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Competency Assessment and Competence Acquisition: The Advanced Practice Nurse as RN Surgical First Assistant

Jane Rothrock, DNSc, RN, CNOR, FAAN

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Abstract and Introduction

Abstract

The present as well as the future holds exciting opportunities for advanced practice nurses (APNs), not the least of which is participation during surgery as a first assistant. In 1990, when the United States Congress included first-assisting and reimbursement for APNs performing this task, faculty in programs that educate registered nurse first assistants (RNFAs) have explored curricular redesign and strategies to prepare APNs for this role.

Traditionally, the RNFA has been defined as a perioperative nurse who is board-certified in the specialty of operating room nursing (CNOR). Matriculation of APN students in RNFA programs, often without such experiential preparedness, required that curricula adapt educational programs to prepare the APN as a safe and qualified assistant-at-surgery. Using competency assessment and remediation, along with a curricular model that includes knowledge and skill development in basic perioperative nursing techniques, RNFA programs are preparing APNs with a broad knowledge of surgical patient care, an expanded skill base in perioperative routines, and critical thinking skills to fulfill role expectation as a first assistant during surgery.

Introduction

In her May 3, 1900, address to the Third Annual Convention of the Associated Alumnae of Trained Nurses, Mrs. Cadwalader Jones reminded the delegates that "When I was a girl, nursing was either considered a gift, like a good voice, or an occupation, like cooking. Every family had some member or friend who was always known as a 'born nurse' and whose help was called for in any emergency. In many cases she certainly deserved her name, and the care she gave was much better than none at all, but it was anything but scientific."[1]

As the science of nursing began to mature, the nursing profession was impelled to develop curricula that educated nurses rather than "trained" them. Early in the history of operating room (OR) nursing, there were numerous chronicles of registered nurses that assisted at surgery. Often functioning as such during times of war, they were highly skilled and valued for their contributions to the successful outcomes of military surgery. Nonetheless, as the specialty of operating room nursing grew and became more sophisticated, the need to develop a definition of the OR nurse as assistant-at-surgery along with recommendations for role preparation and credentialing became obvious. This article will present an overview of the development of recommendations for educational preparation and then focus on the APN as assistant-at-surgery.

First Guidelines From AORN and the American College of Surgeons (ACS)

In 1980, AORN (formerly the Association of Operating Room Nurses, now the Association of periOperative Registered Nurses) approved RNFA guidelines, and in this same year, the American College of Surgeons (ACS) approved a statement on first assistants in the OR. After an AORN survey of State Boards of Nursing in 1982 regarding the role of the RN as assistant-at-surgery, an AORN Task Force was formed to examine the survey results and develop an Official Statement for the Association.

Adopted by the AORN House of Delegates in 1984, the original Official Statement noted that "The perioperative nurse who wishes to assume the role of RN first assistant must develop a set of cognitive, psychomotor, and

affective behaviors that can be acquired in a variety of ways. Development of this set of behaviors begins with and builds upon the education program leading to licensure as a RN, which provides basic knowledge, skills, and attitudes essential to the practice of perioperative nursing.

Further preparation for the RN first assistant should include perioperative nursing practice with diversified experience in scrubbing and circulating. Additional preparation may be acquired through structured education programs with didactic and supervised clinical learning activities, or by independent study with didactic and supervised clinical components."[2]

Formal RNFA Education Programs Begin

In 1984, there were few (if any) structured educational programs that existed outside of hospitals themselves. In 1985, Delaware County Community College started an RNFA program (post-basic RN education). Soon, others began opening in different geographic areas throughout the United States. By 1987, the first textbook for RN first assistants had been published, and in 1990, AORN published the first *Core Curriculum for the RN First Assistant* to promote coherency in the content offered by education programs.

