



# PERIOPERATIVE NURSING:

## Scope and Standards of Practice

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## CONTENTS

Introduction to Perioperative Nursing: Scope and Standards of Practice	1	Standards of Practice	13
Foundational Documents of Professional Nursing	1	Standard 1. Assessment	13
Audience for this Publication	1	Standard 2. Diagnosis	14
Operating Room Nursing and the Association of Operating Room Nurses	1	Standard 3. Outcome Identification	14
Perioperative Nursing Practice and AORN	2	Standard 4. Planning	15
Scope of Perioperative Nursing Practice	3	Standard 5. Implementation	15
Definition of Perioperative Registered Nurse	3	Standard 5A. Coordination of Care	16
Evidence-Based Practice	3	Standard 5B. Health Teaching – Health Promotion	16
Patient Advocacy	3	Standard 6. Evaluation	16
Current Trends and Issues Impacting Perioperative Nursing	4	Standards of Professional Performance	17
Perioperative Patient Focused Model	6	Standard 7. Ethics	17
Operating Room Defined	7	Standard 8. Advocacy	18
Characteristics of Perioperative Nursing Practice	7	Standard 9. Respectful and Equitable Practice	18
Roles, Education, and Practice Settings for Perioperative Nursing Practice	8	Standard 10. Communication	19
Professional Education and Training for All Perioperative Nursing Roles	8	Standard 11. Collaboration	19
Registered Nurse Circulator	8	Standard 12. Leadership	20
Surgical Scrub Person	8	Standard 13. Education	20
Moderate Sedation Registered Nurse	8	Standard 14. Scholarly Inquiry	21
Registered Nurse First Assistant (RNFA)	9	Standard 15. Quality of Practice	21
Graduate-Prepared Registered Nurse	9	Standard 16. Professional Practice Evaluation	22
Perioperative Advanced Practice Registered Nurse	9	Standard 17. Resource Utilization	22
Certification of Perioperative Nurses	10	Standard 18. Environmental Health	23
Ethics in Perioperative Nursing Practice	10	Glossary	25
Application of the Nine Provision of the Code of Ethics for Nurses with Interpretive Statements	10	References	29
Future Considerations for Perioperative Nurses	11	Resources	30
The Impact of Technology	12		

# Introduction to Perioperative Nursing: Scope and Standards of Practice

## FOUNDATIONAL DOCUMENTS OF PROFESSIONAL NURSING

Registered nurses (RNs) practicing in the United States have three professional resources that inform the thinking and decision making that guides their practice:

- **Code of Ethics for Nurses with Interpretive Statements**<sup>1</sup> lists the succinct explications that establish the ethical framework for RNs across all roles, levels, and settings.
- **Nursing's Social Policy Statement: The Essence of the Profession**<sup>2</sup> conceptualizes nursing practice, describes the social context of nursing, and provides the definition of nursing.
- **Nursing: Scope and Standards of Practice, 4th edition**<sup>3</sup> outlines the expectations of the professional role of the RN, includes the scope of practice statement for nursing, and identifies the Standards of Professional Nursing Practice and their accompanying competencies.

*Perioperative Nursing: Scope and Standards of Practice* builds on these professional resources, describes the scope of perioperative nursing practice, and identifies the specialty's Standards of Practice and Standards of Professional Performance and accompanying competencies.

*The American Nurses Association has approved the Perioperative Nursing Scope of Practice as defined herein. Approval is valid for five (5) years from the first date of publication of this document or until a new scope of practice has been approved, whichever occurs first.*

*The American Nurses Association has acknowledged the Perioperative Nursing Standards of Practice, as set forth herein. Acknowledgment is valid for five (5) years from the first date of publication of this document or until new standards of practice have been acknowledged, whichever occurs first.*

## AUDIENCE FOR THIS PUBLICATION

Registered nurses in all settings where invasive procedures are performed are the primary audience for this professional resource. Legislators, regulators, legal counsel, and members of the judiciary system will also find this document to be a valuable resource. Regulatory agencies, interprofessional colleagues, nurse administrators, and health care organization chief executive officers will find this to be an important reference. In addition, patients, families, communities, and nurse educators can use this document to understand what constitutes this specialty nursing practice and its members: perioperative RNs, advanced practice RNs (APRNs), and RN first assistants (RNFAs).

## Operating Room Nursing and the Association of Operating Room Nurses

In 1889, William H. Welch, pathologist; William S. Halsted, surgeon; and Sir William Osler, internal medicine physician, established Johns Hopkins Medical

School in Baltimore, Maryland, to train physicians and nurses. Operating room nursing was identified as an area of specialization and thus became nursing's first specialty.<sup>4</sup> Soon after the turn of the century, several factors radically changed the role and the identity of the surgical nurse. Advances in anesthesia made it possible to extend operating time and reduce surgical mortality. Due to the increase in surgical procedures, a graduate nurse was placed in charge of the surgical amphitheaters and student nurses began to assist regularly with surgeries and etherizing.<sup>5</sup>

In January 1949, 17 operating room supervisors from New York City identified the need for an organization to meet routinely to pool knowledge and exchange ideas on their area of specialization. The result of this unprecedented independent nursing meeting was the Association of Operating Room Nurses (AORN).<sup>5</sup> The primary aims of the association were<sup>5</sup>:

1. To encourage operating room nurses in other parts of the country to form similar groups
2. To pool and share nursing knowledge and technology
3. To provide the surgical patient with optimal care through a broad educational program
4. To make a body of knowledge available to operating room nurses
5. To motivate experienced operating room nurses to share their expertise with others
6. To be an association for the benefit of all professional operating room nurses

In 1957, AORN became an independent national organization.<sup>5</sup> The development of operating room nursing as a specialty is synonymous with the growth of AORN.

In 1978, the AORN House of Delegates adopted a definition of operating room nursing in the Statement of the Perioperative Role:

*The perioperative role for the operating room nurse consists of nursing activities performed by the professional operating room nurse during the preoperative, intraoperative, and postoperative phases of the patient's surgical experience. Operating room nurses assume the perioperative role at a beginning level dependent on their expertise and competency to practice. As they gain knowledge and skills, they progress on a continuum to an advanced level of practice.<sup>5</sup>*

As a result of accepting this definition, operating room nurses became the first nurses to define their nursing specialty's role.<sup>6</sup>

In 1985, the term perioperative role was determined to be too restrictive as it addressed the individual practitioner rather than the scope of nursing practice in the operating room. The term perioperative nursing practice was determined to be more descriptive, and the AORN House of Delegates adopted a revised statement:

*The registered nurse in the operating room is responsible for providing nursing care to surgical patients. Perioperative is used as an encompassing term to incorporate the three phases of the surgical patient's experience. This includes the preoperative, intraoperative, and postoperative periods. Practice refers to expected behavior*

*patterns and technical activities performed during the preoperative, intraoperative, and postoperative phases.*

*Perioperative nursing practice is flexible and diverse and includes a variety of nursing roles that incorporate both behavioral and technical components of professional nursing. The scope of practice for each individual perioperative nurse may include, but is not limited to, roles such as scrub person, circulator, manager, administrator, educator, researcher and first assistant. The perioperative nurse delivers care using the nursing process as reflected in the Standards of Perioperative Nursing Practice in a manner that is cost effective without compromising the quality of care.<sup>7</sup>*

The name of the association was subsequently changed to the Association of periOperative Registered Nurses (AORN) in 1999.

AORN is a nonprofit, national and international, professional membership association of perioperative registered nurses and associates whose mission is to promote safety and optimal outcomes for patients undergoing operative and other invasive procedures by providing practice support and professional development opportunities to the perioperative nurse. This is accomplished through collaboration with professional and regulatory organizations, industry leaders, and other health care partners who support the mission.

*Perioperative Nursing: Scope and Standards of Practice* provides a mechanism to delineate the responsibilities of RNs engaged in practice in the perioperative setting. These Standards serve as the basis for quality monitoring and evaluation systems; databases; regulatory systems; the development and evaluation of nursing service delivery systems and organizational structures; certification activities; job descriptions and performance appraisals; agency policies, procedures, and protocols; and educational offerings for lifelong learning activities.

## Perioperative Nursing Practice and AORN

AORN's first *Standards of Nursing Practice: OR* were developed with the American Nurses Association (ANA) Division of Medical Surgical Practice and printed in 1975. In addition, AORN began publishing Recommended Practices focused on the technical aspects of perioperative nursing. Subsequently, AORN developed a variety of educational programs and activities to assist perioperative RNs in using the standards to evaluate their clinical practice. The Standards were revised after data were collected from practicing perioperative registered nurses to determine the Standards' applicability and usefulness. The resulting revision, titled *Standards of Perioperative Nursing Practice*, was published in 1981. These Standards were augmented in 1982, 1985, and 2004. In 2009, the Standards were consolidated into one document, *Standards of Perioperative Nursing*.

In 2012, AORN shifted its focus from developing Recommended Practices to developing evidence-based guidelines. The AORN nursing practice team members, the lead authors of the Recommended Practices documents, began using the Oncology Nursing Society's Evidence Based Practice Model and the Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines to evaluate

the quality of the available evidence. After a period, the nursing practice team, in consultation with evidence review experts in the field, created AORN's Evidence Based Practice Model to use for rating evidence that is specifically related to the perioperative setting.

In 2015, AORN began authoring its Recommended Practices documents in accordance with the principles set forth by the National Academy of Medicine and changed the name from *Recommended Practices* to *Guidelines for Perioperative Practice*. In 2019, AORN made changes to the AORN Evidence Rating Model that provides the framework for the evidence review on which the current Guideline recommendations are based. These changes have made it easier for perioperative team members to discern the implications for their practice and develop a clear implementation strategy.

## AORN AS A PROFESSIONAL ORGANIZATION

The Association of periOperative Registered Nurses (AORN) is the nursing specialty association, formed in 1949, that represents the interests of more than 200,000 perioperative RNs in the United States and internationally. The association provides nursing education standards and services that enable optimal outcomes for patients undergoing operative and other invasive procedures.

The *AORN Journal* is the go-to perioperative resource recognized for scholarly, evidence-based, peer-reviewed articles that convey standards of excellence and innovations in the delivery of perioperative nursing.

*Outpatient Surgery Magazine*, A Division of AORN, Inc, is the publication for decision makers in facilities where ambulatory surgery is performed. The magazine facilitates the exchange of ideas, advice, experiences, and information between surgical facility management team members. It also delivers relevant information and advice from experts, professional advisors, industry representatives, and others.

## MISSION, VISION, AND VALUES OF AORN, INC.

### Mission:

AORN defines, supports, and advocates for patient and staff safety through exemplary practice for each phase of perioperative nursing care using evidence-based guidelines, continuing education and clinical practice resources.

### Vision:

AORN will provide indispensable evidence-based resources to establish the standards of excellence for each phase of perioperative nursing care to achieve optimal outcomes for every patient, every time.

### Values:

Diversity, Equity & Inclusiveness – honoring the contributions of all individuals

Innovation – rewarding creativity, risk taking, leading edge results

Communication – respecting collaborative, open and honest dialogue

Quality – ensuring reliability, timeliness, and accountability

Achievement – supporting growth and excellence

## Scope of Perioperative Nursing Practice

Perioperative nursing is a specialty that focuses on care of patients undergoing operative or invasive procedures and the needs of the perioperative team.

The practice of perioperative nursing is dynamic and follows the patient from the preoperative assessment to the intraoperative intervention through the postoperative recovery period. Perioperative RNs provide care in a variety of clinical settings. These settings include but are not limited to operating rooms, ambulatory surgery centers, physicians' offices, cardiac catheterization suites, endoscopy suites, intervention suites, radiology departments, and obstetric surgical suites.

Perioperative RNs influence community, regulatory, and legislative activities through employment or voluntary participation at the local, state, national, or international level.

Perioperative nursing practice is based on holistic caring relationships that facilitate health and healing within the range of human experiences and encompasses the care of neonatal, pediatric, adolescent, adult, and elderly patients. Perioperative nursing practice is enhanced by interprofessional collaboration and appropriate resource use. Perioperative RNs use AORN's *Guidelines for Perioperative Practice* as a foundation for practice and specialized educational preparation.

Providing care to surgical patients requires a knowledge base that extends beyond basic nursing knowledge. It requires specialized knowledge of surgical anatomy, alterations in human physiology that occur during surgery, effects of anesthesia, operative risk factors, and prevention of injury. Perioperative nurses are experts in anticipating the needs of the patient and the surgical team by using critical thinking skills that facilitate rapid implementation of safety interventions.

Perioperative nurses work within a dynamic integrated perioperative team, which requires excellent communication and clinical skills. Communication breakdowns in the perioperative setting are a factor in events that adversely affect patients. Patient safety is a top priority for perioperative nurses, adding significant value to the perioperative team by focusing on safe, patient-centered care. Communication tools used by perioperative teams are checklists, hand-over reports, briefings, and debriefings. Perioperative nurses are experts in using these tools to promote highly reliable perioperative teams.

### DEFINITION OF PERIOPERATIVE REGISTERED NURSE

Perioperative RNs use the nursing process to develop individualized plans of care and to coordinate and deliver care to patients undergoing operative or other invasive procedures. Perioperative nurses have the requisite skills and knowledge to assess, diagnose, plan, intervene, and evaluate the outcomes of nursing interventions. In collaboration with other health care providers, perioperative RNs identify needs, establish goals, and develop a plan of care to achieve optimal outcomes with patients and their designated support person(s). Using open and honest communication, perioperative RNs address the physiological, psychological, sociocultural, and spiritual responses of patients.

