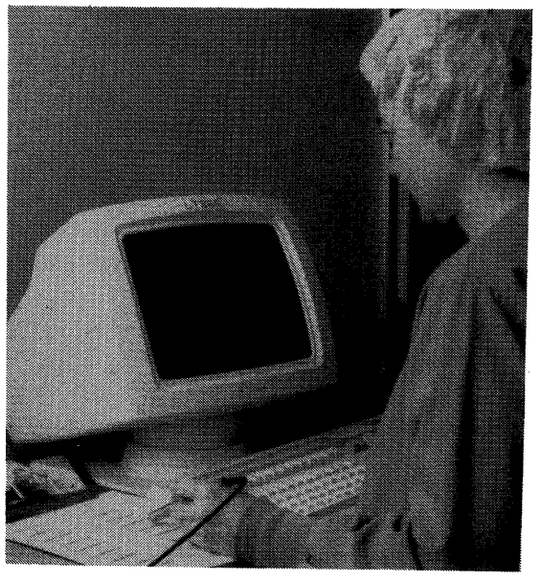


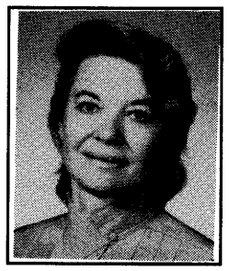
Inventory usage is recorded by wanding the label attached to a replenishment sheet.

tract negotiations between our Purchasing Department and supply vendors.

The implementing of this system was an exciting step in inventory control for the operating room. It provided O.R. nursing administration with control and access to information that was humanly impossible through a manual system. As well, it was a convenient way of processing inventory.

Although the system was designed on a central computing facility, other systems such as micro computers are being developed to provide a similar concept. The potential for further development in this application is monumental, considering the rapid expansion of the technology. ■

About the author



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Special laser surgery issue to be published by the Journal in December

The *Canadian Operating Room Nursing Journal* is planning to publish a special edition on laser surgery for distribution in December. This special issue, which will be sent to all paid subscribers, will be available on request as a single copy order. Details of exact cost will be announced later.

Clinical laser applications

The issue will consist of an up-date of clinical applications and future trends in laser surgery. Topics will include: Lasers in surgery - the current status of laser surgery in the following areas: gynecology, ENT, cardiovascular, dermatology, general surgery, podiatry, urology, neurosurgery, etc.

Laser regulations and standards for hospitals and clinics will be dealt with, as will laser surgery credentialing and privileges.

There will also be a number of pages devoted to laser training for nurses/technicians, and a discussion about the opportunities available for laser education for nurses, technicians and doctors in Canada and the United States.

The issue will also contain a directory of laser products (lasers and ancillary laser devices and products), their manufacturers and distributors. ■

Notice to subscribers...

The Canadian Operating Room Nursing Journal, which has published six issues per year for the past 8 years, is obliged to reduce its frequency to five issues in 1990 due to a reduction in advertising.

Readers will note the volume number and date on this issue reads Volume 8, Numbers 2 and 3, March/April, May/June, 1990. It is presented in this manner to ensure that subscribers are aware that they are not missing an issue from their set.

We will be publishing a "Special Issue on Laser Surgery" later this year.

Thank you for your continuing loyalty and support.

Ron Forster, Publisher

Legal implications of high tech surgery

By L.E. and F.A. Rozovsky

Canadians are enthralled with technology. This is true for the average consumer as it is for hospitals and health care professionals. New diagnostic machines, surgical procedures and equipment, as well as intraoperative support devices put hospitals under constant pressure to improve and "keep up" with technology.

From a legal perspective, high tech procedures are sometimes akin to the tail wagging the dog. The fact that new technology is available does not mean that a health care facility must go out and get it. Indeed, a decision to hold back may be more of a public service and a more legally prudent choice than trying to "keep up with the Jones."

