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Evidenced-Based Staff Education Program for Novice Perioperative Nurses

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Abstract

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MS, Otterbein University, 2007

BS, Ashland University, 2003

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Knowledge of surgical procedures, instruments, and supplies is essential to the perioperative nurse working in the operating room (OR). Nursing school curricula do not specifically educate surgical nurses; therefore, it is difficult to fill open OR positions with experienced perioperative nurses. The purpose of this doctoral project was to develop a perioperative educational program for RNs newly hired in the OR. The practice-focused question asked whether an evidence-based staff education program for the novice perioperative nurse would increase the nurse's knowledge of OR procedures and protocols for patient management. The novice-to-expert framework was used to explore how adult learners acquire knowledge. Five experts were asked to review the educational program for its content, readability, length, and learner objectives using a 5-point Likert scale questionnaire consisting of 8 questions. Experts strongly agreed that the program content met learner objectives. The program was then presented to 4 novice nurses with a pretest/posttest consisting of 5 fill-in-the-blank questions. Pretest results showed 1 of 5 questions were answered correctly by all participants. Posttest results showed all questions were answered correctly by all participants. The educational program has the potential to create a positive social change through increased nurses' knowledge of OR procedures, which might promote improved surgical care and outcomes for patients.

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Section 1: Nature of the Project

Perioperative nurse managers are faced with staffing challenges related to the lack of trained perioperative professionals. As older experienced nurses retire, perioperative nurse managers must consider hiring new graduates (Martin, 2011). Nursing schools have been phasing out the 3-year hospital-based programs in favor of associate degree curriculums. This trend has mostly eliminated perioperative nursing clinical rotations (Castelluccio, 2012) and has created the need for hospitals to design perioperative nursing education for novice perioperative nurses. Perioperative nursing education is an extensive time-consuming process consisting of didactic education and mentoring with an experienced perioperative nurse preceptor (Castelluccio, 2012). The novice nurse orientation process can take 6 to 18 months before independent functioning is realized (Rothrock, 2015). Nurses who wish to practice in the operating room (OR) as perioperative nurses will require additional training to practice in this specialized environment. Without this additional training, a significant gap in practice exists, which when resolved will increase patient safety, reduce the chance of errors, and contribute to social change. Developing and implementing an educational program may provide novice RNs with a basic educational program to assist them in being prepared to assume the role of perioperative nurse.

Problem Statement

The hospital chosen for this project has 10 functioning ORs. According to the OR nurse manager, many of the new hires are novice OR nurses, meaning they have no OR exposure or experience. Currently, the hospital does not have a formal training program

for new OR nurses. Many of the newly hired nurses graduated from nursing programs without any specific training related to working in a hospital OR setting. Few nursing school curriculums specifically train surgical nurses (Castelluccio, 2012) which makes it difficult to fill open positions with experienced perioperative nurses. Nurses without perioperative training have a knowledge deficit that must be addressed to ensure patient safety in the OR.

The local nursing practice problem, as explained by the OR nurse manager, is the lack of qualified applicants for open OR nursing positions. This has resulted in hiring nurses without experience in caring for perioperative patients in the OR setting. Recently the OR has experienced an unusually high turnover rate, which the nurse manager reported was not a problem in the past. The nurse manager explained that the high turnover at the site can be attributed to the retirement of six nurses over the last two years.

Knowledge of surgical procedures, instruments, and supplies is essential to the perioperative nurse working in the OR. Without this specialized knowledge, the nurse cannot anticipate the needs of the patient or the surgical team (Rothrock, 2015). It is imperative that the OR nurse understands the importance of her or his role as it pertains to the care of the patient and the OR team. The patient under anesthesia is vulnerable, and it is the OR nurse's obligation to be the patient's advocate. At the minimum, the nurse must ensure that the patient is positioned properly, is kept warm, and has the proper supplies available to complete the procedure. Implementation of a perioperative

education program may provide novice circulating RNs with information and knowledge to manage patients during the perioperative period.

Purpose

The purpose of this doctoral project was to develop a perioperative educational program for RNs newly hired in the OR. The gap in practice was identified as a lack of staff education and training related to patient management in the OR. Patient management includes understanding the Association of periOperative Registered Nurses (AORN) perioperative guidelines and recommended practices. AORN was founded in 1949 and is the largest professional organization for perioperative nurses. AORN provides recommended practices and defines standardized practice for OR nurses (AORN, 2018). New nursing staff enter the OR setting without this formal training, potentially putting the patient at risk for harm during surgery. Harm to the patient can occur when the nurse caring for the patient does not follow the accepted guidelines, which may include sterile technique, body positioning, or specimen handling.

The practice-focused question for this project was the following: Will an evidence-based staff education program for the novice perioperative nurse increase the nurse's knowledge of OR procedures and protocols for patient management? Implementing this program for novice OR nurses has the goal of providing education for nurses to better manage the perioperative patient. The expected outcome of the project is that at the end of the module, the RN would exhibit an increase in the knowledge necessary to care for the perioperative patient safely. Inside the OR, patients are incapable of making decisions on their own. It is the task of the RN to advocate for

patients while they are in the perioperative environment and unable to care for themselves. Perioperative RNs must have the education and knowledge of the surgical patient's needs to safely care for the patient in surgery and prevent a negative outcome.

Nature of the Doctoral Project

The project setting was a small hospital in the Midwest with 10 ORs and two ORs specifically for open heart procedures. There are 15 RNs and three scrub techs who make up the OR staff along with ancillary transporters and housekeeping staff. The caseload varies from day to day; however, the number of cases averages around 30 according to the nurse manager.

A literature search in the Walden library databases, including ProQuest, MEDLINE, PubMed, and CINAHL, was conducted to obtain evidenced-based primary sources from peer-reviewed journals and published research. Additional sources of evidence included best practice information from official websites of organizations such as The American Nurses Association, AORN, and The Joint Commission on Accreditation of Healthcare Organizations. AORN has published a core curriculum for the OR called Perioperative 101, which is based on AORNs latest *Guidelines for Perioperative Practice* (AORN, 2018). The guidelines were used to provide evidence-based practice recommendations to guide the development of the educational program content.

An expert panel was asked to participate in the evaluation of the program content. The panel consisted of five RNs who had obtained their OR certification, were currently working in the OR, and had over 20 years of experience. The goal of the expert panel was

to evaluate the content of the educational program prior to implementation for applicability of the information. The project received approval from the Walden University institutional review board (IRB) in February of 2019 with the approval number 03-21-19-056147. The educational program was then presented to a panel of experts for evaluation.

Significance

The implementation of a staff development education program may provide the surgical patient with a knowledgeable and competent OR nurse. The educational offering may provide the novice nurse with information on AORN-recommended guidelines. The increased knowledge gained from the program may improve patient care and outcomes by reducing unexpected events in the OR and minimize the risk to surgical patients (Rozina, Nasreen, & Amina, 2012). The stakeholders for this project included patients, RNs, surgeons, health care staff, and the local community.

The RN who completes the training will have increased knowledge of OR practice, AORN guidelines, and evidenced-based practice recommendations for care of the OR patient. The program has the potential to make the nurse more marketable if he or she decides to seek employment outside the system. The community benefits from the skills learned by the novice nurse in that the care provided will be based on the newly gained knowledge from the educational program. The nurse may be able to improve the care she or he delivers. This social change may increase patients' confidence in the care they are receiving. The program may also increase the nurse's confidence in her or his ability to provide safe patient care.

Educational programs for nursing specialties have become necessary due to the limits of basic nursing programs. For example, The Hospital of the University of Pennsylvania academic medical center (Penn Medicine) currently offers an orientation program to new registered nurses without OR experience. "According to PennMedicine (2018) in the Gateway to the Operating Room program, nurses learn the fundamental principles of OR nursing." Development of an educational program to introduce novice RNs to the perioperative setting may be valuable to RNs in the hospital setting or the outpatient setting as the standards of care are the same for both. This project was conducted to provide novice OR nurses with the fundamentals of OR nursing.

Summary

Perioperative nursing education is an extensive time-consuming process (Castelluccio, 2012). Nurses who wish to practice in the OR as perioperative nurses require additional training to practice in this specialized environment. Without this additional specific training, a significant gap in practice exists, which when resolved will increase patient safety, reduce the chance of errors, and contribute to social change. The gap in practice at the site was the lack of staff education and training related to OR patient management. The purpose of the project was to develop a staff education project to address the gap in practice. Developing and implementing an educational program promotes social change by providing novice RNs with a basic educational program to assist them in being prepared to assume the role of perioperative nurse. This project was intended to prepare novice RNs to assume the role of perioperative nurse. Section 2 provides the background and context of the project including concepts, models, and

theories. The relevance to nursing practice, background of the practicum site, and role of the doctor of nursing practice (DNP) student are also discussed.