The nursing process is dynamic and continual. Perioperative nurses, following the nursing process, provide care that is age appropriate, ethnically, and culturally sensitive, and focused on maintaining a safe perioperative environment. In addition, perioperative RNs educate patients and their families, assisting them with preoperative and discharge planning and resources for community care. Perioperative RNs adopt a holistic view of their patients, including the social determinants of health that affect patients' health and outcomes.<sup>1</sup>

### EVIDENCE-BASED PRACTICE

Perioperative RNs use guidelines, knowledge, judgment, and skills based on scientific, evidence-based principles or established best practices. Perioperative RNs follow the AORN Guidelines for Perioperative Practice to guide their scope of professional responsibility. The Guidelines are evidence based and evidence rated and serve as the foundation for perioperative RN practice. Evidence-based practice is essential to improving patient care by promoting decisions based on evidence rather than on opinions, habits, or past practices of an individual health care professional.

The AORN Guidelines are based on a comprehensive, systematic review of research and non-research evidence; the individual references are appraised and scored; and the recommendations are rated according to the strength and quality of the evidence supporting each recommendation. When adhering to the AORN Guidelines for Perioperative Practice, perioperative clinicians can be confident that they are following trustworthy guidelines developed in accordance with the principles set forth by the National Academy of Science, Engineering, and Medicine (NASEM).

### PATIENT ADVOCACY

One of the critical responsibilities of perioperative nurses is serving as the patient's advocate. Perioperative patients are frequently sedated or anesthetized for their procedure and are unable to advocate for themselves. Perioperative nurses use their skills and knowledge as well as their intuition to provide a safe environment of care. **This includes rigorous attention to prevention of breaches of privacy in the open check-in/registration locations and patient and family waiting areas.** It is the individual responsibility of every perioperative nurse to speak up and address behaviors or issues that may lead to patient harm. Every patient undergoing a surgical or invasive procedure should have a perioperative RN as a circulator in the operating room, and nursing care (assessment, diagnosis, outcome identification, planning, and evaluation) should be implemented and documented by a perioperative RN.<sup>8</sup>

## CURRENT TRENDS AND ISSUES IMPACTING PERIOPERATIVE NURSING

### Workplace Safety

Perioperative RNs work in an environment where hazards to their personal safety exist, including exposure to

- bloodborne pathogens and other biohazardous material (eg, contaminated sharps),
- transmissible disease (eg, pathogens transmitted through contact, droplet, and airborne pathways),
- working hours that can lead to fatigue and its consequences (eg, physical and emotional exhaustion, personal health decline, burnout),
- incivility (eg, bullying, a work culture that is not a just culture),
- surgical smoke,
- medical gases (eg, waste anesthesia gases),
- work practices that can cause musculoskeletal disorders (eg, incorrect ergonomic practices),
- hazardous chemicals (eg, chemical sterilants, environmental disinfectants, specimen preservatives [eg, formaldehyde]),
- hazardous medications (eg, chemotherapeutic agents used in hyperthermic intraperitoneal chemotherapy procedures),
- radiation with routine use of fluoroscopy and advanced imaging in hybrid operating rooms,
- laser hazards (eg, burns, eye injury),
- electrical hazards (eg, burns, fire),
- allergens (eg, latex),
- excessive noise, and
- safety concerns related to use of new technologies (eg, training, usability, and accessibility).

### Team Communication

In 1999, the Institute of Medicine (National Academy of Medicine) report *To Err Is Human: Building a Safer Health System* stated that between 44,000 and 98,000 hospital patients die annually because of medical errors in the United States.<sup>9</sup> Since this landmark report, the health care industry has embraced the need for change. In 2018, AORN published the Guideline for Team Communication to address specific safety issues present in the perioperative setting. Seventy percent of adverse events in the surgical environment are caused by breakdowns in communication among health care providers.<sup>10</sup>

Communication tools and team training programs provide a foundation to improve communication so that information is conveyed effectively and received accurately. The surgical safety checklist is one tool that the research literature supports as improving communication in the perioperative environment.<sup>10</sup> The use of checklists in hand overs, briefings, and debriefings provides a defense against adverse events. These safety tools are used in the perioperative setting by perioperative teams to promote patient safety.

### Emergency Response

Perioperative nurses are trained to act quickly in response to a crisis. A crisis can occur at any time in the operating room when there are unintended consequences during a surgical procedure. When disasters occur in a community, such as a mass shooting, a terrorist bombing, torrential flooding, tornados, earthquakes, or hurricanes, all which have the potential to cause life threatening injuries, perioperative nurses prepare the perioperative areas to receive and treat patients with multiple wounds and injuries. The focus in these situations is assessing the needs of patients and deploying the efficient use of resources that include staff, physical space, and supplies.

During a pandemic, such as COVID-19, perioperative nurses are focused on providing essential surgery to patients with the virus while implementing appropriate precautions to create a safe environment for all the health care professionals in the perioperative environment. This includes proactive assessment of vital equipment, supplies, and medications.

Perioperative nurses serving in the military are frequently assigned to a field hospital focused on the critical functions of resuscitation, stabilization, and surgical interventions to increase survivability and evacuation of wounded military and civilian patients to an appropriate hospital.

### Telehealth and Care Delivery

Technology is changing how health care is delivered and managed. One example of this is telehealth, virtual care that allows the delivery of services over long distances with the aid of technology (eg, video conferencing, remote monitoring). Telehealth has existed for decades but is rapidly growing as a patient-centered complement to care. The COVID-19 pandemic accelerated the adoption of telehealth because of patient safety concerns related to in-person visits, the loosening of state licensing requirements and patient privacy restrictions, and reimbursement supported by payers.

Studies have shown the benefit of telehealth, especially in rural settings that do not have access to the same resources as metropolitan areas.<sup>11,12</sup> Telehealth as a replacement for in-person postoperative care appears to be safe for low-risk patients undergoing low-risk procedures.<sup>11</sup> A systematic review focused on the use of telehealth for preoperative assessment, postoperative follow up, and collaboration between surgical teams at different locations, suggests that telehealth is beneficial to both patients and providers.<sup>12</sup> As development of value-based programs continues, telehealth strategies will be used to improve cost savings and access to care. Communication and counseling to promote preoperative optimization, proactive postoperative monitoring, tracking of patient adherence to care management plans, and identification of gaps in care are some responsibilities perioperative nurses may implement to prevent readmissions or surgical complications and improve the outcomes of the surgical population.

While telehealth has been demonstrated to enhance patient satisfaction, promote continuity of care, decrease costs, and improve patient self-management and overall outcomes,<sup>13</sup> further research is needed to study how to promote broader implementation and address barriers. Limited access to high-

speed internet, lack of a computer or smart phone, lack of knowledge or mistrust of technology, and language or other equity barriers are just some of the hurdles to implementation. Perioperative nurses who use telehealth to provide quality care should understand the implications for and the barriers to telehealth and follow the ANA Core Principles of Connected Health.<sup>14</sup>

### ***Bullying and Violence***

Bullying and violence in the perioperative setting is an issue that can affect all perioperative nurses. The perioperative environment can demand efficient productivity, quick turnaround times, and cost containment. These stresses and other factors have fostered an environment of disrespectful behavior. Historically, there has been a tolerance and an attitude of indifference to disrespectful behaviors.

To combat this problem, the health care organization should establish a code of conduct, reporting without fear of retribution, and a zero-tolerance policy for addressing abuse and disrespectful behavior from any member of the perioperative team. Disruptive behaviors (eg, incivility, bullying, horizontal/lateral violence) interfere with interprofessional cooperation and partnerships. A collaborative workplace promotes perioperative nurse retention and sustains the effectiveness of the health care organization.

Every day, nurses are stabbed, punched, grabbed, kicked, verbally assaulted, or worse. Violence of any kind should not be tolerated.<sup>15,16</sup> AORN stands with the ANA in supporting legislation to end nurse abuse by supporting workplace violence legislation. The Workplace Violence Prevention for Health Care and Social Service Workers Act (HR 1195) is the critical next step. It will require health care and social service industry employers to develop and implement a comprehensive workplace violence prevention plan.

### ***Burnout***

Many factors can lead to burnout among perioperative nurses: bullying; working in a highly technical, high stress environment with long hours; and physical exhaustion to name a few. Burnout can lead to doubts about one's ability to impact patient care and lead to withdrawal from work and from life. Perioperative nurses work in a highly technological area and are expected to have a vast knowledge, be extraordinarily flexible and adaptive to change, and be critical thinkers. They are expected to balance providing the best care for patients with organizational demands to contain costs. Over time, these pressures can drive excellent perioperative nurses into distress and burnout. Perioperative nurses and health care organizations share responsibility for recognizing the risks of burnout and helping to reduce this risk.

### ***Diversity, Equity & Inclusion***

AORN believes that all patients have the right to receive the highest quality perioperative care in every practice setting where operative and other invasive procedures are performed. There is well-documented evidence of widespread disparities in health care between minority and non-minority patients, including differences that have been associated with poor surgical outcomes. The National Academy of Science, Engineering, and Medicine defines disparities in health

care as “racial or ethnic differences in the quality of health care that are not due to access related factors or clinical needs or preferences or appropriateness of interventions.”<sup>17, p.32</sup> While a diverse range of factors contribute to the issue – from the blatant racism of stereotyping, bias, and prejudice to clinical uncertainty on the part of health care providers<sup>17</sup> – the fact remains that these disparities significantly and negatively impact minority patients. Health care providers, institutions, professional organizations, patient representatives, and all stakeholders invested in the health and well-being of the diverse patient population must collaborate to create and maintain a systematic and fundamental change to ensure equity in all aspects of care and access without regard to a patient's skin color, ethnicity, religion, sex, gender identity, and sexual orientation.

### ***Social Determinants of Health (SDOH)***

Addressing SDOH is a critical step in achieving health equity. SDOH can be defined as the conditions in which people are born, grow, live, work, and age, including factors such as socioeconomic status, physical environment, access to healthy food, social support networks, neighborhood, employment, access to safe housing and transportation, and health coverage. Patient behaviors such as smoking, exercise, and diet as well as socioeconomic factors are a main driver of health outcomes, and social and economic factors can shape the health behaviors of an individual patient. Patients may live in areas where there is substandard housing; a lack of safety; and less access to sidewalks, playgrounds, parks, recreational areas, and libraries. These factors negatively impact patient access to healthy options and thus their health outcomes. Addressing SDOH helps to address health care disparities as they are interwoven with patient health outcomes, including surgical outcomes.<sup>17</sup>

### ***Sentinel Events***

In the 2020 sentinel event statistics released by The Joint Commission, the number-one sentinel event occurring in surgery in facilities in the United States was the unintended retention of a foreign body and the number-three event was wrong patient, wrong site, and wrong procedure surgeries.<sup>18</sup> AORN has endorsed The Joint Commission's Universal Protocol to provide guidance for prevention of wrong site, wrong procedure, and wrong person surgery.<sup>19</sup> The protocol consists of three steps: preprocedure verification, patient site marking, and a time out.

AORN's Guideline for the Prevention of Retained Surgical Items provides guidance to perioperative team members for preventing retention of surgical items in patients undergoing operative and other invasive procedures. Guidance is provided for implementing a consistent interprofessional approach to preventing retained surgical items, accounting for all items (ie, radiopaque soft goods, sharps and miscellaneous items, instruments), preventing retention of device fragments, reconciling count discrepancies, and using adjunct technologies to supplement manual count procedures.<sup>20</sup>

### ***The Shift to Ambulatory Settings***

The growth in ambulatory surgery centers (ASCs) demonstrates the important role they play in the health care landscape. Even before the COVID-19 pandemic, a shift was occurring with the movement of surgical procedures performed in the

ASC setting. Several reasons for this shift have been cited: convenient locations, shorter wait time, an intimate setting or greater sense of personalized care, lower costs for patients and payors, and advances in clinical approaches and technology that enable faster procedure and recovery times.<sup>21</sup> Because patients and payors, including the Centers for Medicare and Medicaid Services, support the shift to lower-cost health care settings, the number of service lines and the volume of procedures performed in ASCs will continue to increase. Spine, orthopedic, gynecology, and cardiology procedures are fueling the growth as more procedures are approved for the ambulatory setting in pursuit of the triple aim of quality care, affordability, and access, **now named the quadruple aim with the addition of health care provider satisfaction.**

The movement of procedures into the ASCs means ASCs are supporting more-complex cases involving less-invasive techniques that result in smaller surgical wounds and require less recovery time. These minimally invasive procedures require adjustments in surgical preparations and new technology, such as scopes and robotic arms with surgical instruments controlled by the surgeon via a computer. To ensure specialty trained and highly skilled personnel are available to assist surgeons, additional training and competency validation may be required before new procedures can be performed.

The role of the perioperative nurse in the ambulatory setting is to provide care to patients before and after surgery to ensure a safe transition back to the home environment. The rapid turnover of patients requires the ability to adapt to changing situations every day. Due to lean staffing, ASC nurses have opportunities for cross-training so they can fill in where and when needed. ASC nurses have opportunities to expand their education and skills by performing roles outside of patient care, including infection prevention, employee health, education, quality improvement, risk management, sterile processing, and materials management.

### **Critical Staffing Shortages**

The United States is projected to experience a shortage of RNs that is expected to intensify as the population ages and the need for health care grows. According to the Bureau of Labor Statistics' Employment Projections 2019-2029, the RN workforce is expected to grow from 3 million in 2019 to 3.3 million in 2029, an increase of 221,900 or 7%. The Bureau also projects 175,900 openings for RNs each year through 2029 when nurse retirements and workforce exits are factored into the number of nurses needed in the United States.<sup>22</sup>

According to the authors of "United States registered nurse workforce report card and shortage forecast: a revisit" published in the May/June 2018 issue of the *American Journal of Medical Quality*, a shortage of RNs is projected to spread across the country between 2016 and 2030.<sup>23</sup> Parallel to this nurse shortage, the demand for perioperative nurses is projected to increase. Approximately 100 million surgeries are performed in more than 6,000 hospitals and 9,000 ASCs in the United States each year.<sup>24</sup> The number of surgeries is projected to increase 7% each year through 2026 with the increased need for surgical and geriatric care.<sup>24</sup>

Compounding this issue is the average age of a perioperative nurse is older than in other specialties,<sup>25</sup> and perioperative nursing is not taught in many nursing education programs.

