

Orientation of Novice Nurses to the Operating Room Environment

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### Abstract

The basics of nursing school cannot prepare a nurse to be successful in the highly technical environment of the operating room. Operating rooms have utilized many different ways of teaching perioperative nursing to novice nurses; some are informal and others formal. This paper discusses a strategic project involving the implementation of a formal orientation program specific to the operating room. Positive outcomes experienced by other hospitals using the same system have been implemented and have proven successful by increasing nursing competence in the operating room and reducing staff turnover. As part of this project a survey was developed to assist in determining preceptor and student satisfaction with the program. It is anticipated the survey results will parallel those in other facilities which have demonstrated that using a formal teaching method increases the nurse's knowledge base. The more robust knowledge base enhances competence and confidence in their practice, which goes a long way toward promoting a feeling of job satisfaction. A higher sense of job satisfaction is associated with a decreased staff turnover. Retention of knowledgeable employees provides value to an organization exhibited by reduction of safety errors as well as costs associated in hiring new employees.

## Orientation and Precepting the Novice Nurse to the Operating Room Environment

### **Background, History and Purpose**

Through national reporting of sentinel events and safety reports the perioperative arena has been identified as a high risk environment. Imagine a fast paced, sometimes hectic setting where the patient's life is held in the intricate balance between life and death under general anesthesia. Add to this mix multiple surgical procedures being performed that comprehensively rely on communication and knowledge between team members to ensure the safest care is given to the patient (Association of periOperative Registered Nurses, 2006). The perioperative nurse must possess a broad concept of surgical procedures and have the ability to critically apply these concepts in individual situations within a dynamic working environment.

As the nursing shortage grows, the pool for experienced perioperative nurses continues to shrink. Registered nurses applying for positions in the operating room are increasingly filled by new graduate nurses or nurses from differently focused care areas (such as medical-surgical floors, ICU's and E.D.'s). An estimated 42% of the nurses hired in acute care hospitals are new graduate nurses (Goode, Lynn, Krsek, & Bednash, 2009). Periop 101 is a proven, successful program which has had a positive impact on retention, error reduction and the feeling of job satisfaction. The program was developed by the Association of periOperative Registered Nurses.

One of the many strategies the American Organization of Nurse Executives supports is for leaders to be active in the design, implementation and evaluation of patient care delivery systems that are geared to proving patients with safe, evidence based, quality care (American Organization of Nurse Executives, 2011). This strategic project involved implementation of Periop 101 in a large teaching hospital. The need for a more formal orientation program was

evident based on high staff turnover, current use of an informal orientation process and the inundation of novice operating room nurses. The idea to bring a formal perioperative orientation program began in January of 2011. A survey of both students of the course and their preceptors will be developed to demonstrate how this program will benefit patients; impact cost savings to the organization through staff retention as well as increase job satisfaction through education with the nurses themselves.

### **Internal and External Market**

Evaluating external input from other hospitals that have utilized the Periop 101 program was valuable in deciding the benefits for our organization. Visiting an affiliate facility in Jacksonville, Florida for a North Florida HealthStream User Group (HUG) meeting allowed networking between other hospital leaders who had experienced great success with the Periop 101 Program in their organizations. AORN partners with HealthStream so this program can be administered through hospital organizations at a reduced cost. The affiliate in Jacksonville also utilized a simulation lab in conjunction with Periop 101 to teach hands on training and scenarios that were applied to programmable, simulated (robotic) patients.

Another evaluation of an external source arose during the middle of the year. This program, Mosby's Nursing Skills, utilizes evidence based practice and provides features such as clinical practice guidelines, skills and procedures, and continuing education opportunities. Mosby's also partners with AORN, AACN, ENA, AWHONN, and NNSDO to deliver the most current clinical information. (Mosby's Nursing Suite, 2011). As Mosby's contains many skill check-offs it was determined this program would be used to supplement Periop-101 in this facility.

An internal factor that helped in developing guidelines for a survey was through a course designed by the critical care nurses within our organization. They had created a critical care nursing orientation and applied their findings as part of a research proposal. American Nurses Credentialing Center (ANCC) has set forth strict guidelines that recognize this organization as achieving Magnet Status®. A facet of the Magnet Model Components is Exemplary Professional Practice. Two of the many identified Forces of Magnetism are Force #5 Professional Models of Care and Force #11 Nurses as teachers. A perioperative example of these magnet forces are that veteran operating room nurses are charged with the responsibility of being preceptors and mentors, and using the resource Periop 101: A Core Curriculum (Jurkovich, Karpiuk & King, 2010). Because of this, it was determined that nurses already in the operating room who had exhibited excellent teaching communication skills would be distinguished as preceptors for this program.

