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An Effective Succession Planning Educational Program for Operating Room Nurses

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Abstract

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MSN, Molloy College, 2010

BSN, Herbert H. Lehman College, 2006

Diploma in Nursing and Midwifery, Nanavati College of Nursing, 1991

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

The current nationwide shortage of registered nurses is a growing problem that is impacting patient care and hospital operations. The operating room is the area most affected by the nursing shortage. Reasons cited for this shortage include ineffective nursing orientation programs and a decline in job satisfaction, both of which have led to poor job retention and an increasing financial burden for health care organizations. The purpose of this project was to develop a best practice succession planning educational program to provide novice operating room nurses with an introduction to the operating room. The Dreyfus model of skills acquisition and Benner's novice to expert theory guided this project. A 2-step process was used to assess and validate the content and quality of the educational program. In Phase 1, the educational program was distributed to 10 stakeholders, who were operating room nurse professionals for formative review. There was agreement from the reviewers, that the education program covered key concepts important for novice operating room nurses. There were two recommendations made for additional clarification. In Phase II, the educational program was revised and distributed to a group of 10 perioperative professionals for summative review using the AGREE II instrument. The summative review group found the education program to be clear and concise. The overall approval rate of 100% and recommendations of both review groups guided the final development of the best practice educational module. This best practice educational module will provide a standardized educational program for educating novice nurses. This project will contribute to positive social change by supporting safe patient care for all surgical patients.

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Dedication

I am truly humbled by this achievement and I would like to dedicate this project, first and foremost, to my God and savior, who deserve the glory, honor, and praise. My God strengthened me and guided my path throughout my life's journey. Thank you to my family without your love, support, and encouragement, I would not have been able to achieve this accomplishment. To my husband, Bejoy, and my gift from God, my children Kezia, Kevin, and Karen, thank you for encouraging me to keep pressing forward to obtain my DNP degree. Thank you to my parents, siblings, parents in law, grandparents, and my church family (New York Gospel Assembly) for uplifting me and praying for me. To my aunt, Elsa Abraham, who inspired me to choose this profession, a thank you for your special love, support, and prayers. Thank you to my uncle, Dr. Philip Samuel, for his inspiration, encouragement, and acting as a role model for me to achieve my lifelong dream and goal.

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Section 1: Nature of the Project

Introduction

In the past 5 years, approximately 30 nurses who worked in the operating room (OR) in the Catholic Health System (CHS) have retired. As a result, there has been a shortage of experienced Operating Room (OR) nurses. According to an Association of Operating Room Nurses (AORN) survey, in the United States, the baby boomer generation, born between 1946 and 1964, consisted of 77 million members and the subsequent generation, Generation X, who was born between the 1960s to the early 1980s, consisted of 44 million members. As the baby boomer generation retires, Generation X will take their place. This results in a problem for the healthcare system in that there will be a shortage of nurses, including OR nurses. Debate over nursing shortages has been a serious topic of discussion in the nursing community as well as in various articles in several nursing journals (Wilson, 2012). The shortage of experienced Generation X OR nurses will force healthcare facilities to develop training programs to enable novice nurses to become competent. Training of these nurses will take at least 6 to 9 months for them to become competent.

According to 2015 CHS Human Resources data, 102 nurses who are working in ORs at CHS facilities will be reaching their retirement age in the next 5 years. The available replacement pool, which consists of a few per diem nurses, will be insufficient to replace the retiring nurses. Ineffective nursing orientation programs have resulted in high turnover rates in many ORs (Wilson, 2012). A strategic succession planning educational program is a critical component to resolve future nursing shortages in ORs.

This project created to develop a training program for nurses who have had no experience in an OR environment.

According to Willemsen-McBride (2010), due to adjustments in the partnership between hospitals and nursing school education, the level of hospital investment in nursing students has been decreased in terms of clinical practice. As a result, new graduates hired for the OR must adapt not only to a new work environment but also to their new role in the OR. This role entails developing clinical skills as well as learning to think critically (Willemsen-McBride, 2010). New nurses coming from various undergraduate programs would gain clinical and practical experience provided by a best practice succession planning educational program.

Problem Statement

There is an identified need for an effective, best practice succession-planning educational program for OR nurses at CHS. By the beginning of the next decade, due to the retirement of the baby boomer OR nurses, it is anticipated that the Generation X and Millennial, who were born during the time period of 1980 to 2000, workforce will need a succession plan to educate them to become competent OR nurses. The replacement of retiring nurses and retention of newly hired nurses are critical to this particular area due to the extensive knowledge and training required. According to Wilson (2012), there is a tremendous financial burden to replace a vacant OR nurse position. The cost which includes advertisement, recruitment, and the orientation process, can range from $22,000 to $64,000(Wilson, 2012).

Purpose Statement/Project Question

The purpose of this project was to propose an effective succession planning educational program for nurses who are willing to work in the OR in order to mitigate a future shortage of OR nurses caused by retiring nurses. This succession planning program, which includes didactic and practical components, is the key to the succession planning initiative at CHS. A structured best practice succession planning educational program, such as the Period 101 modules from the Association of Perioperative Registered Nurses, will be used for training (AORN, 2015). This training program includes evidence-based topics to support the nurses in achieving skills, education, and experience in order to assist in surgical procedures in the OR.

The future project implementation plan will be assisted with the support of the nursing leadership team and the experienced OR nurses. The selected group of OR experts will evaluate the Periop 101 modules and the developed surgical competency checklist for OR concepts in order to assess and validate the content prior to the succession planning educational program implementation. The DNP project question I developed to guide the study was the following: Can a best practice educational program be developed that will enhance the skills of novice OR nurses?

Significance/Relevance to Practice

Many factors contribute to making the OR environment stressful. These include surgery volume, high patient acuity, time pressure for quick room turnover, advanced technology, integration of electronic records, and short staffing (Wilson, 2012). These

stressors impact the number of nurses retiring in addition to short staffing and nurses retiring as soon as they are eligible. As a result, OR procedures are affected because there are not enough experienced nurses to recruit to fill the vacant positions. Due to the lack of clinical experience, the leaders and educators must now orient new nurses in order to be acclimated to the OR These novice nurses have little or no experience in the OR, and it may take from 6 months to a year for them to function as both the scrub nurse and circulating nurse independently.

Clinical hospital experiences, including OR experiences, have always been included in the nursing curriculum in hospital- based diploma programs (Peterson, 2001). Due to change from hospital-based diploma programs to school-based associates and baccalaureate nursing education, there has been a decrease in the clinical hours spent in the OR as a student (Peterson, 2001). This shift negatively impacted the number of OR nurses with experience while the demand for such nurses remains high (Peterson, 2001). My educational program is aimed at new graduate nurses and nurses with experience in another clinical area. The responsibilities of nurse leaders have become more challenging over the past few years; therefore, in order to ensure organizational success, it is important to be proactive by developing a succession planning program (Fennimore & Wolf, 2011).

Implications for Social Change in Practice

Wilson (2012) noted that newly graduated or inexperienced nurses are likely to experience social isolation from senior OR nurses due to their lack of experience. The

recently graduated nurses will lack confidence as well as feel humiliated at a defenseless time when there is an increasing amount of stress to learn a new and demanding job (Wilson, 2012). Most importantly, the level of stress, job satisfaction, and turnover rate for new nurses is expected to decrease due to early training and succession planning for OR nurses (Wilson, 2012). Individuals who undergo surgical procedures are anxious and have concerns about their health, postoperative recovery, and the surgical outcome (Wilson, 2012). Each patient may express their fear and feelings differently, which can lead to physiological symptoms prior to surgery (Wilson, 2012). In order to aptly take care of such patients, the nurse should have adequate knowledge and training in the OR Overall, the nurses will exercise their ability to assist in surgical procedures in the OR . Positive social change will be enhanced by having a continues flow of registered nurses who are competent to work in OR. Additional educational program and training will provide experience for the nurses in the OR and help them to gain the basic knowledge and familiarity of the OR environment. Also attract the new nurses to this specialty and enhance them with skills needed to function independently in a circulator and a scrub role in the OR.

Definitions of Terms

The following words and phrases have been defined for the purposes of this DNP project:

Baby boomers: Individuals born between 1946 to 1964 (Wilson, 2012. p. 453).

Circulating nurse: A circulating nurse is a registered nurse who is accountable for the environment both inside and outside of the surgical field and for facilitating and supporting the surgical team to ensure patient's safety throughout the entire surgical procedure (The American Heritage Medical Dictionary, 2007).

Generation X: Individuals born between 1965 to 1976 (Wilson, 2012. p. 453).

Generation Y: Individuals born between 1980 and 2000 (Sherman, 2015. P. 138).

Periop 101: The AORN has developed the Periop101 modules to assist in the development of critical thinking skills and a basic training in OR (www.AORN).

Preceptor ship: Preceptor ship is a method used to teach and train new nurses by an experienced nurse. This program enables the novice nurse to be assimilated to their new environment. An experienced nurse will be assigned to provide coaching and mentoring for a predetermined time for the novice nurse in successfully performing in a new role (Webster's dictionary).

Perioperative registered nurses: A registered nurse who is capable of assisting surgical procedures in OR this includes functioning in both the scrub nurse role and circulating nurse role (The American Heritage Medical Dictionary, 2007).

Scrub nurse: A scrub nurse in an OR assists the surgeon during surgical procedures and has accountability of the items on the surgical field. Responsibilities of a scrub nurse include maintaining the sterile field at all times from the beginning of the surgical procedure set up until the completion of the procedure (The American Heritage Medical Dictionary, 2007).

Succession planning: Succession planning is a program developed to recruitment and training to someone in his or her new position. It also provides opportunities to obtain experience and leadership skills (Redman, 2006).

Assumptions and Limitations

According to American Association of the College of Nursing (2006), the short staffing of nurses increases the level of stress and dissatisfaction in the job. Due to this reason, many nurses leave the profession, thus contributing to a nursing shortage (Ball, Doyle, & Oocumma, 2015). Furthermore, nursing turnover negatively affects a facility's work environment, staff morale, and job satisfaction and increases errors, all of which may lead to further staff turnover and retention in areas such as OR (Ball, Doyle, & Oocumma, 2015). This project developed to a train nurses who have had no experience in an OR environment. This training program included clinical as well as evidence-based topics to assist the nurses to achieve skills, education, and experience in order to assist surgical procedures in OR settings. A strategic succession planning educational program is a critical component to resolve future nursing shortages in ORs.

Assumptions

1. The development of this program will impact the retention of new nurses in the facility and was not something implemented before.
2. There would not be anything else that would occur to negatively impact nurses' retention in the facility overall.
3. There will be a shortage of nurses in OR when baby boomers retire.

4. Time and money will be spent to train newly hired nurse with no or little experience.
5. An inexperienced nurse working in an OR will be unable to function as a surgical team member and provide safe care to the surgical patient.

Limitations

1. A major limitation is that this program being created for CHS and may not be applicable to other facilities.
2. The novice nurses or the nurses who has no experience in OR lack of scholarship and understanding to carry out best practices in OR procedures.
3. Some OR candidates may not continue in the intensive orientation program for a variety of reasons.
4. Not having full engagement and participation from the educators and preceptors can make the project difficult to complete on time for the candidate.
5. Not having active participation from OR directors and managers for the succession planning and training project
6. In order to gain the financial support of the top leaders, the project and succession planning educational program must be seen as strategic to the organization.
7. The selection criteria for preceptors include their ability to problem solving and effective interpersonal relationship between the candidate and the

preceptor. These factors may influence or affect the student's attitude towards the program.

8. Potential challenges may also include recruiting the right nurses for the training and education. Most importantly, dedication and commitment from both the candidate and preceptor is essential to completing the time line for the Periop 101 modules training.

Summary

Currently, several health organizations are having a difficult time replacing the retired nurses from the OR. Through the project and the succession planning educational program, CHS will be able to recruit and train competent nurses. In addition, the financial burdens of the organizations will decrease as a result of the effectiveness of the succession planning program by hiring trained nurses for the OR. Due to the critical skills and clinical experience required for an OR nurse, it is important for them to have the training and background knowledge. The project I developed for this study, an effective succession planning educational program that includes Periop 101 modules and a developed surgical competency checklist training endeavor will be able to accomplish this. In section 2, will include review of literature, theoretical and conceptual framework, for the future implementation of a succession planning educational program and training for novice OR nurses at CHS to replace the retiring OR nurses.

Section 2: Review of Literature and Theoretical and Conceptual Framework

Introduction

I conducted the literature review for this project by using the databases of CINHAL, MEDLINE, Ovid Nursing Journals Full Text, and Pub-Med. The keywords and assorted combinations used included: *succession planning, peri-operative nursing, preceptor ship program, mentoring operating room nurses, surgical patient safety,* and *educational program for operating room nurses*. Most of the articles that I used in this project were related to preceptorship and mentoring OR nurses, were published within the last 10 years, and were taken from evidence-based, peer-reviewed journals.

Succession planning, which was first used in family-owned businesses, is now implemented into the healthcare system (Carriere, Muise, Cummings, & Newburn-Cook, 2009). The leaders in the healthcare industry have failed to recognize the need for succession planning, and there is limited research promoting this program (Carriere, Muise, Cummings, & Newburn-Cook, 2009). The importance of succession planning is essential, especially from an academic standpoint, in order to manage the nationwide shortage of nurses (Redman, 2006). The number of nurses is expected to continually decrease in the future to come and the increase in retired nurses leads to less mentors to help the future workforce (Redman, 2006). The Institute of Medicine (IOM; 2010) stated that "Nurses should practice to the full extent of their education and training and implementing nurse residency programs are essential to the future of nursing "(p. 4). Nursing is a lifelong learning process and increasing knowledge through continuing

education involvement in domestic and international policies and remaining current with new research and best practice initiatives will help increase knowledge of future nurses. The OR setting is also an area where there is a tremendous emphasis on patient safety therefore, improving the way the team communicates, increases patient safety, and ensure the desired outcome (Plonien & Williams, 2015, p. 468).