Section 2: Background and Context

Many of the new hires at the site are novice OR nurses, meaning they have no OR exposure or experience. Currently, the hospital does not have a formal training program for new OR nurses. Many of the newly hired nurses graduated from nursing programs without any specific training related to working in a hospital OR setting. Few nursing school curriculums specifically train surgical nurses (Ball, Doyle, & Oocumma, 2015), which makes it difficult to fill open positions with experienced perioperative nurses. Nurses without perioperative training have a knowledge deficit that should be addressed to ensure patient safety in the OR. Nurses who wish to practice in the OR as perioperative nurses require additional training to practice in this specialized environment. Developing and implementing an educational program may provide novice RNs with a basic educational program to assist them in being prepared to assume the role of advanced beginner perioperative nurse. The purpose of this doctoral project was to develop a perioperative educational program for RNs newly hired in the operating room. Section 2 includes a description of concepts, models, and theories; relevance to nursing practice; the local background and context; and the role of the DNP student.

Theoretical Framework

I used the novice-to-expert framework (Benner, 1982) to explore how adult learners acquire knowledge and the progression of that knowledge from novice to expert. Benner's (1982) theoretical model consists of five levels and is based on the Dreyfus model of skill acquisition as applied to the nursing profession. The Dreyfus model, first presented in 1980, explains that skill acquisition can be broken down into five distinct

stages (Benner, 1982). The stages are novice, advanced beginner, competent, proficient, and expert. The model was later adapted to nursing and the learning of clinical skills. The stages of the Benner model to perioperative nursing can be defined as follows:

- Novice: The novice has no experience in the operating room and needs to focus on every task from the beginning of the case to the end.
- Advanced beginner: The advanced beginner can perform at an acceptable level and has some experiences that can be referenced if the case does not go as planned.
- Competent: The competent nurse typically has been on the job for two to three years and has the ability to cope with the changing environment and has long-range goals or plans.
- Proficient: The proficient nurse has an experience-based ability to see the whole picture and is able to identify problems quickly.
- Expert: The expert nurse has a considerable background of experience, intuitively solves problems, and does not waste time contemplating alternate scenarios.

The Benner model (as cited in McEwen & Wills, 2014) explains that the clinician becomes an expert when, during actual clinical practice, she or he is able to test and refine principles and hypotheses. The model includes five central concepts; competence, skill acquisition, experience, clinical knowledge, and practical knowledge (McEwen & Wills, 2014). Benner's (1982) novice-to-expert model outlines seven domains of nursing practice:

1. helping role,
2. teaching or coaching function,
3. diagnostic client-monitoring function,
4. effective management of rapidly changing situations,
5. administering and monitoring therapeutic interventions,
6. monitoring and ensuring quality health care practices, and
7. organizational and work-role competencies (Benner, 2001).

Benner's (1982) model includes the concept that nurses develop skills over time through education and experiences to become experts. Expertise is preceded by experience (Benner, Hughes, & Sutphen, 2008). Benner also explained that nurses begin as novices and progress to experts over time, and each step builds on the previous one. The model explains that nurses can be experts in a specialty of nursing and can return to being a novice nurse when changing to another specialty (McEwen & Wills, 2014). The nurse comes into a new role as a novice, and through education and experience in the practice setting she or he gains skills to become an expert over time (McEwen & Wills, 2014). The model applies to the surgical setting in that many nurses come to the OR from another area where they most likely were experts.

This project was developed using the adult learning theory model (Knowles, 2018). Knowles (2018) described six attributes of adult learners:

- need to know,
- learners' self-concept,
- role of experience,

- readiness to learn,
- orientation to learning, and
- motivation.

According to the adult learning theory, adults learn best when they want or need to learn, the material is presented in a nonthreatening environment, the learning style needs are met, and the student has control over the learning process (Ozuah, 2005). The target audience for this project was novice perioperative nurses. The project fulfilled the requirements of the adult learning theory as it will be presented in a nonthreatening way, nurses will have control over the learning process, and the program includes material nurses need to learn.

Relevance to Nursing Practice

The American Nurses Association (ANA, 2015) outlined the professional scope and standards for nurse performance, which guides nursing practice by providing nurses with the minimum acceptable standards for practice. As part of this project, the ANA standards will be presented. The ANA authoritative statements contained within the standards require that all registered nurses are expected to perform competently (ANA, 2015). Standards of nursing practice are rules or definitions of what it means to provide competent care to patients (ANA, 2015). Nurses are required by law to carry out care consistent with established standards. The ANA is a professional organization founded in 1897 that represents RNs and is involved with establishing standards of practice. It is also involved with promoting the rights of nurses in the workplace (ANA, 2015).

AORN Guidelines

The AORN developed 32 guidelines specific to perioperative nursing practice. The guidelines were originally published in 1978 under the title Perioperative Standards and Recommended Practices, which was changed in 2014 to Guidelines for Perioperative Practice (AORN, 2015). The AORN's evidence-based recommended practices were reviewed and accepted by the National Guideline Clearinghouse as guidelines for perioperative nursing practice (AORN, 2015). These guidelines were established to ensure quality, competent care consistent with established standards. The goal of AORN is to provide nurses with the information necessary to provide safe care to the perioperative patient. The standards are unique to the perioperative setting (e.g., energy-generating devices, instrument cleaning, patient skin antisepsis, positioning of the patient, retained surgical items, sharps safety, specimen management, sterile technique, sterilization, and surgical attire).

The Joint Commission has been accrediting hospitals for 60 years (Knowles, 2018). The Joint Commission's mission is to improve safety and the quality of health care in the United States. Hospitals accredited by The Joint Commission report sentinel events that happen within their facility (Knowles, 2018). A sentinel event, as defined by The Joint Commission, is a patient safety event that causes death, permanent disability, severe temporary harm, or an intervention necessary to sustain life (Knowles, 2018). In 2017 there were 805 sentinel event reports submitted to The Joint Commission. Of the top 10 reported events, three are specific to the perioperative setting:

1. unintended retention of a foreign body (116 reported),
2. wrong patient, wrong site, wrong procedure (95 reported), and
3. operative/postoperative complication (19 reported).

The perioperative area is no stranger to sentinel events. In 2017, 230 of the sentinel events reported to The Joint Commission were related to care the patient received in the perioperative area. This project addressed the gap in practice, identified as the knowledge deficit of novice perioperative nurses, by providing an educational program to educate staff on the current AORN guidelines and reduce the risk of sentinel events in the OR.

Local Background and Context

The project site hospital has 12 operating rooms, including two open heart rooms, two orthopedic rooms, one neurosurgery room, one robot room, and six general surgery rooms. The staff are broken down into three cost centers: open heart, orthopedics, and main OR. For the purpose of this project, only the staff working in the main OR were included. There are 15 registered nurses employed in the main OR, and of those five have less than two years of experience. On most days, there are 20-25 cases done in the main OR, and nine RNs are working to do those cases with another RN or a certified scrub technologist. There has been increased staff turnover recently due to retirement, causing the need to hire additional staff. However, according to the nurse manager, is it difficult to find and hire experienced perioperative staff, so inexperienced RNs have been hired. Because of the lack of perioperative experience in the newly hired RNs, a need for a

novice perioperative education was identified. The nurse manager agreed that the project would be beneficial to her newly hired staff.

Accreditation by The Joint Commission means that a hospital is committed to providing high-quality, safe patient care. To provide safe quality care, nurses must be trained according to the specialty that they are working in. This project was conducted to introduce novice RNs to the perioperative role.

Role of the DNP Student

I recently returned to working in the OR as an RN first assistant after 10 years working as a nurse practitioner in a urology clinic. The project need was identified during my orientation. Because I had 11 years of OR experience and had been working in a urology clinic and doing first assisting, I had a short orientation consisting of orientation to the department and two weeks in each specialty. In discussions with the nurse manager, I discovered that the new OR nurses received on-the-job training with a preceptor regarding circulating and scrubbing in the various specialties; however, there was no education regarding AORN guidelines and no formalized instruction because there was no OR educator on staff.

I was the leader of the project team. The project was a PowerPoint presentation for novice OR nurses that covers the information contained in the AORN guidelines. The PowerPoint is part of a lecture to be given at a OR morning staff meeting. The nurse manager requested that this project be presented to all staff to educate novice nurses and provide a review of AORN guidelines for experienced nurses. This project addressed the gap in practice and gap in knowledge of the established guidelines for perioperative

practice. The goal was to produce an educational program that met the learning needs of novice perioperative nurses.

Role of the Project Team

The project team consisted of five RNs who had obtained their OR certification, were currently working in the OR, and had over 20 years of experience. Team members were selected based on their education and willingness to participate. The panel was asked to participate in the evaluation of the program content. The goal of the panel was to evaluate the content of the educational program prior to implementation for applicability of the information to the site. After IRB approval was obtained, the educational program was presented to the panel for evaluation prior to implementation.

