

Canadian  
**Operating**  
**Room** Nursing  
Journal

Volume 8, Numbers 2 and 3, March/April & May/June, 1990



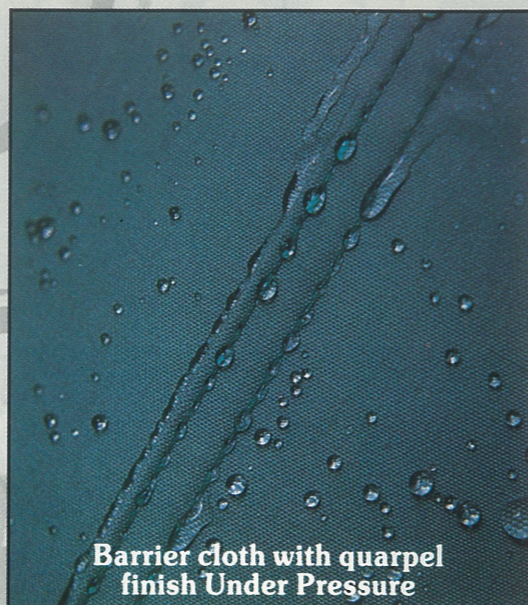
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Recipient - Isabelle Adams Award for  
Excellence in Peri-operative Nursing

Bar coding for OR inventories

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# Canadian Operating Room Nursing Journal

Volume 8, Number 2 and 3, March/April, May/June, 1990  
 (Distributed June, 1990)

Published by Health Media Incorporated

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Subscription Rates:	1 Year	2 Year
Canada	\$16.00	\$26.00
United States	\$22.00	\$36.00
Other Countries	\$26.00	\$40.00
Single copy orders	\$5.00	

I.S.S.N. 0712-6778

Second Class Mail Reg. No. 5934

Canadian Operating Room Nursing Journal, March/June, 1990

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During the recent 11th National ORNAC Conference, Valerie Shirreff became the second recipient of the Isabelle Adams Award. This award is the highest recognition awarded an operating room nurse in Canada.

By Editorial Staff

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An account of the experiences of a large hospital operating room department in the successful implementation of bar codes in pursuit of an automated and dynamic operating room inventory control system.

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New diagnostic machines, surgical procedures and equipment, as well as intra-operative support devices put hospitals under constant pressure to improve and "keep up" with the technology. However, from a legal perspective a realistic view of liability exposure when new technology is being introduced into the operating room is in order.

By L.E. and F.A. Rozovsky

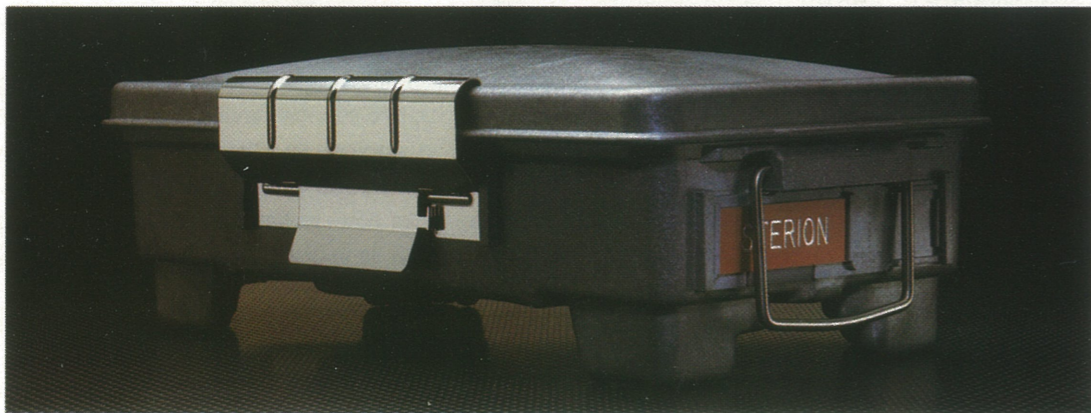
#### 25 The 11th National O.R. Nurses Conference

Photo coverage of the 11th National Operating Room Nurses Conference held in Toronto in early April

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## President's Message

My pursuit of the office of President represents the culmination of many years of caring, participation and commitment to promote operating room nursing as a professional role in developing and maintaining quality care to surgical patients. I have proven my commitment and I now pledge that I will continue to serve the Canadian Operating Room Nurses Association with enthusiasm, dedication, concern and be open-minded to meet the needs of the membership and support and defend the on-going ORNAC goals, as well as establish new ones for the membership and peri-operative nursing.

On behalf of the new executive, I take this opportunity to thank Joan Donald, the Past President, and her executive for a job well done. It is no easy task to be available practically every minute for ORNAC and still be available to one's work duties, family, friends and personal time. I, and the new executive, hope we will be able to fill our predecessors' shoes. The guidance, support and feedback from the board is invaluable, and we, the executive, will continue to rely on this group of dedicated nurses.

I believe ORNAC has an opportunity to mold peri-operative nursing practice through education, standards, research, involvement with the C.N.A., and where possible, actively involved in legislative acts that govern our practice. A strong international link has been developed and the executive will maintain and uphold this link which will keep us in touch with world affairs and concerns in nursing.

I, along with the executive will work with and through the membership in making accurate, decisive, and informed decisions. Some decisions may not be popular, but will be based on feedback and made to the best of our ability. A person who trims oneself to suit everybody will soon whittle oneself away.

We must not put each other in a win/lose situation. Compromise is the answer. This is the important issue. We have volunteered to do the very best we can for ORNAC. Each member has something to offer, some more than others; but we must make everyone feel welcomed and proud to be associated with ORNAC. Communication and constructive criticism will make our association viable and strong. A reputation is easier kept than restored.

An organization does not succeed by leadership alone, but through the strengths and involvement of

its membership. In this we have a wealth of expertise and commitment. Major issues facing ORNAC presently include: lobbying for O.R. experience in the basic nursing program; developing competency statements for the peri-operative nurse; developing a position on RNs as 1st Assistants; eligibility for Board and Executive offices. Issues for the future: a scholarship/bursary program and, research and certification for the peri-operative nurse. We will succeed if we are prepared to lend a helping hand.

There has always been a strong unity - coast to coast - which was clearly demonstrated during the successful 11th National Operating Room Nurses Conference in Toronto where we had the opportunity to exchange ideas, concepts and attitudes, and where there existed a strong, common bond of professional kinship. This bond will strengthen our commitment to our profession, to ORNAC, our patients and to our peers. I am confident in our future as we face the challenges of the 90's.

We must develop innovative strategies to meet these challenges and to uphold the rights of patients and nurses in their quest for a realistic balance between cost, quality and access to care. Nothing is accomplished without a dream. If you aim at nothing, you will hit nothing.

The new ORNAC executive:

- President - Gloria Stephens - B.C.
- President-elect - Carol Lenox-McDougall - Ont.
- Vice-president - Jackie Waisman - Alberta
- Secretary - Anne Hughes - NFLD.
- Treasurer - Carol Starr - Ont.
- Past-president - Joan Donald - N.B.