Specific Literature

Recently, there has been a noted concern and alert focused on the replacement of nurses in ORs due to the aging workforce and nearing retirement. This particular area of nursing requires special training and advanced technological skill adaptations (Ball et al. 2015). According to Ball et al. (2015), the demand for OR nurses in the United States is growing steadily by 1%–2% each year, and it is estimated that nearly 20% of those currently practicing will retire in the next 5 years. According to Persuade (2008), there has been a positive impact on the work environment through mentoring and implementing educational program for nurses to gain clinical experience in OR.

In June of 2000, shortage of OR nurses was identified by a medical center and offered AORN's training course as an education and clinical experience course up to seven to nine month clinical practices for new nurses in OR (Persaud, 2008). By July 2005, out of the 27 new nurses only 12 (44%) continued to work after their completion of the program. One was unable to meet the expectations and did not continue (Persaud, 2008). Eight continued to work in ORs in different places and four went back to formal units and continued their positions (Persaud, 2008). Finally, for two had no pleasure

working in the OR, and so, moved to different areas of nursing. After implementing the preceptor ship program along with Periop 101 education and training course by June 2006, the nurses were transitioned well into the OR and the medical center increased the retention rate from 44% (i.e.,12 out of 27) to 51.4% (i.e., 18 out of 35), an increase of 7% with increased satisfaction. In complex environments, such as the OR, the transition for the new employee may take up to a year (Persaud, 2008). Persaud (2008) noted that the role of the mentor is multidimensional, but the goal of the mentor is to help the new novice nurses accommodate to OR environment with sufficient knowledge and experience to provide safe practice.

Romp and Kiehl (2009), in a study in a large community metropolitan medical center, which consisted of more than 700 nursing staff, noted that 150 new nursing staff was added annually due to turnover. After the implementation of a series of preceptorship programs, the satisfaction rate of the newly hired nurses and their retention tremendously improved; this decreased the turnover rate to 3.8% (Romp & Kiehl, 2009).
Also, the financial savings was of the increased retention was approximately $1.8 million (Romp & Kiehl, 2009). A statement released by the Texas Nurses Association brought attention to the issue of developing nurses for the future .Recently, there has been a noted concern and alert focused on the replacement of nurses in ORs due to the aging workforce and nearing retirement (Tomajan, 2012). This particular area of nursing requires special training and advanced technological skill adaptations (Tomajan, 2012). In order for the advancement to be made in health care, there must be improvements in

education and training for nurses (Tomajan, 2012).

General Literature

The shortage of nurses in the United States has been quite noticeable over the last 10 years (Peterson, 2001). According to Chrys Marie Suby, President and CEO of the Labor Management Institute, the nursing shortage is associated with a variety of reasons, which include the baby boomers' retirement and increased healthcare needs of the aging population. Statistics show that two-thirds of perioperative nursing leaders are above the age of 50 years old and one-fifth are over 60 years of age and among those, 37% will be retiring in next 3 years and 65% will be retiring by 2022 (Sadler, 2015).Due to the retirement age of the OR nurses; the nursing leaders anticipate having problems hiring experienced OR nurses in the coming years (Sadler, 2015). The Robert Wood Johnson Foundation, in conjunction with IOM, joined together to address the nursing shortage crisis and to make recommendations echoed by other reports in the literature, which emphasized the urgency of succession planning programs for nurse develop their skills and deliver safe patient care (IOM, 2010).

Identifying and addressing workplace cultural safety is important to have teamwork and safe patient care (Sammer, & James, 2011). Workplace safety is extremely important to support the complexity and patient acuity in the OR due to the high stress level, high volume, and the isolated culture in OR (Bigony et al., 2009). The safety of the patient has been impacted by the increasing number of cases that must be done in a shorter time and the reduction of time allotted for the nurse in the circulating and scrub

role (Bigony et al., 2009). Disruptive behavior has been a major issue in the OR and can lead to medical errors and contribute to patient safety outcomes (Bigony et al., 2009). Employees working in these areas are unable to participate in teamwork and provide optimal care to the patients (Bigony et al., 2009). According to The Joint Commission leadership chapter (2008), the contributing factors for disruptive behaviors in OR are the not having adequate staff, workload and fatigue, high stress level, anxiety, inadequate interpersonal skills, and conflict management. To attain job satisfaction and meaning from their profession, nurses must have a healthy and complacent working environment (Bigony et al., 2009). They need reassurance, social acceptance, self-esteem, and a sense of belonging in the workplace and support from their nursing leaders (Bigony et al., 2009).

Another important issue is bullying. Chipps, Stelmaschuk, Albert, Berhard, and Holloman (2013) described bullying in the OR environment among the surgical team personnel from two institutions. The 167 respondents in the study evaluated how often they experienced job-related feelings on an eight-item survey using a seven-point Likert scale. In the study, 59% of the respondents reported that they witnessed bullying among coworkers weekly, and 34% reported witnessing at least two bullying acts weekly. Registered nurses identified physicians as the perpetrators of bullying and that the surgical technologists and unlicensed personnel would identify RNs as bullying perpetrators based on the traditional hierarchy of the OR and emotional exhaustion also was correlated with bullying (Chipps et al., 2013).

By the training and implementation of Team Strategies and Tools to Enhance Performance and Patient Safety (STEPPS) methodology, the message to enhance patient safety is applied to team members (Plonien & Williams, 2015). The best results of this methodology are that evidence-based clinical support and decision making can assist in quality clinical decisions to improve the health outcomes for patients, families, and communities (Grove, Burns, & Gary, 2013). By implementing the use of the WHO Surgery Checklist reduced the rate of deaths and surgical complications and the Joint Commission's Universal Protocol is designed to prevent wrong site, patient, and procedure surgeries (WHO website). Implementation of the universal protocol in the OR to improve communication among surgical team members had a tremendously impact on preventing wrong site surgery and other surgical complications (WHO website).

Conceptual Models/Theoretical Frameworks

The Dreyfus model of skills acquisition (Dreyfus & Dreyfus, 1986) and Benner's (1984) novice to expert theory guided this project and supported the development of an effective succession planning for OR nurses. The Benner's novice to expert theory helped to guide this project by allowing for an understanding of the five developmental stages of which a novice OR nurse will acquire skills, knowledge, and experience from novice to expert (Dreyfus & Dreyfus, 1986). In the novice stage, the nurse will be given instructions and feedback and will continuously monitoring of the situation (Dreyfus & Dreyfus, 1986). The second stage, competence, will come after gaining some clinical experience and here the nurse will be able to function independently (Dreyfus & Dreyfus,

1986). In the third stage of proficiency, the nurse gains more practice and are able to make individual decisions, formulate their own plan of care, and solve problems (Dreyfus & Dreyfus, 1986). In the expert level of this model, the nurse is able to apply their expert knowledge into practice without any doubt (Dreyfus & Dreyfus, 1986). At the fifth stage of mastery, the nurse is performing tasks at a higher level of their mental capacity than the expert level (Dreyfus & Dreyfus, 1986). Table 1 explains the Dreyfus model of skills acquisition. This model provides the required steps for a nurse to achieve to move through the levels of knowledge acquisition from novice to expert (Stan Lester Developments, 2005).

Table 1

Novice to Expert: The Dreyfus Model of Skill Acquisition

	Knowledge	Standard of Work	Autonomy	Coping with Complexity	Perception of Context
1. Novice	Minimal, or 'textbook' knowledge without connecting it to practice	Unlikely to be satisfactory unless closely supervised	Needs close supervision or instruction	Little or no conception of dealing with complexity	Tends to see actions in isolation

Table continues….					
2. Beginner	Working knowledge of key aspects of practice	Straightforward tasks likely to be completed to an acceptable standard	Able to achieve some steps using own judgment, but supervision needed for overall task	Appreciates complex situations but only able to achieve partial resolution	Sees actions as a series of steps
3. Competent	Good working and background knowledge of area of practice	Fit for purpose, though may lack refinement	Able to achieve most tasks using own judgment	Copes with complex situations through deliberate analysis and planning	Sees actions at least partly in terms of longer-term goals
3. Proficient	Depth of understanding of discipline and area of practice	Fully acceptable standard achieved routinely	Able to take full responsibility for own work (and that of others where applicable)	Deals with complex situations holistically, decision-makingmore confident	Sees overall 'picture' and how individual actions fit within it
4. Expert	Authoritative knowledgof discipline and deep tacit understanding across area of practice	Excellence achieved with relative ease	Able to take responsibility for going beyond existing standards and creating own interpretation	Holistic grasp of complex situations, moves between intuitive and analytical approaches with ease	Sees overall 'picture' and alternative approaches; vision of what may be possible

Note: Institute of Conservation (London) 2003 based on the Dreyfus model of skill acquisition. (Stan Lester Developments, 2005).

In Brenner's book, *From Novice to Expert: Excellence and Power in Clinical Nursing Practice* in 1984, Brenner discusses that the novice to expert nursing theory is based on a clinical approach. Brenner's method to nursing theory is clinically based. While researching, Brenner observed different exemplars of nursing in order to prove that the basis for clinical practice is knowledge (Burket et al., 2010).

Brenner (1982) observed how novice nurses learn nursing practice and skills from the experienced nurses through exemplars, which include nurse's experiences and what they learned from these experiences. I followed those five levels for this project's Periop101 modules. The first level, novice, starts with candidate selection and with identifying their goals and passion to complete this educational training (Brenner, 1982). Second was the advance beginner level. In this level, the passion and support the nurses' possess is identified and the training module delivers the skills and knowledge to become an OR nurse (Brenner, 1982). Third is the competent level, the candidates become more involved and their progress is assessed and they are provided with feedbacks (Brenner, 1982). Generally, by this time, in the fourth level, proficient, the 6 to 9-month period is over and the new nurse were completing the Periop101 modules and ready for the placement with their OR preceptor (Brenner, 1982). The fifth level is expert and by this time the candidate should be successfully hired to the facility to replace the vacancies in the OR, and the leadership team in the OR should be able to support and provide ongoing

in-services (Brenner, 1982). These are great steps to use from theory to the project in developing an educational program and competency.

Summary

The general and specific literature I reviewed for this particular project pointed out that evidence-based education and training through Periop101 education modules were helpful to novice nurses in the OR to hone their knowledge and clinical practice. The project for this study is the future implementation of a succession planning educational program and training for novice OR nurses at CHS to replace the retiring OR nurses. The Dreyfus model of skill acquisition and Benner's novice to expert model were used in guiding this project. In Section 3, I will outline the project design and method, population and sampling, data collection, data analysis, and project evaluation.

Section 3: Methodology

Introduction

My plan for the project was to assess and validate an educational training program for succession planning for novice nurses who want to work in the operating room at CHS. It is important that newly employed OR nurses have a clinical background and knowledge for perioperative practice to have a strong foundation for professional practice (Zinn, Guglieoni, Davis, & Moses, 2012). In this section, I will address the projects methods, project design, data collection, data analysis, and evaluation plan for the educational training project in detail. This approach will guide the project and future succession planning implementation for OR nurses. Through the Periop 101 module education training and the Surgical Competency Checklist, the preoperative leaders and educators will have an evidence-based tool to educate the nurses to gain OR knowledge and practice and a successful succession planning implementation plan.

Project Design and Methods

The primary goal of this DNP project, an effective succession planning educational program for OR nurses, was the assessing and validating of the Periop 101 modules and surgical competency checklist by the stakeholders. Association of Operating Room nurses is a professional organization that provides education and training through the educational modules, Periop 101, for basic and mastery nursing education (see Appendix K). The surgical competency checklist was developed by me and contains information in competencies related to equipment that the novice nurses must use

competently for basic professional practice. This project method included selected nursing leadership members from six facilities of CHS who assessed and validated the educational program.

The best practice succession planning educational program included the following contents for training : (a) a formative educational program including Periop 101 module (see Appendix A), (b) a timeline and agenda for training (see Appendix B), (c) training objectives (see Appendix C) , (d) a developed surgical competency checklist for OR concepts (see Appendix D), and (e) both a pretest and posttest (see Appendix E) that was evaluated by a selected group of OR members through a two-phased evaluation process. This process of evaluation ensured that Appendices A, B, C, D, and E were appropriate to be included and validated for the OR nurse training program for future implementation. Phase 1 included a formative evaluation (see Appendix F) by a group of 10 selected members of the OR to ensure all topics on the training modules are appropriate. The program was distributed to 10 selected operating room team members along with a formative evaluation form for an initial review for input and feedback. Next, Phase 2 included a summative evaluation group consisting of 10 members, who included ORRN leaders, RN educators, and RN preceptors from each facility. The Appraisal of Guidelines for Research and Evaluation II (AGREE II) instrument (see Appendix G) was used by this second group to validate the educational program. This group was requested to complete and return them in a 2-week period.

Population and Sampling

I conducted the future implementation plan for this project in the CHS facilities in Long Island, New York. Phase I included a formative evaluation by a group of 10 selected members of the OR to provide feedback about the 25 modules of the Periop 101 educational program and the developed surgical checklist competency. The eligibility criteria for participation in Phase 1 of this project were RNs who were OR leaders and clinicians with at least 5 years of experience in the OR and Certified Nurse Operating Room (CNOR) certification. The participation requirements for Phase 2 of the study included being OR educators and RNs who were functioning as preceptors from each of the six facilities of CHS, with at least 5 years of teaching experience as an educator or as a preceptor. Requirements for Phase 2 participants also included CNOR certification and a baccalaureate degree for nurses. All participants were required to be able to communicate in English for the review of the Periop 101 training module and surgical competency checklist for operating room concepts for the validation of the appropriate phase.

In Phase 1 of the project, a formative evaluation questionnaire of the educational program (Appendices A, B, C, D, and E) along with a formative evaluation form (see Appendixes F) were distributed to the experts so that they could provide feedback and evaluation of the educational program for accuracy. These forms were distributed to 10 OR professionals: 3nurse leaders, 5nurse educators, and 3 OR RN preceptors. For the purpose of the Phase 2 of the project, the summative evaluation and the modified

AGREE II Instrument (see Appendix G) were distributed to a group of 10 OR professionals: three nurse leaders of the OR, five OR educators, and three OR preceptors. These 10 participants had the ability to assess and validate the best practice educational program Peri op 101 modules for future implementation, which included didactic and clinical content for surgical procedures, OR equipment, and clinical competency information to enhance the skills of novice OR nurses for the future implementation.