Summary

Perioperative nursing is a unique nursing specialty with a distinct set of skills that are obtained through specialized training. This specialty requires nurses to use a broad knowledge base and have the ability to draw on past experiences. It is imperative that novice perioperative nurses have proper orientation that includes on-the-job training with a preceptor along with exposure to the perioperative standards for practice as outlined by the perioperative professional organization AORN. In the next section, I describe the collection and analysis of evidence.

Section 3: Collection and Analysis of Evidence

Nurses who wish to practice in the perioperative area, more specifically in the OR, require additional training to practice in this specialized environment. Nursing schools have begun to phase out the traditional 3-year hospital-based nursing programs in favor of associate 2-year programs and 4-year bachelor programs. This trend has mostly eliminated perioperative clinical rotations (Castelluccio, 2012). Because of the lack of trained perioperative professionals, perioperative nurse managers must consider hiring new graduates (Martin, 2011). The nurse manager at the practicum site shared that all of the recently hired RNs were novice OR nurses, meaning that they had no previous OR training or experience. The purpose of this doctoral project was to develop a perioperative educational program for RNs newly hired in the OR. Section 3 includes the sources of evidence used to answer the practice-focused question, the strategies used to gather the evidence, the project design, and the method of data analysis.

Practice-Focused Question

The local nursing practice problem as explained by the OR nurse manager was the lack of qualified applicants for open OR nursing positions. This has resulted in hiring nurses who do not have experience in caring for perioperative patients in the OR setting. This project addressed the gap in practice identified as the knowledge deficit of novice perioperative nurses by providing an educational program to educate staff on current AORN guidelines and reduce the risk of sentinel events in the OR. The practice-focused question for this project was the following: Will an evidence-based staff education

program for the novice perioperative nurse increase the nurse's knowledge of OR procedures and protocols for patient management?

Sources of Evidence

A literature search in the Walden library using the Internet databases of ProQuest, MEDLINE, PubMed, and CINAHL was used to obtain evidenced-based primary sources from peer-reviewed journals and published research. Additional sources of evidence included best practice information from organization websites such as The American Nurses Association, The Association of Perioperative Registered Nurses (AORN), and The Joint Commission. Terms used for the search were *staff education*, *perioperative education*, *registered nurse training*, *operating room education*, *novice RN education*, *operating room training*, and *AORN education*. Articles older than 10 years were excluded from the search to ensure updated information was used. Other exclusion criteria included dissertations/theses and articles published in a language other than English. AORN has published a core curriculum for the OR called Perioperative 101, which is based on AORNs latest *Guidelines for Perioperative Practice* (AORN, 2018). The AORN guidelines were used as a reference to guide the development of the educational program content. A systematic review of the literature was the approach to accessing, acquiring, assessing, and synthesizing the research on this topic (Health Evidence Quality Assessment Tool, 2016). The Health Evidence Assessment Tool provides 10 questions to rate the strength of research. The questions are answered with a yes or no. Quality assessment rating is based on the total score of the 10 questions. A total score of 8-10 equals strong evidence, a total score of 5-7 equals moderate evidence,

and a total score of less than 4 is weak evidence. The literature was reviewed for evidence-based practice guidelines, a quality assessment score of at least 5, and content applicable for an educational program for novice OR nurses.

Project Team

An expert panel of five experienced operating room nurses was asked to participate in the evaluation of the program content. These five RNs were selected based on their credentials and OR experience. The purpose of the expert panel was to evaluate, critique, and offer recommendations for content of the program. These RNs were invited to participate in the program evaluation because they were working in the OR, had OR experience, and had contact with the new novice OR nurses. The stakeholders for this project included the OR nurse manager and the OR director.

Procedures

Data for this project were collected from the expert panel using a standard Likert-type survey with the option of write-in comments (Appendix D). The panel was asked to evaluate the program and provide feedback regarding the content. Data from the survey were analyzed and applied to content revisions for the educational program. Responses were anonymous.

Participants

An expert panel of five experienced OR nurses was asked to participate in the evaluation of the program content. The PowerPoint and lecture were presented to the expert panel for feedback. The results were analyzed and changes to the program were made prior to presentation to novice OR RNs as a part of the capstone project.

Protections

I recruited the expert panel and novice OR RNs prior to beginning the project. The panel and the learners were given a copy of the consent form for anonymous questionnaires and were assured that participation was voluntary and evaluation responses would be kept confidential. The participants were informed that they could elect to withdraw at any time without consequences. Walden University's IRB approval number 03-21-19-056147 was granted prior to the review of the project by the panel of experts, as an agreement with the site could not be obtained in a timely manner.

Analysis and Synthesis

The results of the individual questionnaires from the expert panel were analyzed using descriptive statistics. Descriptive analysis is a means to describe data or summarize data in a meaningful way (McLeod, 2008). The five-member panel was asked to review the educational program for its content, readability, and length, and whether learner objectives could be met. Evaluation of the educational program was completed by the five-member panel using a Likert-type questionnaire. A Likert rating scale is used to measure attitudes by asking a series of questions about a specific topic (McLeod, 2008). The answers are given on a scale, usually with five or seven choices that indicate the strength of agreement or disagreement with the statement. A Likert scale includes an odd number of responses, and the midpoint is usually neither agree or disagree, indicating a neutral position. The panel also evaluated the relevance of the posttest to the content presented. All data were organized and recorded manually.

The novice RN participants were given a knowledge-based pretest to evaluate their level of knowledge prior to implementation of the program. The material was presented in a PowerPoint presentation along with oral instructions. The participants were asked to complete a posttest to evaluate comprehension of the material presented. All data were organized and recorded manually.

Summary

In Section 3 I described how the novice educational program was developed by using the best evidence in the literature. The program was reviewed by a panel selected based on their knowledge and expertise in the OR. This evidence-based educational program for novice OR nurses was designed to provide them with basic knowledge of the operating environment to assist them in providing safe care to surgery patients. Section 4 provides project findings and evaluation.

Section 4: Findings and Recommendations

Nurses who desire to work in the specialized area of perioperative nursing require additional training that is not provided in the traditional nursing curriculum. Because perioperative nursing education is an extensive, time-consuming process (Castelluccio, 2012), it has essentially been removed from traditional RN programs. This lack of specialized training has caused a shortage of qualified perioperative nurses to fill vacant positions within the hospital system. The gap in practice is the lack of formalized staff education and training for the novice perioperative RN. The purpose of the project was to develop a staff education project to address the gap in practice. A group of five perioperative experts volunteered to review and evaluate the educational program for content and usefulness using a Likert-scale questionnaire. The project was then reviewed by a pilot group of four novice RNs who completed a pretest and posttest. Data were analyzed for results.

Findings and Implications

Findings

An expert panel of five experienced OR nurses belonging to the local AORN chapter was asked to participate in the evaluation of the novice nurse educational program. The expert nurse has a considerable background of experience, intuitively solves problems, and does not waste time contemplating alternate scenarios (McEwen & Wills, 2014). The Benner model explains that the clinician becomes an expert when, during clinical practice, she or he is able to test and refine principles and hypotheses (McEwen & Wills, 2014). These five RNs were asked to participate based on their

credentials and OR experience. The five experts who agreed to participate in program content evaluation were provided a copy of the consent for anonymous questionnaire form, the continuing education evaluation (Appendix C), and a copy of the PowerPoint educational program (Appendix B). Experts were asked to review the PowerPoint presentation and complete the evaluation. The experts were from the local AORN chapter and were demographically similar. The five expert panel members were female, currently working in the perioperative area, and had more than 20 years of experience. The expert group reviewed the PowerPoint content and returned the questionnaire at a 100% response rate. The experts were asked to provide their response to the eight questions using the 5-point Likert-type questionnaire. The 5-point scale allowed for neutral, agree, disagree, strongly agree, and strongly disagree responses. The ninth question was an open-ended question asking for comments regarding the project. The anonymous questionnaire responses were submitted to me and the data were reviewed. An analysis of the questionnaires revealed that all five experts strongly agreed with each of the eight questions (Table 1), and there were no additional comments provided in response to Question 9.

Table 1

Expert Respondents' Results

Questions	SA	A	N/A	D	SD
1. This activity met the learning objectives stated.	5	0	0	0	0
2. Objectives were related to the overall purpose/goal of the activity.	5	0	0	0	0
3. This activity was related to perioperative continuing education needs.	5	0	0	0	0
4. The exam for the activity was a accurate test of the knowledge gained.	5	0	0	0	0
5. The activity was not commercially biased.	5	0	0	0	0
6. This activity met my expectations.	5	0	0	0	0
7. This activity will enhance professional practice.	5	0	0	0	0
The format was an appropriate method for delivery of the content of this activity.	5	0	0	0	0
If you have any additional comments regarding this activity please note.	None				

Note. SA = strongly agree; A = agree; N/A = neither agree or disagree; D = disagree; SD = strongly disagree.