Laser surgery - a case in point

Hospitals jumping into new technology could find themselves on the receiving end of unpleasant surprises. For example, hospitals which permit laser surgery could be held responsible for injuries stemming from such high tech procedures. How is this possible? Consider the following:

1. A surgeon is permitted to perform laser surgery based on the current privileges he/she enjoys from the hospital. The hospital makes no additional inquiries regarding qualifications to perform the surgery. It turns out the surgeon is not qualified to use the device and injures the patient. Because the hospital knew or should have known that the surgeon was not qualified, the facility could be liable for the patient's injuries, along with, or separately from, the surgeon.

2. An operating room nurse suffers permanent ocular damage while assisting in laser surgery. Inadequate precautions were taken to prevent laser beams from bouncing off certain surfaces in the O.R. resulting in harm to the staff.

3. An operating room nurse, not qualified to assist in laser surgery, performs in a substandard fashion resulting in harm to the patient. The nurse could be held negligent in such a circumstance. The nurse's employer (the hospital/health facility) could also be deemed responsible for assigning someone that supervisory staff knew, or should have known, was not qualified to participate in the operation.

4. A patient claims that he did not give a valid consent to laser surgery since he was not informed of the material risks associated with the procedure. Further more, the patient indicates that he was not told of reasonable treatment options such as the medical management of his condition. The fact that a known risk materializes could give rise to a consent lawsuit.

5. A patient experiences a serious burn when oxygen leaking from the side of the anaesthetic mask is ignited by a laser beam. The injury would not have occurred had the operating room supervisor ordered fire-resistant surgical draping materials.

Legal and public fall-out

Health facilities could also find themselves the subject of other significant legal proceedings. Statutory inquiries, commissions, and in the case of

patient deaths, coroner's inquests or magisterial inquiries could be triggered by high tech procedures that go awry.

The media could also make a field day of reports of high tech disasters. Portrayed as "experimentation" or "novel" interventions, media coverage could leave the impression that a hospital permitted dangerous procedures to be carried out unchecked in the hands of incompetent doctors and nurses. Undoing the damage from such adverse publicity could take years.

Finding a solution

Hospitals need strategic planning for all high tech procedures. Input from physicians, administration, and nursing is imperative if a balanced perspective is to be achieved. Difficult questions must be asked regarding the resource allocation required for expensive, high tech innovations which, in turn, mean serious setbacks in well accepted, traditional surgical interventions.

If a choice is made to go high tech, hospitals should gear up for the innovative surgical procedures. This means meticulous review of several factors including the following:

a. Medical staff credentialing and privileging

Hospitals must decide who is and who is not qualified to carry out high tech procedures. Surgeons wishing to utilize such procedures should demonstrate documentary and clinical proof of proficiency in the new technology. Further, they should be able to demonstrate clinical competency in handling untoward problems which occur during the procedure.

b. Qualifications of staff nurses

Hospitals should spend the money to train nursing staff who will assist in high tech surgical procedures. A one day "blitz" of information or attendance at a workshop is not enough. As with physicians, surgical nurses should demonstrate both documentary and clinical proof of proficiency in the handling of the new technology.

c. Qualifications of other personnel

All those associated with the high tech procedures need training. For example, with laser surgery, anaesthetists must be knowledgeable about flash points and fire retardation procedures when using oxygen masks on patients. By the same token, those responsible for hospital safety should be conversant with handling fires generated during laser surgery.

d. Do not forget the costs

Health facilities must also consider the costs associated with new technology. New gowns, ancillary equipment, charting routines, preoperative and intraoperative requirements as well as down time for staff in training must be considered. Good air circulation and filtration systems should be installed to handle airborne particulates (the laser plume, etc.) from laser surgery. Additional liability insurance premiums to cover claims stemming from the new high tech surgery should be considered. High tech equipment maintenance and replacement costs are also important factors.

e. Consent to treatment

Patients who are candidates for novel, high tech surgical interventions must be given sufficient information to make a treatment choice. Particular attention should be paid to the novel nature of the procedure, its attendant risks and benefits, as well as information regarding other treatment modalities, if any are available. Furthermore, there should be careful documentation of the consent process. Standardized consent forms might not suffice. Instead, specially designed documentation or a concise yet detailed notation in the patient record should be considered. Where high tech procedures are novel or experimental, it may also be necessary for the procedures to be approved by a research ethics board.