Data Collection

I provided participants with an informational brochure in a paper format explaining the purpose of the project, the requirements for participation, and my contact information. An overview of the project and instructions to complete the form, including allotted time, were clarified for the participants. Both groups were provided with my contact information so they could ask me about any questions, concerns, or the clarity of the project.

In Phase 1, the formative review phase, all 10 participants were requested to read and the educational program (see Appendices A, B, C, D, and E) and provide feedback on the formative evaluation form, which was in a paper format and handed to individual participants to assess their understanding. The participants were also requested to complete an evaluation questionnaire of the educational program (see Appendix F), and all 10 formative review feedbacks were returned in a timely manner, before the requested 2-week time period had ended. In Phase 2, the summative review phase, participants were provided with a revised educational program (see Appendices, A, B, C, D, and E). To

collect this group's feedback, I distributed the AGREE II instrument to the 10 participants in the summative group individually in a paper format. All 10 summative evaluations were returned back within 2 weeks. An overview of the project and instructions to complete the form, including allotted time, were provided for the participants. Both groups were provided contact information to ask to any questions, address any concerns they had, and to clarify the project if need be.

Protection of Human Subjects

I protected the participants' confidentiality at all times during the study. Their participation in this study was voluntary. Participant personal identifiers were not collected on the evaluation forms. I honored any concern from the participants about withdrawing from the project upon their request. No one requested to withdraw during this study. Consent was obtained from the Walden University Institutional Review Board (IRB); the approval number for this study was 08-09-16-0421232. A thank you note along with a $20 gift certificate for Dunkin Donuts was sent as compensation to each participant for their efforts. I self-funded the gift certificates.

Data Analysis

I conducted data analysis by analyzing the results from the feedback forms returned from the participants. The formative evaluation feedback form was used for the initial formative evaluation. The results from the formative evaluation feedback forms were tabulated and analyzed using descriptive statistics.

I asked the formative group to evaluate and validate on the formative evaluation feedback form (see Appendices A, B, C, D, and E). The following questions were requested to be answered: (a) does the Periop 101 curriculum provides a clear and organized breakdown of what will be covered in training for each session? and (b) Are the orientation timeline and agenda for novice OR nurses adequate for familiarization with equipment and surgical procedures? Also, primary objectives and secondary objectives were evaluated and analyzed by respondents by their rating from 1–5 on the Likert scale from strongly disagree to strongly agree. I assessed and evaluated the formative group evaluations for recommendations. The educational program was revised based up on the formative group recommendations and then sent to the summative group.

I asked the summative groups participants to complete an AGREE II instrument to guide in developing quality guidelines for an assessment and validation. The AGREE II instrument contains an overall program assessment that allowed the participants to rate their recommendations of the educational program (Brouwers 2009). The six domains of the AGREE II instrument consisted of 23 questions, and the overall guideline assessment consisted of two questions and the percentage was calculated with a formula provided by AGREE II instrument (Brouwers 2009). I used the data collected from the formative evaluations and the summative evaluations to validate the education program.

Project Evaluation Plan

In the future, the program will be piloted in the CHS system of Long Island. A detailed plan will be developed in the education and training department which will

include the progress of the program. The Periop 101 training modules will be implemented to train the nurses who have no experience in the OR along with surgical procedures and equipment. The CHS human resource team will be assessing the group of nurses who will be retiring in the near future in order to calculate the number of new nurses needed to be trained and replaced. At the end of the future completion of the program, the facility will be reviewing the original intent of the program and how successful it was by assessing and evaluating the candidates' knowledge and practical skills to assist with the procedures in an OR. The final results will be disseminated by various methods including chapter meetings of AORN Long Island-Chapter 303; the CHS intranet, by sending an e-mail to each member; as well as through monthly publications such as OR manager Journal and in AORN Journal and conferences .

Summary

The selected members of the CHS system were provided with formative evaluation feedback forms and summative feedback forms to assess and validate the educational program. The summative evaluation feedback form provided responses from the respondents as to the quality and validity of the program. Future implementation of the validated educational program will enable the CHS system to train newly hired OR RNs to replace the retirees. In Section 4, I will provide the results from the findings of the formative and summative evaluations for effective succession planning educational program for OR nurses, Projects Strengths, Limitations, and Recommendations for

Remediation of Limitations, Analysis of self as a Scholar, Practitioner and a Project Developer, and Summary and Conclusion.

Section 4: Findings, Discussion, and Implications

Introduction

This educational program, which includes didactic and clinical components, is the key to the succession planning initiative at CHS, in order to replace and improve the future shortage of OR nurses caused by retiring nurses. This training is imperative for nurses who have had no experience working in an OR environment. I used a two-step process to validate the content and quality of this educational program.

In this section, I will present the results of the Phase 1 and Phase 2 evaluations of the Periop 101 educational modules from the AORN and surgical competency checklist I developed for OR equipment and concept. The educational program was distributed initially in Phase 1 to a group of stakeholders for formative review and validation. Based upon recommendations from their formative review, I adjusted the educational program. In Phase 2, the adjusted educational program was distributed to a group of administrators, OR educators, and OR preceptors for a summative review using the AGREE II instrument.

Summary of Findings

Phase 1: Formative Evaluation

I distributed the educational program including formative evaluation form to 10 participants, who included two OR nursing leaders, five OR educators, and three OR RN preceptors. All 10 participants responded by returning the evaluation form within the allotted time period of 2 weeks. The first question the formative evaluation feedback

form asked on the content of the educational program was: “Does the Peri-op 101 curriculums provide a clear and organized breakdown of what will be covered in each training session?” One hundred percent of the participants (*n* = 10) answered yes. Additional responses in narrative form were: “excellent educational program” and “content of the material covered important aspects of training for OR nurses.”

The second question on the content of the educational program was: “Are the orientation timeline and agenda for novice operating room nurses adequate for familiarization with equipment and surgical procedures?” Eighty percent of the respondents (*n*= 8; two nursing leaders, five educators, and one RN OR preceptor) answered yes. Twenty percent (*n*= 2; two OR preceptors) answered no, commenting that the technological aspects of OR nursing was not included in the timeline and agenda and that it is very difficult to train in the classroom setting within a short period of time. This particular response led me to include additional hands-on training to increase nurses’ familiarization with the sophisticated technology that is involved in various surgical services of the OR. Narrative comments from this question indicated that the agenda covered all topics: “it is an excellent module,” “Clear and concise format,” and “cannot wait for the implementation of the program.”

The primary and secondary objectives of the educational program were evaluated in Item 2 of the formative evaluation. The primary objectives addressed the educational program contents based upon the best practice evidence available. The topics addressed in the primary objectives included administrative, emergency management, professional

development, delivery of safe care, aseptic technique, instruments and supplies, and the appropriateness of the pretest/ posttest questions. Respondents rated every item in the primary objectives including development of skills and application of knowledge, equipment lists, and adequate educational topics. Feedback from the respondents indicated that 100% of participants answered with a 1, or "strongly agree" on the Likert scale, indicating that they strongly felt the educational program covered the essential topics and concepts for new operating room nurses.

In addressing the secondary objectives, I included the appropriateness of educational content. Other questions included: Are the educational objectives appropriate? and is the agenda appropriate? Responses to these questions varied in some areas. There were seven respondents (n = 7; two leaders, three educators, and two RN preceptors) who rated as 1 on the Likert scale, indicating that they strongly agreed, and three (two educators and one RN preceptor) rated 2, that they are close to strongly agreeing on the Likert scale.

Question 3 addressed the following: Can you provide any additional training materials for development of this educational program? The recommendation was to add tissue tracking system and malignant hyperthermia. Preceptor 2: "Real simulation will be helpful." Educator 2: "Education session may be to include tissue tracking and malignant hyperthermia Preceptor 4 & 5: to add more clarification to surgical site marking in terms correct side and correct site and what are the contingency plan if the site is unable to mark or if the patient refuses to mark the surgical site.

Finally, Question 4 addressed an overall evaluation of ability to understand the content of the educational program, and 100% (n = 10) indicated that "yes," they could understand the content. Based on the evaluation from the formative group, it was evident that the Periop 101 educational program addressed all of the content related to an effective succession plan for OR nurses; the findings provide clear and concise feedback on the educational plan and addressed areas for me to reevaluate prior to the summative evaluation.

By evaluating pretest and post-test questionnaires (see Appendix E), I found that 100% strongly agreed that those questionnaires contained pertinent information and important concepts. Twenty percent (n = 2; one educator and one preceptor) suggested to make changes in Question 15 to add more clarification to surgical site marking in terms of correct side and correct site and what the contingency plan would be if the site is unable to be marked or if the patient refuses to mark the surgical site. There were no additional recommendations or modifications in regards to the content of the educational program. Based on the findings of the formative evaluation, the best practice educational program was a comprehensive module in providing knowledge to the novice nurses and addressing the safety of the surgical patients.

Phase 2: Summative Evaluation

For the summative evaluation (see Appendix G), I selected 10 participants, including five registered nurse preceptors of OR; three OR nurse educators; and two OR leaders , who have been practicing in the operating room for at least 5 years in the CHS

Long Island facilities. The selected group was provided with the AGREE II instrument (see Appendix G), project educational plan, timeline, and the Periop 101 educational program to provide feedback on. The summative group was requested to read the project plan, the educational program contents, the timeline and evaluate them with the AGREE II instrument (Brouwers, 2009), which used a Likert scale that ranged from 1 to 7 (strongly disagree to strongly agree).

The AGREE II instrument guidelines were developed to assess the rigor and transparency of an educational program and to differentiate the quality of the educational program by assessing the domain score between a poor quality and a high quality (Brouwers et al., 2010). The AGREE II instrument uses 23 items within six domains for evaluation, and they are: scope and purpose, the involvement of the stakeholders, rigor of development, clarity and presentation, applicability, and editorial independence (Brouwers et al., 2010). The instrument provides an overall assessment of a program by rating two items on the overall quality of the educational program and summative group would recommend Periop 101 educational program for use (Brouwers et al., 2010). The 10 participants evaluated and returned their summative evaluation within the time frame of 2 weeks.

I received the summative evaluation data (see Appendix I) back from the participants and then analyzed it. The first domain, scope and purpose, addressed three items: the overall objective(s) of the educational program is (are) specifically described, the question(s) covered by the educational program is(are) specifically described, and the

OR nursing staff to which the educational program is meant to apply is specifically described (Brouwers et al., 2010). A scaled domain score of 98% was achieved, indicating a high level of agreement by the stakeholders. The second domain addressed the involvement of stakeholders and included three items. The first item asked if the educational program development groups included professionals from all the relevant groups (Brouwers et al., 2010). The second item asked if the views and preferences of the target population have been requested (Brouwers et al., 2010). The third item asked them if the target users of the guideline have been clearly defined (Brouwers et al., 2010). A scaled domain score of 90% was noted, indicating that the involvement of the target users was at high level of agreement. Some of the recommendations specified by the respondents were that the scrub nurse role will require an extended period of orientation and that an experienced scrub person should mentor the novice nurse in the scrub person role.

The third domain addressed the rigor of development of the educational program. It included eight items that encompassed: systematic methods being used to acquire evidence; the criteria used; the strength and limitations of the evidence; a description of methods for providing recommendations; the health benefits, side effects, and risks addressed in making the recommendations; the recommendation and supporting evidence correlates; the guideline has been reviewed by stake holders with expert knowledge; and the provision of a method or updating the guideline (Brouwers et al., 2010). A scaled domain score of 88% was attained in this domain, indicating a high level of agreement by

the stakeholders. The fourth domain, clarity and presentation, included three items. They were that the recommendations were specific, the options for management conditions or health issues were clearly presented, and key recommendations were easily identified. A scaled domain score of 97% was attained indicating that there was a high level of agreement by the stakeholders.

The fifth domain, applicability, addressed four items. They were that the guideline noted facilitators and barriers; provided advice and/or tools on how the recommendations can be implemented for practice; considered the implications when implementing the recommendations, and recommended the monitoring and /or auditing criteria (Brouwers et al., 2010). A scale domain score of 85% was achieved. This indicated a moderate level of agreement by the stakeholders. The sixth domain included two items. They were that the view of the funding body did not influence the guideline contents and the guideline development group members conflicting interest has been recorded and addressed (Brouwers et al., 2010). A scale domain score of 73% was attained indicating that there was a moderate level of agreement by the stakeholders. This moderate score was noted considering that there were no conflicts of interest indicated within the guideline.

In the final domain, overall guideline assessment included two items. The first was to rate overall quality of the guideline. A scale domain score of 100% was achieved indicating that the stakeholders agreed that the education program was of high quality. The second item asked the stakeholders if they would recommend the guidelines for use with the possible answers of: yes, yes with modifications, and no (Brouwers et al., 2010).

A score of 100 % indicated that the stakeholders recommended this educational program for use. The overall guideline assessment of the quality of the educational program indicated that it was high quality and 100% of the respondents (n = 10) agreed. There were no additional recommendations or modifications in regards to the content of the educational program.

All 10 respondents from the summative group noted responses in the general comment section of the AGREE II instrument with feedback, including: educators, preceptors and leaders noted that the comprehensive review and the plan for this educational program were clear and concise. Succession planning for OR is critical as it is very important to start the program without further delay. There is a desperate need to replace the vacant positions in operating room, finally someone came forward with this excellent idea, Excellent project, in long run will CHS will benefit this project implementation. Peri-OP 101 is an excellent educational tool and it is specifically developed for operating nurses. I will definitely recommend this program.

Discussion of Findings in the Context of Literature and Framework

There is an identified need for an effective best practice succession planning educational program for OR nurses at CHS. By the beginning of the next decade, due to the retirement age of baby boomers, it is anticipated that the generation the Generation Y will be replacing the OR nurses who are currently assisting and practicing surgical procedures in an OR(Sherman, 2015).The Best Practice Educational Program Peri-op 101 module, that it will include surgical procedures and OR equipments and clinical

competency information and the developed surgical competency checklist for operating room concepts assessed and validated by both formative and summative evaluation has indicated that this educational program provided more confidence and basic knowledge to work in a complex operating room settings. Dreyfus model of skill acquisition and Benner's novice to expert model will use in guiding this project. The impact of this program on social change is that the development of a best practice effective succession planning educational program for operating room nurses would recommend improving knowledge and practice to ensure patient safety. From the future of nursing practice states that "Nurses should practice to the full extent of their education and training and implementing nurse residency programs are essential to the future (Institute Of Medicine, 2010, p.4)".