Panel Results

The results of the questionnaire indicated an overwhelmingly positive response to the content and usefulness of the program. The experts strongly agreed that the content would enhance professional practice and that the posttest would be an accurate test of the knowledge gained. The experts agreed that the format (PowerPoint presentation) was an

appropriate method for delivery of the content. The open-ended question at the end of the questionnaire was included as a way for the expert reviewers to provide additional feedback to improve the DNP project. The unanticipated outcome was that on Question 9 there were no comments made. This lack of positive or negative feedback resulted in no recommendations for improvement in the project. The findings from this DNP project were limited due to the low number of expert participants, and cannot be generalized to a larger expert panel. The next step was to present the program to a small group of novice nurses.

Novice Nurse Results

The second part of the project was to present the PowerPoint to a group of four novice nurses. The novice nurse has very little or no experience in the OR and needs to focus on every task from beginning of the case to the end. The novice nurses who participated were members of AORN, had less than two years of experience in the OR, were female, and were in orientation at the facilities where they worked. The four nurses were given a copy of the consent for anonymous questionnaire form, a copy of the pretest/posttest (Appendix E), and the PowerPoint with instructions to complete the pretest, review the PowerPoint, and complete the posttest. There was a 100% response rate. The test was administered in a pencil-and-paper format with five fill-in-the-blank questions based on the program content. Table 2 provides the pretest and posttest results for the four novice nurse participants.

Table 2

Program Pretest and Posttest Questionnaire Results

Questions	Pretest correct n (%)	Pretest incorrect n (%)	Posttest correct n (%)	Posttest incorrect n (%)
1. AORN stands for: ___	4 (100)	0 (0)	4 (100)	0 (0)
2. There are ___ guidelines.	0 (0)	4 (100)	4 (100)	0 (0)
3. Patients receiving moderate sedation will need these monitored ___.	3 (75)	1 (25)	4 (100)	0 (0)
4. There is a limit to how much local anesthesia can be used ____.	2 (50)	2 (50)	4 (100)	0 (0)
5. The handwashing guideline can be found in which section? ____	3 (75)	1 (25)	4 (100)	0 (0)

The results from the novice nurse pretest and posttest revealed that all four respondents were able to answer Question 1 correctly on the pretest; however, in Questions 2 through 5 the novices had some difficulty. For example, for Question 2, none of the respondents answered correctly, but for Questions 3 and 5, three novices answered correctly on the pretest. For pretest Question 4, two novice nurses answered correctly and two answered incorrectly. The results of the posttest were also evaluated. The four novice nurse respondents were able to complete the posttest with 100% correct answers on all five questions after reviewing the PowerPoint presentation.

Implications

Research implications are the conclusions drawn from the results and indicate how the findings may be important for practice change (Hasa, 2018). The results of the novice pretest/posttest indicated that the educational project was successful in providing information on the AORN guidelines in a way that facilitated comprehension of the material. Presenting the staff education project to novice perioperative nurses increased

their knowledge of AORN's perioperative guidelines to improve practice. Nurses who wish to practice in the OR require additional training to practice in this specialized environment. Without this additional training, a significant gap in practice exists, which when resolved will increase patient safety, reduce the chance of errors, and contribute to social change. The limitations of the project are that it is not a complete orientation to the OR; it is designed to educate the novice perioperative nurse on the AORN guidelines.

Accreditation by The Joint Commission means that a hospital is committed to providing high-quality, safe patient care. To provide safe, quality care, nurses must be trained according to the specialty they are working in. This DNP project was conducted to introduce novice RNs to the perioperative role and provide the institution with a tool to educate perioperative nurses.

Developing and implementing an educational program promotes social change by providing novice RNs with a basic educational program to assist them in being prepared to assume the role of a perioperative nurse. The community benefits from the skills learned by the novice nurse in that the care provided will be based on the newly gained knowledge from the educational program. The nurse will be able to improve the care she or he delivers to surgical patients. This promotes social change for the community by increasing the confidence in the care that members are receiving.

Recommendations

The panel of experts from the AORN chapter did not express any recommendations for improvement of the DNP project as it was written. Based on the findings, I recommend that the project as written be part of new perioperative nurse

orientation. The educational module, in addition to existing perioperative mentoring during orientation, would provide the new nurse with the AORN guidelines for practice and the knowledge acquisition during the mentoring process. I would also recommend that the program be part of yearly competency for experienced perioperative staff to remind them of AORN guidelines for practice. The educational module could be presented on an annual basis during monthly staff meetings or as a continuing education module that staff can access on the computer.

Contribution of the Doctoral Project Team

A group of five experts from the local AORN chapter volunteered to participate and were asked to review the PowerPoint presentation and complete an evaluation. The experts rated their responses to the eight questions using a 5-item Likert-type questionnaire. All of the respondents strongly agreed that the presentation met all of the objectives, and no additional comments were made. The project was presented at the March 2019 monthly meeting of AORN to four novice OR nurses. I plan to make the educational program available to the OR nurse manager where I work. At some time in the future, I would like to see it become part of the new nurse orientation.

Strengths and Limitations

The benefit of using descriptive research is that surveys can be used to gather data from a target audience and the information can be a precurser to future research. The information can also be helpful in identifying variables that could be tested. The strength of this project was that it was modeled after the AORN published guidelines for perioperative practice. This AORN position document is updated and published every 2

years. The complete published document is over 900 pages. The DNP project PowerPoint included condensed information from the document that can be delivered in approximately one hour. The PowerPoint can be viewed on an individual basis or in a large group presentation. This project may be presented at any hospital OR staff meeting or as part of new OR nurse orientation.

There are limitations when using descriptive statistics in research. There can be bias on the part of the researcher that may be difficult to overcome. There may be bias of the researcher regarding the survey questions. The results cannot be generalized to the population and the findings are open to interpretation. When using descriptive statistics, no variables can be manipulated (McLeod, 2008).

Section 5: Dissemination Plan

Dissemination of scholarly work produced by DNP professional nurses can enhance practice and improve health care outcomes when shared with colleagues and organizations. This completed project was presented at an AORN local chapter meeting. The final product will be presented to my peers working in the OR where I am employed, after I have graduated, in the form of a PowerPoint and oral presentation.

Project Dissemination

The dissemination of DNP project information provides colleagues and organizations with knowledge to assist them in translating research to practice. Sharing new knowledge can help to initiate quality improvement and improve patient outcomes. My dissemination plan began with a presentation of my project to the members of the local AORN chapter. The target audience was novice nurses; however, experienced perioperative nurses were also in attendance. I will also present my project to the perioperative staff at the institution that has resorted to hiring novice nurses to fill open positions. This will take place after graduation. There are many ways to disseminate knowledge obtained from DNP projects. For example, project conclusions can be presented as continuing education, posters, podium presentations, and online courses. I plan to present this project at an AORN national conference, ensuring that this presentation will reach a larger, more diverse audience of perioperative nurses who work at multiple sites. This fills the requirement of the DNP Essential III to disseminate findings from evidence-based practice and research to improve health care outcomes (American Association of Colleges of Nursing, 2019). The goal of this educational

project is to improve the practice of novice OR nurses by informing them of the AORN guidelines for perioperative practice.

Analysis of Self

I am the first in my family to obtain a college education. As the oldest of eight children, I felt that I needed to be an example of what can be accomplished if a person is determined to succeed. After graduation from high school, I enlisted in the U.S. Air Force and served 4 years defending my country. The knowledge and skills that I acquired while in the service helped prepare me for my future challenges. My father lived long enough to see me finish my obligation to the government and graduate nursing school with my diploma in 1993. My father and mother died before I completed my master's degree, but I feel that my accomplishments have inspired my siblings to further their education.

Practitioner and Scholar

I have been a nurse practitioner for over 10 years, and nursing has been a very rewarding career. My nursing journey began in 1993 with my graduation from a hospital diploma program. After working about seven years, three of those in the oncology department, and earning my specialty certification, I returned to college to complete my BSN. I then transferred to the surgery area and became a perioperative nurse, where I found the specialty I loved. I learned all I could from my peers and read books on perioperative nursing until I was confident that I could become certified in perioperative nursing. My next goal was to finish my master's degree and also the RN first assistant program, which I was able to complete in 2007. I currently work in the OR at a medium-size hospital where I precept and mentor novice perioperative nurses. In the course of my

work, I found that the novice nurses lacked knowledge of the AORN guidelines for perioperative practice. This discovery lead me to explore the idea of an educational project for my DNP capstone. Working with new perioperative nurses compels me to stay informed and up to date with standards of care and evidence-based practice as it pertains to perioperative nursing care. In the course of pursuing the DNP and completing the capstone project, I discovered that I enjoy the process of teaching and sharing information with my peers. I had always shied away from public speaking and doing presentations; however, developing and presenting this project as a DNP student has given me confidence as a scholar and practitioner. I think that my confidence comes from the knowledge that I obtained through project development.

