National Survey Report

Expanded Role of the Operating Room Nurse In The Perioperative Practice Setting

By Gloria Stephens, Chairman, Research Committee, ORNAC

Background

The project was initiated in response to a mandate from the ORNAC Strategic Planning session of April, 1992 to investigate "The Expanded Role of the Operating Room Nurse and to set up the future direction for perioperative nursing".

Rationale

Changes in job functions and categories of workers within the OR environment are occurring because of advancing technology, financial restraints and the ever increasing complex surgical procedures. As a result of these real and potential changes it became evident that current practices and opinions of the future role of the perioperative nurse be established.

Principle Investigators:

- G. Stephens (BC) Chairman
- M. Simon (BC)

Co-investigators:

- G. McEvoy (PQ)
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Potential Outcomes

The potential outcomes of the survey included:

- indication of action to take with respect to expanding the OR nurses' role in perioperative nursing,
- suggestions as to required/optional education opportunities,
- indication of current practice,
- indication of need to increase membership in ORNAC,
- indication of action to take with respect to recruitment and retention of nurses to the specialty of operating room nursing,
- data obtained to be used to develop goals and strategic plans, contributing to the profession of nursing.

Basis of the questionnaire

The basis of the questionnaire was derived from the ORNAC Recommended Standards of Nursing Practice (Professional, Clinical & Competencies). In addition, some concerns (not limited to the following) expressed during discussions of the Strategic Planning Session at the April Board meeting in Toronto, 1992: were considered:

- the necessity to determine the "scope of nursing practice" in the operating room,
- circulating nurse's role having the potential of being reduced in scope and authority in view of alternate health care workers being employed,
- promote the need for continuing education for operating room nurses,
- after career laddering for experienced operating room nurses.

Purpose

The purpose of the survey was to determine the current nursing practice of operating room nurses in Canada and to determine if there was any interest/support from OR nurses to promote an expanded role of both the circulating and scrub nurse.

Methodology

Questions were designed to elicit information about current perioperative practice in the three phases of the perioperative period.

Demographic information was sought about the respondents, including: education, OR nursing experience, age and sex, workplace size, surgical services, operations performed and staffing.

Respondents were asked to envision the future role of the operating room nurse and give their opinion on expanding the role of the circulating nurse to that of Assistant to the Anaesthetist and scrub nurse to First Assistant to the Surgeon.

The questionnaire was divided into four major sections:

#A - OR facilities and personnel
#B - OR registered nurse responsibilities
#C - perioperative activities undergoing change
#D - future trends

Consultation throughout the project was provided initially by research experts Barbara Greenlaw, RN, MN, and Heather Clarke, RN, PhD, (RNABC Research Consultant and UBC nursing faculty). Ongoing consultation was provided by Dr. Clarke and the research team at 3M.

The questionnaire was pilot tested with the following people completing and critiquing the questions:

- Dr. Heather Clarke, RNABC research consultant
- 3M Canada research team
- Judith Oulton (Executive Director of CNA)
- Dr. White (President, Canadian Anaesthetist Association)
- ORNAC Executive
- ORNAC research committee members

Selection of Respondents

361 hospitals across Canada were surveyed. Hospitals were selected at random from a list of all Canadian hospitals with more than 100 beds. 75% were selected from each Province, which eliminated the possibility of regional distortion. Surveys were sent to operating room head nurses/managers with the intent that they would respond on behalf of their staff.

Key points in the data analysis:

1. Sample:

It was reported that the response rate of 44% provided high statistical validity to the survey.

The following is a Provincial and hospital size breakdown of the sample:

- 35% - Ontario
- 25% - Quebec
- 14% - British Columbia
- 6% - Alberta
- 6% - Manitoba
- 29% - <250 beds/hosp
- 13% - 501-800 beds
- 5% - 1000 beds/hosp
- 4% - Saskatchewan
- 3% - Newfoundland
- 3% - Nova Scotia
- 3% - New Brunswick
- 1% - Prince Edward Is.
- 50% - 250-500 bedhosp
- 3%-801-1000 bedshosp

Of significance was the fact that 75% of the responses came from the highest populated Provinces of Ontario, Quebec, and British Columbia. The majority of the hospitals are located in the city, and perform 170 operations per/week and have less than 500 beds.