Projects Strengths, Limitations, and Recommendations for Remediation of Limitations

Project Strength

The strengths of the project are that there was no developed succession planning educational program for OR nurses in CHS. This project developed was the first step and it was reviewed, assessed and validated by key stakeholders to implementing the effective succession planning to replace operating room nurses in the future. A second strength of this project was that the best practice educational module was recommended by AORN, based on all educational topics and recommended practices are added to training program. A third strength of this project was that in addition to the didactic

module there is a simulation part of the training. Also a developed equipment to be familiarized in OR and concepts will be included in the educational training program.

A fourth strength of this project was that the participants of this study thoroughly reviewed the educational module and the content of the program and developed equipment to be familiarize in the OR including the concepts in the first phase of evaluation. The recommendations from formative evaluation provided more clarification to the summative group to validate the program for implementation. A fifth strength of this project was that the participants from both phase of evaluations shared a common language and in their knowledge of expertise and understanding the concepts were similar in terms of OR nursing. This commonality was excellent and very helpful in both phase of evaluation to review and validate the project efficiently. The sixth strength of this project was that the support and dedication from leadership has tremendous effort and which impacted for improving the effective succession planning education for OR nurses to implement throughout the entire health system.

Project Limitations

The first limitation of this project was that a few reviewers stated that the implication of financial cost to conduct the project had not been mentioned yet. This is a valid point and the cost of purchasing the educational module from AORN will be assessed and added to with the pilot study. In the future implementation this will be in consideration for individual facilities as well as the system level to plan and include the implementation cost in to the operational budget.

The second limitation of this project that was mentioned by RN was that they would like to incorporate the educational program in assisting and familiarizing other areas such as Caesarian section, endoscopic procedures, and interventional radiology procedures. This recommendation will definitely take in to consideration due to the fact that each facility functions in different schedule and timeframe. For example, in some facilities, during weekends and off hours these special procedures are assisted by OR nurses and will be added to the future implementation.

The third limitation of this project was that a couple of participants mentioned to include succession planning for certified surgical technologists due to the fact that, in most hospitals, this role now fulfilled the scrub role with surgical technologists to assist the surgical procedure. This is in fact true, and even though they receive the didactic knowledge in academia, their hands-on experience is limited during their training period. To train surgical technologists early in advance will also helpful in succession planning for OR staffing in the future.

Analysis of self as a Scholar, Practitioner and a Project Developer

Scholar

The doctor of nursing practice education and the development of the project implementation have provided me an opportunity to bring forth an awareness to address the ongoing concerns of many hospitals to recruit and replace the OR nurses. My main focus of this project was that there should not be any shortage of OR nurses in the future and to provide an educational program to the novice nurses to receive didactic knowledge

and practical experience to function independently to their fullest potential in the complex environment of OR. My experience as a novice OR nurse was over 20 years ago and ever since my ambition and motivation has been increased to be an advocate for providing a safe and quality care for the patients who undergo surgical procedures in many facilities.

Practitioner

As a practitioner to prevent any complication can occur due mistakes or lack of knowledge and experience as a practitioner and to provide safe surgical care for patients who is under anesthesia and unable to speak for themselves while they are in OR. It is evident that the wrong site surgery is still the number one sentinel event in this country. The OR is a complex chaos environment associated with several responsibilities involved in the circulating nurse role to fulfill for the safety of the patient undergoing surgery. In many circumstances, the individual who never worked in this particular role is often difficult to understand the concepts. As a practitioner in OR can assist advocating for patient safety while increasing the knowledge to improve safety and instill the confidence in OR staff.

Project Developer

My professional growth had impacted the guidance and directions for developing a project as a strategic succession planning educational component to resolve future nursing shortages in OR. My special interest in this specific field was heightened when I

got promoted to the management in my carrier and for a long period of time the difficulty that I encountered in order to replace the retirees with experienced OR nurses in an Institution required 24 hours coverage for OR nurses to assist trauma cases. Developing comprehensive best practice evidence based educational program to effectively educate and train the novice nurses across the system hospitals will assist in practicing safe patient care. The OR nurses can view themselves as a competent individual with knowledge and training and function as a valuable professional member of the surgical team. My DNP project along with my clinical and administrative experience has enlightened my abilities as a scholar practitioner and a project developer to continue to look for opportunities to develop evidence based best practices to give back my knowledge and experience in to nursing profession.

Summary and Conclusion

The development of an effective succession planning for OR nurses program provided guidelines to implement a developed best practice education to the novice nurses to get experience in OR. Nursing leaders, educator's and preceptors from OR can use this tool to anticipate the future need and fulfill their nursing staffing vacancy. This project implementation is supported by the members of the OR and implementing this project guideline will provide standardization and competency to the novice nurses across the system. Additionally, this project will provide comprehensive knowledge to OR nurses, and they will be practice by demonstrating the safe patient care for all surgical patients.

Section 5: Scholarly Product

Project Dissemination

My specific plan for disseminating this project is via poster presentation to educate the stakeholders in assessing the knowledge of OR nurses by evaluating pretest and posttest scores. I developed this project to guide the OR leaders and educators to equip the nurses with didactic and clinical experience to function in OR and improve the quality of care for patients undergoing a surgical procedure. I also plan to submit the manuscript for publication in Association of Preoperative Registered Nurses Journal and present at the AORN local chapters as well as upcoming national conferences. I plan to pilot this project at my workplace after graduation and develop a best practice succession planning educational program to provide clinical and didactic knowledge to novice OR nurses at CHS of Long Island.

Following is the description of the scholarly product:

Title: An **Effective Succession Planning Educational Program for Operating Room Nurses**

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Walden University

Objectives: To develop an effective succession planning educational program to educate the novice operating room nurses to function in their fullest potential through operating room leadership peer review assessment and validation.
Background: The replacement of retiring nurses and retention of newly hired nurses are critical in the operating room due to the required didactic and clinical knowledge involved in this particular area. The project was to develop an evidence-based educational program focused on novice operating room nurses at Catholic Health System (CHS) Long Island, NY.
Method: This project was evaluated by a two step process to assess and validate the quality and contents of this educational program. The educational program contents were distributed initially in Phase 1 to a group of stakeholders for formative review to assess and validate the educational program. After the initial review, in Phase 2 the refined educational program was distributed to a group of stakeholders, including administrators and operating room registered nurse educators,

for a summative review by using the Appraisal of Guidelines for Research and Evaluation (AGREE II) instrument.
Participants: In Phase I, I distributed the formative evaluation to 10 participants who included two operating room nursing leaders, five operating room educators, and three operating room registered nurse preceptors. In Phase 2, the summative evaluation was completed by 10 participants, including five preceptors of the operating room, three operating educators, and two operating room nurse leaders.
Results: The stakeholders of this project included operating room leaders, educators, preceptors, and registered nurses who assessed and validated the formative evaluation that led to minor modifications of the developed educational program in Phase 1.The summative evaluation of this project guided and recommended for implementation and the participants responded with a score of 90% in the overall quality evaluation, indicating that they thought the program contained the necessary evidence based best practice educational content. Eighty percent of the respondents (n = 8) recommended that the educational program is an essential component for succession planning for replacement of nurses with OR experience and recommended for its implementation without any changes for an effective succession planning for operating room nurses. There was minor modification recommended by 20% (n = 2) to add a small amount of specific educational content to the program.
Conclusions: The findings of this project indicate that CHS leaders are now seeing the importance of the effective succession planning for operating room nurses. The best practice education tool will provide valuable didactic knowledge and experience through simulation.

INTRODUCTION

In the past 5 years, approximately 30 nurses who worked in the operating room (OR) in the Catholic Health System (CHS) have retired. As a result, there has been a shortage of experienced Operating Room (OR) nurses. According to an Association of Operating Room Nurses (AORN) survey, in the United States, the baby boomer generation, born between 1946 and 1964, consisted of 77 million members and the subsequent generation, Generation X, who was born between the 1960s to the early 1980s, consisted of 44 million members. As the baby boomer generation retires, Generation X will take their place. This results in a problem for the healthcare system in that there will be a shortage of nurses, including OR nurses. Debate over nursing shortages has been a serious topic of discussion in the nursing community as well as in various articles in several nursing journals (Wilson, 2012). The shortage of experienced Generation X OR nurses will force healthcare facilities to develop training programs to enable novice nurses to become competent. Training of these nurses will take at least 6 to 9 months for them to become competent.

According to 2015 CHS Human Resources data, 102 nurses who are working in ORs at CHS facilities will be reaching their retirement age in the next 5 years. The available replacement pool, which consists of a few per diem nurses, will be insufficient to replace the retiring nurses. Ineffective nursing orientation programs have resulted in high turnover rates in many ORs (Wilson, 2012). A strategic succession planning

educational program is a critical component to resolve future nursing shortages in ORs. This project created to develop a training program for nurses who have had no experience in an OR environment.

BACKGROND AND OBJECTIVE OF THE PROJECT

Clinical experiences have always been included in the nursing curriculum since the beginning hospital based diploma nursing program for the specialty areas, including the operating room (Peterson, 2001). There has been a change from the hospital-based diploma nursing programs which have converted a system of college based associate's and bachelor's degrees. The college based nursing programs have affected new nurses by not supplying them with adequate hours of clinical experience in the OR (Peterson, 2001). This shift in the program has tremendously impacted the decrease in number of OR nurses while the demand for such specialty areas for nurses remains high (Peterson, 2001). Additional clinical experience hours for the student nurses in the OR will be helpful to gain the basic knowledge and familiarity of the OR environment, and it will also attract new nurses and provide them with skills needed to function independently in a circulator and a scrub role in the OR.

The objective of this project was the development of a structured best practice succession planning educational program, such as the Periop 101 module, that will include surgical procedures, OR equipment, and clinical competency information as well as the surgical competency checklist for OR concepts that I developed. This training program will include clinical as well as evidence-based topics to assist the nurses to achieve skills, education, and experience in order to assist surgical procedures in OR.

EDUCATIONAL PROGRAM EVALUATION
PROJECT METHOD

In a review of the existing literature, the American Association of the College of Nursing (2006) pointed out that short staffing increases the level of stress and dissatisfaction in the job particularly in OR .Furthermore, nursing turnover negatively affects a facility's work environment, staff morale, and job satisfaction and also increases errors; all of which may lead to further staff turnover (Ball et al., 2015).In order to achieve an effective staffing assignment plan, the first step is to assess the condition of the surgical patient and complexity of the procedure (Ball et al., 2015).

In Phase 1, this educational program's contents were distributed for review to a group of stakeholders for formative evaluation and to validate the educational program. After the initial review, in Phase 2, the revised program (using data and the responses of evaluators in Phase 1) was distributed to a group of members, including administrators and operating educators and preceptors, for a summative review prior to the finalization of the educational program. This summative review ensured the accuracy and approval of the project.

METHODOLOGY
PHASE-1 FORMATIVE GROUP EVALUATION

Participants:

The formative evaluation was distributed to 10 participants, who included two OR nursing leaders, five OR educators, and three OR registered nurse preceptors, to review and provide feedback to modify the recommendations. The participants were requested to complete the evaluation over a 2-week time period. All 10 responded and returned the evaluation form within the allotted time period.

Formative Evaluation Form:

In Phase 1, the formative evaluation form contained four questions and comments to review. The first section was comprised of two questions with yes or no responses in regards to whether or not the Periop 101 curriculums provide a clear and organized breakdown of what will be covered in training for each session. The second question asked if the orientation time line and agenda for novice OR nurses were adequate for them to be familiarized with equipment and surgical procedures. There was also a comment section provided to add additional comments and recommendations if the answer to the question was no. The second section used a Likert scale from 1–5 (1 being strongly agree and 5 being strongly disagree) to review the primary and secondary objectives of the program. In Section 3, I asked the evaluators to add any additional recommendations that might assist in advancing the educational program, and finally asked for a yes or no answer to the question of if they could understand the evidenced-based and the developed educational contents clearly and if they had any further recommendations .

PHASE 1 - FORMATIVE EVALUATION RESULTS

The first question in the content of educational program was: Does the Periop 101 curriculums provide a clear and organized breakdown of what will be covered in each training session? To which, 100 % of the participants (*n* = answered yes. They also gave additional responses in narrative form, stating such things as “excellent educational program” and “content of the material covered important aspects of training for OR nurses.” The second question in the content of educational program was: Does the orientation time line and agenda for novice operating room nurses are adequate to be familiarized with equipment and surgical procedures? Eighty percent of the respondents (*n* = 8; two nursing leaders, five educators, and one registered nurse OR preceptor) answered yes. Twenty percent (*n*= 2; two registered nurse OR preceptors) answered no, commenting the technological aspect of the OR nursing was not included in the time line and agenda and that it is very difficult to train in a class room setting within the short period of time. This particular response led to include additional hands on training to be familiarizing the sophisticated technology that involved in various surgical services of the OR. The narrative comments indicated that agenda covered all topics and to also include tissue tracking system and malignant hyperthermia.

The primary and secondary objectives of the educational program were evaluated in Item 2. The primary objectives address the educational program contents based upon the best evidence practice available. The topics addressed in the primary objectives included administrative, emergency management, professional development, delivery of safe care, aseptic technique, Instruments, supplies, and the appropriateness of the pretest/ posttest questions. One hundred percent of the participants answered with a 1, or “strongly agree” on the Likert scale, indicating that the educational program covered the essential topics and concepts for new OR nurses.
To address the secondary objectives, I included items that asked the participants: is the educational content appropriate? are the education objectives appropriate?, and is the agenda appropriate? Their responses varied in some areas. There were seven respondents (two leaders,

three educators, and two registered nurse preceptors) that gave rated as 1 on the Likert scale, indicating that they strongly agreed on primary and secondary objectives, and three (two educators and one registered nurse preceptor) rated a 2, that they were close to strongly agreeing on the Likert scale. Question 3 addressed: Can you provide any additional training material for development of this educational program? The recommendation was to add tissue tracking system and malignant hyperthermia. Preceptor 2: "Real simulation will be helpful." Educator 2: "Education session may be to include tissue tracking and malignant hyperthermia Preceptor 4 & 5: to add more clarification to surgical site marking in terms correct side and correct site and what are the contingency plan if the site is unable to mark or if the patient refuses to mark the surgical site.