Practitioner and Project Manager

The DNP capstone is the culmination of 4 years of didactic study, clinical hours, research, record keeping, and writing. As the project manager, I looked at several areas at the practicum site as potential educational opportunities. With the aid of my practicum preceptor, I decided to educate novice perioperative nurses on the AORN guidelines because this was not part of the on-the-job training they were receiving. The identified gap in practice was a failure of the novice nurses to know and apply the AORN guidelines in the OR setting. I aimed to introduce the novice nurses to the AORN guidelines and address the gap in practice. Designing this educational project required many hours searching databases for evidence and information regarding the teaching of nurses and the best method of disseminating the knowledge. My skills in searching, reading, and evaluating the literature have improved over the last 4 years. The journey of

writing this scholarly project has been long, but very rewarding. I have learned to be more organized, and my writing skills have improved. However, without the assistance of my DNP chair's encouragement and feedback, this may not have happened.

Summary

This DNP capstone project is an educational module for novice perioperative nurses designed to introduce them to the AORN guidelines for perioperative practice. AORN developed 32 guidelines specific to perioperative nursing practice. The guidelines were originally published in 1978 and were titled Perioperative Standards and Recommended Practices; in 2014 the title was changed to Guidelines for Perioperative Practice (AORN, 2015). These guidelines were established to ensure quality, competent care consistent with established standards. The goal of AORN is to provide nurses with the information necessary to provide safe care to the perioperative patient. The DNP scholarly project was supported by Benner's (1982) novice-to-expert framework. Benner outlined how adult learners acquire knowledge and the progression of that knowledge from novice to expert. Through the project, novice OR nurses were provided education to assist them in becoming expert nurses in the OR setting.

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Appendix A: Site Approval Documentation for Staff Education Doctoral Project

AORN of Central Ohio
Kay Ball, PhD, RN, CNOR, CMLSO, FAAN; President
6743 S. Old State Road
Lewis Center, Ohio 43035

March 4, 2019

The doctoral student, Marjorie Jasinski, is involved in Staff Education that will be conducted under the auspices of our organization, AORN of Central Ohio. The student is approved to collect formative and summative evaluation data via anonymous staff questionnaires, and is also approved to analyze internal, de-identified site records that I deem appropriate to release for the student's doctoral project. This approval to use our organization's data pertains only to this doctoral project and not to the student's future scholarly projects or research (which would need a separate request for approval).

I understand that, as per DNP program requirements, the student will publish a scholarly report of this Staff Development Project in ProQuest as a doctoral capstone (with site and individual identifiers withheld), as per the following ethical standards:

a. In all reports (including drafts shared with peers and faculty members), the student is required to maintain confidentiality by removing names and key pieces of evidence/data that might disclose the organization's identity or an individual's identity or inappropriately divulge proprietary details. If the organization itself wishes to publicize the findings of this project, that will be the organization's judgment call.

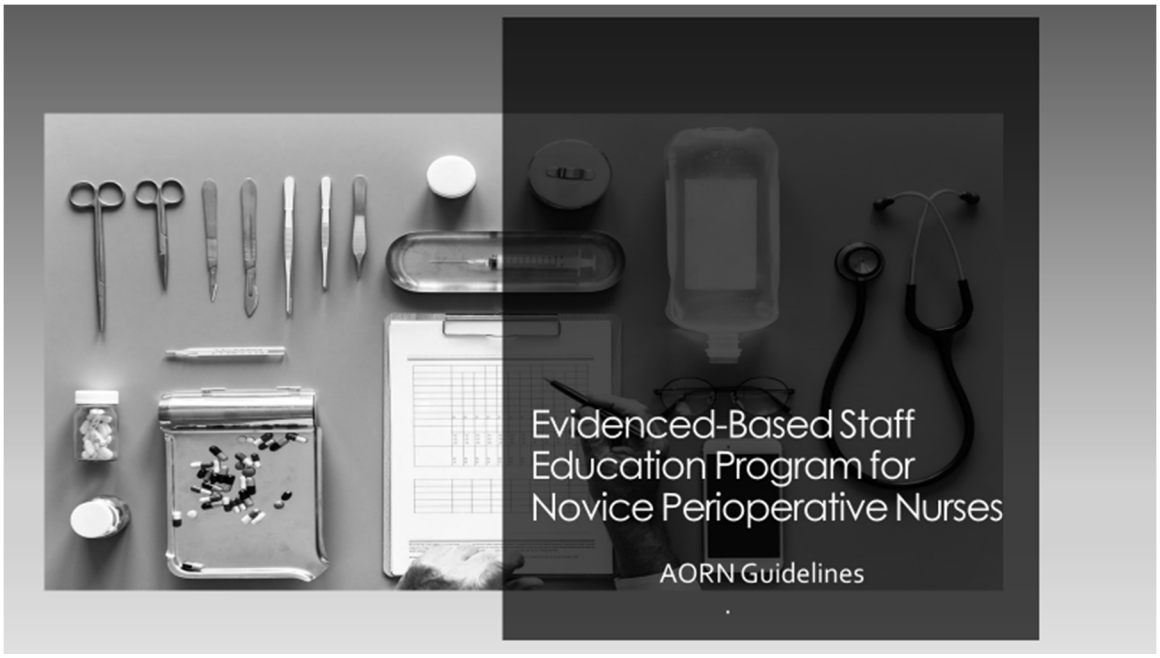
b. The student will be responsible for complying with our organization's policies and requirements regarding data collection (including the need for the site IRB review/approval, if applicable). c. Via a Consent Form for Anonymous Questionnaires, the student will describe to staff members how the data will be used in the doctoral project and how the stakeholders' autonomy and privacy will be protected.

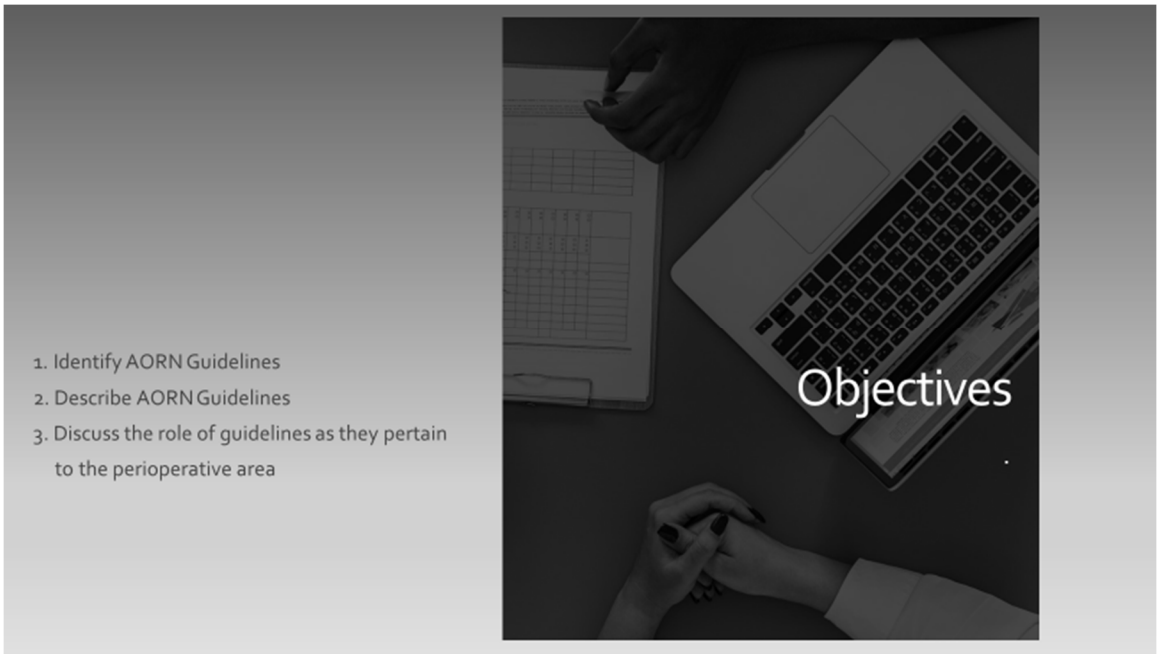
I confirm that I am authorized to approve these activities in this setting.

Sincerely,

Kay Ball, PhD, RN, CNOR, CMLSO, FAAN
President, AORN of Central Ohio

Appendix B: Evidenced-Based Staff Education Project





The goal of The Association of Perioperative Nurses (AORN) is to provide perioperative nurses with the information necessary to provide safe care.

AORN developed 32 guidelines specific to perioperative nursing practice. The guidelines were originally published in 1978.

The guidelines were established to ensure quality competent care consistent with established standards.