We, the executive, look forward to a great future enabling us to contribute to the growth and further development of ORNAC in a collaborative effort with the provinces. I close with this poem:

*"What you can do, or dream  
you can, begin it.  
Courage has genius, power  
and magic in it.  
Only engage, and then the  
mind grows heated;  
Begin it and the work will  
be completed."*

(Diane Ritter)



Gloria Stephens  
ORNAC President

# The Isabelle Adams Award for Excellence

Valerie Shirreff - 1990 Recipient

Valerie Shirreff was honored by her nursing colleagues April 2nd, 1990 at the National ORNAC Conference in Toronto. She was presented with the Isabelle Adams Award for Excellence in Perioperative Nursing, the highest award accorded exclusively to operating room nurses in Canada. She was officially presented with the prestigious award in front of over 1,000 O.R. nurses, the ORNAC executive and representatives of the suppliers and manufacturers, many of them personal friends, as well as colleagues. In a brief and emotional acceptance speech she said: "I am most grateful and honoured by this award because ORNAC has been my life."



ORNAC was indeed a very large part of Valerie's life, as were all of her many O.R. nursing activities - within the hospitals she worked, within her city of Toronto, provincially, nationally and internationally. Most importantly, Valerie was for many years the "life" of ORNAC. She was ORNAC's founding president and served in this office for four consecutive years. During her tenure she was the driving force behind the organization, setting-up its aims and objectives, and instituting the association's by-laws. She was instrumental in establishing ORNAC's representation internationally with the AORN and the World O.R. Conference, in securing a viable relationship with the Canadian Nurses' Association, and intimately involved in the establishment of the "Canadian Operating Room Nursing Journal."

Valerie Shirreff was a gifted organizer of people, of organizations and events related to the operating room nursing specialty. She was a highly profes-

sional nurse, totally dedicated and committed to her profession, and one of the warmest and most enthusiastic women so many of us had the privilege to know. For her significant contributions to O.R. nursing, and especially her work with ORNAC - "her life" - she was honoured with the award.

Two weeks following the presentation of the Isabelle Adams Award, Valerie Shirreff died at the Mississauga Hospital after a long and courageous battle against cancer.

Raised in Toronto, Valerie took her nursing education in England. On her return to Canada she worked through the ranks from staff nurse to nursing administrator, most recently at The Wellesley Hospital, and lastly at the Mississauga Hospital from 1983 to 1990.

She was instrumental in the establishment of the O.R. Nurses Association of Ontario. She served as President of the Greater Toronto O.R. Nurses Group, and over the years, she held numerous offices in these organizations.

Valerie worked very closely with the Exhibitors during those many

years. Through her professional friendships, she was able to set up ORNAC on a solid financial basis for years to come. Her warm and positive influence was felt by everybody and everything connected with ORNAC: its logo, its flag and its future direction.

We all grieve the passing of Valerie and also celebrate her life. In too few years, this fair lady left a legacy. By surpassing accepted standards of nursing, she made a most significant contribution to the perioperative nursing field. The ORNAC executive, O.R. nurses across Canada and abroad, the publisher and editors of this journal, and all her many friends and colleagues extend to her family and intimate friends deep and warm sympathy.

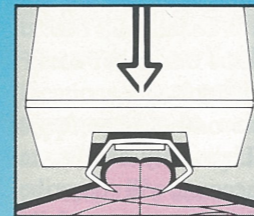
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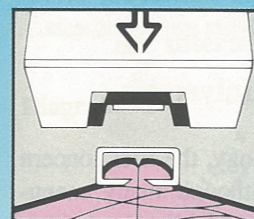


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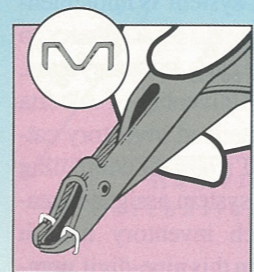
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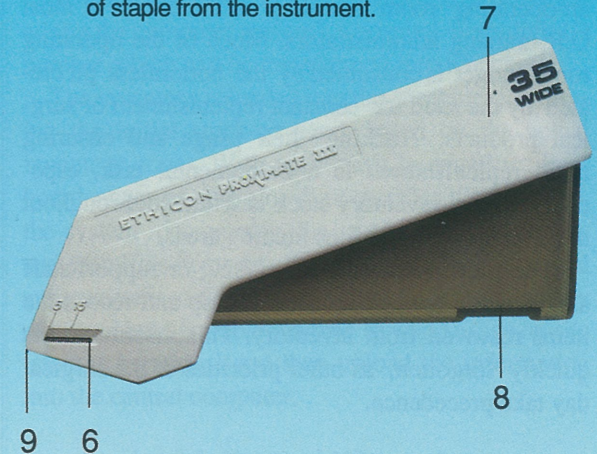
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# Bar codes

## for a more dynamic O.R. inventory system

By Donna Prokopczak, R.N., B.Sc.N., M.Ed.

Harnessing and taming the rampant high cost of an operating room inventory is the dream of most O.R. nursing administrators. Much of the operating room budget is consumed by the bottomless pit created by the need for constant replenishment of surgical products. Tracking their usage and ensuring rapid replenishment is a monumental task, especially if the inventory stock is scattered throughout the department in various holding areas.

The hectic pace of O.R. nursing or support staff allows little time or no time to stop and record the items removed from inventory. This information is quickly forgotten, as other priorities of the surgical day take precedence.

### Streamlining the process

A convenient method of capturing the information at the point of use, without the need of a keyboard data entering system or the necessity of writing down what has been taken, would certainly streamline the process of replenishment.

Accountability for this inventory motivated one major operating room to seek new ways of controlling this "direct buy" inventory by incorporating computer technology. By taking a look at the service sector of our society, we saw how the use of bar code

technology touched our everyday lives. Why not apply this technology to the operating room?

The following is a description of the experience of the operating room at the University of Alberta Hospitals in Edmonton. This account will describe how this operating room found ways to successfully implement the "wonderful world of wandables" in order to automate the department's direct buy inventory, consisting mainly of implants and prosthesis.

### Bar coding not universal

In considering this technology, the first concern that comes to mind is that, although many manufacturers are producing inventory with universal bar codes, what do we do about those manufacturers who do not furnish them? Unless a system is implemented with a lot of "exceptions," it will be necessary to generate our own bar codes for each inventory item.

In view of the fact that the University of Alberta Hospitals already had a computerized inventory catalogue in place (on the hospital's central computing facility), including a nine-digit system assigned catalogue number identifying each inventory item, it seemed only logical to transform this nine-digit number into a bar code format.

The next concern was how to generate and attach a

bar code to each inventory item so the usage could be conveniently captured through an infra-red pen scanner or wand.

It was decided that a dedicated thermal transfer bar code printer be purchased to generate labels to be attached to each inventory item. Probably the key item in the success of this system was the selection of a suitable bar code label. Because all O.R. inventory is not of a uniform size, it was imperative to choose as compact a label as possible - one that would be scannable and contain as much information as deemed essential.

### Replenishment record

One of our major concerns was how to attach a label to those inventory items that were detachable when the supply item was used. To accomplish this, a double ply adhesive, peelable label was selected. Initially, the adhesive backing adheres to the inventory item package or, in the event that the item does not have packaging, it may be placed into a suitable size plastic bag for labelling purposes.