### **Nursing Education**

The imperative to evolve nursing education is driven by the needs of students, employers, and consumers of care. Increasingly, as care moved out of the hospital and into the community, nursing education no longer prioritized the preparation of nurses for roles confined to acute care settings, including the specialty areas of the operating room, emergency department, and critical care. In addition to this shift in the curriculum is the availability of qualified nursing faculty. A second variable is the aging of the nursing faculty workforce. This has created pressure to adapt new strategies to address growing faculty shortages fueled by both increased retirements and demand. Although faculty are delaying retirement much longer than in the past, in 2015, 31% of full-time faculty were over 60 years of age.<sup>26</sup> In 2017, 55% of all nursing programs (baccalaureate, master's, and doctoral) reported an insufficient number of faculty as one of the primary reasons for not admitting all qualified applicants.<sup>27</sup>

Responding to the challenges of a shift in the focus of nursing education, the need for surgical nurses, and the lack of faculty has resulted in the development of a robust partnership between academic institutions and the clinical community. *Periop 101: A Core Curriculum*<sup>TM28</sup> is a comprehensive, blended educational program developed by AORN's expert perioperative nurse educators and content creators based on the evidence-based Guidelines for Perioperative Practice. The faculty and preceptors are provided by the clinical facility (hospital, ASC) and collaborate formally and informally with AORN during the 6-month program. Students who complete this program are eligible to take the examination to become a certified perioperative nurse after 18 months in practice.

To meet the growing need for perioperative RNs, faculty in schools of nursing have requested a course to fill the gap in specialty education in the undergraduate curriculum. AORN responded with *Introduction to Perioperative Nursing* designed for a student at any level in the undergraduate nursing education program. This can also be incorporated as a capstone project for students in the final phase of their undergraduate nursing program.

Access to online education and new technologies such as artificial intelligence, predictive learning, and virtual reality are growing. These teaching approaches will assist in addressing limited resources, the demands to expand enrollments, and diverse student learning styles. AORN's competency-based educational tools are well positioned to meet the need for perioperative specialty education, including supporting an emerging global educational market.

### **PERIOPERATIVE PATIENT FOCUSED MODEL**

The Perioperative Patient Focused Model (Figure 1) is the conceptual framework for perioperative nursing practice and the Perioperative Nursing Data Set (PNDS). The Model illustrates the relationship between the patient, designated support person(s), and care provided by the perioperative RN. At the core of the Model, the patient and the patient's designated support person(s) provide the focus of perioperative nursing care. Concentric circles expand beyond the patient and designated support person(s), representing the perioperative nursing domains and elements.

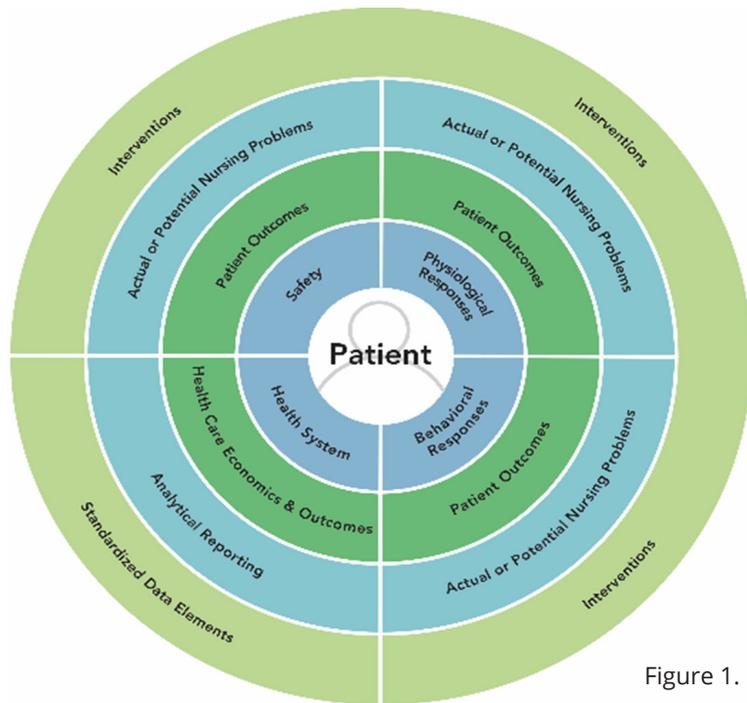


Figure 1.

### **Patient Centered**

The patient is at the center of the Model to clearly represent the focus of perioperative patient care. Regardless of practice setting, geographic location, or nature of the patient population, nothing is more important to the perioperative RN than to advocate for the patient.

### **Four Domains**

The Model is divided into four quadrants; three represent patient-centered domains:

- patient safety,
- patient physiologic responses to operative and other invasive procedures, and
- patient and designated support person(s) behavioral responses to operative and other invasive procedures.

The fourth quadrant represents the health system in which the perioperative care is delivered. The health system domain represents administrative concerns and structure elements essential to successful perioperative outcomes, including social determinants of health.

### **Outcome Focused**

The Model focuses on patient outcomes. This is important because nursing theories and models should embrace and represent all elements of the nursing process. AORN's Model represents the outcomes focus of perioperative RNs by placing outcomes immediately adjacent to the patient care domains. Perioperative RNs have a unique knowledge base that supports high-quality

patient outcomes. An individualized patient assessment guides the identification of actual or potential diagnoses/problems and selection of nursing interventions for each patient.

### **OPERATING ROOM DEFINED**

The operating room is a room within a facility or unit that is equipped for the performance of operative or other invasive procedures. Construction and design guidelines specify how the operating room must be built and maintained, especially related to temperature, humidity, and air flow. Adhering to these specifications, as well as following environmental cleaning guidelines, is important for maintaining the sterile environment and preventing infection. In addition to these requirements, all perioperative personnel should wear appropriate surgical attire.<sup>29</sup> The operating room is equipped with technology and equipment that will vary depending on the surgical specialties performed in the facility or unit. A brief list of equipment present in a normal operating room includes but is not limited to:

- the operating bed,
- the operating room overhead lights,
- the anesthesia machine,
- the anesthesia cart,
- sterile instruments,
- an electronic monitor for monitoring the patient's vital signs, and
- surgical specialty equipment.

### **CHARACTERISTICS OF PERIOPERATIVE NURSING PRACTICE**

Perioperative RNs provide care across the surgical continuum, beginning when patients are first informed that they need an operative or invasive procedure and ending when patients return to their usual roles and responsibilities. Perioperative RNs focus on patients and their designated support person(s). AORN maintains that every surgical patient deserves the care of a perioperative RN for the duration of any operative or other invasive procedure and actively promotes laws and regulations to ensure the supervisory presence of the professional RN in the perioperative setting.

Several related themes underlie the standards of perioperative nursing. Nursing care must be individualized to meet a patient's unique needs and situation. This care should be provided in the context of disease or injury prevention, health promotion, health restoration, health maintenance, or palliative care. The cultural, racial, and social determinants of health and the ethnic diversity of the patient must always be considered during provision of nursing care.

The perioperative RN respects the goals and preferences of the patient and designated support person(s) while implementing care. One of nursing's primary responsibilities is patient education; therefore, perioperative nurses should provide patients with appropriate information to make informed decisions regarding their care and treatment.

The perioperative RN's partnership with the patient and other health care providers is recognized in the Standards. The perioperative RN works with other health care providers in a coordinated manner throughout the process of caring for the patient undergoing an operative or other invasive procedure. The involvement of the patient and designated support person(s) is paramount. The degree of participation that is expected of the patient, designated support person(s), and other health care providers is determined by the clinical environment and the patient's unique situation.

## Roles, Education, and Practice Settings for Perioperative Nursing Practice

Perioperative RNs fill a variety of roles that are dynamic and continually evolving through increased education and experience to meet the changing needs of patients, society, and advances in medical technology. These roles may include but are not limited to clinical RN, RN first assistant, advanced practice RN, manager, administrator, educator, informatics nurse specialist, nurse consultant, and nurse scientist.

Perioperative RNs act in the public interest when providing the unique services society has entrusted to them. Accountability is accomplished through self-regulation, professional regulation, and legal regulation. Perioperative RNs positively influence health care services and delivery by promoting a safe environment.

### PROFESSIONAL EDUCATION AND TRAINING FOR ALL PERIOPERATIVE NURSING ROLES

The *Introduction to Perioperative Nursing* is available to schools of nursing as an elective to fill the gap in perioperative nursing specialty education in the undergraduate curriculum. AORN supports the baccalaureate degree (BSN) as the minimum requirement for entry to practice.<sup>30</sup> New graduate RNs and RNs transferring from other units to the perioperative area should participate in a nurse residency program.<sup>31</sup> This program is essential to assist in decreasing the theory-practice gap and to increase confidence, knowledge, and competence.<sup>32</sup> Nurse residency programs for perioperative RNs should include *Periop 101: A Core Curriculum*<sup>28</sup> as an essential part of the residency program curriculum. The *Periop 101* program includes didactic and clinical experience components coupled with formal preceptor education, training, and evaluation designed to prepare nurses to the perioperative specialty. The *Periop 101* curriculum includes graduate level QSEN (Quality and Safety Education for Nurses) competencies.<sup>33</sup> Including these competencies serves to prepare future perioperative RNs to acquire the attitudes, knowledge, and skills to improve the quality and safety of perioperative patient care.

Perioperative nurses assume responsibility for lifelong learning. Nurses must be self-motivated to learn. Lifelong learning is an adaptation of learning and is a process by which nurses continually seek new information, clarify the information, synthesize the information into practice, and prepare to acquire

additional new information.<sup>34</sup> Knowledge comes from many sources that can enhance evidence-based practice in nursing care delivery.

### REGISTERED NURSE CIRCULATOR

This role is performed by the perioperative RN, who does not don sterile attire, during the intraoperative phase of surgical patient care. In collaboration with the entire perioperative team, the RN circulator uses the nursing process to provide, coordinate, and document the nursing care of the patient undergoing an operative or other invasive procedure. The perioperative RN circulator supervises and evaluates the activities of other team members while simultaneously executing immediate directives and interventions in urgent or emergent situations.

### SURGICAL SCRUB PERSON

It is essential that perioperative RNs be educated and trained in the scrub role. The required training, in addition to the training required for all perioperative RNs, includes learning specialized skills such as handling instruments, care and handling of tissue, functioning around a sterile field, using aseptic technique, and anticipating steps in the surgical procedure. An in-depth knowledge of anatomy and physiology and understanding hemostasis are key in the surgical scrub role. This role is performed by an individual who handles the instruments, supplies, medications, and equipment during the surgical procedure. The scrub person understands the procedure being performed, anticipates the needs of the surgeon, and confirms requisite surgical packs, instruments, and equipment are present and operational. The scrub person has the knowledge and ability to ensure quality patient care during the operative procedure, maintains active communication with the RN circulator and other perioperative team members to ensure safe care, and is vigilant about maintenance of the sterile field.

### MODERATE SEDATION REGISTERED NURSE

This role is performed by a perioperative RN with demonstrated competency to administer moderate sedation who is trained and experienced in critical care, emergency, and the perianesthesia specialty area and is given the responsibility of administration, maintenance, and reversal of moderate sedation in the presence of and by order of the physician.<sup>35</sup> The perioperative RN must receive education and have verified competency that addresses specialized knowledge and skills related to administering moderate sedation. Nurses who are administering sedation should have no other duties during the procedure and should assure that necessary equipment is present and working properly with audible alarms prior to the procedure. The moderate sedation nurse has knowledge of and proficiency with medications and skills to assess, interpret, and intervene in the event of complications (eg, over-sedation and airway management). Moderate sedation may be administered by a competent RN or a certified registered nurse anesthetist (CRNA).

Moderate sedation administered by a CRNA does not require physician supervision nor does it require an order for sedation services. In addition, CRNAs may select or order sedation services, including services provided by moderate sedation RNs, in accordance with state law.<sup>36-38</sup>

## REGISTERED NURSE FIRST ASSISTANT (RNFA)

An expanded perioperative nursing role was developed in 1984 with responsibilities that are further refinements of perioperative nursing practice and are executed within the context of the nursing process.<sup>39</sup> These responsibilities include certain delegated medical functions that can be assumed by the RN who is qualified to practice as an RNFA.

RNFA responsibilities and accountability may vary depending on patient populations, practice environments, services provided, accessibility of human and fiscal resources, institutional policy, and state nursing regulations. The RNFA's responsibilities may include:

- preoperative patient management in collaboration with other health care providers, such as
  - » performing focused preoperative nursing assessments and
  - » communicating and collaborating with other health care providers regarding the patient's plan of care;
- intraoperative performance of surgical first assistant techniques, such as
  - » using instruments and medical devices,
  - » providing surgical site exposure,
  - » handling and/or cutting tissue,
  - » providing hemostasis,
  - » suturing, and
  - » wound management; and
- postoperative patient management in collaboration with other health care providers in the immediate postoperative period and beyond, such as
  - » participating in postoperative rounds,
  - » assisting with patient discharge planning, and
  - » identifying appropriate community resources as needed.<sup>40</sup>

The minimum qualifications to practice as an RNFA include

- certification in perioperative nursing (CNOR);
- successful completion of an RNFA program that meets the AORN standards for RN first assistant education programs; and
- compliance with all applicable statutes, regulations, and institutional policies relevant to RNFAs.<sup>40</sup>

## GRADUATE-PREPARED REGISTERED NURSE

Graduate-prepared RNs may have master's or doctoral degrees in nursing (eg, MSN, DNP, PhD) or in other fields such as business (eg, MBA), education (eg, EdD), informatics, divinity, and the sciences. They may practice in a variety of roles, including but not limited to, nurse administrator, nurse leader, nurse manager, clinical educator, policy consultant, researcher, research assistant, infection preventionist, quality improvement specialist, patient safety/risk management professional, and nurse informaticist.