The goal of this presentation is to provide an introduction to the 32 AORN Guidelines

The complete guidelines can be found in the 2017 edition of Guidelines for Perioperative Practice

Aseptic Practice

GUIDELINE FOR ENVIRONMENTAL CLEANING

- ✓ A multidisciplinary team should establish cleaning procedures and frequencies in the perioperative practice setting
- ✓ The patient should be provided with a clean, safe environment
- ✓ A clean environment should be re-established after the patient is transferred from the area
- ✓ Perioperative areas should be terminally cleaned
- ✓ All areas and equipment that are not terminally cleaned should be cleaned according to an established schedule
- ✓ All personnel should take precautionary measures to limit transmission of microorganisms when performing environmental cleaning and handing waste materials
- ✓ Procedures for environmental cleaning and disinfection should be established for circumstances that may require special cleaning procedures
- ✓ Perioperative and environmental services personnel should receive initial and ongoing education and competency verification
- ✓ Policies and procedures for environmental cleaning processes and practices should be developed , reviewed periodically, revised as necessary, and readily available in the practice area
- ✓ Perioperative personnel should participate in a variety of quality assurance and performance improvement activities that are consistent with the health care organization

Aseptic Practice

Guideline for Hand Hygiene

- ✓ All perioperative team members should maintain healthy fingernail and hand skin condition
- ✓ Perioperative team members should not wear jewelry (eg, rings, watches, bracelets) on the hands or wrists
- ✓ Perioperative team members should perform hand hygiene
- ✓ Perioperative team members should perform surgical hand antisepsis before donning sterile gowns and gloves for operative and other invasive procedures
- ✓ A multidisciplinary team should select hand hygiene products to be used in the perioperative setting following an analysis of product effectiveness, user acceptance, and cost
- ✓ Perioperative personnel should participate in a variety of quality assurance and performance improvement activities that are consistent with the health care facilities plan to improve understanding and compliance with the principles and processes of hand hygiene

Aseptic Practice

Guideline for Preoperative Patient Skin Antisepsis

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- ✓ Patients should bathe or shower before surgery with either soap or an antiseptic
- ✓ Hair removal at the surgical site should be performed only in select clinical situations
- ✓ A multidisciplinary team including perioperative RNs, physicians, and infection preventionists should select safe and effective antiseptic products for perioperative patient antisepsis
- ✓ Perioperative team members should apply the perioperative patient skin antiseptic in a safe and effective manner
- ✓ Perioperative team members should review and follow the skin antiseptic manufacturer's instructions for use and safety

Aseptic Practice

Guideline for Sterile Technique

- ✓ Perioperative personnel should implement practices that reduce the spread of transmissible infections when preparing or working in the OR
- ✓ Surgical gowns, gloves, and drape products for use in the perioperative setting should be evaluated and selected for safety, efficacy, and cost before purchase or use
- ✓ Perioperative personnel should use sterile technique when donning and wearing sterile gowns and gloves
- ✓ Sterile drapes should be used to establish a sterile field
- ✓ A sterile field should be prepared for patients undergoing surgical or other invasive procedures
- ✓ Items introduced to the sterile field should be opened, dispensed, and transferred by methods that maintain the sterility and integrity of the item and the sterile field
- ✓ Sterile fields should be constantly monitored
- ✓ All personnel moving within or around a sterile field should do so in a manner that prevents contamination of the sterile field
- ✓ Perioperative team members should receive initial and ongoing education and competency verification on their understanding of the principles of and performance of the processes for sterile technique

Aseptic Practice

Guideline for Sterile Technique

- ✓ Nursing activities related to sterile technique should be documented in a manner consistent with health care organization policies and procedures and regulatory and accrediting agency requirements
- ✓ Policies and procedures for the implementation of sterile technique should be developed, reviewed periodically, revised as necessary, and readily available in the practice setting
- ✓ Perioperative personnel should participate in a variety of quality assurance and performance improvement activities that are consistent with the health care organization's plan to improve understanding of and compliance with the principles and processes of sterile technique

Aseptic Practice

Guideline for Surgical Attire

- ✓ Clean surgical attire should be worn in the semi-restricted and restricted areas of the perioperative setting
- ✓ All individuals who enter the semi-restricted and restricted areas should wear scrub attire that has been laundered at a health care accredited laundry facility or disposable scrub attire provided by the facility and intended for use within the perioperative setting
- ✓ Personnel entering the semi-restricted and restricted areas should cover the head, hair, ears, and facial hair.

Equipment & Product Safety

Guideline for Safe Use of Energy Generating Devices

- ✓ Precautions should be taken to mitigate the risk for injury to patients and personnel during the use of energy-generating devices
- ✓ Precautions should be taken to mitigate the risk for injury associated with the use of electrosurgical units and electrosurgical accessories
- ✓ Precautions should be taken to mitigate the risk for injury associated with the use electrosurgery during minimally invasive surgery
- ✓ A laser safety program should be established for all owned, leased, or borrowed laser equipment in any location where lasers are used
- ✓ Precautions should be taken to mitigate the risk for injury associated with the use of a laser
- ✓ Precautions should be taken to mitigate the risk for injury associated with the use of a phacoemulsifier (used in cataract surgery)
- ✓ Precautions should be taken to mitigate the risk of injury associated with the use of argon enhanced coagulation (AEC is a method for operative coagulation of tissues that utilizes a jet of argon gas)

Equipment & Product Safety

Guideline for Care of Patients Undergoing Pneumatic Tourniquet-Assisted Procedures

- ✓ The perioperative registered nurse should assess the patient preoperatively for risks and potential contraindications related to the use of a pneumatic tourniquet
- ✓ The perioperative RN should collaborate with the surgeon and anesthesia professional to develop and confirm the plan of care related to the use of a tourniquet
- ✓ Patient safety should be the primary consideration when using a pneumatic tourniquet
- ✓ Inflation of the tourniquet cuff should be done under the direction of the surgeon and anesthesia
- ✓ Tourniquet inflation time and patient condition should be monitored while the tourniquet cuff is inflated
- ✓ The perioperative RN should collaborate with the surgeon and anesthesia to implement safe practices when deflating the tourniquet
- ✓ The perioperative RN should evaluate the outcome of the patient care after the tourniquet has been deflated
- ✓ The tourniquet and accessories should be cleaned after each use according to the manufacturers instructions.

Equipment & Product Safety

Guideline for the Care of Patients Undergoing Pneumatic -Tourniquet Assisted Procedures

- ✓ Perioperative team members should receive initial and ongoing education and competency verification on the use of pneumatic tourniquets
- ✓ Documentation should reflect activities related to the care of the patient undergoing pneumatic tourniquet-assisted operative or other invasive procedures
- ✓ Policies and procedures for use of pneumatic tourniquets should be developed, reviewed periodically, and revised as necessary
- ✓ Perioperative personnel should participate in quality assurance and performance improvement activities related to using pneumatic tourniquets

Equipment & Product Safety

Guideline for Product Selection

Purpose
The purpose of this guideline is to provide guidance for evaluating and purchasing medical devices and other products (AORN, 2017).

Patient & Worker Safety

Guideline for Autologous Tissue Management

Purpose
The purpose of this guideline is to provide guidance for managing autologous tissue including avulsed teeth, cranial bone flaps, parathyroid glands, skin, veins, and dropped autografts (AORN, 2017).

Patient & Worker Safety

Guideline for a Safe Environment of Care, Part 1

Purpose

The purpose of this guideline is to provide guidance for providing a safe environment of care related to patients and perioperative personnel and the equipment used in the perioperative setting Topics included in this guideline

- musculoskeletal injury
- fire safety
- electrical equipment
- clinical and alert alarms
- blanket and solution warming units
- medical gas cylinders, waste anesthesia gases
- chemicals including bone cement, and hazardous waste

Patient & Worker Safety

Guideline for a Safe Environment of Care, Part 2

Purpose

The purpose of this guideline is to provide guidance for the design of the building structure

- Movement of patients, personnel, supplies, and equipment
- Safety during construction
- Environmental controls
- Power failure response planning
- security
- Control of noise and distractions

Patient & Worker Safety

Guideline for Radiation Safety

- ✓ A radiation safety program must be established in all facilities and health care organizations in which the potential for diagnostic or therapeutic radiation exposure exists
- ✓ The perioperative team should implement measures to minimize the patients exposure to radiation
- ✓ Occupational exposure to radiation should be minimized
- ✓ Personnel with a known or suspected pregnancy must restrict the occupational radiation dose as described in local, state, and federal regulations
- ✓ Shielding devices, including architectural shielding, equipment-mounted or mobile shields, and personal protective devices should be used with all sources of radiation.
- ✓ Radiation monitors or dosimeters must be worn by personnel as required by regulatory agencies
- ✓ The principles of time, distance, and shielding should be followed by personnel handling therapeutic radionuclides and by personnel caring for patients who have received therapeutic radionuclides.

