

SURGICAL SMOKE



RISK

Surgical smoke can carry dangerous bacteria and viruses, including HIV. It can produce upper respiratory irritation and may have mutagenic potential.

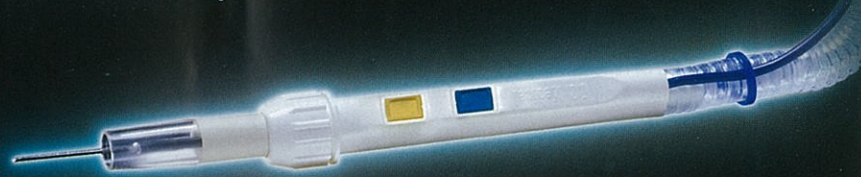
FACT

An estimated 23,000 operating room professionals are exposed to electrosurgical smoke each year in Canada, including surgeons, nurses, anesthesiologists, and surgical technologists. Sadly, many existing operation room smoke evacuation systems are underutilized due to bulky handpieces that nobody likes to use.

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WHY A RN FIRST ASSISTANT? A Look at the Benefits....

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Can a Registered Nurse First Assistant (RNFA) work effectively as a first assistant to the surgeon and the patient? This article will examine the RNFA role and the benefits it provides to the healthcare system.

Most procedures performed within the operating room suite require a surgical assistant. Traditionally this function has been fulfilled by residents in teaching hospitals or by family physicians in community hospitals. Community-based hospitals are finding it increasingly challenging to acquire surgical assistants. This in turn is causing cases to be delayed or postponed. With the media reporting a shortage of physicians that is likely to increase in the future, it is not surprising that several Ontario hospitals and surgeons have begun to look to Registered Nurse First Assistants (RNFAs) to augment the available pool of surgical assistants.



Karen Sagness, RNFA, scrubs preoperatively

RNFAs are experienced perioperative nurses who have been educated to function in this expanded role. Recognition of pertinent anatomy, coupled with knowledge of the operative sequence and its rationale, are requirements to effectively anticipate the surgeon's next move and assist rather than hinder the process. The RNFA, through a formalized educational process that includes a surgeon mentored clinical internship, is prepared to effectively fulfill the assistant's role.

Canadian hospitals for the most part do not reimburse physician assistants. Physicians bill the provincial government for their services so they are free to the hospital, although not to the global health system. Understandably, hospital administrators and heads of nursing and surgery balk at paying for a RNFA in these times of financial restraint. *Why then are those hospitals and/or surgeons who currently employ RNFAs willing to pay that extra price? What unique perspective does a RNFA bring to the operating room, surgical team and a patient's surgical outcome?*

Little qualitative data exists or is published on the benefits of the RNFA. *Suzin Ilton, a RNFA, (2002) working with a paediatric neurosurgeon is positively influencing the patients and the practice. She reports that together she and the surgeon are able to see more patients. Case and turn over times are faster, patient satisfaction is improved, the surgeon is more efficient, and Ilton's job satisfaction is way up.*

Holmes (1993) in a study from the UK, involving 1300 patients undergoing coronary bypass surgery, showed a significant difference in leg surgical site infections depending on who harvested the saphenous vein. Where the RNFA was involved the rate was 2.45% compared to an infection rate of 7.9% if a surgeon/physician was the vein harvester.

Quantitative or anecdotal data is much more readily available. Surgeons, perioperative nurses, anaesthesiologists, registered respiratory therapists, and perfusionists have been known to comment that things just seem to go smoother and quicker when a RNFA assists. Data generally

Photo by Joan Porteous

supports that a faster operation equals a better patient outcome (Wysocki, 1989).

But how does a RNFA contribute to this? By being available and present a RNFA is able to recognize what needs to be done, and has the skills and education to actually do it. A willingness to work hard is also a key attribute of a RNFA.

Within the operating room itself, RNFAs are motivated by what is in the best interest of the patient, rather than by advantageous billing practices. RNFAs are there to assist the entire health team – including nursing, anaesthesia, respiratory, and perfusion – not just the surgeon. RNFAs tend to be immediately available and very focused.

Assisting a surgeon intra-operatively is similar, in concept, to ballroom dancing. When the same partner is available for every dance, the partners become able to anticipate each other's moves and utilize their different sets of skills to function as one. The surgeon leads while the assistant follows. The result is a smooth and elegant "dance". When the assistant continually changes, it is more difficult to get the same results. If the assistant is not familiar with, or comfortable with, the environment, this will further detract from the outcome.