### **Financial, Clinical, Cultural Analysis and Considerations**

The financial reasoning of using the Periop 101 course through the HealthStream partnership with AORN was probably the clearest choice as far as financial benefits. The program was \$5,400 through the HealthStream application. This included two (2) System Administrator seats, four (4) Preceptor seats and twelve (12) Student seats. Through AORN, twelve (12) student seats alone were \$9,540, saving of over \$4,000 dollars without considering System Administrator or Preceptor seats. The true cost of orientation to the facility has been placed on a spreadsheet and can be accessed by members of the Association of periOperative Registered Nurses through their website (AORN, 2011). A new nurse can cost facilities anywhere from 50 to 150 percent of their salary in related expenses. A study estimated the cost

to hospitals translates into \$300,000 per percentage point of turnover in staff nurses (PriceWaterhouseCoopers, 2008).

The decision of who would teach this specialized material was discussed and assessed comprehensively. It was decided the college of nursing associated with our hospital would not be an appropriate choice, as the faculty members do not teach operating room nursing in the curriculum. Through efforts supported by the Administrative Executive of Nursing Education, it was possible to bring this program in through the existing HealthStream network. Periop-101 was presented to the Vice President of Nursing, Associate Vice Presidents of Nursing and the Fiscal Coordinator. It was discussed how Periop-101 would assist in providing orientation to nurses, aiding in the creation of competent, safe nurses which would be expected to result in an increase of employee retention.

An instant change realized in the clinical culture through the implementation of Periop 101 was that the once inconsistent method of educating the registered nurse to the perioperative environment was replaced with a structured curriculum. This increased the value of the time and energy that was put into the program. Prior to this change the educational portion of the existing informal orientation method was to read paper modules and answer a questionnaire at the end of the lesson. It was difficult at best, to keep up with the paper trail, grading, and evaluation of the comprehension of the skills nurses learned.

### **Alternatives and Rationale**

The alternative of continuing to use an informal orientation was briefly considered. It was observed that there were fewer nurses familiar with operating room practices available from the pool of available applicants. Some nurses that had been hired previously had expressed

disenchantment with their orientation experience and some would leave once orientation had ended or soon thereafter. Hiring challenges and nurse shortages added pressure to hurry staff through the established orientation process in three (3) months rather than the six (6) months strongly recommended by AORN standards.

Periop-101 is a formal orientation program that offers online modules which delve into important issues such as principles, practice, and use of equipment. There are questions throughout each module that test subject comprehension. As the interactive questions are answered, explanations are generated addressing the core issues. The rationale box explains right or wrong answers and references the student to the location of the teaching material. Students' progress is stored online and monitored and can be evaluated by the preceptor at any given time. An added benefit is the orientee will receive 40 Contact hours upon successful completion of the online course.

The return of the hands-on skills lab is beneficial in training the novice operating room nurse. As part of this applied training, nurses are taught the basics of scrubbing a case. They can experience the steps of a procedure more clearly from the surgical field in a non-threatening environment. The nurse begins to anticipate needs such as sponges, instruments, as well as develop listening skills that will assist the surgeon in completing the surgery successfully. This helps to improve recall of the situation during critical circumstances when timing is crucial. The ability to anticipate the needs of the patient and surgical team has been identified as practical competence. Nurses, particularly in the perioperative arena, who demonstrate practical knowledge are valued and held in high esteem by colleagues because they are considered to be very competent (Gillespie & Hamlin, 2009).

**Implementation Timeline**

A course of action was mapped out in preparation for the Periop-101 program in January 2011.

Concept mapping has been shown to be useful in synthesizing, arranging and assisting in the organization of a hospital orientation program (Noonan, 2011). This program was presented to the operating room managers, clinical leaders and educator. A discussion was held during this presentation to preliminarily identify preceptors, students and system administrators. It was decided at this time to bring back the hands on skills lab and to once again teach registered nurses how to scrub. As everyone in this forum had difference of opinion as to how important (or not important) the scrubbing aspect was to orientation, it helped to identify who the stakeholders were in the group. Bringing the skill lab back would help enforce the new mantra adopted by the HealthStream User Group which is “See many, practice many and then do one”

(North Florida HealthStream User Group, 2011).