At the point of usage, the top layer of label containing the bar code and descriptive information is detached and affixed to a "replenishment record form." These forms are conveniently placed in the storage locations. The forms are collected daily by the O.R. supply clerk who wands the usage into the automated inventory system. This system, designed on the hospital's central computing facility and involving the co-ordinated efforts of the purchasing, ac-

counting and information systems departments, in collaboration with the operating room department, became a reality. (See conceptual diagram #1)

### How the system works

All O.R. inventory items are catalogued according to their respective surgical service, such as neurosurgery, cardiovascular, orthopaedics, and so on. The catalogue consists of information including:

- a description (condensable to fit available space)
- size dimensions
- unit of issue (eg., each, box of 10)
- cost per unit
- vendor
- manufacturer/vendor catalogue (product) number
- storage location (coded description)

Inventory volumes are controlled by quota levels determined by the operating room nursing supervisor in each surgical service. This is a three-point quota level consisting of a high level (indicating the upper volume of inventory to be stocked), low level (point at which replenishment is to be initiated), and a warning level (point at which the inventory stock is at or near depletion).

As each inventory item is catalogued, it is assigned (by the computer system) a hospital nine-digit ID number which can be transformed into a bar code.

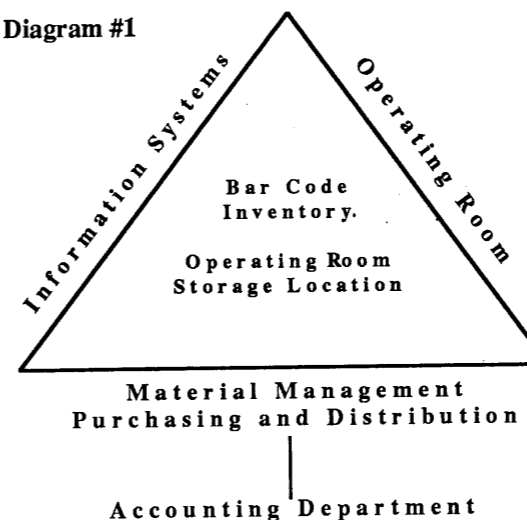
The inventory is loaded into the computer identifying the initial stock-on-hand, based on the actual inventory count. With each entry by wand (or keyboard entry of the nine digit number if necessary), the system decrements the stock-on-hand quantity and identifies items needing replenishment. An ideal enhancement to this system would be the availability of a hand held portable scanner to wand usage on site (storage locations) and then upload the information into the central computer.

### A trek through the system

Following the inventory cataloguing and entering the inventory supply count into the central computer, the life cycle of an O.R. inventory supply item begins with its bar coded label affixed and placed on the designated shelf location in the operating room. The existence of this item is recorded in the "stock-on-hand" category within the computerized inventory. As the item becomes required for use, the label is detached by either an operating room

### An Interdepartmental Venture

Diagram #1



nurse or one of the O.R. support personnel and affixed to the available "Replenishment Record Form." The O.R. supply clerk enters the usage into the central computer at a terminal, using an infra-red, light pen or keyboard, if the label is damaged or unscannable by the wand.

When the "Stock-on-Hand" level reaches the pre-established low level (re-order point), the system generates a print-out list of items requiring replenishment at the command of the purchasing personnel. This last process (re-ordering point) requires human intervention as a print-out is not automatic.

### Inventory replenishment

Replenishment becomes the responsibility of the purchasing department and system-generated purchase orders can be either telephone-faxed or forwarded to the appropriate vendor. The purchase order can be viewed through the computer terminal by the O.R. personnel. When the supply items are shipped to the hospital receiving department, the purchase order is called up on a system terminal and receipt is documented. This activates the dedicated bar code printer in the O.R. to generate a label for each item as it is received. Checking the labels produced by the bar code printer informs the O.R. of the availability of inventory just received. This is valuable as it may be urgently required.

As the inventory is delivered to the O.R., the labels are matched and attached appropriately to the new inventory. This also acts as a double check on the

system. If insufficient labels are received for the inventory, then a data entry error can be detected. The arriving inventory is then placed in the designated storage location awaiting the next usage. Through careful co-ordination, turnaround time can be as little a 24-48 hours for some high usage, high cost inventory items. (See diagram #2)

### Labels - the key ingredient

It was deemed essential for this system that the bar code labels be printed on site rather than be custom produced by an outside printer. The rationale for this is the number of items to be labeled. There are over 3000 inventory items in our O.R. catalogue.

A quiet, dedicated, thermal transfer bar code label printer was selected. The hospital's Information Systems Department was required to program the printer to communicate with the central computer and produce labels as defined by the operating room. With the assistance of Information Systems, the following specifications were developed for our labels.

The desired information contained on each bar coded label, in addition to the bar code, includes:

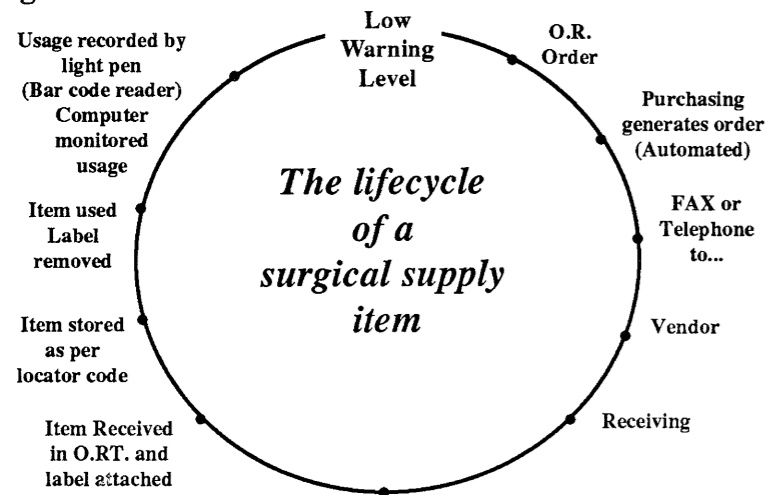
- the catalogue number (from which the bar code was derived)
- unit of issue
- vendor (a code was developed to condense names into a three-character field)
- vendor catalogue (product) number
- catalogue description (a 30 character field);

- the optional code for 'CN' to designate consignment inventory. (See illustration of bar code, page 13)

### Consignment inventory

One of the big hurdles in the planning process was the method by which the accounting department could best accommodate the consignment inventory. This inventory is not purchased until after it is used, so modifications to the issues/returns processing had to be developed to allow for this exception, and for the operating room to proceed with implementing the new concept. In addition to the "CN" designation, the high-low and warning levels are all set the same or equal for con-

Diagram #2



Documentation - Enter into Computer  
- Match Invoice to Purchase Order  
(Label automatically prints in O.R.)