Patient & Worker Safety

Guideline for Prevention of Retained Surgical Items

- ✓ A consistent multidisciplinary approach should be used for preventing retained surgical items (RSI) during all surgical and invasive procedures
- ✓ Surgical soft goods opened onto the sterile field should be accounted for during all procedures in which soft goods are used
- ✓ Sharps and other miscellaneous items that are opened onto the sterile field should be accounted for during all procedures in which sharps and miscellaneous item are used
- ✓ Instruments should be accounted for in all procedures for which the likelihood exists that an instrument could be retained
- ✓ Measures should be taken to prevent retention of device fragments
- ✓ Standardized measures for reconciling count discrepancies should be taken during the closing count and before the end of the surgery. When a discrepancy in a count is identified, the surgical team should take actions to locate the missing item
- ✓ A multidisciplinary team may evaluate adjunct technologies for use as a supplement to manual counting procedures at the health care organization
- ✓ Documentation should reflect activities related to prevention of RSIs
- ✓ Policies and procedures for the prevention of RSIs should be developed, reviewed periodically, and revised as necessary
- ✓ Perioperative personnel should participate in quality assurance and performance improvement activities related to RSI prevention.

Patient & Worker Safety

Guideline for Sharps Safety

- ✓ Health care facilities must establish a written bloodborne pathogens exposure control plan
- ✓ Perioperative personnel must use sharps with safety-engineered devices
- ✓ Perioperative personnel must use work practice controls when handling sharps and sharp devices
- ✓ Perioperative personnel must use PPE
- ✓ Sharp devices must be contained and disposed of safely
- ✓ The perioperative RN should demonstrate personal and professional responsibility in preventing sharps injuries and preventing the transmission of bloodborne pathogens
- ✓ Personnel should receive initial and ongoing education and competency verification on their understanding of safe sharps handling
- ✓ Documentation should reflect activities related to sharps safety
- ✓ Policies and procedures for sharps safety processes and practices should be developed, reviewed periodically, and revised as necessary
- ✓ Perioperative personnel should participate in quality assurance and performance improvement activities to monitor and improve the prevention of sharps injuries

Patient & Worker Safety

Guideline for Specimen Management

- ✓ The perioperative RN should incorporate specimen management needs when developing the plan of care
- ✓ The perioperative RN should complete a preoperative assessment that confirms the site identification of specimens to be collected
- ✓ Specimens should be collected and handled in a manner that protects and preserves the integrity of the specimen
- ✓ Specimens should be transferred from the sterile field in a manner that maintains the integrity of the specimen
- ✓ Containment of the specimen should be completed in a manner that protects and secures the specimen and prevents exposure of health care personnel to body fluids or infectious material
- ✓ Specimen containers should be labelled to communicate patient, specimen, preservative, and biohazard information
- ✓ Specimens should be preserved in a manner that protects the integrity of the specimen and prevents exposure of health care personnel
- ✓ Specimens should be transported in a manner that protects the integrity of the specimen and prevents exposure of health care personnel and maintains the confidentiality of protected patient information
- ✓ Policies and procedures for disposition of specimens should be established in accordance with local, state, and federal regulations
- ✓ Nursing activities related to specimen management should be documented in a manner consistent with facility policy and procedure

Patient & Worker Safety

Guideline for Surgical Smoke Safety

- ✓ The health care organization should provide a surgical smoke-free work environment
- ✓ The perioperative team should evacuate all surgical smoke
- ✓ Perioperative team members should receive initial and ongoing education and competency verification on surgical smoke safety
- ✓ Policies and procedures for surgical smoke safety should be developed, reviewed periodically, revised as necessary, and readily available in the practice setting in which they are used
- ✓ Perioperative personnel should participate in a variety of quality assurance and performance improvement activities

Patient & Worker Safety

Guideline for Prevention of Transmissible Infections

This document provides guidance to perioperative RNs in implementing standard precautions and transmission-based precautions to prevent infection in the perioperative area.

Standard precautions are the foundation of infectious disease prevention and must be used for all patients in all health care settings.

Hand hygiene has been found to be one of the most effective ways to prevent disease transmission.

Patient Care

Guideline for Complementary Care Interventions

- ✓ The perioperative team can implement music interventions
- ✓ The perioperative team can implement preoperative or post operative massage therapy
- ✓ The perioperative team can implement preoperative acupuncture and acupressure
- ✓ The perioperative team can implement preoperative aromatherapy
- ✓ The perioperative team can implement patient hypnosis before, during, and after the surgical procedure
- ✓ The perioperative team can implement preoperative Reiki Therapy (ancient Tibetan technique of laying of hands to transfer energy)
- ✓ Additional complementary care interventions can be used

Holistic interventions such as guided imagery, relaxation tapes, and essential oils can also be incorporated in the perioperative setting if the patient has a willingness to use these measures.

The perioperative RN should receive education and complete competency verification prior to using guided imagery and essential oils

Patient Care

Guideline for Prevention of Deep Vein Thrombosis

- ✓ A health care organization-wide protocol for the prevention of DVT that includes care of the perioperative patient should be developed and implemented
- ✓ The perioperative RN should complete a preoperative patient assessment to determine DVT risk factors
- ✓ The perioperative RN should implement specific interventions when the patient is receiving mechanical DVT prophylaxis
- ✓ The perioperative RN should implement specific interventions when the patient is receiving pharmacologic DVT prophylaxis
- ✓ The perioperative RN should provide the patient and his or her caregiver(s) instructions regarding prevention of DVT and the prescribed prophylactic measures
- ✓ Personnel should receive initial education and competency validation, as applicable to their roles, on patient care measures to prevent DVT
- ✓ Documentation should include a patient assessment, plan of care, nursing diagnosis, and identification of desired outcomes and intervention, as well as an evaluation of the patient's response to the care provided
- ✓ Policies and procedures for DVT prophylaxis should be developed, reviewed periodically, revised as necessary, and readily available in the practice setting
- ✓ A quality improvement program should be in place to evaluate the outcomes of DVT prophylaxis (DVT rate) and protocol compliance

Patient Care

Guideline for Prevention of Unplanned Patient Hypothermia

- ✓ The perioperative RN should perform a preoperative assessment to determine the presence of factors that could contribute to unplanned hypothermia
- ✓ The patient's temperature should be measured and monitored in all phases of perioperative care
- ✓ In all phases of perioperative care, the perioperative RN should develop an individualized plan of care and implement the interventions chosen for prevention of unplanned hypothermia
- ✓ A quality improvement (QI)/ management program should be in place to identify and respond to opportunities for improvement related to unplanned perioperative hypothermia
- ✓ Health care personnel should receive education about hypothermia as applicable to the person's job responsibilities

Patient Care

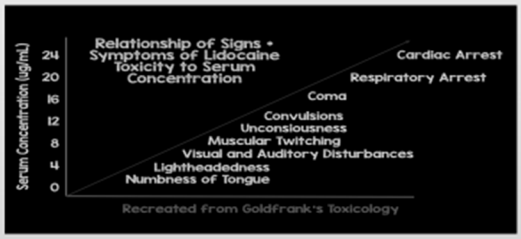
Guideline for Patient Information Management

- ✓ As a part of the legal health record, the perioperative patient health care record should reflect the plan of care, including assessment, nursing diagnosis, outcome identification, planning, implementation of interventions, and evaluation of progress toward the expected outcome
- ✓ Perioperative nursing documentation should be synchronized with the nursing workflow
- ✓ Electronic perioperative nursing documentation should use the Perioperative Nursing Data Set (PNDS) and other structured vocabulary
- ✓ Perioperative nursing documentation should be structured to meet professional an regulatory compliance requirements for a comprehensive representation of patient care
- ✓ Patient information must be secure, held confidential, and protected from unauthorized disclosure
- ✓ Modifications to existing content in the patient health care record should comply with federal and state regulations, health care accreditation requirements, and national practice guidelines
- ✓ Perioperative personnel should receive initial and ongoing education and competency verification on their understanding of the principles and performance of the processes for documenting patient care and of best practices for maintaining the security of patient care information
- ✓ Policies and procedures for perioperative information management should be developed, reviewed periodically, revised as necessary, and readily available. As new evidence emerges, policies and procedures should evolve to accommodate best practices
- ✓ A quality improvement program should be developed and implemented, and should focus on the integrity of the data within the patient health care record

Patient Care

Guideline for Care of the Patient Receiving Local Anesthesia

- ✓ The perioperative RN should perform a preoperative nursing assessment for the patient who will receive local anesthesia
- ✓ The perioperative RN should monitor and document the patient's physiological and psychological responses, identify nursing diagnoses based on assessment of the data, and implement the plan of care
- ✓ The perioperative RN should receive initial and ongoing education and competency verification on his or her understanding of local anesthesia pharmacology, calculation of total dose, contraindications, desired effects, adverse effects, and resuscitation
- ✓ The perioperative RN should provide patient education regarding perioperative care of patients undergoing local anesthesia
- ✓ Policies and procedures for the care of the patient receiving local anesthesia should eb developed, reviewed periodically, revised as necessary, and readily available