As a result of their perioperative background, RNFAs can assist a variety of surgeons equally well. Individuals who work with each other on a regular basis also come to understand each other's idiosyncrasies, moods and preferences. They begin to complement each other and achieve optimal outcomes for the patient in a safe and efficient manner.

As operating rooms become increasingly complex and dependent on ever changing technology, it is no longer possible to have just any assistant "pop in" to the OR. Daily ongoing experience and education build a comfort level and a skill set that short-term involvement cannot. The RNFA, with previous scrub and circulating experience, is intimately familiar with and at home in the perioperative environment.

Patient safety is integral to the practice of perioperative nursing. The RNFA, in colla-

boration with the OR team, helps to ensure that the patient remains free from harm. Experience and familiarity with the environment ensure that the RNFA, along with other nursing staff are quick to discern subtle clues and to intervene and prevent untoward events from occurring.

Ideally, RNFAs also maintain contact with the patient throughout their perioperative experience – pre-operatively, intra-operatively and post-operatively. Nurses tend to be holistically oriented and in general, have more time to spend with patients than surgeons. RNFAs not only understand the surgical process, but they also understand what the patient is about to face and, as a result, are able to prepare the patient and his/her family for what lies ahead. The unknown can be very frightening and confusing. A smiling friendly RNFA can help to alleviate fears and make the process more tolerable and manageable. Both pre- and post-operatively patients, and their families, appear less reluctant to ask questions of the RNFA than they would be with a surgeon. In the writer's experience, patients often have unanswered questions which increase their anxiety level but do not want to bother the surgeon as they feel he/she is too busy. Because the RNFA directly participates in the surgical procedure he/she is an excellent front-line source of information and comfort.

By assessing the patient pre-operatively, consulting with the surgeon, and having a thorough understanding of the operative sequence and equipment, the RNFA is able to personalize the plan of care and communicate that information to other team members. This often prevents the unnecessary opening of equipment and supplies thus contributing to keeping case costs down.

RNFAs can also be an integral part of the learning experience for staff, students, and even other assistants. The world of the operating room is one of mystery – few outsiders know what happens beyond that magical red line on the floor or pneumatic double doors. RNFAs are often among the most highly trained individuals who work with the surgeon on a

regular basis and have a 'bird's eye view' of the surgical intervention in addition to hands-on experience. When unplanned events occur, the RNFA is generally able to continue assisting effectively. As a result they have much to offer less experienced personnel.

When a surgery utilizes large amounts of instruments and equipment, as it does in orthopaedics, for example, the RNFA is able to help novice nurses understand and prepare for the sequence of events. This makes the situation less stressful for the scrub nurse, reduces the potential frustration of the surgeon, and helps to maintain the pace of surgery.

Previous scrub nurse experience allows the RNFA to help the surgeon in other small ways. Seemingly minor acts such as handing suture ends to the surgeon or cleaning tissue off forceps when the scrub nurse is busy helps to keep the operative flow constant and the pace of work steady. These tasks may be little factors on their own but, in combination, they facilitate a smoother and faster operation.

RNFAs, like other registered nurses, are becoming involved in research opportunities and best practice innovations. Both alone and in collaboration they help to identify practice problems, and seek answers and solutions through scientific investigation (Elliott, 2002).

As the predicted nursing shortage becomes more acute recruitment and retention are becoming increasingly important issues. The use of RNFAs is one way to help the system retain experienced registered nurses within the perioperative arena. The opportunity the role offers encourages nurses to expand their skills and helps to foster a positive work environment. RNFAs become mentors, role models, and informal educators. As Ilton (2002) states "people making career choices are attracted to nursing for the opportunity of an autonomous role, with the opportunity for clinical growth" (p. 26). The RNFA role exemplifies this statement.

The subspecialty of nurse anaesthetists (in the USA) was born because surgeons felt that nurses

had the "natural aptitude and intelligence to develop a high level of skill in providing the smooth anaesthesia and relaxation that the surgeon demanded" (Garde, 1946, p. 567). Likewise, RNFAs are proving that they have the knowledge, skills, and professional judgment required to act as effective assistants in the OR. As a result they are being accepted by surgeons and by hospitals as a viable addition to the available pool of surgical assistants.

It seems the answer to this article's introductory question – 'Can a RNFA work effectively as a first assistant to the surgeon and patient?' – is YES. ✦

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