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\* Journal of Clinical Microbiology, November 1985, p. 735 - 739

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## Specifications for Inventory Bar Code Labels

1. Width: - 4.33" (110mm) media as backing on two 2" labels
2. Length: - each label repeats at 1" (forms control of 6lines per inch)
3. Thickness: - between 0.0023" (0.06mm) and 0.010" (0.25mm)
4. Type: - either continuous media, fan-folded labels, or, if roll, role capacity 9" (230mm), maximum outside diameter X 3" (76mm) core diameter
5. Material: - thermal transfer, light weight design, smudge proof, high resolution (no fading with time)
6. Operation: - labelling of inventory items  
- must have an easily removable barcode with adhesive backing  
- barcode readable by infra-red scanner.

signment inventory so that replenishment is initiated with each usage. As each consignment item is used, the system communicates the need for payment to the accounting department, plus the need for replacement through Purchasing.

### The benefits

There are many benefits to be derived from a computer automated inventory control system, including:

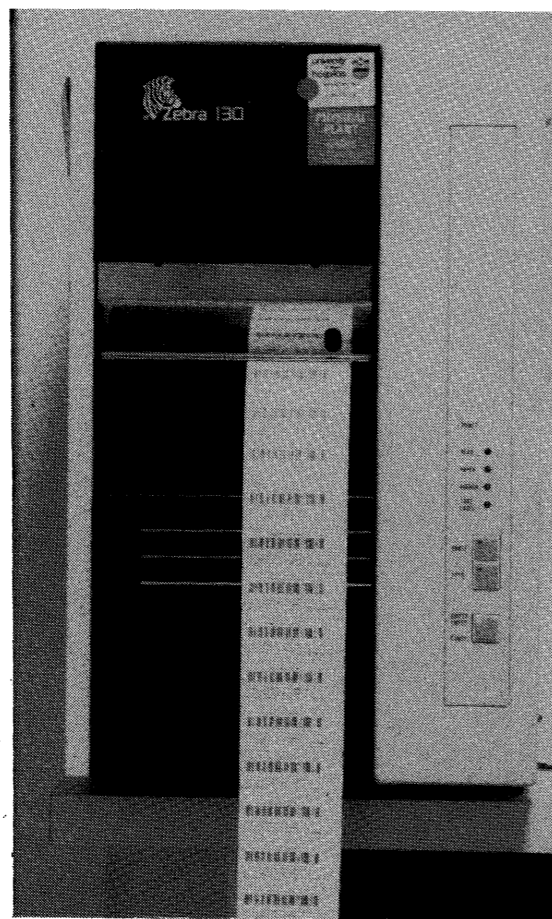
1. Convenience to the O.R. nurses or support staff who use the inventory items and who cannot stop to type or write things down. All that's required is the removal of a label and its attachment to a replenishment record sheet.
2. The accuracy of bar code wand reading eliminates data entry errors in transcribing issues to computer.
3. Computer monitoring of inventory stock levels automatically generate purchase orders when levels

reach the reorder point. Although human intervention is currently required to actually send out the purchase order, the need for manual stock counting (except for periodic checking) and manual production of purchase orders is eliminated.

4. Inventory stock levels can be kept at a minimum as the system monitors the need for replenishment and turn-around time can be reduced. Some of the supply item replenishment for items such as consignment inventory (e.g., total hip components) can be restocked within 24-48 hours through rapid co-ordination between the usage entry, automated purchase order generation, telephone-fax communication and vendor response.

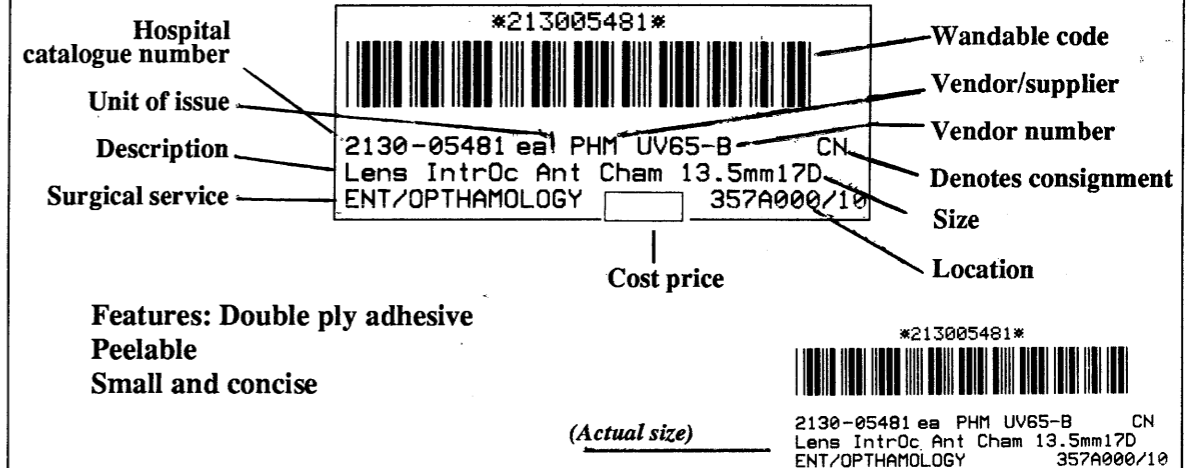
5. Stock out situations can be reduced, unless the problem is a result of vendor backorder.

6. Authorized operating room personnel can use the



A dedicated printer in the OR automatically generates labels for received inventory as it is documented in the Hospital's Receiving Department

## Anatomy of the bar code label



system to view the status of any of their inventory items, including retrieval of the purchase order number with date and purchase order information.

7. The system compiles a monthly usage of each item for a period of one year, plus an average daily use calculation. This information becomes quite valuable when resetting quota levels, changing product lines or negotiating new contracts. It will also provide information identifying slow moving or items not used over the past 12 months.

8. There are a variety of reports that can be generated by the system in addition to the usage reports mentioned previously: cost consumption, or stock lists (sorted by service, location or catalogue number), inventory catalogue and year end inventory lists.

### Implementing the system

Aside from the interdepartmental collaborative efforts of those developing the system, it is important to involve all staff who will determine the success of the system. Educating the staff and involving them in the various phases of implementation will facilitate a sense of "ownership," or identity with the system.

The program has been introduced and phased in service-by-service over a span of time. Initially, the first surgical service to pilot the system was Orthopaedics, with its massive and dynamic inventory. It was believed that if the system could be tested successfully in Orthopaedics, then it would be beneficial throughout the operating room. There is a lot

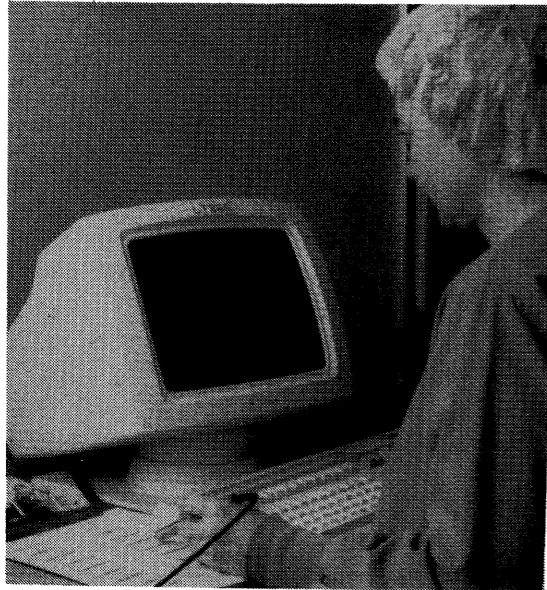
of dedication required in order to ensure that catalogues are current, that inventory levels are set properly, that packaging, labelling and counting of each inventory item is done thoroughly; there is then the entering of the exact count into the computer so that "wandering" may begin.