Approximately 74% of the OR staff are ORNAC members and appear to be mostly situated in the mid-sized hospitals. Interestingly hospitals of over 1000 beds sampled had the lowest percentage of ORNAC members (50% vs. 74% average) and the least number of staff with OR post graduate education. The overall average being 17% with post graduate education.

OR Managers with an average of 21 years experience in OR and over 30 years of age made up 84% of the respondents. Of these 29% had taken post basic OR programs; approximately six months in length. The highest level of education of the respondents broke down to: 64% - diploma, 29% - BScN, 3% - non-nursing degrees, 4% - Masters level. (Manitoba & Quebec show significant high percentage of respondents with their baccalaureate degree in nursing).

2. Findings - Current Practice:

Twenty six questions were asked with regard to the OR nurses' general, preoperative, induction, interoperative, and immediate postoperative responsibilities in both the circulating and scrub nurse roles. Respondents agree, that 67% of the time, the OR nurse was solely accountable.

General Responsibilities

- promoting and maintaining standards of practice 84%
- complying with legal requirements 83%
- identifying and rectifying unethical practices 56%
- exemplify role model characteristics 87%

Quebec views the induction differently. They appear to utilize respiratory technicians more than other provinces - to assist the Anaesthetist and provide support care to the patient during induction, and this phase is to be a shared responsibility unlike other provinces that believe the induction activities is solely the circulating nurse's responsibility.

The circulating nurse provides comfort measures in relation to vital functions 98% and is with the patient 78% at induction. The OR nurse (88%) receives, identifies and admits the patient to the operating room.

Combinations of many OR staff members are found to be responsible for the anaesthetist equipment. For recording activities and drugs during a cardiac arrest (Circulating Nurse 56%, Respiratory Technician 4%). The Circulating Nurse was found to be primarily responsible for the anaesthetic equipment (>50%).

The survey showed that the circulating nurse did

not have primary responsibility to monitor the anaesthetized patient (<60%) the exception being in the case of the monitoring local anaesthesia (96%).

92% do not have a designated RN whose role it is to assist the anaesthetist. Of those, 25%, received extra training from an organized anaesthetic program and 88% from on the job training.

The majority, 53%, indicated that the scrub nurse performs a surgical assistant's function when additional assistance is required and only when there is no surgical assistant available. This would not be consider a "transfer of function". 89% reported the scrub nurse was expected to perform both roles consecutively.

3. Vision on Future Roles:

The polls appeared to be split when asked if the respondents could envision an expanded role for the scrub and circulating nurse.

66% indicated that they could see an expanded role for the scrub nurse to include that of RN First Assistant. Respondents stressed the importance of advanced education and experience and this should be a separate function not shared with other responsibilities.

54% envisioned an expanded role for the circulating nurse to that of First Assistant to the Anaesthetist. Again, advance education was stressed on the fact that this should be a separate function of the circulating nurse. Some respondents felt they were presently fulfilling this task.

The most popular affiliation responsible for preparing operating room nurses to assume these functions are educational institutions.

75% of the respondents agreed that there will be an increased role for the nurses in the operating rooms of Canada over the next five to ten years.

Survey Of Each Section

Section A: Operating Room Facilities and Personnel Highlights:

78% of the hospitals that responded are located in the city with the majority utilizing between 250 and 500 beds per hospital. The majority, 36%, will use an average four to five operating room theatres on weekdays between September and June. (This is very dependent on the size of the hospital). Approximately 31 operations are done per day, or 170 per week on average.