By 1992, the work of another AORN Task Force resulted in the development of a revised Official Statement, approved by the AORN House of Delegates in 1993. That statement differed from the earlier one by clearly stating that "Additional preparation is then acquired through completion of formal education programs including didactic and supervised clinical learning activities. These programs should consist of curricula that address all components of the *Core Curriculum for the RN First Assistant* , take place in institutions approved by the Association of Higher Education (or its equivalent), and award a degree or certificate upon successful program completion."[3]

The first certification examination for the RNFA (CRNFA) was offered in 1993. The *Core Curriculum for the RN First Assistant* was revised in 1994, and the first set of Education Standards for RNFA programs was published by AORN that same year. By 1997, the Certification Board, Perioperative Nursing (CBPN) instituted a process for determining whether RNFA programs were "accepted", setting forth criteria to determine whether a given program met the criteria in the AORN Education Standards; if so, that program's graduates are then eligible to sit for certification (CRNFA).

Current Education Standards

In 1998, the Official Statement was revised again and adopted by the House of Delegates. This revision specified that RN first assistant programs should award college or university credits, reinforcing the need for a formal educational process. By taking the position that such programs offer college credit, they were placed within academic departments, subject to the same rigorous processes of curricular design and evaluation as other nursing courses.

Current AORN recommended education standards for RN first assistant programs emphasize having a multidisciplinary faculty and using a variety of instructional methodologies. For both didactic and clinical components, suggested requirements are offered. Each component of a program (didactic course followed by clinical internship) must be 1 full academic semester (4 months) in length. Thus, RNFA education takes place over a full academic year.

The Education Standards address APNs, noting that they may be included in RNFA programs without having previous perioperative nursing experience. For APNs (nurse practitioners [NP], clinical nurse specialists [CNS], and certified nurse midwives [CNM]), a pre-test or demonstration assessment regarding perioperative skills specific to surgical aseptic technique should be administered. If the assessment results indicate a need for additional knowledge and skills, it is recommended that faculty develop a plan for the individual APN student.[4]

Official Statement Revised in 2004

In 2004, the Official Statement was again revised, adding language that further clarified some of the preoperative, intraoperative, and postoperative patient care activities of RNFAs[5] Collaboration with the healthcare team is essential in providing a smooth, safe, seamless continuum of care for surgical patients, many of whom are same day admissions or ambulatory surgery patients.

Recognizing the need for RNFAs to participate in preoperative patient management, the 2004 Official Statement added the following activities:

- Working with other healthcare providers in performing preoperative evaluation and focused nursing assessments;
- Communicating and mutually working on the patient's plan of care;
- Using either established protocols to write preoperative orders or standardized preoperative orders -- a common practice in today's healthcare environment.

In terms of care during the operation, nursing behaviors while first-assisting were slightly modified in the 2004 Official Statement, expanding the use of instruments to include medical devices, and adding "cutting tissue" to the clinical function of tissue handling.

Postoperative patient management was expanded in the 2004 Official Statement to include writing the operative note, using protocols for postoperative orders, participating in postoperative rounds, and assisting with discharge planning. All of these additions recognize the nature of the surgical team and the value of RNFA participation.

It is also important to note that staffing models in community and rural hospitals vary significantly from those in teaching institutions. For many community and rural hospitals, RNFAs have a greater presence and have been fully integrated into institutional practice, contributing to improved efficiency and effectiveness of surgical patient care.

The APN as First Assistant-in-Surgery

According to Brown and Draye, a central theme in their research of pioneer NPs was that of building on existing autonomy and making a difference in patient care.[6] APNs who desire to practice in the role of assistant-at-surgery are likely to have these essential intentions. The nurse who acts as first assistant takes on a role of autonomous decision-making and critical thinking.

While the nurse is working under the guidance of a surgeon, the knowledge and skills requisite to the first assistant are not subservient to or always at the order of the operating surgeon. There is an inherent expectation that the RN first assistant, whether an APN or experienced perioperative nurse, be educated to not only know the steps of the surgical intervention, but to also know, for example, the anatomic location of critical structures, physiologic consequences of various methods of handling tissue, and how to anticipate these without instructions or direction.

One of AORN's competency statements for the RN first assistant[7] elaborates the requirements of implementing and managing the perioperative plan of care consistent with RNFA practice. That statement suggests that the RN first assistant should be able to:

- Initiate interventions efficiently, safely, and skillfully, using sound clinical judgment;

- Provide knowledge-based technical assistance such as using surgical instruments, handling tissue, providing exposure, achieving hemostasis, and wound closure;
- Collaborate closely with the RN circulator;
- Serve as an information resource for other members of the surgical team; and
- Apply principles of problem solving.