## PERIOPERATIVE ADVANCED PRACTICE REGISTERED NURSE

Perioperative nursing is an additional specialized area of practice for the advanced practice registered nurse (APRN), who hold a master's degree or higher. Specialty areas of practice require additional preparation (ie, education and licensure) and privileging.<sup>32</sup> This section specifically addresses the clinical nurse specialist (CNS) and nurse practitioner (NP) in the perioperative practice area.

The perioperative APRN is a nurse who, as authorized by the applicable regulatory bodies,

- practices in the preoperative and postoperative areas;
- formulates clinical decisions in managing acute and chronic illnesses by assessing, diagnosing, and prescribing treatment modalities, including pharmacologic agents;
- promotes maximum patient functioning and wellness during performance of comprehensive health assessments;
- fosters patient advocacy and patient safety;
- uses the skills specific to the role of the APRN when diagnosing and treating the responses of the patient;
- uses *Perioperative Nursing: Scope and Standards of Practice* as a foundation for APRN practice; and
- incorporates specialized perioperative nursing knowledge and skills into the care of patients undergoing operative and other invasive procedures and of their designated support persons.

The APRN practicing in the perioperative environment as a first assistant<sup>32</sup>

- functions in an expanded perioperative APRN role;
- must comply with all statutes, regulations, and institutional policies relevant to the APRN when first assisting during surgery;
- is required, as of January 1, 2016, to acquire the knowledge and skills needed to provide safe, competent surgical first assistant services by completing a program that covers the content of the AORN Standards for Registered Nurse First Assistant Education Programs, which may be a stand-alone program or may be a portion of a graduate or postgraduate program;
- functions autonomously as part of the surgical health care team to achieve optimal patient outcomes in the preoperative and postoperative management of surgical patients and their complex responses to the surgical process;
- functions in the perioperative arena with responsibilities based on role-specific competence, patient populations, practice environments, accessibility of human and fiscal resources, and health care organization policy;
- acts intraoperatively as a first assistant at surgery only and not concurrently as a scrub person or circulator;
- functions intraoperatively in a coordinated manner with the surgeon while using instruments and medical devices, providing surgical site exposure, handling and/or cutting tissue, providing hemostasis, suturing, and wound management; and

- provides support to patients' significant others and participates in discharge planning and postoperative patient and family follow-up.

## CERTIFICATION OF PERIOPERATIVE NURSES

AORN believes that the practice of perioperative nursing requires specialized knowledge and skills that contribute to optimal patient outcomes. Obtaining perioperative nursing specialty certification from accredited credential providers is one important step to assuring patients, colleagues, and the public at large that they are receiving the highest quality perioperative nursing care. Employers should support RNs in their certification and recertification activities, encourage the display of the certified RN's credentials, and market the professional accomplishments of certified RN to the public.<sup>41</sup> The Competency & Credentialing Institute administers credentialing to perioperative RNs; the available credentials are Certified Perioperative Registered Nurse (CNOR), Certified Surgical Services Manager (CSSM), Clinical Nurse Specialist-Perioperative (CNS-CP), and Certified Ambulatory Surgery Nurse (CNAMB).<sup>42</sup> The National Assistant at Surgery Certification credentials the Registered Nurse First Assistant (CRNFA).<sup>43</sup>

Because certification in perioperative nursing verifies what an accomplished perioperative nurse should know and do in the context of daily work, all perioperative nurses are encouraged to pursue specialty certification to demonstrate their mastery of nationally recognized nursing standards and evidence-based practices. In addition, perioperative RNs who complete their certification are excellent resources to mentor future candidates in appropriate practices through the knowledge and experiences they have gained in their specialty. Creating a culture of learning and peer-to-peer support drives workplace satisfaction; confidence; and ultimately, safer patient care.

## Ethics in Perioperative Nursing Practice

Perioperative RNs learn about ethical principles and their application to their practice through *AORN's Perioperative Explanations for the ANA Code of Ethics for Nurses with Interpretive Statements*.<sup>44</sup>

Ethical decisions for the perioperative nurse are often difficult but necessary during the care of the surgical patient. Perioperative nurses need to be able to recognize and respond to ethical dilemmas. Perioperative nurses are responsible for nursing decisions that are not only clinically and technically sound but also morally appropriate and suitable for the specific problems of the particular patient being treated. The technical or medical aspects of the decision answer the question, "What can be done for this patient?" The moral component involves the patient's wishes and answers the question, "What should be done for this patient?"

Ethics, as a branch of philosophy, incorporates multiple approaches to take when dealing with or applying actions to real-life situations. Thus, each perioperative nurse may experience a situation differently, as well as address the situation and identify the ethical conflict issues, their feelings, behaviors, actions, analysis, and resolution of the situation differently. Health care delivery provided via a team format, such as by the surgical team, does not necessarily create ethical conflicts, but it may highlight the conflicts if the values of the team members emphasize

different priorities. Additionally, new roles of healthcare team members may carry expectations about how members should interact with each other and how standards of care should be met. The perioperative nurse, by virtue of the nurse-patient relationship, has an obligation to provide safe, professional, and ethical patient care. It is important that nurses know how to manage ethical decisions appropriately so that patients' beliefs can be honored without compromising the nurse's own moral conscience. Ethical practice is thus a critical aspect of nursing care, and the development of ethical competence is paramount for present and future nursing practice.

## APPLICATION OF THE NINE PROVISION OF THE CODE OF ETHICS FOR NURSES WITH INTERPRETIVE STATEMENTS

The *Code of Ethics for Nurses with Interpretive Statements* serves as the moral compass for all nurses. The following discussion provides examples of the unique application of the provisions in perioperative nursing.

**Provision 1** – The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person. *Respects and complies with the patient's wishes and individual choices (eg, advance directives, end-of-life choices, refusal of blood or blood products). For example, the perioperative nurse protects the patient's dignity by exposing only the part of the body that is the subject of the surgical procedure.*

**Provision 2** – The nurse's primary commitment is to the patient, whether an individual, family, group, community, or population. *Respects the patient's decision to choose or refuse care or interventions, and advocates for the patient's decision if the patient is unable to speak for themself. For example, the perioperative nurse collaborates with the patient regarding health care whenever possible and is respectful of the patient's autonomous decision for surgical intervention.*

**Provision 3** – The nurse promotes, advocates for, and protects the rights, health, and safety of the patient. *Maintains confidentiality of patient information within scope of practice (eg, does not post the patient's name or identifiers in areas where such information is visible to others who should not have such access). For example, the perioperative nurse discusses details of a patient's surgical procedure only with those directly involved in caring for that patient.*

**Provision 4** – The nurse has authority, accountability, and responsibility for nursing practice; makes decisions; and acts consistently with the obligation to promote health and provide optimal, holistic care. *Practices according to the ANA Code of Ethics for Nurses with Interpretive Statements, AORN's Guidelines for Perioperative Practice, and the health care organization's policies and procedures. For example, the perioperative nurse seeks out new knowledge affecting practice (eg, new procedures, technology, medications, guidelines, laws, and regulations).*

**Provision 5** – The nurse owes the same duties to self as to others, including the responsibility to promote health and safety, preserve wholeness of character and integrity, maintain competence, and continue personal and professional growth. *Helps peers to be assertive and emotionally healthy. This includes requesting education and/or emotional or spiritual support as needed, including the use of employee assistance programs or other counseling services. For example, the*

*perioperative nurse understands the effects of fatigue associated with extended shifts (ie, longer than 12 hours) and working on call; prioritizes rest and self-care between shifts.*

**Provision 6** – The nurse, through individual and collective effort, establishes, maintains, and improves the ethical environment of the work setting and conditions of employment that are conducive to safe, quality health care. *Follows processes for addressing unsafe practice and unsafe conditions and advises the appropriate personnel in the practice environment. For example, the perioperative nurse promotes a perioperative practice environment that is intolerant of harassment, abuse, and incivility.*

**Provision 7** – The nurse, in all roles and settings, advances the profession through research and scholarly inquiry, professional standards development, and the generation of both nursing and health policy. *Fosters an environment of intellectual curiosity, uses research findings to support and improve clinical practice. For example, the perioperative nurse seeks out and uses research findings to support and improve perioperative patient outcomes.*

**Provision 8** – The nurse collaborates with other health professionals and the public to protect human rights, promote health diplomacy, and reduce health disparities. *Educates elected officials and other personnel in governmental organizations about the impact of the perioperative RN and the perioperative environment. For example, the perioperative nurse recognizes groups in the community affected by health care disparity and takes action to provide outreach to those communities (eg, provide services and education in health fairs, wellness classes, and vaccination clinics; advocates for health access and equity).*

**Provision 9** – The profession of nursing, collectively through its professional organizations, must articulate nursing values, maintain the integrity of the profession, and integrate principles of social justice into nursing and health policy. *Practices perioperative nursing that incorporates AORN's Guidelines for Perioperative Practice. For example, the perioperative nurse promotes interaction with regulatory agencies (eg, US Food and Drug Administration, Centers for Medicare & Medicaid Services) by articulating perioperative expertise that advances safe, quality care of the patient undergoing surgery or other invasive procedures.*

## Future Considerations for Perioperative Nurses

The primary responsibility of the perioperative nurse is to provide evidenced-based care to the patient undergoing an invasive procedure regardless of the setting. The role of the perioperative nurse will continue to evolve as increasing numbers of procedures move to the ambulatory setting. Challenges related to the nature of patient acuity, advances in technology, and increasing procedural complexity will require perioperative RNs to adapt to the clinical practice environment and also to changes in related regulatory requirements. Additionally, research and innovative technologies identify new opportunities to treat patients by minimizing the invasiveness of surgical procedures, simplifying procedures, and reducing the disruption to the patient's life during the perioperative period.

The Perioperative Nursing Data Set (PNDS) is the standardized nursing terminology that perioperative nurses should use in planning, implementing, and evaluating care. The PNDS describes patient care interventions and actions that can be implemented to protect the patient, promote positive patient outcomes, and support quality and performance improvement initiatives. The PNDS is updated by AORN following the ANA recommendations on maintaining a standardized nursing language. These updates are provided to healthcare organizations and vendors who utilize the PNDS.

The Enhanced Recovery After Surgery (ERAS®) programs will be expanded to include all surgical specialties and will be managed by perioperative nurse practitioners who will broaden their responsibilities to the full extent of their license and training. ERAS was introduced in 1997 by a group of general surgeons in northern Europe who were researching ways to decrease the incidence of postoperative ileus in patients undergoing open colorectal procedures.<sup>45</sup> Central to the ERAS concept is to decrease the body's reaction to surgical stress by focusing on optimal nutrition, pain control without the use of opioids, and letting patients resume normal eating as soon as possible.<sup>45</sup> The group of surgeons interested in this concept grew over time and more research was conducted. In 2010, the ERAS Society was formed and registered in Sweden as an international non-profit medical academic society with members representing many professions that impact surgical care.<sup>45</sup>

The ERAS Society provides guidance for many surgical specialties and conducts an annual international congress as well as its ERAS Implementation Program.<sup>45</sup> ERAS is not a single protocol that is rigid in nature but a way of working with an interdisciplinary team that is ready to make changes as evidence evolves.<sup>45</sup> An ERAS protocol incorporates strategies in all areas of perioperative care, and all team members should be familiar with the ERAS protocols in individual facilities as well as their role in protocol implementation. With many providers involved in patient care, a coordinated approach should be used to make sure that all elements of an ERAS program are adopted.<sup>46</sup> If an ERAS program is to be successfully implemented, a change framework should be adopted that includes assessing the current status, developing the ERAS protocol based on evidence, using change management theory to support implementation, and determining feedback and performance measures.<sup>46</sup>

ERAS protocols for patients undergoing total joint replacement procedures can improve patient outcomes and patient satisfaction with their care. ERAS programs should be monitored, audited, and continually improved.<sup>47</sup> Audit processes that review practitioner practices and data collection are important to improve compliance with the protocols.<sup>47</sup> Four main areas should be considered for process improvement:

- measure outcomes related to clinical practice such as length of stay, complication rates, and readmission rates;
- measure non-clinical outcomes such as finances and patient experience;
- maintain the ERAS program as an ever-changing process based on current research; and
- modify the ERAS program as needed.

Technology will continue to evolve with the advancement of artificial intelligence, machine learning, and precision medicine that will focus on determining the treatment that will work best for specific patients. This will be accomplished by using diagnostic imaging and genetic and other molecular information to reduce morbidity and mortality rates. The impact of innovative methods of treating the surgical patient will further increase the complexity of the environment and require significant collaboration among all members of the surgical team. The perioperative nurse will continue to be the coordinator of the interprofessional team and will ensure that patient-centered care is provided across the continuum as the technology advances. These advances will create a heightened awareness of how preoperative psychological wellness affects the recovery period.

Advances in technology will require perioperative nurses to update their practice and to be mindful of how technology improves or interferes with the delivery of safe care in the perioperative setting. The increased technical skills perioperative nurses will need to acquire will include the ability to problem solve and resolve minor operational issues with the technology. The foundation of perioperative nursing will always require a blend of holistic nursing driven by the ethics of care with the use of technology. Technological proficiency will never take precedence over the art and science of perioperative nursing.

Perioperative nurses have the responsibility and accountability to seek to inform and contribute to the development of new and innovative technologies that enhance the delivery of safe and effective care to the surgical patient through collaboration with medical device companies.

## THE IMPACT OF TECHNOLOGY

The operating room is a highly technological environment that presents many risks to patient and staff safety and well-being. The advances that technology brings to care of the surgical patient include efficiency, effectiveness of outcomes, and potential cost savings, but patients must be included in decisions about the technology that will be used in their care. It is imperative that perioperative nurses develop a personalized plan of care that includes dignified and empathetic care as critical elements to ensuring that the implementation and use of technology aligns with nursing and patient values.<sup>48</sup> A fundamental concept of perioperative nursing is serving as the patients' advocate during times when patients are not able to protect themselves. Technology is inseparable from surgical patient care, and it is essential that training and education programs for perioperative nurses emphasize advocacy as fundamental to the care of the surgical patient.