Those involved must be meticulous in monitoring and entering the count of any manually-placed inventory arriving after the implementation. These inventory items are easily detected as the system does not generate bar code labels for items not on a system-generated purchase order.

Although the process of replenishing inventory through the wand becomes less labour intensive (almost a pleasure), a downside remains in the necessity to maintain the system by keeping the catalogue current and up-to-date through creating new inventory and editing or deleting as necessary. It may be necessary to revert back to the old standby, manual system when new products are on trial.

Changing an orthopaedics line may involve one or two hundred items and suppressing out just as many existing in the catalogue. This would require a lot of manpower if the new product line is only temporary. Once the decision has been made to implement a new line, the process of cataloguing, packaging, labelling and counting begins. Initially, the Purchasing Department must be involved in and kept informed of changes in the catalogue, such as product additions or deletions. Many of our products are secured through negotiated vendor contracts.

The history of product usage on the system will provide valuable information to support future con-



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

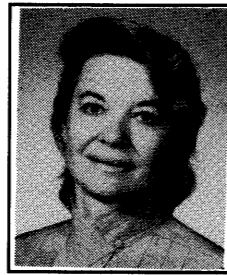
tract negotiations between our Purchasing Department and supply vendors.

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



Donna Prokopczak, R.N., B.Sc.N., M.Ed., is clinical Nurse Specialist in the Surgical Suite of the University of Alberta Hospitals in Edmonton. She holds a joint appointment with the Faculty of Nursing at the University of Alberta, and is currently involved in the evaluation,

selection, development and implementation of computer programs within her healthcare setting. She is a graduate of the Royal Alexandra Hospital School of Nursing in Edmonton, and has a post basic Baccalaureate in Nursing and Master of Educational Administration from the University of Alberta.

### 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

### Medico-Legal Issues

# 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.

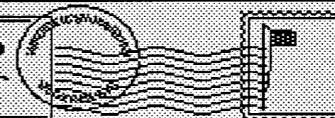
### The bottom line

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.

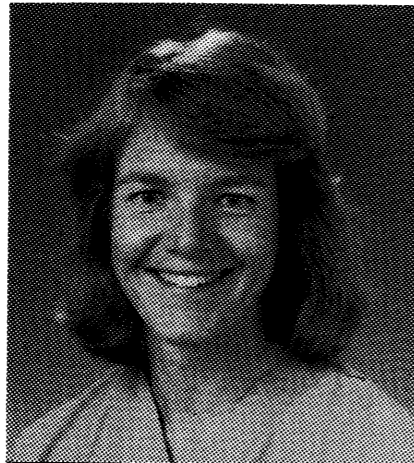
"When the optode works, and I'm sure it will before long, this is going to revolutionize some aspects of critical care both in the operating room and intensive care. Having instantaneous and continuous blood gas data rather than having to wait for laboratory results will save a lot of time and lives,"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

ORNAC's 12th  
National Conference  
Banff Springs Hotel  
May 12 - 17, 1991

## HEAD NURSE - O.R.

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Vancouver, B.C. V5Z 1M9



**Vancouver General Hospital**  
British Columbia's Health Sciences Centre

### Sterilant gas mixture (CFC) used in operating rooms destroys ozone layer

A gas mixture that is used to sterilize medical equipment in hospitals is contributing to the destruction of the ozone layer.

A report released last year by the *Friends of the Earth* emphasizes a need to eliminate the use of chlorofluorocarbons (CFCs) in medical device sterilization and recommends that the use of a CFC-containing sterilant called "12/88" be eliminated by 1994 in

Canada. CFCs contribute to the depletion of the ozone layer.

"Few people recognize that Canadian medical professions use CFC-12 in the sterilant gas mixture "12/88," which is known as an important contributor to the destruction of the ozone layer," the report stated.

The report said that one CFC molecule can destroy 100,000 ozone molecules during the more

than 80 years it will spend in the earth's atmosphere.

In 1987 alone, close to 600,000 kilograms of "12/88" were used, according to the report. "12/88" is a mixture that consists of 12% ethylene and 88% CFC-12.

The report further stated that more than 95% of the CFC-containing sterilant is released into the atmosphere as soon as the sterilization of medical equipment has been completed. Liquid "12/88" is used in operating room sterilizers. In Canada, hospitals use 85% of the CFC-12 sterilant, while the remaining 15% is used by industry in the production of medical equipment.

The government has announced that 85% of CFC production should be eliminated by 1999. *Friends of the Earth*, however, want the substance reduced by 40% by 1992 and eliminated by 1994. ■

### King abdicates over abortion issue

Last month (early April), King Baudouin of Belgium, the world's longest serving monarch (30 years), stepped down from

his royal pinnacle rather than give royal approval to a law legalizing abortion in his country. After years of parliamentary argument that would make Canada's efforts pale in comparison, a bill was finally passed permitting termination before 12 weeks.

Rather than give his royal assent, he asked the parliament to declare him "unable to reign" for one day. The government passed the bill in his absence. Now, Ireland is the only country in Europe where all abortions are banned. ■

### U.S. study shows that the forced air warming blanket is the most effective in relieving post-operative shivering and hypothermia

Approximately 50% of people undergoing surgery will become hypothermic during the procedure. Providing relief from the resulting post-op shivering is an important part of peri-operative nursing.

Many surgical patients say that the feeling of cold and shivering during the recovery period was the worst part of the whole experience.

#### Variety of methods

The mechanism behind post-op shivering is not clearly defined, and while a variety of warming methods have been devised, none has yet emerged as a panacea. There are four techniques currently available to counter the problem.

Determining which of the four methods is the most effective was the subject of a study performed by Dr. Daniel Sessler and colleagues at the Department of Anaesthesiology, University of California, San Francisco.

The first method was an infra-red heat lamp. Two lamps, similar to the lights that might be used to warm cafeteria food, are mounted on a pole and suspended over the recovering patient.

The second device, called a thermal ceiling, uses a two-foot by five-foot radiant surface to warm the patient.

Dr. Sessler's research group also evaluated a circulating water blanket. The rubber blanket has tubing running through it that allows water of various temperatures to be piped through.

#### Forced air warmer

The fourth device was a forced-air warming blanket. This warming blanket is described as "very much like a giant hair dryer that blows

warm air through an empty quilt." The air fills the channels and there are slits on the bottom side of the quilt which allows the warm air to float out over the patient.

#### Measuring heat transfer

Each of these four devices were evaluated in five healthy volunteers. They used a recently perfected technology called "heat flux transducers" to measure heat transfer across the skin.

A number of these transducers were located at various places on the subjects to determine heat transfer across the whole body, not just in the optimal spot.

"The results were quite clear," Dr. Sessler said. "The two radiant heaters (the infra-red lights and the thermal ceiling) were considerably less effective than the water blanket. The forced air warming blanket, however, was by far and away the most effective."