Finally, Question 4, addressed an overall evaluation of the program: Were you able to understand the content of the educational program? One hundred percent (n = 10) of the respondents answered yes. Based on the evaluation from the formative group, it is evident that the Periop 101 educational program addresses all of the contents related to an effective succession planning for OR nurses. The findings provide clear and concise feedbacks on educational plan and addresses to be reevaluated prior to the summative evaluation.

By evaluating pretest and posttest questionnaires, I found that 100% of the participants strongly agreed that those questionnaires contained pertinent information and important concepts. Forty percent (n = 4; one leader, two educators, and one preceptor) suggested making some changes in Question 15, to add more clarification to surgical site marking terms of correct side and correct site and what are the contingency plan would be if the site is unable to be marked or if the patient refuses to mark the surgical site. There were no additional recommendations or modifications in regards to the content of the educational program. Based on the findings of formative evaluation, the best practice educational program was a comprehensive module in providing knowledge to the novice nurses and addressing the safety of the surgical patients.

Table 2
Phase 1: Formative Data/Results

Item	Answer and explanations
A. Does the Peri op 101 curriculum provide a clear and organized breakdown of what will be covered in training for each session?	100 % of the participants answered yes N = 10, 2; nurse leaders of operating room of in room, 5; educators, 3; preceptors). With additional responses in narrative form "excellent educational program" and "content of the material covered important aspects of training for operating room nurses."
B. Are the orientation timeline and agenda for novice operating room nurses adequate for familiarization with equipment and surgical procedures?	Feedback received from 80% respondents (n = ; 2 nursing leaders, 5 educators and 1 registered nurse operating room preceptor) who answered yes. Twenty percent (n= 2; 2 operating room preceptors) answered no
2. Primary Objectives: A. Is the content of the curriculum for operating room nurses training are adequate?	100% respondents rated yes as 1, or "strongly agree" on the Likert Scale, indicating that the

	educational program. Development of covered the essential topics and concepts.
B. Is the information content is based up on the best evidence practice?	100% rated as 1, or "strongly agree" on the Likert scale, indicating that the educational program covered the essential topics and concepts for new operating room nurses.
C.Is the content surgical checklist and equipment to be familiarized is appropriate for assisting operating room for nurses?	7 respondents (*n* = 7; 2 leaders, 3 educators, 2 registered nurse preceptors) rated as 1 on the Likert scale, indicating that they strongly agreed and three (2 educators and 1 RN preceptor) rated 2, that they are close to strongly agree on the Likert scale
3.Secondary Objectives: A. Do you agree that this learning experience will help learners to meet the operating room didactic and clinical basic experience?	70% - Strongly Agree (*n* = 7; 2 leaders, 3,) 30% three (2 educators and 1 RN) (preceptor) on the Likert scale rated 2, that content they are close to strongly agree on the Likert scale
B. Are the practices and topics promoted in the curriculum is acceptable within the operating room Settings?	100 % (*n* = 10) Yes.
3. Can you provide any additional training-material for development of this educational program?	Tissue tracking system and Malignant hyperthermia. Preceptor 2: "Real simulation will be helpful." Educator 2: "Education session may be to include tissue tracking and malignant hyperthermia Preceptor 4 & 5: to add more clarification to surgical site marking in terms correct side and correct site and what are the contingency plan if the site is unable to mark or if the patient refuses to mark the surgical site.
4. Overall Evaluation: were you able to understand	100% (*n* =100) Yes. Recommendations noted were: "it is an excellent module", "clear format", "cannot wait for the implementation of the program".

PHASE 2- SUMMATIVE GROUP EVALUATION AND VALIDATION

Participants:

The summative evaluation educational program and AGREE II tool was distributed to 10 stakeholders (five preceptors of OR, three OR educators, and two OR nurse leaders) in the OR. The participants were requested to complete the evaluation and

recommendations and return them back to me at their earliest availability. All 10 responded and returned the summative evaluation within a 2 week of time frame.

Summative Group Evaluation Instrument:

The summative group were requested to read the project plan, the educational program contents, and timeline and evaluate them with the AGREE II instrument, which uses a Likert scale ranging from 1 to 7 (strongly disagree to strongly agree). This instrument addresses 23 items within six domains: Scope and purpose, involvement of the stakeholders, rigor of development, clarity and presentation, applicability, and editorial independence (Brouwers,et al.,2010). The AGREE II tool has been evaluated for usefulness, reliability, and constructs validity when appraising educational contents and project plans (Brouwers, et al.,2010). I also asked the summative group to provide an overall assessment of the program by rating two items on overall quality of the educational program and if they would recommend Periop 101 educational program for use.

PHASE 2- SUMMATIVE EVALUATION RESULTS

Domain 1: The first domain, scope and purpose, addressed three items: if the overall objective(s) of the educational program is(are) specifically described, if the question(s) covered by the educational program is(are) specifically described, and if the OR nursing staff to whom the educational program is meant to apply is specifically described (Brouwers,et al.,2010). This question achieved a scaled domain score of 98%, indicating a high level of agreement by the stakeholders.

Domain 2- The second domain addressed the involvement of stakeholders and included three items. The first item asked if the educational program development groups included professionals from all the relevant groups (Brouwers, et al., 2010). The second item asked if the views and preferences of the target population have been requested (Brouwers, et al., 2010).The third item asked them if the target users of the guideline have been clearly defined (Brouwers, et al., 2010). A scaled domain score of 90% was noted indicating that the involvement of the target users was at high level of agreement. Some of the recommendations specified by the respondents were that the scrub nurse role will require an extended period of orientation and that an experienced scrub person should mentor with the novice nurse in the scrub person role.

Domain 3- The third domain addressed the rigor of development of the educational program. It included eight items that encompassed: the systematic methods being used to acquire evidence; the description of the criteria used; the description of the strength and limitations of the evidence; the description of methods for providing recommendations; the health benefits, side effects, and risks were addressed in making the recommendations; the recommendation and supporting evidence correlates; the guideline has been reviewed by stakeholders with expert knowledge; and the provision of a method or updating the guideline (Brouwers et al., 2010). A scaled domain score of 88% was attained in this domain, indicating a high level of agreement by the stakeholders.

Domain 4-The fourth domain, clarity and presentation, included three items. They were that the recommendations were specific and unambiguous, the different options for management conditions or health issues were clearly presented, and key recommendations were easily identifiable. A scaled domain score of 97% was attained indicating that there was a high level of agreement by the stakeholder's.

Domain 5 - The fifth domain, applicability, addressed four items. They were that the guideline noted facilitators and barriers; provided advice and/or tools on how the recommendations can be implemented for practice; considered implications when implementing the recommendations, and recommended the monitoring and /or auditing criteria (Brouwers et al., 2010). A scale domain score of 85% was achieved. This indicated a moderate level of agreement by the stakeholders.

Domain 6 - The sixth domain editorial independence, included two items. They were that the view of the funding body did not influence the guideline contents and the guideline development group members' conflicting interest have been recorded and addressed (Brouwers et al., 2010). A scale domain score of 73% was attained, indicating that there was a moderate level of agreement by the stakeholders. This moderate score was noted considering that there were no conflicts of interest indicated within the guideline.

In the final domain, the overall guideline assessment included two items. The first was to rate the overall quality of the guideline. A scale domain score of 100% was achieved, indicating that the stakeholders agreed that the education program was of high quality. The second item asked the stakeholders if they would recommend the guidelines for use with the possible answers of yes, yes with modifications, and no (Brouwers et al., 2010). A score of 100 % indicated that the stakeholders recommended this educational program for use. The 100% response to the overall guideline assessment of the quality of the educational program indicated that it was of high quality. There were no additional recommendations or modifications in regards to the content of the educational program.

All 10 respondents from the summative group including educators, preceptors and leaders noted responses in the general comment section of the AGREE II instrument with feedback, including that the comprehensive review and the plan for this educational program was clear and concise. Succession planning for operating room is critical, it is very important to start the program without further delay, desperate in need to replace the vacant positions in operating room, finally someone came forward with this excellent idea, Excellent project, in long run will CHS will benefit this project implementation. Periop 101 is an excellent educational tool and it is specifically developed for operating nurses. I will definitely recommend this program.

Table 3
Phase 2: Summative Group - AGREE II Data/Results

AGREE - II Domain	Scores

Domain 1: Scope and Purpose	98%
Domain 2: Stakeholder Involvement	90%
Domain 3: Rigor of Development	88%
Domain 4: Clarity and Presentation	97%
Domain 5: Applicability	85%
Domain 6 Editorial Independence	73%
Overall Guidelines Assessment and Quality	100%
Recommendation of the educational program	100% - Yes without modifications

DISCUSSION

The formative evaluation group provided a clarified educational program for evaluation and validated by summative group in the phase two. In phase two, summative evaluation, a low score 73% was obtained for Domain 6 Editorial independence because the financial aspect of purchasing the module were not addressed and conflicts of interest were none. However, the low score on this particular domain did not affect the quality of the program. This will allow the future project implementation to include this recommendation. Through this project evaluation by both Phase 1 and Phase 2 of the evaluation process, the overall approval of 100% recommendation by both groups and validation by summative group provided guidance to implement the best practice educational module and the developed surgical competency checklist for operating room equipment and concepts. Addressed below is the formal educational program for implementation.

Formal Educational Program

AORN, Periop 101 schedules for a formal program that incorporates Periop 101 standardized, evidence-based education sessions. A pretest will be done prior to the training program and afterwards each month with their progress. A posttest will be conducted once they complete their Periop 101 modules and to understand the knowledge level of the candidates and the efficiency of the program;
Note*:* Peri-op 101*:* A core curriculum is a trademark of AORN, Inc, Denver, CO

1. Introduction:
2. High-level overview of the implementation assistance process.

a. Preplanning phase
b. Engaging facility resources

c. Establishing a learning environment
d. Objectives for the peri-operative educator
e. Student selection process
f. Implementation phase
g. A sample Peri-op101 schedule for a formal program that incorporates Peri-op 101 standardized, evidence-based education
h. Measurable outcomes
i. Preceptor competencies
j. How to successfully pass the final exam
k. Competency skill assessment
l. Recommended clinical orientation phase
m. Recommended videos from the Perioperative Nursing Video Library from Cine-Med

Timeline and agenda for novice nurse training program from AORN's Periop 101 modules

A. Week-1- 37.5 hrs

1) Administrative Activities Contents include:
a. Advance directives
b. Code of conduct
c. Communication
d. Culture of safety
e. Documentation
f. Employee rights

2**) Emergency Management Contents Include:**
a. BLS Skills
b. Code response/ Crash Cart
c. Disaster Planning
d. Fire Safety
e. Latex Allergy
f. Malignant Hyperthermia

3) Professional Development Contents include:
a. Career advancement
b. Certification
c. Critical thinking
d. Committee participation
e. Professional association.
f. Scope of practice
g. Team roles

B. Week- 2- 37.5 hrs

1) Delivery of Safe Care Topics Included.
a. Age specific policies
b. Anesthesia/intubation

c. Assessment of patients'.
d. Conscious sedation
e. Count policies
f. Cultural/populations specific policies
g. Electro surgical safety
h. Fire safety
i. Laser safety

C. Week-3- 37.5 hrs

1)) Aseptic Technique

a. Disinfection - sterilization/ autoclaves/gas/STERIS
b. Environmental responsibility
c. Infection Control – verifying sterility developing a surgical conscious/ opening supplies and delivery to the sterile field Instrument processing (Care and handling)
d. Principles of aseptic technique
e. Scrubbing/gowning/ Skin preps
g. Surgical attire
h. Tissue banking
i. Wound management

D. Week -4 - 37.5 hrs

1) Equipment/ Instruments/ Supplies

a. Basic instrumentation
b. Basic OR equipment (table, lights, ESU, suction)
c. Care and cleaning of instruments and equipment
d. Minimally Invasive Surgery (endoscopic) equipment
e. Powered equipment
f. Rotation in clean holding/ workroom/ preference cards

E. Evaluation of pre- and posttest

Total = 4 weeks = 150hrs of training module

After the completion of fourth week, surgical Specialty Service rotations will start in the operating rooms

Training Objectives

After the completion of Per-op101 educational module the operating room nurse will be able to:

1. Understand the didactic knowledge to take care of patients who undergo surgical procedure.
2. Understand aseptic techniques and simulate the clinical aspect of the sterile techniques/ methods
3. Verbalize the contents including ethical and legal implication of surgical procedure

4. Understand the importance of team effort and effective communication with other surgical team members and how it impacts the surgical patient safety
5. Apply the didactic knowledge in to simulation and enhanced clinical practice.
6. Asses the age specific need of the patient and provide appropriate phase of care to the surgical patients.
   Apply the knowledge assist in various surgical procedures in operating room

Pretest and Posttest Evaluation

1) How do you assess the patient prior to surgery and what is the very important source of documentation obtained from the patient?
a. Discharge instruction
b. Financial resource
c. Exercise pattern
d. Authorized Permission to perform surgical procedure (Informed Consent)
(Answer: d)
2) What is the purpose of following the surgical checklist?
a. To prevent an unexpected event or wrong site surgery
b. To maintain the vital sign
c. To provide adequate discharge instruction
d. To validate the availability of the surgery time
(Answer: a)
3) During the preintra op phase of care the circulating nurse's role also include as include being a patient advocate?
a. True
b. False
(Answer: a)
4) Monitoring and maintaining the aseptic technique during surgery is critical to prevent surgical site infection?
a. True
b. False
(Answer: a)
5. When do you perform counts for surgical items used on the surgical field?
a. Never
b. When an instrument missing
c. After the procedure completed
d. Before the start of surgical procedure, during and prior to skin closure
(Answer: d)
6. The expectation of a circulating nurse to count items in a surgical case would be?
a. alone
b. Together with anesthesiologist
c. Perform the surgical count visually and verbally with scrub nurse/ surgical technician
d. With surgeon and scrub nurse/ surgical technician
(Answer: c)
7) Training modules and simulation assistance are helpful to assist aseptic technique in the operating room.
a. True

b. False
(Answer: a)
8) Proper positioning techniques during surgical procedures are important to prevent injury to the patient?
a. True
b. False
(Answer: a)
9) Knowledge about proper sterilization methods and cleaning of instruments are essential component in operating room
a. True
b. False
(Answer: a)
10) Responsibilities of an operating room nurse include the development a care plan and the provision of education to the patient is necessary before, during, and after the procedure.
a. True
b. False
(Answer: a)
11) The circulating nurse is responsible for intra-operative documentation in the patient's medical record.
a. True
b. False
(Answer: a)
12) Providing privacy and protecting confidentiality of the surgical patient is the responsibility of each surgical team member.
a. True
b. False
(Answer: a)
13) When will you initiate Fire safety checklist in the operating room?
a. Completion of the procedure
b. Before the pre-procedure time out
c.Never
(Answer: b)
14) Who are the surgical team members participate in universal protocol?
a. Surgeon and charge nurse.
b. Anesthesiologist and scrub nurse.
c. Surgeon and Anesthesiologist.
d. Surgeon, Anesthesiologist, Circulator and Scrub nurse.
(Answer: d)
15) What is specific implication of surgical site marking?
a. Surgeon's initial is required on the patient's correct surgical site.
b. Does not require surgical site marking.
c. To avoid delay.
(Answer: a)
16). Comprehensive blood works and lab results are essential prior to surgery?
a. True.
b. False.