AORN published the Guideline for Safe Patient Handling and Movement in 2018.<sup>49</sup> This guideline was based on a systematic review and found compelling evidence that perioperative nurses and other team members are faced with a wide array of occupational hazards in the perioperative setting that place them at risk for injury.<sup>49</sup> Most injuries involve the musculoskeletal system, with typical injuries being to the lower back, shoulder, and upper extremities.<sup>49</sup> These injuries are most often a result of overexertion, repetitive movement, manual lifting, pulling, and pushing. Other physical stressors that contribute to injury include forceful exertions, repetitive motions, awkward postures, static postures, prolonged standing, long cumulative work hours (eg, overtime, consecutive shifts), moving

or lifting patients and equipment, carrying heavy instruments and equipment, and overexertion.<sup>49</sup> These physical stressors describe typical requirements of working in the perioperative setting.

Additionally, the perioperative setting poses unique challenges related to the provision of patient care and completion of procedure-related tasks. This highly technical environment is equipment intensive and necessitates the lifting and moving of heavy supplies and equipment during the perioperative team member's work shift.<sup>49</sup> Many of the patients undergoing surgical or other invasive procedures are completely or partially dependent on caregivers because of general or regional anesthesia or sedation.<sup>49</sup> Patients who are unconscious cannot move, sense discomfort, or feel pain, and they must be protected from injury. This may require perioperative team members to manually lift the patient or the patient's extremities several times during a procedure, putting them at risk for personal injury.

In 2013, the ANA published *Safe Patient Handling and Mobility: Interprofessional National Standards Across the Care Continuum*<sup>50</sup> and established eight core standards related to safe patient handling:

1. Establish a Culture of Safety
2. Implement and Sustain a Safe Patient Handling and Mobility (SPHM) Program
3. Incorporate Ergonomic Design Principles to Provide a Safe Environment of Care
4. Select, Install, and Maintain SPHM Technology
5. Establish a System for Education, Training, and Maintaining Competence
6. Integrate Patient-Centered SPHM Assessment, Plan of Care, and Use of SPHM Technology
7. Include SPHM in Reasonable Accommodation and Post-Injury Return to Work
8. Establish a Comprehensive Evaluation System

AORN's Guideline for Safe Patient Handling and Movement<sup>49</sup> address all eight standards as they apply to the perioperative environment and should be reviewed in its entirety.

Current technological innovations include robotic-assisted surgery, that can decrease both operative time and postoperative recovery time. Perioperative RNs serve as members of an interdisciplinary team for planning patient care for perioperative robotic services. They determine the room configuration (eg, location of device components, OR bed, anesthesia machine) based on the scheduled procedure and needs of each patient. Perioperative RNs oversee the robotics program including the coordination of inventory management for single-use items, reprocessing of reusable items, and maintenance procedures for equipment used in these procedures including robotic systems and monitors. Perioperative RNs also ensure that necessary personnel, equipment, and supplies are available for robotic procedures through collaboration with scheduling personnel, preference lists, and review of the surgeon privileges. Perioperative RNs assess the patient for risk of positioning and pressure injuries and implement interventions that protect the patient from injury. Perioperative RNs provide guidance, support, and performance improvement feedback to the robotics team, including technical support and troubleshooting

of system malfunctions, and act as a patient advocate and maintain privacy and confidentiality of individuals and health information.

Radio-frequency identification (RFID) technologies will increasingly be used to prevent retained foreign objects, monitor the location of equipment within the facility, and identify the amount of blood loss on sponges and drapes.

Hybrid operating rooms have improved the patient's experience by incorporating real-time medical imaging during the procedure, thereby reducing the need for a second procedure.

Telemedicine allows perioperative nurses to conduct a preoperative assessment, postoperative education, and follow-up assessment with the patient via the internet. Video communication has enhanced the relationship between the nurse and the patient related to visual recognition.

Integrated medical records allow personnel to access all the information documented on a patient at any time. Big data initiatives will allow nurses to leverage clinical data from the electronic health record (EHR) to support clinical decision making, inform research, and report quality and patient safety outcomes.

Future technology developments will include machine learning where models find patterns within data and apply the patterns to new data to make predictions, for example, by constructing a model that can help predict patients at risk for surgery.<sup>51</sup> Artificial intelligence is projected to reduce the variations in surgical techniques and therefore improve the outcomes. Artificial intelligence also has the potential to identify additional training required by surgical team members. Interoperability in the perioperative environment will allow all the devices that collect data to recognize, interpret, and make the data immediately available to all members of the team who have access to the EHR.

Digital technology is an important adjunct in the care of the surgical patient. Smart sensors and wearable technology will enable remote monitoring of preoperative teaching by sending reminders about important patient activities like a preoperative shower and bowel preparation, and evaluation of post-discharge status will be integrated into the health care information system. Patient self-reporting of postoperative ambulation, heart rate, sleeping patterns, and glucose levels will be eliminated. Wearable technology will also affect the work of perioperative nurses by analyzing the physical movements of individuals and mapping the patterns of workflow to suggest changes in location of supplies and identify repetitive patterns that a robot could be programmed to do.

Nursing education will evolve with the use of immersive technology. Immersive technology uses virtual technology to simulate real perioperative scenarios and train the team in an engaging environment where they can gain the confidence and skills in managing the high profile situations that result in the most devastating outcomes, such as a fire in the operating room.

## Standards of Practice

The Standards of Perioperative Nursing are authoritative statements that describe the responsibilities for which all RNs, regardless of role, population, or specialty, are accountable and that reflect the values and priorities of the profession. The Standards focus on the process of providing nursing care and performing professional role activities. It is the perioperative RN's responsibility to meet these standards, assuming that adequate environmental working conditions and necessary resources are available to support and facilitate the nurse's attainment of these standards. It is the responsibility of health care employers to provide an appropriate environment for nursing practice.

It is beyond the scope of this document to account for all possible scenarios that the perioperative RN may encounter in practice. The nurse will need to exercise judgment based on education and experience to determine what is appropriate, pertinent, or realistic. Further direction also may be available from documents such as guidelines for care, agency standards, policies, procedures, protocols, and current evidence-based research findings. The standards are subject to change with the ever-changing health care industry and evolving perioperative nursing profession. The standards are reviewed and revised every 3 to 5 years.

### STANDARD 1. ASSESSMENT

The perioperative RN collects pertinent data and information that is relevant to the patient's health or situation and planned operative or invasive procedure.

#### *Competencies*

The perioperative RN:

- Determines data collection priorities based on the patient's condition or needs and the relationship to the proposed intervention and the expected outcome.
- Recognizes the importance of social determinants of health and patient outcomes.
- Collects pertinent data and information using systematic, comprehensive, and evidence-based techniques with empathy and consideration for the inherent dignity, worth, and unique qualities of each patient.
- Conducts a systematic and ongoing process for data collection.
- Involves the patient, designated support person(s), and health care providers in the data-collection process.
- Recognizes the patient as the authority on their own health by honoring their care preferences.
- Identifies barriers to effective communication with the patient, designated support person(s), and other health care providers.
- Reviews the results of diagnostic studies relevant to the patient's current status and planned operative or invasive procedure.
- Follows ethical, legal, and privacy requirements in the collection, maintenance, use, and dissemination of patient data and information.
- Documents relevant data in a retrievable format available to other health care providers.

### ***Additional competencies for the graduate-level prepared registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Uses advanced assessment techniques, independently or collaboratively, to gather appropriate data pertinent to patients and populations.
- Synthesizes assessment data to identify trends and improve perioperative outcomes.
- Recognizes complex physiologic responses.

### ***Additional competencies for the advanced practice registered nurse***

In addition to the competencies of the perioperative RN and the graduate-level prepared RN, the APRN:

- Performs ongoing physical examinations, selecting, ordering, and interpreting diagnostic tests.
- Initiates diagnostic studies relevant to the patient's current status and planned operative or invasive procedure.
- Interprets results of diagnostic studies relevant to the patient's current status and planned operative or invasive procedure.
- Assigns American Society of Anesthesiologists (ASA) physical status classification.

## **STANDARD 2. DIAGNOSIS**

The perioperative RN analyzes the assessment data to determine actual or potential diagnoses, problems, and issues.

### ***Competencies***

The perioperative RN:

- Identifies actual or potential diagnoses, problems, and concerns that are consistent with the assessment data.
- Sets priorities using actual or potential diagnoses, problems, and concerns based on assessment data.
- Validates actual or potential diagnoses, problems, and concerns with the patient, designated support person(s), and health care providers.
- Documents actual or potential diagnoses, problems, and concerns in a retrievable format available to other health care providers.

### ***Additional competencies for the graduate-level prepared registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Uses cumulative data to articulate diagnoses, problems, and concerns of patients and health care systems.

### ***Additional competencies for the advanced practice registered nurse***

In addition to the competencies of the perioperative RN and the graduate-level prepared RN, the APRN:

- Synthesizes assessment data using advanced knowledge and clinical judgment to formulate differential diagnoses for clinical problems and risk reduction.
- Sets priorities using differential diagnoses.

## **STANDARD 3. OUTCOME IDENTIFICATION**

The perioperative RN identifies expected outcomes for a plan that is individualized to the patient or the situation.

### ***Competencies***

The perioperative RN:

- Uses ethical principles to determine expected outcomes that are mutually formulated with the patient, designated support person(s), and other health care providers.
- Develops culturally and age-appropriate expected outcomes, based on the patient's present and potential physical capabilities and behavioral patterns.
- Defines expected outcomes that are attainable with considerations of the human and material resources available to the patient.
- Identifies measurable criteria to determine attainable outcomes.
- Sets priorities including a time estimate for attaining expected outcomes.
- Modifies expected outcomes based on the patient's status and situation.
- Communicates expected and attained outcomes to health care providers to provide direction for continuity of care.
- Assesses the actual patient outcomes compared to expected outcomes.
- Documents outcomes in a retrievable format available to other health care providers.

### ***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Acts as a resource to determine an outcome-driven plan for individual patients and patient populations.
- Synthesizes evidence and best practices to determine optimal outcomes for individual patients and patient populations.
- Differentiates outcomes that require care process interventions from those that require system-level actions.
- Defines expected outcomes that incorporate cost, clinical effectiveness, and are aligned with the outcomes identified by members of the interprofessional team.

## STANDARD 4. PLANNING

The perioperative RN develops a collaborative plan encompassing strategies to achieve expected outcomes. .

### **Competencies**

The perioperative RN:

- Uses current trends and scientific evidence in the planning process to address the identified diagnoses, problems, or concerns.
- Collaborates with the patient, designated support person(s), and other health care providers while planning care.
- Designs a plan of care that includes strategies for health promotion and restoration.
- Advocates on behalf of the patient's right to receive responsible and applicable use of interventions to avoid unwarranted or nonessential procedure(s).
- Creates a plan of care with measurable elements that supports continuity among providers.
- Develops priorities for care reflecting the signs, symptoms, and behavioral responses of patients.
- Specifies a logical sequence of interventions and implementation pathway that describes steps and milestones to attain measurable expected outcomes.
- Identifies human and material resources necessary to implement the plan of care.
- Communicates the plan of care to the patient, designated support person(s), and other health care providers.
- Documents the plan of care using standardized language in a retrievable format, available to other health care providers.
- Identifies cost and economic implications of the plan.

### **Additional competencies for the graduate-level prepared registered nurse or advanced practice registered nurse**

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Develops treatment plans while instructing the patient and designated support person(s) about the risks, benefits, and possible outcomes of the plan.
- Collaborates to develop and improve the planning process.
- Participates in the development of new nursing practices.
- Synthesizes research findings and expert clinical knowledge to expand the plan of care for individuals and patient populations.

## STANDARD 5. IMPLEMENTATION

The perioperative RN implements the identified plan.

### **Competencies**

The perioperative RN:

- Implements the ongoing plan in collaboration with the patient, designated support person(s), and other health care providers based on the patient's responses.
- Demonstrates caring behaviors to develop therapeutic relationships.
- Determines that the evidence-based nursing interventions are consistent with the plan of care.
- Verifies that nursing interventions reflect the rights and desires of the patient and designated support person(s).
- Implements nursing interventions safely and efficiently.
- Responds to situational changes.
- As an advocate for the patient, modifies the plan of care based on the patient's responses.
- Incorporates new knowledge and strategies to initiate change in nursing care practices if desired outcomes are not achieved.
- Integrates critical thinking and technology solutions to implement the nursing process to collect, measure, record, retrieve, trend, and analyze data and information to enhance nursing practice and patient outcomes.
- Documents implementation using standardized language (eg, the PNDS) in a retrievable format available to other health care providers, to promote continuity of care.

### **Additional competencies for the graduate-level prepared registered nurse**

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Integrates advanced knowledge and skills to initiate change and implement the plan.
- Employs quality principles and standards with implementation of the plan.
- Utilizes evidence with implementation of the plan.
- Works to achieve necessary organizational or system change by using theory-driven pathways.

### **Additional competencies for the advanced practice registered nurse**

In addition to the competencies of the perioperative RN and graduate-level prepared RN, the APRN:

- Uses prescriptive authority, procedures, referrals, treatments, and therapies in accordance with state and federal regulations.
- Provides advanced interpretation of conditions and rationale for the procedure.
- Performs evidence-based interventions that apply advanced nursing therapies and include medication management and clinical procedures.
- Provides clinical consultation for patients and professionals related to complex clinical cases to improve care and patient outcomes.

## **STANDARD 5A. COORDINATION OF CARE**

The perioperative RN coordinates care delivery.

### **Competencies**

The perioperative RN:

- Organizes elements of the plan throughout the perioperative experience.
- Delegates tasks and functions according to applicable laws, regulations, and standards, taking into consideration the competence of the delegatee.
- Collaborates with the patient to help manage expectations based on mutually agreed on outcomes.
- Engages the patient and designated support person(s) to bring about named goals for quality of life.
- Assists the patient and designated support person(s) with identifying options for care.
- Effectively communicates with the patient, designated support person(s), other health care providers, and community resources to achieve safe transitions in continuity of care.
- Advocates for dignified and holistic care for the patient throughout the perioperative experience.
- Documents coordination of care throughout the perioperative experience.