### Radial keratotomy, safe but unpredictable

Radial keratotomy, although it has been found to be safe and effective, is a somewhat unpredictable way to correct simple myopia, says a report that involved nine U.S. ophthalmic centres.

Dr. George Waring III, principal author of a report on the evaluation of radial keratotomy that appeared in the *Journal of the American Medical Association* (Feb. 23, 1990, Vol. 263, No. 8), said that four years after the keratotomy, two-thirds of the patients were lens-free. "The problem is that RK can be unstable and it is impossible to tell in advance if patients will have progression after surgery."

Myopia, which affects about 25%

He attributed the effectiveness of the forced air warming blanket to the fact that the warming blanket uses all three mechanisms of heat transfer: heat conduction, heat convection and radiation, while the infra-red lamps and thermal ceiling use only radiation. The additional benefits of conduction and convective heating are about half the total of the thermal blanket.

#### Uniform warmth

While all of the devices to relieve post-operative shivering were effective in the optimal spot right under the warmer, only the forced air blanket uniformly warmed the patient's entire body, including the toes and sides of the legs.

The forced air warming blanket is also available in a size that covers only a portion of the patient's body, allowing it to be used intra-operatively without impeding the work of the surgical team. ■

of adults in Western countries, is caused by excessive refraction of light rays, due in turn to exaggerated corneal curvature. Images are focused in front of rather than on the retina causing vision to be blurred.

Although glasses and contacts correct the impairment, the goal of ophthalmologists has been to obtain clear vision without visual aids. Thus, various surgical techniques have been designed to reduce refractive power by changing the shape of the cornea. Radial keratotomy, developed in the USSR, is the most widely used of these techniques and has been used successfully on hundreds of thousands of patients worldwide. ■

## "Enhancing the Spirit"

### 6th Regional Conference Operating Room Nurses Association

of Hamilton & District

October 12 & 13, 1990

Holiday Inn, Burlington, Ontario

#### Friday Evening, October 12

- 1800 - 1830 Registration and exhibits  
1830 - 1915 Exhibits and wine with hors d'oeuvres  
1915 - 1930 Opening address  
1930 - 2100 Dinner  
2100 - 2200 Keynote speaker: Pat Bethune, former president of the Ontario Nurses Association; currently, Nursing Coordinator, Ministry of Health, Government of Ontario.  
2230 - 0100 O.R.N.A.H.D. Music and cocktails

#### Saturday, October 13

- 0800 - 0830 Registration and continental breakfast  
0830 - 0845 Opening address  
0845 - 1000 Session speaker: Marilyn Belleghem Consulting Incorporated presents "Staff Relationships and Conflict Management"  
1000 - 1200 Viewing of exhibits  
1200 - 1330 Lunch  
1330 - 1445 Marilyn Belleghem (Continued) "Personal Power: Beyond Assertiveness Training"  
1445 - 1500 Closing address



## ARTHROSCOPY PROGRAM FOR O.R. NURSES

Orthopaedic and Arthritic Hospital  
in conjunction with  
Zimmer of Canada Limited  
are pleased to offer a series of two-day  
arthroscopy courses for operating room nurses

#### Course Director:

Robert Jackson, M.D., M.S., F.R.C.S.(C)

#### Course Instructor:

Marlene Muir, R.N.

#### Program Highlights...

- Peri-operative management of patients undergoing arthroscopic surgery
- Anaesthetic techniques
- What to purchase
- Care, handling and sterilization of instrumentation and equipment
- Normal/abnormal knee pathology
- Skills laboratory - models and videos
- Trouble shooting the video system
- Observation of OR arthroscopy procedures

#### Location:

Orthopaedic and Arthritic Hospital  
43 Wellesley St. East  
Toronto, Ontario  
M4Y 1H1

#### Course Dates:

October 15-16  
October 29-30  
November 26-27  
December 10-11

#### Course Fee:

\$175.00 per nurse - includes coffee breaks & lunches. Does not include accommodation.

#### Registration: To register, phone or write:

Bette Hales, Zimmer of Canada Limited,  
2323 Argentia Road, Mississauga,  
Ontario L5N 5N3  
Phone (416) 858-8588 FAX (416)-858-8747



## Study shows that music holds sway in drowning out noise in the O.R.

It seems the controversy surrounding music and noise during operating room preparations and procedures just won't go away. The latest study into the conundrum comes from Australia where two surgeons from the Royal Prince Albert Hospital in Sidney measured sound levels during a major operation. They found that noise levels during an operation were often loud enough to make communication between the surgical team not only difficult, but sometimes impossible.

### Intermittent noises

Dr. J. Thompson and Dr. B. Hodge found that, although overall sound levels were within recommended working limits, intermittent noises from, for example, suckers, intercoms and anaesthetic machine alarms, could interfere with communication and disrupt team concentration.

Unnecessary background conversations also disrupted both communication and concentration, and they recommended that background music be played at a low volume to mask these.

Writing in the *Lancet*, the surgeons said the noisiest time was during the preparation for an operation.

They stressed that this pre-op time period had important implications for patient safety since this was when sponges, instruments, swabs, etc. were counted. A lapse in concentration at this time could cause a counting discrepancy.

### Noise-induced stress

The surgeons suggested that extraneous noises could be a serious problem for a patient having a local or regional anaesthetic. They further suggested that patients be offered soothing music played through headsets in order to minimize noise-induced stress.

The two doctors analysed the particular noises during a representative five-minute section of the operation. They found that the loudest noise - 108 dB - was caused by a stainless steel bowl falling.

Other loud noises included gas escaping during the change of an anaesthetic gas cylinder, the banging of the swing doors leading to PARR, and the trolley sides being raised and lowered. ■

### Director of Nursing, Operating Room, PACU & Day Surgery

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We are looking for a first-class leader to take on the challenge of developing and implementing a new Day Surgery Centre and reorganizing the current OR's within the concept of decentralization. We are also looking for an excellent communicator and decision maker who has imagination, strong

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Minimum requirements for this position include an RN designation with current Ontario registration and a Master's in Nursing or Administration. Several years' progressive operating room nursing experience is essential, preferably in a senior management role. Familiarity with Day Surgery and/or ICU experience is preferred.

An excellent salary backed by a wide range of benefits, together with outstanding career opportunities, make this appointment very enticing.

If you have the professional style and talent we are seeking and if moving into a new decade of advanced nursing practice is what you want, send your detailed resume, in confidence, to: **Sandra Twyon, Corporate Vice-President, Nursing, The Toronto Hospital, 399 Bathurst Street, Toronto, Ontario M5T 2S8.**

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THE TORONTO HOSPITAL

## Want to pay off the national debt? Eliminate medical quackery's \$25 billion annual rip-off

How much does medical quackery cost in North America? The answer: enough to pay the national debt of most countries.

A few years ago, it is estimated that medical quacks defrauded about \$10 billion a year from North Americans. That figure has grown to \$25 billion annually, says Dr. David Peachey, the Ontario Medical Association's Director of Professional Affairs.

In 1988, estimates are that over \$1 billion was pocketed by AIDS hucksters in North America. There is widespread speculation that this figure is peanuts compared to what lies ahead.