The OR staff nurse most often alternates between scrub/circulating (98%) nurse duties. 86% of the hospitals reported that OR nurse assists the Anaesthetist and 50% of the hospitals have their staff nurse work in the recovery room, relieve for managerial positions (55%) and do other duties such as cleaning, supplies, leader, etc. (50%).

95% of the respondents were female. It should be noted here that the Provinces of Nova Scotia and Quebec, as well as, the smaller Hospitals, have the highest ratio of males.

Section B: Operating Room Registered Nurse Responsibilities:

This section is divided into the following sections:

General	
Preoperative Phase:	Circulating Nurse
Induction Phase:	Circulating Nurse
Intraoperative Phase:	Circulating Nurse
Intraoperative Phase:	Scrub Nurse

For the most part respondents agreed that the nurse has responsibility for these activities. This section will only touch on the exceptions worth noting.

a. Preoperative Phase: Circulating Nurse

The overall outcome indicated that 48% of Circulating Nurses perform preoperative patient assessments. 80% of circulating nurses receive, identify and assess patients. 36% of the respondents agreed that the circulating nurse is accountable for preparing individual perioperative nursing care plans. Another 36% agreed that they *should be* responsible.

Similar results are found for the Circulating Nurse's obligation for participating in perioperative patient teaching as above. 14% currently are participating in perioperative family teaching. 35% feel they should be responsible for this and 30% are sharing this with other staff. This sharing is found mainly in larger hospitals - 30%.

b. Induction Phase: Circulating Nurse

Analysis shows that 55% of the hospitals are sharing the responsibility for preparing and maintaining anaesthetic equipment.

53% of the hospitals in Quebec indicated that assisting the Anaesthetist during induction is a shared responsibility. The remaining provinces feel that this is only the Circulating Nurse's obligation.

c. Intraoperative Phase: Circulating Nurse

Half of the respondents felt that the responsibility of monitoring the physical wellbeing of the patient throughout the perioperative period is shared whereas the other half felt it lies solely with the Circulating Nurse. 87% of the time the Circulating Nurse is responsible for providing resources in order to accomplish the operative procedure. The Circulating Nurse evaluates the patient care outcomes and 82% of the time communicates the information to other members of the health care team.

d. Intraoperative Phase: Scrub Nurse

With regard to preparing and maintaining the technical equipment for surgical procedure, 60% responded that this responsibility was solely the Scrub Nurse's. Another 34% responded that this role is shared.

Section C: Perioperative Activities Undergoing Change

Bio-Psycho/Physical Assessments are usually done on admission to the OR in the (Holding Area). Presurgery area 20% of the respondents indicated doing this assessment in a combination of ways: in a preadmission clinic, on the wards the day before surgery, on the admission to the OR. Quebec had a large percentage respond that they do not do this assessment.

Before surgery most patients are assessed (76%). Only 6% responded that only inpatients are assessed.

44% of the hospitals do not use care plans. 40-50% of the respondents in British Columbia, New Brunswick, and Ontario as well as the large hospitals use "Standard Nursing Care Plans".

The OR registered nurse is found (88%) of the time to receive, identify, and admit the patient to the OR. The Anaesthetist, Respiratory Technician and Receptionist rarely ever are responsible for this. It should be noted that the Anaesthetist does receive, identify and admit 40% of the time in hospitals that have greater than 1000 beds.

A response of 54% indicated that Circulating Nurse administers medication for intravenous use. With exception, a large majority of the respondents within the provinces of British Columbia, Manitoba, Nova Scotia and PEI indicated that this activity is not performed by the Circulating Nurse.

81% responded that the Circulating Nurse would not administer anaesthetic agents intravenously.

Although the majority of the responses indicated that the Circulating Nurse would record the narcotics use by the Anaesthetist in the drug register, by 52%, the other 40% indicated negatively. (Alberta, Nova Scotia, Saskatchewan and mid-size hospitals held the majority in the No answer). The remainder of the questions asked with regard to the Circulating Nurse's anaesthetic responsibilities were answered positively. 69% of the time narcotics are dispensed by the Circulating Nurse and 79% apply monitoring devices, equipment to patients.