### **Additional competencies for the graduate-level prepared registered nurse**

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Provides leadership in the coordination of interprofessional health care for integrated delivery of health care services to achieve safe, effective, efficient, timely, patient-centered, and equitable care.

### **Additional competencies for the advanced practice registered nurse**

In addition to the competencies of the perioperative RN and graduate-level prepared RN, the APRN:

- Uses advanced knowledge to initiate new treatments or change existing treatment based on changing trends or scientific evidence.
- Synthesizes patient data and information to prescribe and provide needed community support services after discharge.
- Makes referrals to other health care professionals and community agencies.

## **STANDARD 5B. HEALTH TEACHING – HEALTH PROMOTION**

The perioperative RN employs strategies to teach and promote health and wellness.

### **Competencies**

The perioperative RN:

- Coordinates the development, implementation, and evaluation of educational programs for individual patients; designated support person(s); patient populations; and local, regional, or state communities based on identified needs.
- Presents opportunities for the patient to determine needed health care promotion, disease prevention, and self-management topics.
- Teaches modifications for activities of daily living.
- Provides information to patients to reduce high-risk behaviors.
- Advocates for healthy lifestyle choices.
- Uses health promotion and teaching strategies that are appropriate to the situation and the patient's developmental level, cognitive ability, learning needs, readiness, language preference, culture, and beliefs.
- Alters teaching strategies based on feedback from patient and social determinants of health.
- Reports information to the appropriate source regarding local, state, and national health issues that affect safety according to policy, guidelines, or regulations.

### **Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse**

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Uses advanced theoretical knowledge to organize and deliver educational programs for patients, designated support person(s), health care professionals, and the community.
- Initiates referrals promoting risk reduction and health .
- Disseminates information regarding local, state, and national health issues that affect safety.

## **STANDARD 6. EVALUATION**

The perioperative RN evaluates progress toward attainment of goals and outcomes.

### **Competencies**

The perioperative RN:

- Conducts a systematic and ongoing evaluation measuring the effectiveness of the interventions in relation to achieving identified goals and outcomes.
- Monitors the patient's progress toward achieving specified goals and outcomes in the time frame identified in the plan.

- Documents the patient's progress toward achieving specified goals and outcomes accurately and consistently using standardized language in a retrievable format.
- Revises diagnoses, specified goals, outcomes, and the plan of care, based on ongoing assessment and evaluation.
- Documents revisions in diagnoses, specified goals, outcomes, and the plan of care in a retrievable format using the PNDS.
- Involves the patient, designated support person(s), and health care providers in the evaluation process whenever possible.
- Disseminates evaluation results as appropriate to the patient and others according to federal and state laws and regulations and facility guidelines.
- Shares synthesized evaluation data that could have a potential effect on current and future health care practices for individual patients and patient populations, with patients and other stakeholders in accordance with federal and state regulations.
- Recommends policy, procedure, protocol, process, or structural changes, as appropriate, based on evaluation data.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or the APRN:

- Evaluates responses to interventions systematically.
- Revises differential diagnoses as needed in relation to the patient's progress toward attaining outcomes.
- Uses advanced knowledge of learning and change theories, human behavior, stress and coping mechanisms, crisis management, growth, and development to evaluate patient responses to care.
- Modifies the patient's plan of care, recommending additional diagnostic testing and treatments if necessary, to attain goals and outcomes.
- Synthesizes knowledge of diagnostic tests, therapeutic regimens, and the patient's responses as they relate to progress toward attaining expected goals and outcomes.

## Standards of Professional Performance

### STANDARD 7. ETHICS

The perioperative RN integrates ethics in all aspects of practice.

#### ***Competencies***

The perioperative RN:

- Practices nursing according to the Code of Ethics for Nurses with Interpretive Statements.<sup>1,44</sup>
- Acts as a patient advocate.

- Encourages patient self-advocacy.
- Endorses the understanding that the primary commitment is to the patient regardless of setting or situation.
- Seeks direction from appropriate personnel in situations where the rights of the patient may conflict with public health guidelines.
- Safeguards the privacy and confidentiality of patients, others, and their data and information within ethical, legal, and regulatory guidelines and parameters.
- Delivers nursing care treatments in a nonjudgmental and nondiscriminatory manner that is sensitive to cultural, racial, gender, and ethnic diversity.
- Delivers care in a way that preserves and protects the patient's autonomy, dignity, and human rights.
- Upholds professional and therapeutic boundaries in relationships with patients, designated support person(s), and other health care personnel.
- Formulates ethical decisions by using available resources.
- Reports illegal, incompetent, or impaired practices.
- Recognizes their own physical and psychological limitations to providing safe, competent patient care.
- Participates on ethics committees as appropriate.
- Provides independent or collaborative care that is nondiscriminatory and nonprejudicial regardless of the setting.
- Considers ethical implications of scientific advances, cost, and clinical effectiveness, as well as acceptance or satisfaction of the patient and designated support person(s).
- Demonstrates professional accountability and responsibility for nursing practice.
- Maintains competence through continued personal and professional development.
- Demonstrates commitment to self-reflection and self-care.
- Contributes to the establishment and maintenance of an ethical environment that is conducive to safe, quality health care.
- Articulates nursing values to maintain personal integrity and the integrity of the profession.
- Integrates principles of social justice into nursing and policy.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Contributes to the development of consistent policies and services that are comparable in all settings and that are within the legal and ethical scope of advanced practice.

## **STANDARD 8. ADVOCACY**

The perioperative RN demonstrates advocacy in all roles and settings.

### **Competencies**

The perioperative RN:

- Champions the voice of the patient.
- Recommends appropriate levels of care, timely and appropriate transitions, and allocation of resources to optimize outcomes.
- Promotes safe care of patients, safe work environments, and sufficient resources.
- Participates in healthcare initiatives on behalf of the patient and the facilities where surgical/invasive procedures are performed.
- Demonstrates a willingness to address persistent, pervasive systemic issues.
- Informs the political arena about the role of perioperative nurses and the vital components necessary for nurses and nursing to provide optimal care.
- Empowers all members of the healthcare team to include the patient in care decisions, including limitation of treatment and end of life decisions.
- Embraces diversity, equity, inclusivity, health promotion, and health care for individuals of diverse geographic, cultural, ethnic, racial, gender, and spiritual backgrounds during the perioperative phases of care.
- Participates in developing policies that improve care delivery and access for underserved and vulnerable populations.
- Promotes policies, regulations, and legislation at the local, state, national level to improve health care access and delivery of health care.
- Considers societal, political, economic, and cultural factors to address social determinants of health.
- Models advocacy behavior.
- Addresses the urgent need for a diverse and inclusive workforce as a strategy to improve outcomes related to the social determinants of health and inequities in the health care system.
- Advances policies, programs, and practices within the health care environment that maintain, sustain, and restore the environment and natural world.
- Contributes to professional organizations.

### **Additional competencies for the graduate-level prepared registered nurse**

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Analyzes the impact of geographic, societal, political, economic and cultural factors on healthcare disparities.
- Develops alliances with various groups to promote advocacy goals.
- Pursues resources to improve the delivery of care to the surgical patient and outcomes during all phases of perioperative care.
- Influences leaders, legislators, governmental agencies, nongovernmental organizations, and international bodies to address the social determinants of health.

### **Additional competencies for the advanced practice registered nurse**

In addition to the competencies of the perioperative RN and graduate-level prepared RN, the APRN:

- Promotes universal application of full practice authority in all surgical and invasive settings and roles in meeting the healthcare needs of diverse populations.
- Advocates for a direct reporting structure to the appropriate advanced practice nursing leadership position.
- Endorses the profession's Consensus Model for APRN Regulation: Licensure, Accreditation, Certification, & Education.

## **STANDARD 9. RESPECTFUL AND EQUITABLE PRACTICE**

The perioperative RN practices with cultural humility and inclusiveness.

### **Competencies**

The perioperative RN:

- Demonstrates respect, fairness, and compassion in actions and interactions with all patients and designated support person(s).
- Participates in lifelong learning to better understand cultural preferences, worldview, choices, and decision-making processes of diverse patients.
- Examines their own values, beliefs, and cultural heritage.
- Practices perioperative nursing while acknowledging the differences in health beliefs, practices, and communication styles.
- Recognizes that discrimination in practice can negatively affect vulnerable cultural groups.
- Uses appropriate skills and tools vetted for the culture, literacy, and language of the populations served.
- Utilizes medical interpreters and translators when necessary and preferred by the patient and/or designated support person(s).
- Acknowledges, but does not interject, personal opinions, morals, and beliefs into the assessment process.
- Respects decisions of the patient and designated support person(s) based on age, tradition, belief and family influence, and stage of assimilation.
- Advocates for policies that promote health and prevent harm among culturally diverse patients and/or designated support person(s).
- Promotes equal access to services, tests, interventions, health promotion programs, enrollment in research, education, and other opportunities in the perioperative environment and health care.
- Educates colleagues, as necessary, about cultural similarities and differences of patients and designated support person(s).

***Additional competencies for the graduate-level prepared registered nurse***

In addition to the competencies of the RN, the graduate-level prepared RN:

- Evaluates tools, instruments, and services used in the perioperative environment, for culturally diverse populations.
- Advances organizational perioperative policies, services, and practice that reflect respect, fairness, and compassion for cultural diversity and inclusion.
- Conducts research to improve perioperative services and surgical outcomes for culturally diverse patients.
- Promotes recruitment and retention strategies to acquire a diverse workforce.

***Additional competencies for the advanced practice registered nurse***

In addition to the competencies of the RN and graduate-level prepared RN, the APRN:

- Promotes shared decision-making solutions when the patient's cultural preferences may be in opposition with evidence-based practice.
- Leads interprofessional teams to accommodate the cultural and language needs of the perioperative patient.

**STANDARD 10. COMMUNICATION**

The perioperative RN communicates effectively in all areas of professional practice.

***Competencies***

The perioperative RN:

- Evaluates personal communication skills and effectiveness.
- Utilizes language translation services and/or alternative communication strategies for patients and designated support person(s) as necessary for effective communication.
- Contributes to a supportive and healthy work environment by using appropriate verbal and nonverbal communication techniques.
- Uses communication styles and methods that demonstrate caring, respect, deep listening, authenticity, and trust.
- Builds trust by being approachable, honest, and accountable.
- Models effective professional communications.
- Effectively communicates with team members and others in a respectful and courteous manner to facilitate a safe environment for patients and personnel.
- Uses conflict resolution skills to manage difficult behavior, promote positive working relationships, and advocate for patient safety.
- Exhibits continuous development of effective communication skills.
- Implements strategies to decrease distractions or interruptions.
- Implements a safety pause when a distraction or interruption occurs that could affect patient safety.
- Speaks up to address behaviors observed that may lead to patient harm.

- Communicates pertinent information relating to patient care to internal and external stakeholders as appropriate.
- Conveys accurate information.
- Uses a standardized hand-over tool, checklist, or protocol for the transfer of patient information between individuals and teams.
- Participates in the surgical team briefing.
- Participates in a time out before all operative or other invasive procedures.
- Uses a standardized debriefing process with a checklist to guide the debriefing.
- Documents data and information via standardized terminologies and processes.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Uses advanced knowledge and leadership skills to assist personnel with promoting healthy communication in the perioperative setting.

**STANDARD 11. COLLABORATION**

The perioperative RN collaborates with the patient and other key stakeholders.

***Competencies***

The perioperative RN:

- Clearly defines the perioperative nurse's role and responsibilities within the interprofessional team.
- Demonstrates dignity, respect, accountability and flexibility when interacting with others and while giving and receiving feedback.
- Includes the patient and designated support person(s) and health care team members, as appropriate, in decision making when providing perioperative nursing care.
- Partners with all stakeholders to devise, execute, and appraise a comprehensive plan.
- Uses the unique and complementary abilities of all members of the team to optimize attainment of desired outcomes.
- Promotes engagement through consensus building and conflict management.
- Uses effective group dynamics and strategies to enhance team performance.
- Provides continuity of care when implementing referrals.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Demonstrates a leadership role in interprofessional collaboration.

- Collaborates to prevent and reduce the incidence of surgical site infections, health care–associated infections, and other adverse events experienced by surgical patients.
- Serves as a resource for perioperative personnel, surgeons, ancillary departments, and community groups requiring advanced nursing expertise.
- Fosters a collaborative environment that values each provider’s contribution to comprehensive health care.
- Acts in partnership with appropriate health care providers to initiate new treatments or change existing treatments to promote positive outcomes.

## **STANDARD 12. LEADERSHIP**

The perioperative RN leads within the profession and practice setting.

### ***Competencies***

The perioperative RN:

- Contributes to an environment that supports and maintains respect, trust, and dignity.
- Supervises peers, colleagues, assistive health personnel, as assigned and appropriate.
- Holds self and team members accountable to the patient, the organization, and other internal and external stakeholders.
- Encourages innovation in practice and role performance to attain personal and professional plans, goals, and vision.
- Cultivates a healthy work environment and culture that embraces life-long learning.
- Advocates for a culture of safety for patients and personnel in the workplace.
- Actively participates in decisions regarding organizational operations.
- Participates in ongoing quality improvement workplace activities as appropriate to their position, education, and practice environment.
- Enhances perioperative nursing through involvement with professional organizations.
- Participates in legislative and policy-making activities that influence perioperative care.
- Mentors colleagues for the advancement of nursing practice and the profession to enhance safe, quality health care.

### ***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Uses advanced knowledge to act at the organizational level and beyond to promote change.
- Promotes interprofessional cooperation and collaboration to implement outcome-based patient care programs to meet the needs of individual

patients; designated support person(s); patient populations; or local, regional, or state communities.