Clearly, to assume such a knowledge-based and technically challenging role, APNs without any OR experience need to acquire fundamental knowledge and skills to safely accommodate their new role.

Analysis of APN Self-Ratings on Fundamental Perioperative Nursing Competencies

To determine the pre-existing level of competence in fundamental perioperative nursing care, the cohort (n = 16) of APNs in Delaware County Community College's post-basic RN First Assistant program were analyzed by my colleagues and myself for the 2003 academic year. Each entering APN rated himself or herself on a scale of 0 (know nothing about this) to 5 (am competent and confident in this area). Of the 16 APNs, 6 had prior OR experience; the other 10 did not.

Self-Ratings: APNs With OR Experience

For the APNs with OR experience, there remained areas they rated themselves as needing more knowledge and skill to practice as an RNFA. They acknowledged that, although they knew many of the basic principles of perioperative patient care, they did not feel as confident in the following areas:

- Interpreting laboratory values and radiologic studies;
- Using various means of achieving hemostasis at the surgical field;
- Identifying referral services;
- Participating in discharge planning;
- Intraoperative monitoring, primarily identifying fluid and electrolyte imbalances, and replacement therapies.

Self-Ratings: APNs Without OR Experience

For the APN group without any OR experience, significant areas of deficiencies in competence were self-identified. These areas included lack of competence in:

- Establishing intraoperative nursing diagnoses and patient outcomes;
- Developing an intraoperative plan of care (organizing nursing activities to function efficiently as the first assistant; knowing instrument, supply, and equipment needs to function effectively as the first assistant);
- Positioning the patient for the surgical intervention;
- Creating and maintaining a sterile field;

- Anticipating what would be required during the surgery;
- Performing counts of sponges, sharps, and instruments to prevent the risk for injury from a retained foreign body;
- Participating in use of surgical medications;
- Calculating blood loss (ie, estimating losses for the perioperative team);
- Monitoring and controlling the surgical environment (including traffic patterns, electrical safety, environmental sanitation, and thermoregulation);
- Exercising safe judgment and decision-making based on past experience; and
- Evaluating desired patient outcomes for the intraoperative period.

The Relationship of Competence to Safety

The sentinel 1999 Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System*[8] was the clarion call for quality care, conveying a sense of urgency to proponents of such quality. Since that time, the National Quality Forum has worked on provider-specific measures of quality, while the Leapfrog Group for Patient Safety has worked to publicly identify provider breakthroughs in patient safety.

The Joint Commission now sets annual National Patient Safety Goals (NPSG), and for the past 3 years, at least 1 has applied to perioperative patient care. For 2005, requirements for surgical site verification are covered under the universal protocol for preventing wrong surgery as opposed to under the patient safety goals.[9]

A reduction of the risk of healthcare-associated infections is an ongoing NPSG throughout the 2005 guidelines.[10] The question might be posed, if an APN without OR experience is unfamiliar with the essentials of creating and maintaining a sterile field or environmental sanitation in the OR (as noted in self-assessments of areas of competence deficiency), then how would he or she contribute to achieving this particular goal? Competence in fundamental principles for infection prevention is essential for making contributions to safe, quality patient care and, therefore, must be the area of focus for knowledge expansion for individuals who have a poor rank for this skill. Taking the key areas where APNs rated themselves as lacking knowledge, skill, and competence into consideration, there are clear risks to ensuring patient safety unless remedial learning and skill acquisition are ensured.

Delaware County Community College's RNFA Program: Focus on APNs

Our College of Nursing has a program[11] has educated many from the United States and worldwide, including Australia, Latvia, Canada, Bermuda, and Iceland. As such, it allows perioperative nurses, or certified APNs, from around the globe to receive education without significant disruption in their routines.

The didactic session begins with assigned readings and critical thinking exercises (students use 5 textbooks, read and do a written critique of 24 chapters, have Web-based assignments, and complete 14 critical thinking exercises). Students obtain their books from an on-line bookstore, and begin logging hours of study. They also receive an anatomy exam, which must be completed and returned to 1 of the professors before their arrival on campus. This exam, which is open-book, is intended to begin focusing the student on the anatomical relationship of various structures that will be discussed during class. Students then arrive for an intense 1-week session on campus, attending lectures and practicing in a simulated setting.