76% of Circulating Nurses assist the anaesthetist during induction. The Circulating Nurse provides comfort measures in relation to vital functions 98% of the time.

Similarly, 40% of the respondents use a combination of the Circulating Nurse, Respiratory Technician, and Nursing Aide along with other staff to prepare and maintain the anaesthetic equipment. In exception, 52% of the responses in Quebec use a Respiratory Technician only, and 60% of the responses in Saskatchewan use only a Circulating Nurse.

When asked if the Circulating Nurse has primary responsibilities for monitoring the anaesthetized patients, the answers were fairly negative. Exceptions: 47% of the respondents in small hospitals indicated that the Circulating Nurse has primary responsibility only when the Anaesthetist is absent (eg. Alberta, New Brunswick, Nova Scotia, Ontario). 66% answered "always" when asked if the Circulating Nurse has the primary obligation during local anaesthesia and records findings.

Not surprisingly, 92% answered No when asked if the hospital has a designated Registered Nurse whose role it is to assist the Anaesthetist. (42% in Manitoba answered Yes). Of the remaining 8% who answered Yes only 25% have nurses who received extra training from an organized Anaesthetic Program.

The Circulating Nurse is usually chosen as being primarily responsible for assisting the Anaesthetist (67%):

- to perform specific duties during extubation/conclusion,
- to record the activities and drugs given during a cardiac arrest/emergency situation,
- to accompany the anaesthetist and patient to the recovery room.

Larger hospitals use a combination of the Circulating Nurse (60%), respiratory technician (10%), nursing assistant, along with Residents, Orderlies, OR Technicians, RN Anaesthetic Assistants, and RNs to assist the Anaesthetist during extubation/conclusion of the anaesthetic. 40% of the respondents in Quebec use a combination of the Respiratory Technician and Circulating Nurse to make available and record the equipment, drugs, etc. during a cardiac arrest. Resident, surgeons and orderly, along with the Circulating Nurse, Respiratory Technician (4%) and Nursing

Assistants are used in larger hospitals to accompany the Anaesthetist and patient to the recovery room.

76% responded that both verbal and written charts are used as a means of communication for patient information between the Circulating Nurse and the recovery staff.

Greater than 80% of the responses indicated that the Scrub Nurse has responsibility in observing and reporting activities that could cause injury. 88% indicated the Scrub Nurse is responsible to observe and respond to complications.

Most hospitals agreed, (53%), that the Scrub Nurse performs both roles when additional assistance is required and when there is no surgical assistant.

89% agreed that the Scrub Nurse would perform Scrub Nurse functions as well when performing surgical assistant activities. 96% responded that this would not be considered a 'Transfer of Function" and only 25% agreed that when formulating the "Transfer of Function" activities, operating room nurses were involved in the decisions (ie. small hospitals).

Section D: Future Trends Highlights

66% agreed that they could envision an expanded role of the Scrub Nurse to include that of RN First Assistant.

Only 54% responded that they could see the Circulating Nurse expand its role to that of RN First Assistant to the Anaesthetist. Alberta, British Columbia, New Brunswick, Nova Scotia, and PEI were provinces that responded negatively to this question.

75% agreed that there will be an increase in the role of nurses in the operating rooms of Canada over the next five to ten years.

Comments for an increased role are:

- advances in technology have dictated an increase of the role (ie. laproscopic surgery),
- increased awareness of legalities have developed, therefore, nurses will play a greater role as patient advocates (decentralization),
- aging population will impact,
- increased regulation,
- expand to paramedical fields of anaesthetics and surgery,
- patients will be discharged at a faster rate, giving more time for patient teaching on an outpatient basis,
- as recent cutbacks become more evident, the role of the RN in the OR will expand (new roles will be developed),
- no longer a narrow vision as an instrumentalist, thus going to see a greater role of nursing specialists,
- professional autonomy.