Agent	Max Dose w/o Epi	Max Dose w/ Epi	Duration of Action	Notes
Lidocaine	5mg/kg	7mg/kg	30 - 90 min	1% = 10mg/mL 2% = 20mg/mL
Bupivacaine	2.5mg/kg	3mg/kg	6 - 8 hrs	0.5% = 5mg/mL
Mepivicaine	7mg/kg	8mg/kg	---	---
Ropivacaine	3mg/kg	---	---	---

Patient Care

Guideline for Minimally Invasive Surgery

- ✓ Health care organizations should establish a multidisciplinary team to create an efficient, safe environment for minimally invasive procedures
- ✓ Potential patient injuries and complications associated with gas insufflation media used in MIS procedures should be identified, and practices that reduce the risk for injuries and complications should be established
- ✓ The perioperative RN should identify potential injuries and complications associated with fluid used for irrigation or as distention media during MIS and computer-assisted procedures
- ✓ Precautions should be taken to mitigate the risk for injury associated with energy-generating devices during MIS
- ✓ The perioperative team should identify potential risks for injury and complications associated with computer-assisted procedures and should implement safe practices
- ✓ The health care organization should determine the requirements for the design and operation of the hybrid OR for surgical or invasive procedures
- ✓ The health care organization should identify risks for injury and complications associated with intraoperative MRI procedures and should establish safe practices regardless of magnet format or field strength
- ✓ Perioperative personnel should receive education and complete competency verification activities in the perioperative nursing care of patients who undergo MIS and computer-assisted procedures
- ✓ Policies and procedures for MIS and computer-assisted procedures should be developed, reviewed periodically, revised as necessary, and readily available

Patient Care

Guideline for Care of the Patient Receiving Moderate Sedation

The guideline purpose is to provide guidance for determining the scope of nursing practice related to administration of moderate sedation, patient selection criteria, pre-sedation patient assessment, intraoperative sedation assessment, staffing, monitoring, medication administration, and post operative discharge criteria. (AORN, 2017).

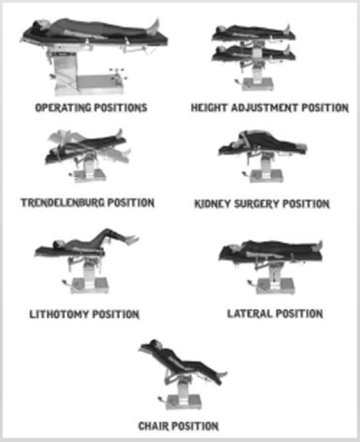
Each state board of nursing regulates which medications are within the scope of practice for non-anesthesia providers to administer.

The American Society of Anesthesiologists (ASA) joint statement with The American Association of Nurse Anesthetists states that only persons trained in the administration of general anesthesia may administer propofol, thiopental, or etomidate.

Patient Care

Guideline for Positioning the Patient

- ✓ Personnel who purchase positioning equipment should make decisions based on the health care organization's patient population, current research findings, and the equipment design safety features required to minimize risks to patients and personnel
- ✓ During the planning phase of patient care, the perioperative RN should anticipate the positioning equipment needed for the specific operative or invasive procedures
- ✓ Positioning and transporting equipment should be periodically inspected and maintained in properly functioning condition
- ✓ During the preoperative assessment, the perioperative RN should identify unique patient considerations that require additional precautions for procedure-specific positioning
- ✓ Perioperative personnel should use proper body mechanics when transporting, moving, lifting, or positioning patients



Patient Care

Guideline for Positioning the Patient

- ✓ Potential hazards associated with patient transport and transfer activities should be identified, and safe practices should be established
- ✓ Positioning equipment should be used in a safe manner and according to the manufacturers' written instructions
- ✓ The perioperative RN should actively participate in safely positioning the patient under the direction of and in collaboration with the surgeon and anesthesia provider
- ✓ After positioning the patient, the perioperative RN should assess the patient's body alignment, tissue perfusion, and skin integrity
- ✓ The perioperative RN should collaborate with the post operative caregiver to identify patient injury due to intraoperative positioning

Competency

- ✓ Perioperative personnel should receive initial education, competency verification, and updated information on patient positioning, new positioning equipment and procedures, and ergonomic safety

Documentation

- ✓ Patient care and use of positioning devices should be documented on the intraoperative record by the RN circulator

Policies and Procedures

- ✓ Policies and procedures related to positioning should be developed, reviewed annually, revised as necessary, and be readily available

Quality

- ✓ A quality management program should be in place to evaluate the outcomes of patient positioning practices and improve patient safety

Patient Care

Transfer of Patient Care Information

- ✓ Standardization of transfer of patient information processes improves accuracy, reliability, and quality of information.
- ✓ The process for transferring patient information should include verbal and written components in a standardized format.

Sterilization and Disinfection

This section provides the last five AORN guidelines.

These guidelines for sterile processing personnel covering processing all types of reusable surgical equipment.

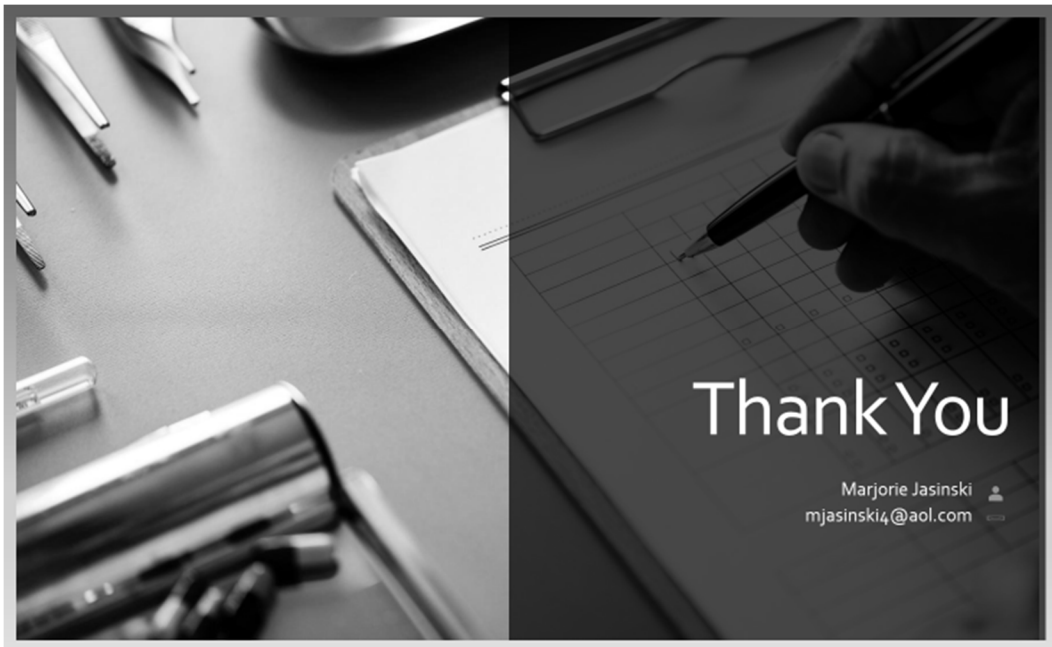
Topics covered in this section include :

- ✓ Flexible endoscopes
- ✓ High-level disinfection
- ✓ Instrument cleaning
- ✓ Packaging systems
- ✓ Sterilization

The goal of The Association of Perioperative Nurses (AORN) is to provide perioperative nurses with the information necessary to provide safe care.

REFERENCE

AORN Recommended, P.C. (2017). Perioperative standards and recommended practices for inpatient and ambulatory settings. Denver, CO; Association of Perioperative Registered Nurses, INC.



Appendix C: Continuing Education Evaluation

SA= strongly agree A= agree N/A= neither agree or disagree D=disagree SD=strongly disagree

1. This activity met the learning objectives stated:

   SA A N/A D SD

2. Objectives were related to the overall purpose/goal or the activity:

   SA A N/A D SD

3. This activity was related to perioperative continuing education needs:

   SA A N/A D SD

4. The exam for the activity was an accurate test of the knowledge gained:

   SA A N/A D SD

5. The activity was not commercially biased:

   SA A N/A D SD

6. This activity met my expectations:

   SA A N/A D SD

7. This activity will enhance professional practice:

   SA A N/A D SD

8. The format was an appropriate method for delivery of the content of this activity:

   SA A N/A D SD

9. If you have any comments regarding this activity please note:

Appendix D: Pretest and Posttest

1. AORN stands for:

    a. Association of Registered Nurses
    b. Assembly of Registered Nurses
    c. Association of Perioperative Registered Nurses
    d. Association of Operating Room Nurses

2. There are _____ guidelines.

    a. 10
    b. 15
    c. 20
    d. 32

3. Patients receiving moderate sedation will need these monitored.

    a. BP and pulse ox
    b. EKG
    c. End-tidal CO2
    d. All of the above

4. . There is a limit to how much local anesthesia can be used_____.
    a. Yes
    b. No

5. The handwashing guideline can be found in which section?

    a. Sterilization and Disinfection
    b. Patient care
    c. Patient and Worker Safety
    d. Aseptic Practice