Even though AIDS is a "quack's dream come true," Peachey says that medical quackery is creating one of the continent's fastest

growing industries. He also said that people with cancer, heart disease and arthritis are some of the biggest and most lucrative targets.

Speaking at an annual meeting of the Ontario Chapter of the College of Physicians and Surgeons of Canada, Peachey pointed out that "fountain-of-youth" products are one of the most profitable areas of medical quackery.

"Bogus anti-aging nostrums such as the instant face lift, hair restorers, muscle toning and increased sexual potency lead the parade estimated to account for over \$5 billion annually.

Discussing the mail-order fraud game, he referred to a so-called miracle machine that guarantees to cure wrinkles. "It turned out to be a Christmas light." ■

## Medical facts to ponder

In Canada, the elderly comprise 11 percent of the population. Yet, recent evidence indicates that this 11 percent consumes 40 percent of all prescription drugs.

Also, Health and Welfare Canada estimates that 4000 elderly Canadians die every year from the bad side effects of prescription drugs.

Also, over 200,000 cases of illness are caused annually in the elderly because of reactions to prescription drugs that are improperly used or not needed.

Also, a recent study by the Ontario government found that people in Ontario spend more of their health care budgets on drugs, than any other society in the world. ■

### VALLEY HEALTH SERVICES ASSOCIATION

Valley Health Services Association, a Regional Hospital, the main referral center for Nova Scotia's beautiful Annapolis Valley for specialties including, Orthopedics, Pediatrics, Obstetrics, Urology, Internal Medicine, Psychiatry, Cardiology, Thoracic and Vascular Surgery, General Medicine and Surgery has an immediate opening for:-

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Miller Unit  
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Kentville, Nova Scotia  
B4N 1C4

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York County Hospital  
596 Davis Drive  
Newmarket, Ontario  
L3Y 2P9

## Banff Springs Hotel to be site of '91 National OR Conference

In May, 1984, the 8th National Operating Room Nurses Conference was held in Jasper. The Operating Room Nurses Association of Canada (ORNAC) was still in its infancy. As a national organization of specialty nurses, it had "Mountains to Climb," which was the theme of that memorable Spring event.

Two years later, in 1986, among the cavernous heights of the Montreal skyline, the ninth national gathering of operating room nurses took place. This time, the theme was "Over the Mountains," the theme-makers aware of the fact that, even though ORNAC was on the way to emerging as a viable and productive association, there were still hurdles to overcome.

Over the next four years, from 1986 to 1990, ORNAC stabilized. Two more national events were held, one in Vancouver in 1988 (which celebrated the 10th Anniversary of the national gathering) and the most recent in Toronto in early April of this year. Although the mountain motif disappeared in the last two conferences, for those with long memories, the time has arrived to introduce that theme again.

Next year, from May 12 to 17, at the Banff Springs Hotel, Banff, Alberta, operating room nurses from across Canada will be asked to participate in "Mov-

ing Mountains," the mountain motif again recurring.

However, added to this motif or theme are two related conference objectives that will be part and parcel of the event, namely, "Mastering Skills," and "Maturing Professionally."

Earlier this past decade, ORNAC came into existence; it grew, it flourished; it evolved as a viable, national reality for every operating room

nurse in Canada. Now, as the organizers of the 12th National Conference have pointed out, it's time for the association to mature

and become more masterful in the pursuit of its objectives - and begin

the new task of moving the mountains that stand in the way, and

that epitomize the challenges of the 90s. Details of the Operating

Room Nurses Association of Canada's 12th National Conference will be

appearing in future issues of the *Canadian Operating Room Nursing Journal*. In the mean-

time, O.R. nurse delegates and exhibitors wishing information can contact:

**Pat Petersen, Chairman  
Banff '91  
Box 8218, Edmonton,  
Alberta T6H 4P1  
Phone (403) 343-2519.**



### News Clips

#### Older mothers - healthy babies

Surveys in Canada and the U.S. show that women in the 35 to 40 age group constitute the fastest growing number of new mothers.

Experts now believe that prenatal care and how a woman prepares herself for pregnancy play a more important role in producing a healthy baby than does age.

This is not to deny that difficulties can't occur associated with age. Fertility decreases as women get older, so it takes longer to get

fertilized, says Dr. Gilbert Haas Jr., Chief of Reproductive Endocrinology and Infertility at the University of Oklahoma Health Sciences Center in Oklahoma City.

Reserachers have noted an increased incidence of pregnancy-related diabetes, hypertension and bleeding during pregnancy among women over 40. However, the researchers are quick to point out that careful monitoring usually results in a healthy baby. ■

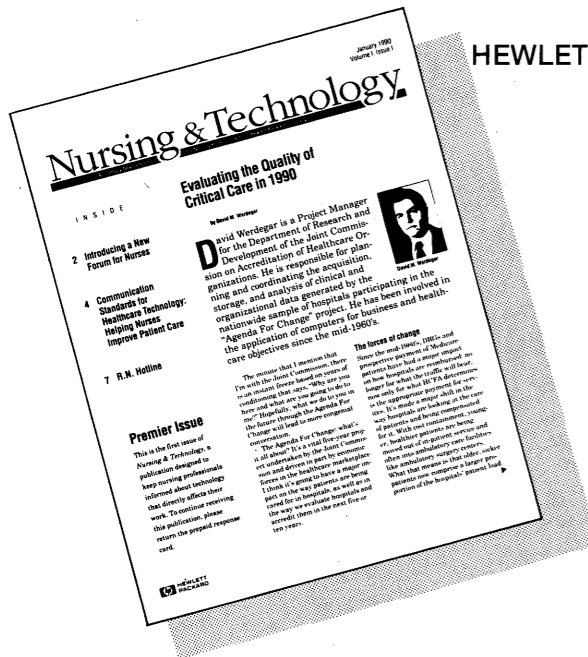
#### Raw, not cooked garlic, please

Raw garlic contains allicin, a substance known to inhibit blood clotting and said to be better at preventing heart attacks than acetylsalicylic acid (ASA), according to researchers at the Department of Pharmacology, Tulane Medical School, New Orleans.

Allicin in raw garlic (cooked garlic destroys allicin) inhibits blood-platelet aggregation without affecting vital enzymes - and it has none of ASA's side effects. ■

# Nursing & Technology

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## Calendar of Events

**September 28 - 30, Regina, Sask.:** 6th Annual Conference, Saskatchewan Operating Room Nurses Group. (Contact Ginny Mielke, 106 Lockwood Rd., Regina, Sask. S4S 3G2. (306) 359-2325).

**October 12 - 13, Burlington, Ontario:** 6th Annual Conference, Operating Room Nurses Association of Hamilton and District, Holiday Inn, Burlington, Ontario. Theme: "Enhancing the Spirit."

**October 12-13, Calabogie (Ottawa), Ontario:** Annual Fall Conference, Ottawa Regional Operating Room Nurses Association. For further information contact: Maureen Stitt, c/o Operating Room, Salvation Army Grace General Hospital, 1156 Wellington St., Ottawa, Ontario K1Y 2Z4.