Comments for a decreased role are:

- financial constraints,
- scrubbing will be deleted,
- flattening organization,
- the OR technician brings good value with a more reasonable salary,
- fewer procedures are being covered by OHIP, thus the number of cases will reduce, thus fewer staff,
- nurses are not going into OR nursing as there are few training programs (not part of the basic training, therefore, not attracted to it)

Quotations worth noting:

1. "I believe that the OR nurse's role in Canada is continually growing. This is due to high risk points, modern technology, legislated acts, as well as legal implications".

2. "I envision the OR nurse as a strong patient advocate, a resource person for the surgeon, a specialist in a particular area of surgery and as a teacher/educator of OR nursing practice...".

3. "The role will change dramatically as we move into minimal access surgery, computerization, greater access to patient care information and our ever changing technology. The decreasing health care dollars and aging population will impact and challenge our future dramatically. We must be pro-active, flexible, and prepared to meet the needs of our patients in the context of the complexities of our uncertain future".

A second survey restricted to staff nurses was conducted during the National OR Conference in Quebec City, June, 1993. The results of this survey will be published in a future issue of the Journal. As well, there will be periodic reports on what will be transpiring with regard to the "expanded role" for the operating room nurse.

Acknowledgement

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Postoperative Complications of Surgical Positioning in the Elderly Orthopaedic Patient

By Regina Leonard

Population demographics indicate that the number of elderly persons in our society is increasing. The elderly share a number of commonalities, including health problems. At present the number of elderly who are accessing the health care system is high compared to other age levels. These clients are requiring more health care treatments, are costing more and are taking a longer time to recover and to exit from the hospital system. The number of elderly who are receiving surgical procedures is increasing (Jackson,1988). This is especially true in the speciality of Orthopaedic surgery where arthroplastic joint replacement and reduction of hip fractures is becoming quite routine. The elderly are also having surgery for limb, shoulder and back injuries and disease processes.

Positioning for a surgical procedure may jeopardize, compromise or disrupt the integrity of the body systems. The systems most frequently affected by the surgical positioning are the peripheral neural, musculoskeletal, integument, respiratory and cardiovascular. The focus for this paper will be on the complications affecting the peripheral neural, musculoskeletal and integument systems. Risk factors present a challenge to the surgical team for all patients. Patients incur some effects from the surgical positions, albeit most of the effects will be minor, expected and transient. Each patient is a unique individual and although some patient needs are universal, there are concerns and problems specific to each patient and at each age level.

The elderly, as a group, pose higher surgical risks than the younger population. They are often physiologically and pscyhologically compromised, have less body fat and muscle tissue to cushion bony prominences, have a slower and sometimes compromised vascular system, have less physiological reserve, are slower to heal and are less responsive to treatment protocols than younger patients. The elderly have decreased tissue perfusion, their health status is often lower, they frequently suffer from more than one medical condition and they may be on multiple medications. They may have impaired communication ability due to medical condition, nutritional status, medications, and the dependent nature of unfamiliar surroundings.

The elderly arthritic patient poses problems in accommodating to the surgical demands on the musculoskeletal system. The obese manifest problems with poor tissue perfusion, a larger expanse of tissue and an uneven distribution of body weight on the OR table. Fatty tissue has decreased vascularity and resiliency which may enhance breakdown of tissue (Iverson, 1988). The aged have decreased skin thickness, vascularity and healing capacity. They have diminished ability to respond to physical and emotional stress and to return to a pre-stress level of

Abstract

This paper addresses the elderly population from the perspective of physiological and anatomical changes which occur throughout the aging process. Recommendations to enhance elderly patient wellbeing throughout the perioperative experience are given including achieving integrity of the body systems, positions used for surgery, and actual and potential problems which may occur as a result of prolonged positions.

Author

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