(Answer: a)
17) Special handling and care is required when implanting tissues?
a. True.
b. False.
(Answer: a)
18) Patients are expected to remove jewelry, any form metal from their body and dentures prior to the surgical procedure.
a) True.
b. False.
(Answer: a)
19) Accountability of each surgical item counted must be expected to be correct before closing the skin.
a) True.
b. False.
(Answer: a)
20) How confident are you in assisting with a surgical procedure after the completion of Peri-Op 101 education module?
a. Confident.
b. Very confident.
c. Need further assistance.
d. Not interested in working operating room.
(Answer: a)

CONCLUSION

In conclusion, this project is an initial step towards the development of an educational program for OR nurses at CHS facilities. This educational program is educational program include variety of teaching module include didactic knowledge and simulation experience of the contents. The program comprehensive included the PeriOp 101 educational module from the AORN and a developed surgical competency checklist for OR equipment and concepts. This project was evaluated by OR stakeholders including OR nursing leaders, OR educators, and OR registered nurse preceptors as well as the evidence from the literature review have granted an enormous support for the development for this project. If implemented, the program is anticipated to decrease the turnover rates and to replace the retired nurses in OR. The purpose for social change with this DNP project is to replace and improve the future shortage of OR nurses caused by retiring nurses. Also, provide opportunity for novice nurses who have had no experience in an OR environment to enhance their knowledge and practice, and to provide the best patient care in a safe and effective manner.

I am grateful for the opportunity to do this project and while doing this project, I had the advantage of encountering some wonderful professionals who cares about the profession and future. The professors at Walden encouraged and guided me throughout my Journey especially towards the DNP project my chair and committee members were very supportive. In the future, I would like to present this project at national level and impact the healthcare field with the effective succession planning and education for OR nurses.

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Appendix A: Formal Educational Program

AORN Periop 101 schedules for a formal program that incorporates Periop 101 standardized, evidence-based educations. A pretest will be done prior to the training program and afterwards each month with their progress. A posttest will be conducted once they complete their Periop 101 modules and to understand the knowledge level of the candidates and the efficiency of the program;

Note*:* Peri-op 101*:* A core Curriculum is a trademark of AORN, Inc, Denver, and C

1. Introduction:
2. High-level overview of the implementation assistance process.
    a. Preplanning phase
    b. Engaging facility resources
    c. Establishing a learning environment
    d. Objectives for the preoperative educator
    e. Student selection process
    f. Implementation phase
    g. A sample Periop 101 schedule for a formal program that incorporates Periop 101 – standardized, evidence-based education
    h. Measurable outcomes
    i. Preceptor competencies
    j. How to successfully pass the final exam
    k. Competency skill assessment

l. Recommended clinical orientation phase

m. Recommended videos from the Perioperative Nursing Video Library from Cine-Med

3. Developed surgical competency checklist for operating room concepts

Appendix B: Timeline and Agenda for Novice Nurse Training Program from AORN's Periop 101 Modules

A. Week 1 37.5 hrs

1. Administrative Activities Contents include:

a. Advance directives
b. Code of conduct
c. Communication
d. Culture of safety
e. Documentation
f. Employee rights

2. Emergency Management Contents include:

a. BLS Skills
b. Code response/ Crash Cart
c. Disaster Planning
d. Fire Safety
e. Latex Allergy
f. Malignant Hyperthermia

B. Week 2 37.5 hrs

1. Professional Development Contents include:

a. Career advancement
b. Certification
c. Critical thinking
d. Committee participation
e. Professional associations
f. Scope of practice
g. Team roles

2. Delivery of Safe Care topics include:

a. Age specific policies
b. Anesthesia/intubation
c. Assessment of patients
d. Conscious sedation
e. Count policies
f. Cultural /population specific policies

g. Electro surgical safety
h. Fire safety
i. Laser safety

C. Week3 37.5 hrs

1) Aseptic technique

a. Disinfection - sterilization/ autoclaves/gas/STERIS
b. Environmental responsibility
c. Infection Control – verifying sterility developing a surgical conscious/ Opening supplies and delivery to the sterile field
d. Instrument processing (Care and handling). Principles of aseptic technique for Scrubbing/gowning/gloving
e. Skin preps
f. Surgical attire
g. Tissue banking
h. Wound

D. Week 4 - 37.5 hrs

1. Equipment/Instruments/Supplies

a. Basic instrumentation
b. Basic OR equipment (table, lights, ESU, suction)
c. Care and cleaning of instruments and equipment
d. Minimally Invasive Surgery (endoscopic) equipment.
e. Powered equipment
f. Rotation in clean holding/ workroom/ preference cards

E. Evaluation of pre and post test

Total = 4 weeks = 150 hrs of training module

After the completion of fourth week, surgical specialty service rotations will start in the operating rooms and the developed surgical competency checklist for OR concepts performance will be evaluated.

Appendix C: Training Objectives

After the completion of Periop101 educational module the operating room nurse will be able to:

1. Understand the didactic knowledge to take care of patients who undergo surgical procedure.
2. Understand aseptic techniques and simulate the clinical aspect of the sterile techniques/ methods
3. Verbalize the contents including ethical and legal implication of surgical procedure
4. Understand the importance of team effort and effective communication with other surgical team members and how it impacts the surgical patient safety.
5. Apply the didactic knowledge in to simulation and enhanced clinical practice.
6. Asses the age specific need of the patient and provide appropriate phase of care to the surgical patients.
7. Apply the knowledge assist in various surgical procedures in operating room.

Appendix D: Surgical Competency Check List for Operating Room Concepts

Orientee's Name: _____ Date: _____

Primary Preceptor Name: _____

TOPIC	Satisfactory	Unsatisfactory	Comments	Initials
BASIC OPERATING ROOM CONCEPTS				
PPE – Personal Protective Equipment Understands what PPE's Are				
Understands what to wear and when to wear your PPE's [gloves, gown, googles, …etc]				
Operating Floor Understands the break-down of the operating room [sub-sterile rooms, dirty room …etc]				
Understands how supplies are handle and stored				
Surgery classes Understands the Surgical classification [emergent, Urgent & elective]				
Wound Classes "Clean to Dirty" Understanding the 4 wound classes				
Sterilization				
Understands how to use the autoclave				
Understands when to use the autoclave				
Understands the temperature parameters of the autoclave				
Understands what "flashing" means				
Understands how, when and why to "flash"				
Understands what biological testing is and why it's done				
Understands how to record instruments that are flashed				
Sterile Field				
Understands the concept of what is sterile				

Understands what to do if something is contaminated [i.e. gown, instruments, gloves etc]				
Patient Positions and Planes				
Understands different positions and how it applies to the Operating Room. [supine, lithotomy … etc]				
Understands difference in planes and how it applies to the Operating Room [sagittal, tranverse … etc]				
Patient Safety – (i.e. Safety Belt, Guard Rails… etc) Understands how to keep patient safe as well as why. [i.e preventing decubital pressure ulcers … etc]				
Specimens				
Understands what and how to properly label specimens Labeling right patient, right specimen, right location, correct post diagnosis, in "EPIC" Header and specimen "TIME OUT" Also, time specimen taken to laboratory. (except breast specimens)				
Medication – (Right Patient, Right Med, Right Location Right Dose, Right Time {expire?}) Always Verify!				
Allergies and the OR Understands what to do if the patient is allergic to.. [i.e penicillin, latex…etc]				
Anesthetia Categories: Local Vs General Vs..etc: knowing the difference for the OR				
Antibiotics?				
"The Count"				
Understanding how to count tray, instruments, raytecs, blue towels…etc				
Understanding when to count and why to count "always answer the count, 1 in - 1 out"				
Understanding when and what "NOT" to count				
Understands "Time Out" for the OR				

"Prepping"				
Understands the different prep options in the OR				
Understands how to prep a patient				
Understands when to use appropriate preps [i.e. chloroPrep vs. Betadine, … open wound, allergies … etc]				
SCRUBBING				
Understands how to wash and scrub hands [i.e. soap and brush method & Avaguard method]				
Understands how to gown and glove one self				
Understands how to gown and glove others				
TRAUMA				
Understanding what you "NEED"				
Instruments – What and where?				
Position of Patient				
Drapes and Trays: Knows where to find for case				
Sternal Saw				
Thoracic Tray, Rib Resector Tray & Vascular tray				
Trauma Cart				
Crash Cart				
Warming Blanket and Machine				
"To Count or Not To Count" – The Trauma Question				
GIA & TA				
Surgicel – Do you know what it is and where to find it or something like it.				
Understands what a Liver Suture is? [#1 Blunt Chromic Gut]				
MALIGNANT HYPERTHERMIA				
Understands what malignant hyperthermia is?				
Understands signs and symptoms [..muscle rigidity, CO_2 elevation, Increase Temperature, ..etc]				

Understands what to do if a patient goes into MH in the Operating Room. [MH Cart, reconstitute dantriline, get "virgin" anesthesia machine (machine used considered contaminated or change the circuits)…etc]				

DENTAL			
Wound Class – Know what type of case			
Position			
Drapes: Understands what drapes to find and use**.** Understands what drapes to find and use. [i.e. Split Sht With Minor Pack]			
Trays: Knows where to find these things			
Understands equipment needed			
Understands instruments needed […Open Reduction, Closed Reduction, & hand tray Craniofacial Tray, Drill: Core Drill with small drill cart… etc]			
Understands Medications Needed **[…Medication**: 1% Lidocaine w/ epinephrine…etc]			
Understands what small and large disposables needed [..Needle Tip Bovie, Wire Gauge: 23g or 24g, Throat pack (soaked klink)…etc]			
Understands what and how to set-up			
Understands what to count			
ENT			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed [Bovie, Suction, Microscope, …etc]			
Understands instruments needed […storz sinus instru., harmonic, smr nasal tray suction cautery, T&A tray, …etc]			
Understands Medications Needed			
Understands what small and large disposables needed […cottonoids, tonsil balls, …etc]			

Understands what and how to set-up			
Understands what to count			
Eye			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed			
Understands instruments needed [… cataract tray, dcr tray, …etc]			
Understands Medications Needed [… visco, provisc, helon, mytomyacin, 1% lidocaine MPF…etc]			
Understands what small and large disposables needed [… Colorado bovie tip, q-tips, wetfield cautery, wexels …etc]			
Understands what and how to set-up			
Understands what to count			
General			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed [… sliding bed, bovie machine, suction, c-arm, lead aprons…etc]			
Understands instruments needed […adult stat tray, minor tray, book walter, hemaclip appliers, GI tray, Adv. Lap Chole tray, camera, light source, scope…etc]			
Understands Medications Needed			
Understands what small and large disposables needed GIA, TA, Hemaclips, ties, sutures, blades, poole suction, trocars, verres needle …etc]			
Understands what and how to set-up			
Understands what to count			
Urology			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			

Understands equipment needed [Allen stirrups, towers, sliding bed…etc]			
Understands instruments needed [Cysto tray, camera, light cord, cystoscope, resectoscope, lithotripsy machine…etc]			
Understands Medications Needed			
Understands what small and large disposables needed [sterile water, glycine, sensor wire, open ended uretheral catheter, glide wire, cysto pan, y-tubing, surgilube, ureteral stent			
Understands what and how to set-up			
Understands what to count			
GYN			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed [candy canes, allen stirrups, towers…etc]			
Understands instruments needed [vaginal tray, heany clamps, adult tray, d&c tray, tubal ligation tray, …etc]			
Understands Medications Needed 1% lidocaine w/ epi, lugols sol., monsol sol., …etc]			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed [Jackson flat table, trauma table, bone foam, 2nd table, c-arm, mini c-arm, hip positioned, tourniquet, pillows, weighted I.V pole]			

Understands instruments needed [Small fragment tray, large fragment tray, pelvic instrument tray, pelvic reduction tray, pelvic implant tray, Drills, Nails, hommans, chanley retractor…etc]			
Understands Medications Needed			
Understands what small and large disposables needed [blades, tourniquet cuff, trocars, keith needle, mayo needle, beath needle, c-arm, wires, pins, pin cover …etc]			
Understands what and how to set-up			
Understands what to count [not necessary to count instruments]			
PLASTIC			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			
Understands equipment needed [Microscopes, table, suction, (ESU) bovie machine, lead aprons, c-arm, mini c-arm,			
Understands instruments needed [minor tray, micro/hand tray, …etc]			
Understands Medications Needed			
Understands what small and large disposables needed [c-arm cover, blades, pins, pin covers, wires, …etc]			
Understands what and how to set-up			
Understands what to count			
PODIATRY			
Wound Class: Know what type of case			
Position			
Drapes: Understands what drapes to find and use.			
Trays: Knows where to find for case:			

Understands equipment needed [candy cane …etc]			
Understands instruments needed [drill, podiatry tray …etc]			
Understands Medications Needed			
Understands what small and large disposables needed [needles betadine, 4x4 gauze]			
Understands what and how to set-up			
Understands what to count			