The bottom line

The bottom line is that careful thought should be given to many factors before introducing new, high tech surgical procedures in Canadian hospitals. Advice must be sought from a wide circle of qualified people, not simply staff surgeons and hospital legal counsel. Insurers, infection control experts, architects, engineers as well as heating, electrical and plumbing contractors may have valuable insights for those faced with making a decision on going high tech. Financial advisors can also advise on the choice of purchasing or leasing of expensive, high tech equipment.

Conclusion

By the same token, it is imperative that decision-makers take into account advice from operating room supervisors and operating room nursing staff. Such precautions provide a reasonable approach to introducing high tech surgery with a realistic view of liability exposure. ■

Letters to the Editor

Dear Editor:

In reading the article (in the *Canadian Operating Room Nursing Journal)* entitled "Professionalism and the O.R. Nurse," February, 1990, Volume 8, Number 1, page 6, I was stunned.

The author elaborates on "rewards O.R. nurses share with other professionals." What a wonderful hospital she must work in! Are there any positions open? Maybe O.Rs are great in Quebec.

I have worked in an operating room for six years and I have colleagues who I speak to regularly who work in operating rooms across the province of Ontario.. We do not share Miss McEvoy's views. Her list of rewards is our list of goals.

Being treated like a "Cinderella" is not respect by colleagues. $2.10 /hour to remain on call and within five minutes of hospital (on your only time off I might add) is not a healthy balance in work and personal life. $20.00/hour after 22 years of nursing experience is not a fair salary when I literally run for eight hours...and when I'm not running, I am scrubbed in under high stress, and I could go on and on...

Of course, it is not all bad. I would not still be working in the O.R. if it were. It is, after all, the only place in our hospital where I can work day shift. But, the real reason I am still an O.R. nurse is because I like (O.R.) nursing, and I believe our goals are realistic and attainable.

I am pleased for Miss McEvoy that she can work in an institution with such a heavenly atmosphere.

M. Eileen Davidson,
President-Elect
Ontario Nurses Association

Experimental device eliminates the wait for blood gas analysis during surgical procedures

An experimental device that would allow the rapid and continuous measurement of blood gases right in the operating room has shown promising results in a new California study.

Called an optode, researchers at the University of California Irvine have been evaluating the device hoping that it will eliminate the need to wait for a blood gas analysis from the laboratory.

A blood gas analysis causes a delay of anywhere up to 20 minutes before the results get back.

The optode is an optical fibre that fits through an 18 or 20 gauge radial artery cannula positioned in the surgical patient's wrist. A miniaturized capsule of dye in the end of the probe sits in the bloodstream. The probe is connected to a monitor that generates a light through the fibre. In response to this light, the dye generates a light of its own in a different colour. This light is in turn picked up by the monitor.

The amount of light the dye generates is a function of how much oxygen and carbon dioxide are in the blood surrounding the dye.

The oxygen and carbon dioxide readings, along with blood acidity levels, are shown continuously on a digital display.

In the study, Dr. Stephen Barker, associate professor and vice-chairman of the University's department of anaesthesiology, compared results using both 18 and 20 gauge cannulas to results obtained by independent laboratory testing in 25 surgical patients.

Time and lives saved

It was found that all three blood gas readings taken in the 18 gauge cannula were comparable to those from the standard lab analysis. "In fact, the results we got in the 18 gauge cannula were good enough to be clinically accepted," said Dr. Barker. Readings from the 20 gauge cannula were not as accurate.

"When the optode works, and I'm sure it will before long, this is going to revolutionize some aspects of critical care both in the operating room and intensive care. Having instantaneous and continuous blood gas data rather than having to wait for laboratory results will save a lot of time and lives," Dr. Barker said. ■

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