- Uses advanced team building, negotiation, and conflict resolution skills to promote teamwork to build partnerships within and across health care systems.
- Initiates legislative and policy-making activities that influence perioperative care.
- Facilitates personnel member access to and compliance with current local, state, and federal regulations; professional standards; and accreditation guidelines.
- Advances the profession through writing, publishing, and presenting pertinent information to individuals and groups of lay and professional audiences.
- Models expert practice to interprofessional team members and patients.
- Mentors colleagues in the acquisition of clinical knowledge, skills, abilities, and judgment.

## **STANDARD 13. EDUCATION**

The perioperative RN seeks knowledge and competence that reflect current nursing practice and promotes futuristic thinking.

### ***Competencies***

The perioperative RN:

- Completes a perioperative RN residency program to assist in decreasing the theory-practice gap and increasing confidence, knowledge, and competence.
- Seeks experiences to maintain skills and competencies necessary to practice perioperative nursing.
- Commits to lifelong learning by participating in ongoing educational activities relevant to professional issues and trends in perioperative nursing.
- Mentors nurses in the perioperative environment for successful orientation and continued professional development.
- Engages in formal or informal dialogues to address issues in perioperative nursing practice.
- Identifies adaptations needed in the delivery of perioperative education based on feedback from patients and designated support person(s).
- Develops peer education that emphasizes identification and use of culturally appropriate patient outcome measures.
- Maintains records and documents to support competence in perioperative nursing and lifelong learning.
- Shares knowledge and skills as a role model and mentor.
- Supports colleagues’ professional development.
- Strives to achieve certification in perioperative nursing.
- Incorporates the QSEN competencies in nursing practice.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or the APRN:

- Develops evidence-based guidelines to influence policy, change practice, and support professional development of colleagues.
- Acts as a preceptor for advanced practice registered nurses.
- Incorporates current research, national guidelines, standards, and evidence-based practices to develop advanced clinical knowledge and augment performance in perioperative nursing.
- Maintains educational requirements necessary for advanced certification and licensure to practice.

**STANDARD 14. SCHOLARLY INQUIRY**

The perioperative RN integrates scholarship, evidence and research findings into practice.

***Competencies***

The perioperative RN:

- Uses the most appropriate evidence-based research available to guide practice, including AORN's Guidelines for Perioperative Practice.
- Initiates change using evidence-based research to develop policies and procedures or influence perioperative nursing practice.
- Supports nursing practice changes based on evidence-based research.
- Seeks new knowledge that is evidence-based through print, web-based, and other sources.
- Participates in the establishment of evidence-based practice through research.
- Promotes ethical principles of research in practice and the health care setting.
- Identifies questions in the healthcare setting and practice that can be answered by nursing research.
- Participates in the conduct of research.
- Evaluates nursing research for utilization in perioperative practice.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Aggregates data to analyze care decisions, patient responses, and health outcomes for potential research projects.
- Synthesizes current and emerging research findings that contribute to positive patient outcomes and can be incorporated into advanced practice decisions.
- Performs a literature review and critical appraisal of findings to advocate for analysis or review of system-wide clinical practices.

- Conducts research to contribute to nursing knowledge and evidence-based practice.
- Disseminates research findings through writing, publishing, and presenting to influence general and advanced nursing practice.
- Pursues funding for perioperative nursing research.
- Promotes a climate of collaborative research and clinical inquiry.
- Encourages other nurses to develop research skills.

**STANDARD 15. QUALITY OF PRACTICE**

The perioperative RN contributes to quality nursing practice.

***Competencies***

The perioperative RN:

- Ensures that nursing practice is safe, effective, efficient, equitable, timely, and patient centered.
- Incorporates evidence into nursing practice to improve outcomes.
- Uses creativity and innovation to enhance nursing care.
- Recommends strategies to improve nursing care quality.
- Collects data to monitor the quality of nursing practice.
- Contributes to efforts to improve health care efficiency.
- Provides critical review and evaluation of policies, procedures, and guidelines to improve the quality of health care.
- Engages in formal and informal peer review processes of the interprofessional team.
- Participates in quality improvement initiatives.
- Collaborates with the interprofessional team to implement quality improvement plans and interventions.
- Documents nursing practice in a manner that supports quality and performance improvement initiatives.
- Recognizes the value of professional and specialty certification.

***Additional competencies for the graduate-level prepared registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN:

- Uses data in system-level decision making.
- Analyzes trends in health care quality data, including examination of cultural influences and factors.
- Designs innovations to improve outcomes.
- Engages in development, implementation, evaluation, and revision of policies, procedures, and guidelines to improve health care quality.

- Designs quality improvement studies, research, initiatives, and programs to improve health outcomes in diverse settings.
- Provides leadership in the design and implementation of quality improvement initiatives.
- Promotes a practice environment that supports evidence-based health care.
- Contributes to nursing and interprofessional knowledge through scientific inquiry.
- Incorporates available benchmarks to evaluate practice at the individual, departmental, or organizational level.
- Influences the organizational system to improve outcomes.
- Promotes compliance with internal and external regulatory requirements.
- Encourages professional or specialty certification.

***Additional competencies for the advanced practice registered nurse***

In addition to the competencies of the perioperative RN and graduate-level prepared RN, the APRN:

- Engages in comparison evaluations of the effectiveness and efficacy of diagnostic tests, clinical procedures and therapies, and treatment plans, in partnership with health care consumers, to optimize health and health care quality.
- Applies knowledge obtained from advanced preparation, as well as current research and evidence-based information, to clinical decision-making at the point of care to achieve optimal health outcomes.

**STANDARD 16. PROFESSIONAL PRACTICE EVALUATION**

The perioperative RN evaluates one's own and others' nursing practice.

***Competencies***

The perioperative RN:

- Provides care consistent with the institution's policies and procedures.
- Practices nursing in accordance with the state board of nursing statutes, as well as the standards and guidelines of accrediting and regulatory bodies.
- Adheres to ANA standards, practice guidelines, and position statements.
- Adheres to AORN Standards of Perioperative Practice, Guidelines for Perioperative Practice, and position statements.
- Adheres to standards, evidence-based guidelines, position statements, and support documents from other nursing organizations as relevant to perioperative practice.
- Participates in an ongoing self-reflection and self-evaluation process to establish areas of strength as well as areas where professional growth would be valuable.
- Seeks evaluative input from peers, colleagues, patients, and patients' designated support person(s) regarding nursing practice.
- Participates in peer review to evaluate nursing practice of RN colleagues.

- Develops an action plan for professional development as part of an ongoing evaluation process.
- Facilitates personnel and agency compliance with current local, state, and federal regulations and standards.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Influences development of advanced practice standards and guidelines in perioperative nursing.
- Evaluates professional practice data and benchmarks to enhance their own and other's practice.

**STANDARD 17. RESOURCE UTILIZATION**

The perioperative RN utilizes appropriate resources to plan, provide, and sustain evidence-based nursing services that are safe, effective and financially responsible and used judiciously .

***Competencies***

The perioperative RN:

- Develops a personnel plan that identifies strategies for cost-effective and efficient staffing priorities without compromising perioperative patient safety.
- Assists the patient and designated support person(s) with identifying human and material resources that are available to address perioperative patient needs in making decisions about care.
- Advocates for technical advances in clinical care to increase efficiency or improve outcomes.
- Promotes access and healthy interactions between patients and health care providers by using telehealth, mobile technologies, and electronic information systems to provide perioperative patient care efficiently and safely.
- Advocates for reusing, recycling, and renewing supplies whenever appropriate in the perioperative setting.
- Conserves supplies to minimize waste and decrease costs without compromising safety or negatively affecting outcomes.
- Addresses discriminatory health care practices and the impact on resource allocation.

***Additional competencies for the graduate-level prepared registered nurse and the advanced practice registered nurse***

In addition to the competencies for the perioperative RN, the graduate-level prepared RN:

- Designs innovative solutions to use resources effectively and maintain quality.
- Provides consultation services to the organization to achieve high-quality, cost-effective outcomes for populations of patients across settings.

- Promotes systemwide communication to reduce costs by avoiding unnecessary duplication of diagnostic tests.
- Evaluates data regarding the effectiveness of care, the cost-benefit relationship of the care being provided, and patient satisfaction.
- Accepts leadership roles to initiate and direct change.
- Maintains knowledge of the organization's methods of financing the delivery of care.
- Implements a cost-benefit evaluation of new technology.

***Additional competencies for the advanced practice registered nurse***

In addition to the competencies for the perioperative RN and graduate-level prepared RN, the APRN:

- Participates in product review committees.
- Considers health care access, fiscal responsibility, efficacy, and quality when providing advanced nursing care.
- Engages organizational and community resources to formulate and implement interprofessional plans.

**STANDARD 18. ENVIRONMENTAL HEALTH**

The perioperative RN practices in a manner that advances environmental safety and health.

***Competencies***

The perioperative RN:

- Promotes a safe, healthy, and professional perioperative work environment.
- Assesses the perioperative environment to determine environmental risk factors for patients and personnel.
- Collaborates with the health care team to reduce environmental health risks to self, colleagues, and patients.
- Communicates information about possible environmental health risks and methods to reduce exposures.
- Disposes of health care products safely and appropriately per organizational policy and local, state, and federal regulations.
- Incorporates technology, as appropriate, to foster a safe perioperative environment.
- Uses products or treatments compatible with evidence-based practice to decrease environmental threats.
- Participates in developing an approach to promote healthy perioperative practice environments.

***Additional competencies for the graduate-level prepared registered nurse, including the advanced practice registered nurse***

In addition to the competencies of the perioperative RN, the graduate-level prepared RN or APRN:

- Examines the effect of social, political, and economic influences on the perioperative, system, and global environments and the experience of the patient and designated support person(s).
- Creates partnerships that promote sustainable global environmental health policies and conditions that focus on prevention of hazards to people and the natural environment.<sup>53</sup>

# **GLOSSARY**

## GLOSSARY

### **Advanced practice registered nurse (APRN).**

A registered nurse who has completed an accredited graduate-level education program to prepare for the role of certified nurse practitioner, certified registered nurse anesthetist, certified nurse midwife, or clinical nurse specialist; has passed a national certification examination that measures the APRN role and population-focused competencies; maintains continued competence as evidenced by recertification; and is licensed to practice as an APRN.

### **Ambulatory surgery center**

A distinct entity that operates exclusively for the purpose of providing surgical services to patients not requiring hospitalization; the expected duration of services would not exceed 24 hours following an admission.

### **AORN Syntegrity**

A wholly-owned subsidiary of AORN. The AORN Syntegrity Solution is an evidence-based perioperative documentation solution built by perioperative clinicians to help standardize the way procedures are scheduled, perioperative data are managed, the PNDIS is utilized, and patients are treated.

### **Artificial intelligence**

The theory and development of systems able to complete tasks that typically require human intelligence, such as visual perception, speech recognition, decision making, or language translation.

### **Assessment**

A systematic, dynamic process by which the registered nurse, through interaction with the patient, family, groups, communities, populations, and health care providers, collects and analyzes data. Assessment may include the following dimensions: physical, psychological, sociocultural, spiritual, cognitive, functional abilities, developmental, economic, and lifestyle.

### **Autonomy**

The right of patients to make decisions about their medical care without their health care provider trying to influence the decision.

### **Caring**

The moral ideal of nursing, consisting of human-to-human attempts to protect, enhance, and preserve humanity and human dignity, integrity, and wholeness by assisting a person to find meaning in illness, suffering, pain, and existence.<sup>54</sup>

### **Code of ethics (nursing)**

A list of explications that makes explicit the primary goals, values, and obligations of the nursing profession and expresses its values, duties, and commitments to the society of which it is a part. In the United States, nurses adhere to the Code of Ethics for Nurses with Interpretive Statements.<sup>55</sup>

### **Collaboration**

A professional health care partnership grounded in a reciprocal and respectful recognition and acceptance of each partner's unique expertise, power, and sphere of influence and responsibilities; the commonality of goals; the mutual safeguarding of the legitimate interest of each party; and the advantages of such a relationship.

### **Competency**

An expected and measurable level of nursing performance that integrates knowledge, skills, abilities, and judgment, based on established scientific knowledge and expectations for nursing practice.

### **Continuity of care**

An interprofessional process that includes patients, families, and other stakeholders in the development of a coordinated plan of care. This process facilitates the patient's transition between settings and health care providers, based on changing needs and available resources.

### **Delegates**

Allows a delegate to perform a specific nursing activity, skill, or procedure that is beyond the delegate's traditional role and not routinely performed. When a nursing task is delegated, the perioperative RN maintains accountability for the patient and the delegate is responsible for the performance of the delegated skill, activity, or procedure.<sup>56(p2)</sup>

### **Designated support person(s)**

A member of the family of origin or another person designated by the patient.

### **Diagnosis**

A clinical judgment about the patient's response to actual or potential health conditions or needs. The diagnosis provides the basis for determining a plan to achieve expected outcomes. Registered nurses use nursing and medical diagnoses depending on their educational and clinical preparation and legal authority.

### **Environment**

The surrounding habitat, context, milieu, conditions, and atmosphere in which all living systems participate and interact. It includes the physical habitat as well as cultural, psychological, social, and historical influences.

### **Environmental health**

Aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychological influences in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially adversely affect the health of present and future generations.

### **Evaluation**

The process of determining the progress toward attainment of expected outcomes, including the effectiveness of care.

### **Evidence-based practice**

A problem-solving method that integrates the best evidence from well-designed research studies and evidence-based theories; clinical expertise and evidence from assessment of the patient's history and condition, as well as health care resources; and patient, family, group, community, and population preferences and values. When evidence-based practice is delivered in a context of caring, as well as an ecosystem or environment that supports it, the best clinical decisions are made to yield positive patient outcomes.<sup>57</sup>

**Expected outcomes**

End results that are measurable, desirable, and observable, and translate into observable behaviors.

**Graduate-level prepared registered nurse**

A registered nurse prepared at the master's or doctoral educational level who has advanced knowledge, skills, abilities, and judgment; functions at an advanced level as designated by elements of their position; and is not required to have additional regulatory oversight.

**Health**

An experience that is often expressed in terms of wellness and illness and may occur in the presence or absence of disease or injury.