THORACIC				
Wound Class: Know what type of case				
Position				
Drapes: Understands what drapes to find and use.				
Trays: Knows where to find for case:				
Understands equipment needed Bed, 2 suctions, bean bag, arm rest, pillows, towers, …etc]				
Understands instruments needed [adult stat tray, V.A.T. laparascopy tray, camera, scope, light source…etc]				
Understands Medications Needed				
Understands what small and large disposables needed [EZ 45endo GIA, roticulating GIA reloads, thoracic trocars, …etc]				
Understands what and how to set-up				
Understands the count, what , when, how and where				
VASCULAR				
Wound Class: Know what type of case				
Position				
Drapes: Understands what drapes to find and use.				
Trays: Knows where to find for case:				
Understands equipment needed [sliding table, vascular table, head light, c-arm, …etc]				
Understands instruments needed [Av shunt tray, pheripheral tray, pacemaker tray, Doppler w/ cord …etc]				

Understands Medications Needed				
Understands what small and large disposables needed [hemaclips, vessel loops sutures, booties, vessel cannula, angio-catheter, ties, syringes…etc]				
Understands what and how to set-up				
Understands what to count **Policies/ Accountability for central sterile department**				
ORGAN PROCUREMENT / HARVEST				
Knows what type of case this is				
Position				
Drapes				
Trays: Knows where to find for case:				
Understands equipment needed [sliding table, vascular table, head light, c-arm, …etc]				
Understands instruments needed [Av shunt tray, pheripheral tray, pacemaker tray, Doppler w/ cord …etc]				
Understands Medications Needed				
Understands what small and large disposables needed [hemaclips, ties, ice, cups…etc]				
Understands what and how to set-up				
Understands what to count				
Understands Critical Difference for this case as oppose to others				
Understands proper documentation as it applies to the personal performing it [Makes notes of what is harvested, hospital organs will be sent to …etc				
MANAGING DEATH				
Understands how to prepare deceased				
Understands what forms to fill out. [Final Notification form "pink form", Incident form, Death Certificate, Medical Examination "ME" form.				
MISC. INFORMATION				
Emergency Protocals				
Understands what to do in case of a fire in the OR "Break the fire triangle" /\ **Oxygen** / \ **Heat** / ___ \ **Fuel**				

Understands what R.A.C.E stands for and how it applies to the OR				
Knows where the alarms are in the OR				
Understands how to contain an OR fire				
Understands where the shut off valves are and knows what to do with it. [in front of the O.R. Rooms]				
Knows where all the extinguishers are				
Understands the different types of extinguishers in the OR				
Understands how to use an extinguisher “P.A.S.S.”				

Appendix E: Pretest and Posttest Evaluation

1) How do you assess the patient prior to surgery and what is the very important source of documentation obtained from the patient?

a. Discharge instruction

b. Financial resource

c. Exercise pattern

d. Authorized Permission to perform surgical procedure (Informed Consent)

(Answer: d)

2) What is the purpose of following the surgical checklist?

a. To prevent an unexpected event or wrong site surgery

b. To maintain the vital sign

c. To provide adequate discharge instruction

d. To validate the availability of the surgery time

(Answer: a)

3) During the preintra op phase of care the circulating nurse's role also include as include being a patient advocate?

a. True

b. False

(Answer: a)

4) Monitoring and maintaining the aseptic technique during surgery is critical to prevent surgical site infection?

a. True

b. False

(Answer: a)

5. When do you perform counts for surgical items used on the surgical field?

a. Never

b. When an instrument missing

c. After the procedure completed

d. Before the start of surgical procedure, during and prior to skin closure

(Answer: d)

6. The expectation of a circulating nurse to count items in a surgical case would be?

a. alone

b. Together with anesthesiologist

c. Perform the surgical count visually and verbally with scrub nurse/ surgical technician

d. With surgeon and scrub nurse/ surgical technician

(Answer: c)

7) Training modules and simulation assistance are helpful to assist aseptic technique in the operating room.

a. True

b. False

(Answer: a)

8) Proper positioning techniques during surgical procedures are important to prevent injury to the patient?

a. True

b. False

(Answer: a)

9) Knowledge about proper sterilization methods and cleaning of instruments are essential component in operating room.

a. True

b. False

(Answer: a)

10) Responsibilities of an operating room nurse include the development a care plan and the provision of education to the patient is necessary before, during, and after the procedure.

a. True

b. False

(Answer: a)

11) The circulating nurse is responsible for intra-operative documentation in the patient's medical record.

a. True

b. False

(Answer: a)

12) Providing privacy and protecting confidentiality of the surgical patient is the responsibility of each surgical team member

a. True

b. False

(Answer: a)

13) When will you initiate Fire safety checklist in the operating room?

a. Completion of the procedure

b. Before the pre-procedure time out

c. Never

(Answer: b)

14) Who are the surgical team members participate in universal protocol?

a. Surgeon and charge nurse.

b. Anesthesiologist and scrub nurse.

c. Surgeon and Anesthesiologist.

d. Surgeon, Anesthesiologist, Circulator and Scrub nurse.

(Answer: d)

15) What is specific implication of surgical site marking?

a. Surgeon's initial is required on the patient's correct surgical site.

b. Does not require surgical site marking.

c. To avoid delay.

(Answer: a)

16). Comprehensive blood works and lab results are essential prior to surgery?

a. True.

b. False.

(Answer: a)

17) Special handling and care is required when implanting tissues?

a. True.

b. False.

(Answer: a)

18) Patients are expected to remove jewelry, any form metal from their body and dentures prior to the surgical procedure.

a) True.

b. False.

(Answer: a)

19) Accountability of each surgical item counted must be expected to be correct before closing the skin.

a) True.

b. False.

(Answer: a)

20) How confident are you in assisting with a surgical procedure after the completion of Peri-Op 101 education module?

a. Confident.

b. Very confident.

c. Need further assistance.

d. Not interested in working operating room.

(Answer: a)

Appendix F: Formative Evaluation Feedback Form

1. Content of Educational Program.

A. Does the Periop 101 curriculum provide a clear, comprehensive and organized breakdown of what will be covered in training for each session?

Yes □ No □

If No, please add your comments/recommendations.

B. Are the orientation timeline and agenda for novice operating room nurses adequate for familiarization with equipment and surgical procedures?

Yes □ No □

If No, please add your comments/recommendations.

2. Objectives of the Educational Program.

Strongly Agree						**Strongly Disagree**				
1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**
					Primary objectives:					
					A. Address administrative, emergency management and professional development activities?	□	□	□	□	□
					B. Address delivery of safe care and aseptic technique?	□	□	□	□	□
					C. Address equipment/supplies?	□	□	□	□	□
					D. Pretest and post test questions being appropriate?	□	□	□	□	□
					Secondary objectives:					
					A. Are the educational content appropriate?	□	□	□	□	

□

B. Are the educational objectives are appropriate?

□ □ □ □ □

C. Is the agenda appropriate? □ □ □ □ □

3. Can you provide any additional training-material for development of this educational program?
Please note below

4. Overall Evaluation.

Were you able to understand the educational program?

Yes □ No □

If No, then what areas were difficult to understand?
How would you change them to make them more understandable?

The above skills are accurate /or stated correctly, as indicated.

Evaluator Name: _____Title / Facility: _____

Evaluator Signature: _____ Date: _____

Thank you for your assistance in the completion of this evaluation.

Appendix G: Summative Evaluation Form

AGREE II Instrument

Evaluator Name: _____Title / Facility: _____

Evaluator Signature: _____ Date: _____

DOMAIN 1: SCOPE AND PURPOSE						
Item 1 The overall objective (s) of the educational program is (are) specifically described.						
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
Item 2 The question (s) covered by the educational program is (are) specifically described.						
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
Item 3 The operating room nursing staff to which the educational program is meant to apply is specifically described.						
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
DOMAIN 2: STAKEHOLDER INVOLVEMENT						
Item 4 The educational program development group includes individuals from all relevant professional groups.						
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree
Item 5 The views and preferences of the target population (patients, public, etc.) have been sought.						
1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 6
The target users of the guideline are clearly defined.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

DOMAIN 3: RIGOR OF DEVELOPMENT

Item 7
Systematic methods were used to search for evidence.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 8
The criteria for selecting the new nurses are clearly described.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 9
The strengths and limitations of the body of evidence are clearly described.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 10
The methods for formulating the recommendations are clearly described.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 11
The health benefits, side effects, and risks have been considered in formulating the recommendations.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 12 There is an explicit link between the recommendations and the supporting evidence.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 13

The educational program has been externally reviewed by experts prior to its publication.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 14

A procedure for updating the guideline is provided.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

DOMAIN 4: CLARITY OF PRESENTATION

Item 15

The recommendations are specific and unambiguous.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 16

The different options for management of the condition or health issue are clearly presented.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 17

Key recommendations are easily identifiable.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

DOMAIN 5: APPLICABILITY

Item 18

The guideline describes facilitators and barriers to its application.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 19

The guideline provides advice and/or tools on how the recommendations can be put into practice.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 20
The potential resource implications of applying the recommendations have been considered.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 21
The guideline presents adequate topic and timeline criteria.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

DOMAIN 6: EDITORIAL INDEPENDENCE

Item 22
The views of the funding body have not influenced the content of the guideline.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Item 23
Competing interests of guideline development group members have been recorded and addressed.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

GENERAL COMMENTS

OVERALL GUIDELINE ASSESSMENT

1. Rate the overall quality of the educational program.

1 Lowest possible quality	2	3	4	5	6	7 Highest possible quality

2. I would recommend the educational program for use.

Yes	
Yes, modifications	
No	

Comments/Notes:

Appendix H: Formative Evaluation Data

Operating Room Leaders, Educators and preceptors Responses

Statistics.

Number of evaluations distributed: 10
Number of evaluations returned: 10

1. Content of educational program.

Does the Periop 101 module provide a clear and organized breakdown of what will be covered in each training session?
Yes: 10(100%)
No: 0 (0%)
If No, please add your comments/recommendations.
Comment by Leader 1: "It covered every topic."
Comment by educator3: "Comprehensive program."

2. Objectives of educational program.

	1 Strongly Agree		2		3		4		5 Strongly Disagree	
Primary Objectives	#	%	#	%	#	%	#	%	#	%
A. Address administrative, emergency management and professional development activities?	10	100	0	0	0	0	0	0	0	0
B. Address delivery of safe care and aseptic technique?	10	100	0	0	0	0	0	0	0	0
C. Address equipment/supplies?	10	100	0	0	0	0	0	0	0	0
D. Pretest and post test questions being appropriate?	10	100	0	0	0	0	0	0	0	0
Secondary Objectives										
A. Are the educational content appropriate	10	100	0	0	0	0	0	0	0	0
B. Are the educational objectives are appropriate?	10	100	0	0	0	0	0	0	0	0
C. Is the agenda appropriate	10	100	0	0	0	0	0	0	0	0

3. Comments to enhance or change educational program.

Please note below any topics or comments you think of that can enhance or change this educational program.

Preceptor 2: "Real simulation will be helpful."
Educator 2: "Education session may be to include tissue tracking and malignant hyperthermia
Preceptor 4 & 5: to add more clarification to surgical site marking in terms correct side and correct site and what are the contingency plan if the site is unable to mark or if the patient refuse

to mark the surgical site. There were no additional recommendations or modifications in regards to the content of the educational program.
4. Overall evaluation.
Were you able to understand the educational program? Yes: 10 (100%) No: 0 (0%) If No, then what areas were difficult to understand? None How would you change them to make them more understandable? None. Comments. Preceptor 1: “Modules of the Program is clear.” Educator 1: “Well organized.” Leader 1: “ cannot wait to implement this program”

Appendix I: Summative Evaluation Data

AGREE II Instrument

DOMAIN 1: SCOPE AND PURPOSE				
Appraisers	Item 1	Item 2	Item 3	Total
OR RN Educator 1	7	7	7	21
OR RN Educator 2	7	7	7	21
OR RN Educator 3	7	7	7	21
OR RN preceptor 1	7	7	7	21
OR RN preceptor 2	7	6	6	19
OR RN preceptor 3	7	7	6	20
OR RN preceptor 4	7	7	7	21
OR RN preceptor 5	7	7	7	21
OR RN Leader 1	7	7	7	21
OR RN Leader 2	7	6	7	20
Total	70	68	68	206

Maximum possible score = 7 (strongly agree) x 3 (items) x 10 (appraisers) = 210
Minimum possible score = 1 (strongly disagree) x 3 (items) x 10 (appraisers) = 30
Scaled Domain Score: obtained score – minimum possible score

_____

maximum possible score – minimum possible score

$$\frac{206-30}{210-30} \times 100 = \frac{176}{180} \times 100 = 98\%$$

Scaled Domain Score: 98%

DOMAIN 2: STAKEHOLDER INVOLVEMENT				
Appraisers	Item 4	Item 5	Item 6	Total
OR RN Educator 1	7	6	7	20
OR RN Educator 2	6	7	6	19
OR RN Educator 3	7	6	5	18
OR RN preceptor 1	6	7	6	19
OR RN preceptor 2	7	6	5	18
OR RN preceptor 3	6	7	7	20
OR RN preceptor 4	6	7	6	19
OR RN preceptor 5	6	6	7	19
OR RN Leader 1	5	7	6	18
OR RN Leader 2	7	6	6	19

Total	63	65	64	192

Maximum possible score = 7 (strongly agree) x 3 (items) x 10 (appraisers) = 210
Minimum possible score = 1 (strongly disagree) x 3 (items) x 10 (appraisers)= 30
Scaled Domain Score: obtained score – minimum possible score

maximum possible score – minimum possible score

$$\frac{192-30}{210-30} \times 100 = \frac{162}{180} \times 100 = \mathbf{90\%}$$

Scaled Domain Score: **90%**

DOMAIN 3: RIGOR OF DEVELOPMENT

Appraisers	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Total
OR RN Educator 1	7	6	7	7	7	7	7	6	54
OR RN Educator 2	6	6	7	6	5	7	6	5	48
OR RN Educator 3	7	5	5	7	6	5	7	7	49
OR RN preceptor 1	6	7	5	6	6	7	6	7	50
OR RN preceptor 2	7	6	6	7	5	7	6	5	49
OR RN preceptor 3	6	5	7	6	7	6	7	7	51
OR RN preceptor 4	7	7	5	7	6	5	7	7	46
OR RN preceptor 5	5	7	7	6	6	7	5	7	50
OR RN Leader 1	7	6	7	7	7	7	6	5	52
OR RN Leader 2	6	7	7	5	7	5	7	7	51
Total	63	60	63	64	62	63	63	63	500