The first group of two students started the Periop-101 program on February 23, 2011. From February until November 2011 there have been 15 students enrolled and 14 have successfully completed the online portion of the Periop 101 course. The remaining student began employment over the past week and is enrolled but has not started the curriculum. The timeline for the completion of this course, the hands on skill labs and scrubbing experience is 6 months, as suggested by AORN:

Week 1	Week 2 & 3	Weeks 4 & 5	Week 6	Weeks 7 - 24
Domain 4: Health System Competencies	Domain 1: Safety	Domain 3: Physiologic Responses	Domain 4: Behavioral Responses	Specialty Rotations
Basic life support, Career advancement, Certification, Committee participation,	Time-out procedure, Medication	Assessment of patients, Latex allergy, Equipment	Advance directives, Informed consent,	Bariatric surgery, Cardiac, ENT, General, GYN/OB,

Communication, Critical thinking, Culture of safety, Disaster planning, Employee safety, Environmental responsibility, Fire safety, Legal issues, Performance improvement projects, Professional associations, Team roles, Terminology, Vendor policies	safety, Count policy, Positioning, Radiation safety, Laser safety, Specimen handling, Smoke evacuation, Tourniquets	instrumentation, MH, Monitoring and sedation, Prevention of infection, Respiratory status, Tissue banking	Preoperative teaching, Advocacy, Age-Specific policies, Cultural/Population-specific policies, Documentation, HIPAA, Patient privacy policies.	Neurosurgery, Ophthalmology, Ortho, Pain, Pediatrics, Plastics, Podiatry, Transplants, Urology, Vascular
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(AORN, 2006)

### **Application and Integration of Information Systems**

Periop 101 is an application that is available through AORN. It is also offered through HealthStream at a better cost; all that was needed was revenue released from the Fiscal Coordinator to turn on this application. HealthStream was already integrated and accessible through our hospital portal page. When the Periop 101 application was fully available, there was a trial basis using online streaming, however it was very slow. The other consideration was the streaming came with an additional cost. We discovered there had been a previous purchase of AORN CD-ROMS and DVD's that correlated with the lesson planning and module breakdown.

### **Regulatory Requirements**

Regulatory requirements in using the Periop 101 program require that no part of the program be downloaded or printed to develop other orientation processes or competing programs. (AORN, 2011) This program is copyrighted and warnings are displayed when it is first accessed stating such a fact. The designated course administrator must complete their portion of the program in order for students or preceptors to start.

### **Legal and Ethical Considerations**

When designing a survey (to be given to the orientees and the preceptors at a later date) certain standards must be met and the survey approved in order to satisfy the International

Review Board (IRB) requirements to protect human subjects (Addendum 1). This survey will fall under the heading of human research and involves human subjects for interaction (UCF, 2011). A form letter will explain that the information being gathered by the survey will be collected anonymously and participants will not be identifiable to the principle investigator or public. Subjects will be sent a letter indicating that they can voluntarily take place in a survey that evaluates their experience with the Periop-101 course and orientation. They will be given a link to Survey Monkey that will ask them to give their mother's maiden initials and birth date for a code. The code will only be used to analyze data that is collected. (SUF, 2011)

### **Delineation of Outcome Measures**

The evaluations of the surgical outcomes measured are anticipated to show improvement through the implementation of the Periop 101 program. Prevention of pressure ulcers is understood by learning how to properly use padding and positioning devices during surgical procedures. It also involves a preoperative assessment by the circulating nurse to determine risk of skin breakdown factors or pre-existing skin conditions prior to the surgical procedure. Another outcome measure is the Surgical Care Improvement Project or SCIP. The SCIP quality initiative is sponsored by the Centers for Medicare & Medicaid Services (CMS) and ensures certain measures are taken so patients don't experience post-operative infections or complications. The evaluation includes the antibiotics needed before, during and after surgery, hair that needs to be removed prior to surgical procedure, the prevention of blood clots and patient use of beta blockers are all assessed as part of this project (Centers for Medicare & Medicaid Services, 2011). A quality goal within the hospital organization is Interdisciplinary Clinical and Academic Programs or ICAPs. The ICAP was developed to provide the safest and

highest quality care for the patient through teams consisting of multi-disciplinary staff. One of the ICAPs focus teams is peri-operative medicine (Shands University of Florida, 2010).

### **Plan for Evaluation**

The plan to evaluate the implementation of the Periop 101 program will be through a survey that will be distributed at the beginning of February 2012. The date chosen reflects one year following up with original students that started the program. It is anticipated the participants will express a positive feeling toward their experience and hoped that the comments will include some useful suggestions on how to improve the program. The programs affects will be further demonstrated through the learner satisfaction and competency survey. (Addendum 2).

### **Conclusion**

The purpose of this strategic project was to demonstrate how using a formal program like AORN's Periop 101 course assists in educating the novice operating room nurse. The program enables the confidence and competence that is needed to be successful in this dynamic environment. Nursing competence in the perioperative environment has been attributed to being held in high esteem by colleagues (Gillespie & Hamlin, 2009). This creates a positive working environment for the entire surgical team. Implementation of Periop 101 in other institutions has had a positive impact on nurses and is evidenced by job satisfaction and job retention. Developing a competency and satisfaction survey will confirm these same results are possible at this organization. Patients will benefit by receiving quality care and the organization will recognize reduction in safety errors and staff turnover as well as a reduction in the costs associated with replacing staff members.

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