For APN students, skills labs are now being expanded in a simulated OR. In addition to fundamental skills such as scrubbing, gowning, and gloving, surgical instruments, sutures, and accessory items are also reviewed. Using the analysis of the 2003 APN cohort to design an improved course, spring 2004 semester students worked in the college's simulated OR with a surgeon, role-playing the first assistant during routine surgical maneuvers such as the skin incision, holding retractors, and tying knots.

At the end of this first semester, students take a cumulative final examination. In between semesters, they are provided with faculty-determined competencies to help prepare for their actual internship as an RNFA in surgery. These competencies are directed toward the specific patient population the APN works with or will be working with during surgery. The following serves as an example:

"Based on your competency assessment, please add these 2 objectives to your pre-Internship practice:

1. Develop competence in providing equipment and supplies based on the orthopedic surgical patient's needs:
    - Review AORN Recommended Practices (RPs) - specific RPs are highlighted on the attached index;
    - Review procedures/supplies/equipment needed for this specialty surgical population (You should obtain a basic perioperative nursing textbook, such as *Alexander's Care of the Patient in Surgery* , 2003, Mosby);
    - Obtain copies of surgeon preference cards for procedures where you are assigned as assistant-at-surgery during the pre-Internship period. These cards should be reviewed such that you are able to identify each of the items on the preference card and describe its purpose. Please submit 5 samples to your faculty facilitator;
    - Participate with the perioperative nursing team in preparing relevant supplies and equipment. Please document a minimum of 10 surgical interventions where you undertook this activity and have the RN team member write a brief note confirming your competency in safely accomplishing this activity.
2. Actively participate in counting required surgical items:
    - Review key Recommended Practices (AORN RPs);
    - Review relevant institutional policies;
    - Perform counts in collaboration with surgeon mentor and perioperative nursing team. Please document a minimum of 10 surgical interventions where you undertook this activity and have the RN team member or surgeon write a brief note confirming your competency in accomplishing this activity."

Clinical Internship

The second course is the clinical internship, usually undertaken in the setting where the APN will be or already is employed. During this clinical course, the APN intern must assist for a minimum of 120 intraoperative hours. Every 2 weeks, a competency assessment is completed by both the APN intern and a mentoring surgeon. This assessment is submitted along with a review of each surgical procedure.

Thirteen clinical studies are written, culminating in an extensive case study that covers a patient from a surgeon's office or surgical clinic to the operating room and then back to home. APNs who work in the same institution may collaborate on many of the clinical assignments, as collaboration is the hallmark of perioperative nursing and significant to patient safety. Other clinical time is spent:

- Performing preoperative and postoperative patient assessment;
- Conducting focused reviews and confirmatory history and physical examinations;
- Attending rounds;
- Educating patients and their families;
- Participating in pain management.

In a review of files from all (n = 50) RNFA interns during the 2003 academic year, the mean number of hours spent in their educational program was 450 hours (this value includes both the didactic and clinical components). RNFA programs like this, which are geared toward the adult learner and allow for distance learning, are expected to help alleviate the potential shortage of assistants in surgery (related to regulations that limit the number of hours surgical residents can work) and ensure that the assistant is competent and able to deliver safe, quality care.

Conclusion

With each effort to improve and clarify the educational preparation, role responsibilities, and credentialing of RNFAs, there is an inherent underpinning of validating the Importance of patient safety and quality patient care. Reports continue to document that the public invests its highest trust in nurses. To deserve such trust, all RNFAs need to work to continuously improve their clinical knowledge and acumen. Ensuring competence in nursing activities and interventions is a part of nurses' responsibility to the public they serve.

In 1900, Katherine De Witt addressed the issue of specialties in nursing, noting that "as useful as the old nurse was, with her ready adaptability to many kinds of work, the new nurse is more useful, at least to the patient himself, and ultimately to the family and community. Her sphere is more limited, but her patient receives better care...Nurses who are particularly quick of eye and deft of hand prove themselves such useful assistants in surgical work that there is a constant demand for their aid."[12] One hundred four years later, her observations have withstood the test of time.

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