labor and Delivery unit and Special Care Nursery at Genesys Regional Medical Center (GRMC) and has fulfilled this role for the past six years. Lisa is very passionate about nursing and teaching, as she has continued to push her own professional growth by becoming a Neonate Resuscitation Procedure (NRP) program coordinator. This opportunity allows Lisa to build and coordinate education curriculum for simulation education that allows nursing staff, residents, and physicians to become certified in neonate resuscitation. Lisa also holds many other certifications including a certification in the specialty role of staff development.

Upon discussion with Lisa it was decided that Lisa's role as a preceptor would be one of leadership, resource, and evaluator. Lisa states she has a positive professional attitude to fulfilling her role and has requested a weekly meeting to allow opportunity for communication, problem solving, feedback, and evaluate project progress. I believe having Lisa as a preceptor

will provide me with a leader and role model that will be effective in guiding my project research, coordination, implementation, and evaluation for a successful educational experience.

Timeline for Completion of Project

Week 1-6

Tasks/Milestones	Week 1-2 20hrs	Week 3 hrs	Week 4 10hrs	Week 5 10hrs	Week 6 10hrs
Conduct Research Literature review related to evidence based/best practice of MH	X				
Identify actual learning objectives & evaluation methods	X	X			
Create Learning Module utilizing video & ppt.		X	X	X	
Coordinator with LMS personnel/load module on system				X	
Test/eval on-line module for implementation					X
Meet w/preceptor	1 ½ hr/wk =3	1 hr	1 hr	1 hr	1 hr

Week 7-12

Task/Milestone	Week 7-8 10 hrs	Week 9 10hrs	Week 10 10hrs	Week 11 10hrs	Week 12 8 hrs
Implement on-line module for OR staff to complete	X				
Collect Data from module completion		X	X		
Evaluate/Summerize Data for module effectiveness				X	X
Meet w/preceptor	1 hr	1 hr	1 hr	1 hr	1 hr

Reference

Association of periOperative Registered Nurses (2011), Perioperative Standards and Recommended Practices. Denver, CO: AORN Publications.

Billings, D. M. & Halstead, J. A. (2009). Teaching in Nursing A Guide for Faculty. (3rd ed.) St. Louis, MO: Saunders Elsevier.

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University of Ohio (n/d). The effective preceptor. <http://www.oucom.ohiou.edu/fd/monographs/effective.htm>.

University of Oregon (n/d) Timeline and milestones. http://www.edu/moursund/PBL/part_6.htm.

Appendix A

Nursing 710 Project Proposal Planning Guide

Title of Project: On-learning Module for Malignant Hyperthermia

Goals	Objectives	Activities	Timeline
<p>Goal 1: Develop a computer based (on-line) malignant hyperthermia learning module for GRMC's perioperative nursing staff.</p>	<p>1.1 Review literature and organizational information related to the most up to date assessment and treatment for MH.</p>	<p>1.1a Collect & read evidence based information that will support learning content</p> <p>1.1b Create bibliography to organize literature</p>	<p>Week 1 -2 Complete Objectives 1.1-1.2</p>
	<p>1.2 Identify learning module objectives, utilizing cognitive development theories and Bloom's taxonomies for knowledge building.</p>		
	<p>1.3 Identify computer programs compatible with GRMC's LMS for ease of integration.</p>	<p>1.3a Meet with LMS coordinator to discussion learning program compatibility. targeted launce date, & audience</p>	<p>Week 2-4 Complete Objectives 1.3 – 1.5</p>
	<p>1.4 Develop learning module content that addresses assessment, recognition, interventions, and post care of patients with MH</p>		

<p>Goal 2: Implement a computer based (on-line) malignant hyperthermia learning module for GRMC's perioperative nursing staff</p>	<p>1.5 Identify a test for evaluation of content and learning effectiveness Supported by evidence</p> <p>1.6 Indentify an evaluation for assessment of value for staff practice. Supported by evidence</p> <p>2.1 Analysis content, test, evaluation and timing of educational module</p> <p>2.2 Launch the on-line MH learning module</p>	<p>1.5a Review literature to identify an evaluation tool that is supported by evidence</p> <p>1.5b Create evaluation tool</p> <p>1.6a Review literature to identify an evaluation method that is supported by evidence</p> <p>2.2a Assist staff in completion of learning module</p>	<p>Week 5-6 Completion Objectives 1.6 – 2.1</p> <p>Week 7-9 Complete Objective 2.2a</p>
<p>Goal 3: Evaluate the computer-based (on-line) malignant hyperthermia learning module for GRMC's perioperative nursing staff by August 10, 2012.</p>	<p>3.1 Review evaluation data collected</p> <p>3.2 Analysis collected data</p>	<p>3.1a Collect data from evaluation of learning & staff value of content</p> <p>3.1b Develop summery of data</p>	<p>Week 10-11 Complete Objective 3.1a</p> <p>Week 12 Complete Objective 3.1b</p>

Appendix B

This is a sample of what should be included in the preceptor and the agency agreement forms. You need one from the preceptor and one from an individual in leadership who oversees the preceptor. This is to ensure that the agency is aware of the nature and scope of the project. You can duplicate forms and make the needed changes to identify the agency representative. Please feel free to adjust and adapt this form to your specific use. It is meant only as a possible sample of what needs to be included in the agreements.

Student-Preceptor Agreement

The overall objective of this experience is to provide an on-site setting in which a student, with the preceptor (professional employee of a health care agency), can further develop his/her understanding and skills related to an advanced nursing role specialty.

Agency name Genesis Health System
 Student name Ginger VanDenBerg
 Student Telephone # (810) 287-5227
 Preceptor name Lisa Tedrow Preceptor's Title Maternal Child Clinical Educator
 Preceptor Telephone # (810) 600-5382 Preceptor email ltedrow@genesys.org

The following goal(s), objectives, and activities will be completed by the student during this project/practicum.

It is agreed upon by the preceptor and student that the identified goals and objectives would be completed above and beyond how worked at Genesis Hospital.

Please see attached appendix A for goals, objectives, activities and timeline

SIGNATURE SIGNIFYING AGREEMENT TO THE TERMS OF THIS PRECEPTOR AGREEMENT:

Student Ginger VanDenBerg Date 2-17-2012
 Preceptor(s) Lisa Tedrow MSN, RNC-BC Date 2/17/12

Appendix C

Scholarly Project: Malignant Hyperthermia On-Line Learning Module Date 2-17-2012

Student-Agency Agreement

Agency name Genesis Health System

Student name Ginger Vandenberg

Student Telephone # (810)287-5027

Agency representative Laurie L. Hawkins MSN, AOCN®

Agency representative Title Manager Clinical Education

Agency representative Telephone # 810-606-5763 email lhawkins@genesys.org

The following goal(s), objectives, and activities will be completed by the student during this project/practicum.

It is agreed upon by the agency representative and student - Ginger Vandenberg that the identified goals and objectives would be completed outside of working hours and the project would be utilized for Genesis staff education.

Please see attached appendix A for goals, objectives, activities and timeline.

SIGNATURE SIGNIFYING AGREEMENT TO THE TERMS OF THIS AGREEMENT:

Student Ginger Vandenberg Date 2-17-2012

Agency representative Laurie L. Hawkins Date 2-17-12