Maximum possible score = 7 (strongly agree) x 8 (items) x 10 (appraisers) = 560
Minimum possible score = 1 (strongly disagree) x 8 (items) x 10 (appraisers) = 80
Scaled Domain Score: obtained score – minimum possible score

maximum possible score – minimum possible score

$$\frac{500-80}{560-80} \times 100 = \frac{420}{480} \times 100 = 87.5\ \%$$

Scaled Domain Score: 88 %

DOMAIN 4: CLARITY OF PRESENTATION

Appraisers	Item 15	Item 16	Item 17	Total
OR RN Educator 1	7	7	7	21
OR RN Educator 2	6	7	7	20

OR RN Educator 3	7	7	6	20
OR RN preceptor 1	7	7	7	21
OR RN preceptor 2	6	7	7	20
OR RN preceptor 3	7	7	6	20
OR RN preceptor 4	7	7	7	21
OR RN preceptor 5	6	7	7	20
OR RN Leader 1	7	7	6	20
OR RN Leader 2	7	7	7	21
Total	67	70	67	204

Maximum possible score = 7 (strongly agree) x 3 (items) x 10(appraisers) = 210
Minimum possible score = 1 (strongly disagree) x 3 (items) x 10(appraisers) = 30

Scaled Domain Score: obtained score – minimum possible score

maximum possible score – minimum possible score

$$\frac{204-30}{210-30} \times 100 = \frac{174}{180} \times 100 = 96.6\%$$

Scaled Domain Score: **97%**

DOMAIN 5: APPLICABILITY

Appraisers	Item 18	Item 19	Item 20	Item 21	Total
OR RN Educator 1	6	7	5	7	25
OR RN Educator 2	7	6	5	7	25
OR RN Educator 3	5	7	5	6	23
OR RN preceptor 1	6	6	7	7	26
OR RN preceptor 2	7	5	7	6	25
OR RN preceptor 3	7	6	5	7	25
OR RN preceptor 4	6	7	5	6	24
OR RN preceptor 5	5	7	7	6	25
OR RN Leader 1	7	6	5	7	25
OR RN Leader 2	6	5	7	7	25
Total	62	62	58	66	248

Maximum possible score = 7 (strongly agree) x 4 (items) x 10 (appraisers) = 280
Minimum possible score = 1 (strongly disagree) x 4 (items) x 10 (appraisers) = 40

Scaled Domain Score: obtained score – minimum possible score

maximum possible score – minimum possible score

248-40
_____ x 100 = 208
280-40

____ x 100 = 86.6%
240

Scaled Domain Score: **87 %**

DOMAIN 6: EDITORIAL INDEPENDENCE

Appraisers	Item 22	Item 23	Total
OR RN Educator 1	5	6	11
OR RN Educator 2	6	5	11
OR RN Educator 3	5	6	11
OR RN preceptor 1	6	5	11
OR RN preceptor 2	5	6	11
OR RN preceptor 3	6	5	11
OR RN preceptor 4	5	5	10
OR RN preceptor 5	5	6	11
OR RN Leader 1	5	5	10
OR RN Leader 2	5	6	11
Total	53	55	108

Maximum possible score = 7 (strongly agree) x 2 (items) x 10 (appraisers) = 140
Minimum possible score = 1 (strongly disagree) x 2 (items) x 10(appraisers) = 20

Scaled Domain Score: obtained score – minimum possible score
_____
maximum possible score – minimum possible score

108-20
_____ x 100 = 88
140-20

____ x 100 =**73.3%**
120

Scaled Domain Score: **73%**

GENERAL COMMENTS	
OR RN Educator 1	Peri-op 101module and the content of checklist are appropriate in assisting new nurses
OR RN Educator 2	This kind of program is long overdue. We need a Standardized educational training across the system.
OR RN Educator 3	This educational program will be helpful for succession planning for OR nurs
OR RN preceptor 1	Well put together program. was very informative and educational.

OR RN preceptor 2	This educational program is assembled nicely.
OR RN preceptor 3	I will definitely use this program in my facility.
OR RN preceptor 4	Program is based up on the best evidence practice
OR RN preceptor 5	The listed surgical procedures and equipment are adequate for the basic training
OR RN Leader 1	Excellent training and planning to replace operating room
OR RN Leader 2	Operating room leadership will be the most supportive for program implementation across the system

OVERALL GUIDELINE ASSESSMENT

Appraisers	Overall Quality	Total
OR RN Educator 1	7	7
OR RN Educator 2	7	7
OR RN Educator 3	7	7
OR RN preceptor 1	7	7
OR RN preceptor 2	7	7
OR RN preceptor 3	7	7
OR RN preceptor 4	7	7
OR RN Leader 1	7	7
OR RN Leader 2	7	7
Total	70	70

Maximum possible score = 7 (strongly agree) x 1 (items) x 10 (appraisers) = 70
Minimum possible score = 1 (strongly disagree) x 1 (items) x 10(appraisers) = 10

Scaled Domain Score: obtained score – minimum possible score

maximum possible score – minimum possible score

$$\frac{70-10}{} \times 100 = 60$$

$$\frac{}{70-10} \times 100 = 100$$

Total percentage of overall quality: 100%.

Appraisers	Yes
OR RN Educator 1	Yes
OR RN Educator 2	Yes
OR RN Educator 3	Yes
OR RN preceptor 1	Yes

OR RN preceptor 2	Yes
OR RN preceptor 3	Yes
OR RN preceptor 4	Yes
OR RN preceptor 5	Yes
OR RN Leader 1	Yes
OR RN Leader 2	Yes
Total	100 % approval

Appendix J: Permission to Reprint AGREE II Instrument

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Appendix K: E-mails with AORN Representative

From: XXXXXXXXXX
Sent: Wednesday, May 06, 2015 8:02 PM
To: XXXXXXXXXX
Subject: XXXXXXXXX

Hi XXXXXXXXX,

Good evening!

It was very nice meeting you today at nurse executive leadership seminar. As I mentioned, My DNP project is in progress and my topic is
"**Development of a proposal for an effective succession planning for operating room nurses**."
Please guide me with your expertise and send me the literature/ peri-op information for me to successfully complete my project.
Take care,
Thank you & God bless!
XXX

XXXXX,

It was great meeting you also. Attached please find a document that contains information that you might find very beneficial. I will also send you my standard Periop 101 information email to follow.

Keep it touch!

XXXXXXXXXXXXXXXXXX

From: XXXXXXXX
To: XXXXXXXXX
Subject: Periop 101 details
Date: Thu, 7 May 2015 02:00:45 +0000

Hi XXXXX,

Please fill out the attached order form to get started!

In follow-up to your email, I have included with this email the most updated, important information about AORN's Periop 101: A Core Curriculum online course. I also highlighted some links and information below that may be especially helpful. Be sure to let me know if you have questions about any of this!

2015 PERIOP 101 STUDENT SEAT PRICING, regardless of which learning plan you use

1-10 student seats	***$885** each*
11-29 student seats	***$615** each*
30-49 student seats	***$480** each*
50+ student seats	***Please call me!***

- *Please note that buying 11 seats is less expensive than buying 8, 9, or 10 seats!*
- **Student seat fees are based on how many student seats are purchased at one time—student seat purchases are not cumulative**. However, once you have purchased a certain number of student

  seats *directly from AORN* at one time, that price is locked in for the balance of your term. If you make a later purchase of even more seats that puts you into a lower seat price category, then that new, lower price is locked in for the balance of your agreement term instead of the earlier, higher fee. In other words, the lowest price you ever paid for a seat during your 2-year term will be locked in for that term unless a subsequent seat purchase of even more seats puts you in a lower price bracket. Your student seat price will never be raised during your term—only lowered.

- You can add and use more student seats at any time during the 2-year term. Those seats just need to be started (student registers online and logs in) before your 2-year term expires.
- We can usually get your Periop 101 order processed within 3-5 business days of our receipt of the completed paperwork and payment.

When you buy the rights to use the online course, your facility is buying generic student seats and will be able to have access (upon request) to also teach all three Periop 101 learning plans at no

extra cost beyond the seat prices—***(1)*** the original OR course, ***(2)*** Periop 101: A Core Curriculum for the Ambulatory Surgery Center, and ***(3)*** Periop 101: A Core Curriculum for the OB RN Circulator, and with the same student seat pricing. Surgical techs also may take the regular OR nursing course for the same price, but there is no final exam, and no contact hours are awarded. You can also buy seats for AORN's specialized Periop 101 for PAs/residents/medical students/interns/APNs/other allied health professionals, which contains 6 modules from Periop 101.

Specific, experienced OR/OB nurse leadership staff as Administrators are needed for the students, plus facility-specific policies/procedures to intermingle with the didactic portion of the course. *This blended course is designed to be given in an integrated format with a clinical practicum and a preceptorship (see attachment)*.

You can use Periop 101 not only to educate your new OR nurses, but also

(1) For experienced nurses switching specialties, or

(2) For nurses coming back to work after an extended absence.

(3) Many facilities also use it for experienced nurses who never had any formal didactic education and would benefit from this foundational learning to help their critical thinking skills.

(4) Some facilities have their entire nursing staffs take it for educational consistency and potential prevention of risk issues.

(5) Some facilities put STs and CSTs through the OR nursing course just for the education content (since no CH are awarded to non-nurses).

- **Informational Presentation** – This PowerPoint presentation link presents the benefits and advantages of using Periop 101 and can assist you in getting buy-in for the purchase.

- **A brief Periop 101 Demo** (ßclick on the link) **from the Administrator perspective** with narration of the Periop 101 online course is available for you to access to see what it looks like and how it works on AORN's Learning Management System (LMS).

- If your or someone else there would like more detail ab**o**ut the features of the course in AORN's LMS and wants to see it for themselves, ***just click on this link to choose a preview of a portion of AORN's Assessment module—the OR version, the OB version, or both—*** which will allow you to take that module as a student would. Just click on either link right below the photo of a nurse at a computer: http://www.aorn.org/Periop101/

- **We also have a Periop 101 implementation assistance program that would be available to you for a fee if you initially purchase 11 student seats.** (*This service for expenses is only available to you if you buy Periop 101 directly from AORN.)* Please see

http://www.aorn.org/implementperiop101 for more information. An AORN Educator is available to come to your site for a maximum of two days. During this time, the AORN Educator will meet with management, educators, and staff to discuss best practices on how to structure the didactic and clinical components, preceptor objectives, sample schedules, and outcome measurement tools for Periop 101. One of our educators who might come taught Periop 101 in a college setting herself before coming to AORN.

Below is important information for you to know about what the course includes and some of its ***BENEFITS***:

1. **2 free Administrator Course registrations** which are available for the 2-year term of your agreement and include access to all student modules*.* Students cannot start the online course until at least one Administrator has completed and passed the short (3-hour) Administrator Course.

2. Each new Periop 101 agreement also includes **2 free Preceptor Module registrations**, available for use during your 2-year term. Extra seats beyond the free ones cost $89 each. This module covers how to teach adult learners, so it can be used for employees other than OR nurses*. (see attached Preceptor Module information)*. If you buy 11 student seats, you get 4 free Preceptor seats.)

3. Periop 101 students will **receive a free, one-year member-at-large AORN membership**.

4. Interactive **online delivery of content** with goals, objectives, glossaries, reading assignments in the required textbooks, recommended video viewings, interactive learning reinforcement exercises, module posttests, and a proctored, closed-book, closed notes final exam with randomized questions. Students must pass all 25 module posttests at 80% or better before access to the final exam.

5. **Clinical objectives and competency statements for each module** are printable from the Preceptor Guidelines in the Administrator Course.

6. **Access to Online Course**

- Administrators have access to the Periop 101 Administrator Course and student modules for **2 years** from the date AORN sends them the Administrator Start Email with logon information. They may buy and use seats for as few or many students as they want during that 2-year term. The student seats must be used (at least started) by the end of the 2-year term, or they are lost (they do not carry over to a new term). They may be used all at once, one at a time, or anything in between.

· Students have access to the Periop 101 student course for **6 months** from the date they register online.

- Preceptors have access to the Preparing the Preceptor module for **3 months** from the date the AORN sends them the Preceptor Start email with login information.

You can get the member rate on the books and videos if you buy them for your Periop 101 students and note this on your order.

- ***Required reading in 2 books*** - one set of the two textbooks called the Perioperative Textbook Package (includes the latest versions of AORN's *Guidelines to Perioperative Practice* plus *Alexander's Care of the Patient in Surgery*) at the member rate would be **$240** + s/h – order number MAN-015F for the 2015 version. (Shipping/handling is $6.95 for the first set and $.95 per set thereafter.)

- Most of the 30+ ***recommended, supplemental video titles*** from Cine-Med come with independent studies with answer keys that may be used to educate OR nurses at your facility.

o Please see the attached list of all the 30+ videos. You may take the opportunity to ***request a brief demo*** at http://cine-med.com/index.php?nav=aornonline.

You can buy just a few, 11+, or all the recommended video titles on CD-ROM or DVD and get a special discount (see video attachment for pricing). If you buy all the video titles in CD-ROM or DVD format at the member rate with our special Periop 101 discount, they cost $2,372 + shipping/handling (typically $40 for UPS Ground) for a total of **$2,412**. You can see the video titles and descriptions at http://cine-med.com/index.php?nav=aorn and see overviews of all the videos in the AORN library offered through this Cine-Med link.

o An alternative to the CD-ROMs/DVDs is the ***online video library subscription***, which is **$550** (AORN member price) for an individual subscription with one login ($740 for a nonmember); or **$1,480** for an institutional subscription (AORN member price) with 50 logins ($2,215 for a nonmember). There are no further discounts for the online version. To subscribe or ask questions, call Cine-Med in Connecticut at 1-800-633-0004.

Please let me know if you have any questions about Periop 101 or if I can help you in any other way! We look forward to working with you!

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