**Health care providers**

Individuals with special expertise who provide health care services or assistance to patients. They may include nurses, physicians, psychologists, social workers, nutritionist/dietitians, and therapists.

**Holistic care**

An approach to health care that addresses the patient's physical, emotional, social, and spiritual needs.

**Illness**

The subjective experience of discomfort, disharmony, or imbalance. Not synonymous with disease.

**Immersive technology**

The integration of virtual content with the physical environment that allows the user to engage naturally with the blended reality. There are three types of immersive technologies: augmented reality (AR) that puts a digital layer over the real world; virtual reality (VR) that puts the user in another world entirely; and mixed reality (MR) that places interactive digital objects into the real world.

**Implementation**

Activities such as teaching, monitoring, providing, counseling, delegating, and coordinating.

**Information**

Data that are interpreted, organized, or structured.

**Interoperability**

The ability of different information systems, devices, and applications (systems) to access, exchange, integrate, and cooperatively use data in a coordinated manner within and across organizational, regional, and national boundaries to provide timely and seamless portability of information and optimize the health of individuals and populations globally.

**Interprofessional.**

Integrated enactment of knowledge, skills, and values/attitudes that define working together across professions, with other health care workers, and with patients along with families, as appropriate to improve health outcomes in specific care contexts.<sup>58</sup>

**Machine learning**

A branch of artificial intelligence focused on building applications that learn from data and improve their accuracy over time without being programmed to do so.

**Nursing**

The protection, promotion, and optimization of health and abilities; prevention of illness and injury; facilitation of healing; alleviation of suffering through the diagnosis and treatment of human response; and advocacy in the care of individuals, families, groups, communities, and populations.

**Nursing practice**

The collective professional activities of nurses characterized by the interrelations of human responses, theory application, nursing actions, and outcomes.

**Nursing process**

A critical thinking model used by nurses that is represented as the integration of the singular, concurrent actions of these six components: assessment, diagnosis, identification of outcomes, planning, implementation, and evaluation.

**Patient**

Persons, clients, families, groups, communities, or populations that are the focus of attention for nurses.

**Peer review**

A collegial, systematic, and periodic process by which registered nurses are held accountable for practice and which fosters the refinement of one's knowledge, skills, and decision-making at all levels and in all areas of practice.

**Plan**

A comprehensive outline of the components that need to be addressed to attain expected outcomes.

**Quality**

The degree to which health services for patients, families, groups, communities, or populations increase the likelihood of desired outcomes and are consistent with current professional knowledge.

**Registered nurse (RN)**

An individual registered or licensed by a state, commonwealth, territory, government, or other regulatory body to practice as a registered nurse.

**Scope of nursing practice**

The description of the who, what, where, when, why, and how of nursing practice that addresses the range of nursing practice activities common to all registered nurses. When considered in conjunction with the Standards of Professional Nursing Practice and the Code of Ethics for Nurses, comprehensively describes the competent level of nursing common to all registered nurses.

**Social determinants of health**

The economic and social conditions that influence individual and group differences in health status.

**Standards**

Authoritative statements defined and promoted by the profession by which the quality of practice, service, or education can be evaluated.

**Standards of perioperative nursing practice.** Authoritative statements of the duties that all perioperative registered nurses, regardless of role, patient population, or specialty, are expected to perform competently.

**Standards of practice.** Standards that describe a competent level of nursing care as demonstrated by the nursing process. See also Nursing process.

**Standards of professional performance.** Standards that describe a competent level of behavior in the professional role.

**Telehealth.** The use of electronic information and communication technologies to provide and support health care when distance separates participants (ie, health care professionals and patients).

# REFERENCES & RESOURCES

## REFERENCES

1. *Code of ethics for nurses with interpretive statements*. 2nd ed. Silver Spring, MD: American Nurses Association; 2015.
2. *Nursing's Social Policy Statement: The Essence of the Profession*. Silver Spring, MD: American Nurses Association; 2010.
3. *Nursing: Scope and Standards of Practice*. 4th ed. Silver Spring, MD: American Nurses Association; 2021.
4. McGarvey HE, Chambers MG, Boore JR. Development and definition of the role of the operating department nurse: a review. *J Adv Nurs*. 2000;32(5):1092-1100.
5. Groah LK. *Operating Room Nursing: The Perioperative Role*. 2nd ed. Reston, VA: Reston Publishing Co; 1983.
6. D'Amico DB. Operating room nursing: perioperative role. *AORN J*. 1978;27(6):1156-1175.
7. A model for perioperative nursing practice. *AORN J*. 1985;41(1):188-194.
8. *AORN Position Statement on Perioperative Registered Nurse Circulator Dedicated to Every Patient Undergoing an Operative or Other Invasive Procedure*. AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/position-statements>. Accessed September 22, 2020.
9. Institute of Medicine. *To Err Is Human: Building a Safer Health System*. Washington, DC: The National Academies Press; 2000.
10. Guideline for team communication. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2021:1065-1096.
11. Purnell S, Zheng F. Safety of surgical telehealth in the outpatient and inpatient setting. *Surg Clin North Am*. 2021;101(1):109-119.
12. Asiri A, AlBishi S, AlMadani W, ElMetwally A, Househ M. The use of telemedicine in surgical care: a systematic review. *Acta Inform Med*. 2018;26(3):201-206.
13. Sikka N, Willis J, Fitall E, Hall KK, Gale B. Telehealth and patient safety during the COVID-19 response. Agency for Healthcare Research and Quality. <https://psnet.ahrq.gov/perspective/telehealth-and-patient-safety-during-covid-19-response>. Accessed April 14, 2021.
14. American Nurses Association. *ANA Core Principles on Connected Health*. <https://www.nursingworld.org/~4a9307/globalassets/docs/ana/practice/ana-core-principles-on-connected-health.pdf>. Approved June 6, 2019. Accessed April 14, 2021.
15. Nursing Organizations Alliance. *Elements of a Healthy Practice Environment*. American Organization for Nursing Leadership. [https://www.aonl.org/system/files/media/file/2020/02/elements-healthy-practice-environment\\_1.pdf](https://www.aonl.org/system/files/media/file/2020/02/elements-healthy-practice-environment_1.pdf). Published 2019. Accessed April 14, 2021.
16. *AORN Position Statement on a Healthy Perioperative Practice Environment*. Denver, CO: AORN, Inc; 2021.
17. Institute of Medicine. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare*. Washington, DC: The National Academies Press; 2003.
18. Sentinel event statistics released for 2019. The Joint Commission. <https://www.jointcommission.org/-/media/tjc/documents/resources/patient-safety-topics/sentinel-event/summary-se-report-2020.pdf>. Accessed September 22, 2020.
19. UP.01.02.01: Mark the procedure site. In: *Comprehensive Accreditation Manual*. E-dition. Oakbrook Terrace, IL: The Joint Commission; 2017.
20. Guideline for retained surgical items. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2021:769-820.
21. Kumar P, Parthasarathy R. Walking out of the hospital: the continued rise of ambulatory care and how to take advantage of it. McKinsey & Company. <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/walking-out-of-the-hospital-the-continued-rise-of-ambulatory-care-and-how-to-take-advantage-of-it>. Published September 16, 2020. Accessed April 14, 2021.
22. Occupational Outlook Handbook. US Bureau of Labor Statistics. <https://www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-6>. Updated April 9, 2021. Accessed April 14, 2021.
23. Zhang X, Tai D, Pforsich H, Lin VW. United States registered nurse workforce report card and shortage forecast: a revisit. *Am J Med Qual*. 2018;33(3):229-336.
24. National Hospital Discharge Survey. Procedures by selected patient characteristics. Number by procedure category and age. Centers for Disease Control and Prevention. [http://www.cdc.gov/nchs/nhds/nhds\\_tables.htm](http://www.cdc.gov/nchs/nhds/nhds_tables.htm). Updated 2010. Accessed April 15, 2021.
25. Bacon DR, Stewart KA. Results of the 2020 AORN salary and compensation survey. *AORN J*. 2020;112(6):605-623.
26. Fang D, Kesten K. Retirements and succession of nursing faculty in 2016-2025. *Nurs Outlook*. 2017;65(5):633-642.
27. American Association of Colleges of Nursing, ed. *Fact Sheet: Nursing Faculty Shortage*. <https://www.aacnnursing.org/Portals/42/News/Factsheets/Faculty-Shortage-Factsheet.pdf>. Accessed May 18, 2021.
28. *Periop 101: A Core Curriculum*. AORN, Inc. <https://aorn.org/education/facility-solutions/periop-101>. Accessed September 23, 2020.
29. Guideline for surgical attire. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2021:1015-1032.
30. *AORN Position Statement on Entry into Practice*. Denver, CO: AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/position-statements>. Accessed April 15, 2021.
31. *AORN Position Statement on Perioperative Registered Nurse Residency Programs*. AORN, Inc. <https://aorn.org/guidelines/clinical-resources/position-statements>. Accessed November 23, 2020.

32. AORN Position Statement on Advanced Practice Registered Nurses in the Perioperative Environment. AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/position-statements>. Accessed September 22, 2020.
33. QSEN Competencies. QSEN Institute. <https://qsen.org/competencies/pre-licensure-ksas/>. Accessed September 22, 2020.
34. Vandevveer M. From teaching to learning: theoretical foundations. In: Billings DM, Halstead JA, eds. *Teaching in Nursing: A Guide for Faculty*. 3rd ed. St Louis, MO: Saunders Elsevier; 2009:189-226.
35. Guideline for moderate sedation. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2021:535-570.
36. Scope of Nurse Anesthesia Practice. American Association of Nurse Anesthetists. [https://www.aana.com/docs/default-source/practice-aana-com-web-documents-\(all\)/scope-of-nurse-anesthesia-practice.pdf](https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/scope-of-nurse-anesthesia-practice.pdf). Accessed January 27, 2021.
37. *Standards for Nurse Anesthesia Practice*. American Association of Nurse Anesthetists. [https://www.aana.com/docs/default-source/practice-aana-com-web-documents-\(all\)/standards-for-nurse-anesthesia-practice.pdf](https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/standards-for-nurse-anesthesia-practice.pdf). Accessed January 27, 2021.
38. *Non-anesthesia Provider Procedural Sedation and Analgesia: Policy Considerations*. American Association of Nurse Anesthetists. [https://www.aana.com/docs/default-source/practice-aana-com-web-documents-\(all\)/non-anesthesia-provider-procedural-sedation-and-analgesia.pdf](https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/non-anesthesia-provider-procedural-sedation-and-analgesia.pdf). Accessed January 27, 2021.
39. Wade P. Historical trends influencing the future of perioperative nursing. *ORNACJ*. 2012;30(2):22-25, 32, 34-35, passim.
40. AORN Position Statement on RN First Assistants. AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/rn-first-assistant-resources>. Accessed November 23, 2020.
41. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press; 2011.
42. Competency & Credentialing Institute. <https://www.cc-institute.org/>. Accessed September 22, 2020.
43. National Assistant at Surgery Certification (NASC). <https://nascertification.com/crnfa/>. Accessed November 23, 2020.
44. AORN's Perioperative Explications for the ANA Code of Ethics for Nurses with Interpretive Statements. AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/code-of-ethics>. Accessed September 22, 2020.
45. Kehlet H. Multimodal approach to control postoperative pathophysiology and rehabilitation. *Br J Anaesth*. 1997;78(5):606-617.
46. Kehlet H, Wilmore DW. Multimodal strategies to improve surgical outcome. *Am J Surg*. 2002;183(6):630-641.
47. Senturk JC, Kristo G, Gold J, Bleday R, Whang E. The development of enhanced recovery after surgery across surgical specialties. *J Laparoendosc Adv Surg Tech A*. 2017;27(9):863-870.
48. Archibald MM, Barnard A. Futurism in nursing: technology, robotics and the fundamentals of care. *J Clin Nurs*. 2018;27(11-12):2473-2480.
49. Guideline for safe patient handling and movement. In: *Guidelines for Perioperative Practice*. Denver, CO: AORN, Inc; 2021:821-872.
50. *Safe Patient Handling and Mobility Guidebook*. St Louis, MO: VHA Center for Engineering & Occupational Safety and Health (CEOSH); 2016.
51. Hofer IS, Burns M, Kendale S, Wanderer JP. Realistically integrating machine learning into clinical practice: a road map of opportunities, challenges, and a potential future. *Anesth Analg*. 2020;130(5):1115-1118.
52. AORN Position Statement on Perioperative Nursing Certification. AORN, Inc. <https://www.aorn.org/guidelines/clinical-resources/position-statements>. Accessed September 22, 2020.
53. *ANA Principles of Environmental Health for Nursing Practice with Implementation Strategies*. Silver Spring, MD: American Nurses Association; 2007.
54. Watson J. *Human Caring Science: A Theory of Nursing*. 2nd ed. Sudbury, MA: Jones and Bartlett Learning; 2012.
55. *Code of Ethics for Nursing with Interpretive Statements*. Silver Spring, MD: American Nurses Association; 2015.
56. NCSBN, American Nurses Association. *National Guidelines for Nurse Delegation*. [https://www.ncsbn.org/NGND-PosPaper\\_06.pdf](https://www.ncsbn.org/NGND-PosPaper_06.pdf). Effective April 29, 2019. Accessed November 23, 2020.
57. Melnyk BM, Gallagher-Ford L, Long LE, Fineout-Overholt E. The establishment of evidence-based practice competencies for practicing registered nurses and advanced practice nurses in real-world clinical settings: proficiencies to improve healthcare quality, reliability, patient outcomes, and costs. *Worldviews Evid Based Nurs*. 2014;11(1):5-15.
58. Interprofessional Education Collaborative Expert Panel. *Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel*. Washington, DC: Interprofessional Education Collaborative; 2011.

## RESOURCES

- Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington DC: The National Academies Press; 2001.
- Leininger M. *Transcultural Nursing: Concepts, Theories, Research & Practices*. 2nd ed. New York, NY: Glencoe/McGraw-Hill, Inc; 1996.