**October 18 - 20, Gander, Nfld:** 11th Annual Conference, Newfoundland & Labrador O.R. Nurses Association, Hotel Gander. (Exhibitors contact Henry Norris, James Paton Memorial Hospital, 125 Trans Canada Highway, Gander, Nfld. A1V 1P7).

**April 26-27, 1991, Edmundston, N.B.:** 17th Spring Institute, New Brunswick Operating Room Nurses Group, Howard Johnson Edmundston. (Exhibitors contact Noeline LeBel, Edmundston Regional Hospital, 54 - 21st Avenue, Edmundston, N.B. E3V 2C1 (506) 735-3361).

**May 12 - 17, 1991, Banff, Alberta:** 12th National Conference, Operating Room Nurses Association of Canada (ORNAC). Theme: "Moving Mountains." See future issues for more details.

**Spring, 1993, Province of Quebec:** 13th Annual Conference, Operating Room Nurses Association of Canada (ORNAC).

**Spring, 1995, Vancouver:** 14th Annual Conference, Operating Room Nurses Association of Canada (ORNAC).

**Spring, 1997, Province of Ontario:** 15th Annual Conference, Operating Room Nurses Association of Canada (ORNAC). Location to be announced in future issues of the Journal.

Top: Audience participation during one of the sessions. Above: Nurse Clinician, Madeleine Helie, Ottawa General (centre) and her sister, Monique Patenaude, York Central Hospital, Newmarket, Ontario, with Evan Collins, Johnson & Johnson.



Top right photo: Two O.R. nurses are flanked by the colour guard following Opening Ceremonies, 11th National Operating Room Nurses Conference.

Above: ORNAC President, Gloria Stephens is shown with Steven Lewis, former Canadian Ambassador to the United Nations and a keynote speaker at the conference.

Left: A colour guard adds pagentry to the Opening Ceremonies at the 11th National Operating Room Nurses Conference held in Toronto in early April.



**ORNAC Executive and Board - 1990**

**Front row, left to right (seated):** Loretta Thomas Aasen, (Sask.); Sandra Betts, New Brunswick; Muriel Shewchuk, (Outgoing-Secretary); Carol Lenox- McDougall, (Vice Pres.); Joan Donald (Immediate Past Pres.); Gloria Stephens, (President); Carole Starr, (Treasurer); Heather Arsenault, (PEI); Shirley Taylor, (Nfld).

**Back row, left to right (standing)** Jackie Waisman, (Vice Pres.), Alberta; Carole Belanger, (P.Q.); Lorna Murphy, (B.C.); Marne Simon, (B.C.); Marlene Hill, (PEI); Penny Gael, (N.S.); Anne Hughes, (Secretary); Judith Wheeler, (N.B.); Ann Robinson, (Outgoing Past-Pres); Geraldine McEvoy; (P.Q.); Audrey McFaden, (Man.); Mary MacAdam, (N.S.); Linda Bobinski, (Ont.); Sharon Balkan, (Alta.); Hilda Gatchell, (Ont.); Eva Marie Lessing, (Man.); and Darlene Stuttard, (Sask.).



**National Exhibitors Advisory Committee (NEAC)**

The National Exhibitors Advisory Committee was formed in 1984 to advise and assist ORNAC in conference planning and provide input in conference guidelines. NEAC has been of tremendous assistance to ORNAC over the years. During the recent ORNAC board meeting in Toronto, the mandate of NEAC was expanded. One element of this expansion was that NEAC would act in an industry advisory role. It was felt that if an issue was one that affected a majority of the surgical suppliers, the issue could be brought to NEAC for review and response. Thus, NEAC would speak for the industry as a whole. ORNAC appreciates the support received from NEAC and applauds the time and effort provided by its members. Photo above of the NEAC and ORNAC executives: **(left to right)** Steve Carter (Davis & Geck); Lorne Flower, (Instrumentarium); Joan Donald (ORNAC Past Pres.); Bob Bothwell, (MDT Canada); Gloria Stephens, (ORNAC President); Jim Lawrence, (BARD); and Jim McCullough (Maverick Surgical).



**Organizing Committee, 1991 National OR Conference, Banff, Alberta**

**Left to right:** Dorothy Orr, Brooks Health Centre, Brooks, AB.; Pat Petersen, Publicity, St. Michael's Hospital, Lethbridge; Carol Rolfe, Red Deer Regional Hospital; Gerry Diehl, University of Alberta Hospitals, Edmonton; Marjorie Phillips, University of Alberta Hospitals, Edmonton; Muriel Shewchuk, Foothills Hospital, Calgary; Jackie Waisman, Committee Chairperson (President of the ORNA), Red Deer Regional Hospital; Nadine Englehart, Foothills Hospital, Calgary; Sharon Balkan, University Hospital, Edmonton; Margery Ensminger, Medicine Hat & District General Hospital



**Above:** Gloria Stephens, receives the President's Chain of Office from Joan Donald, ORNAC Past-president, during ceremonies at the 11th National Operating Room Nurses Conference held in Toronto in April.

**Left:** Theresa Markowski, Hotel Dieu Hospital, Kingston, was the recipient of the Drake-Thompson Memorial Award for Editorial Excellence. She is shown receiving a commemorative plaque from Surgikos Canada's President, David Patterson.

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## New technology spawns increased growth for orthopaedic markets

According to figures extrapolated from a study performed in the United States, in an average year in Canada, it is estimated that there are over 400,000 orthopaedic surgical operations, 700,000 fractures and close to one million sprains. With these statistics on the increase, most orthopaedic and prosthetics markets are experiencing annual growth rates of between 10-15 percent. Estimates from these figures indicate that the total Canadian market value by 1995 for the orthopaedic and prosthetics markets will be over \$225 million.

These figures were extrapolated from a report entitled "Orthopaedic and Prosthetic Markets: Technological Improvements Drive Implants and Diagnostics," published by Market Intelligence Research Corporation of Mountain View, California.

### Growth factors

The main factors responsible for the increased growth in the orthopaedics/prosthetics markets are:

- Increase in the over-65 age group, composed chiefly of women
- Increased number of orthopaedic procedures on the under-50 age group
- Highly sophisticated surgical implants made of materials that are extremely biocompatible
- Development of more sophisticated lines of diagnostic and surgical instrumentation
- Proliferation of diagnostic and treatment monitoring devices, as well as orthopaedic screening
- Increase in the number of orthopaedic procedures
- Favourable reimbursement policies.

These factors have helped create an increasingly competitive orthopaedic specialty, allowing for present and future growth.

Sports medicine is the fastest growing segment in the orthopaedic field. Over 50% of all adult Canadians do regular exercise. Sports medicine, considered a specialty, has greatly contributed to the increased use of orthopaedic arthroscopy.

Also, improvements made with certain imaging techniques like magnetic resonance (MR), computerized tomography (CT), and bone densitometers, are allowing for evaluation of conditions that previously went undiagnosed or were thought incurable. ■

## Ancient sugar treatment revived in dealing with wound healing

To help heal seriously infected wounds, some surgeons have revived a 4000-year-old treatment born on the battlefields of ancient Egypt: they pack the depths of treacherous wounds with sweet substances such as sugar.

Dressings made of sugar and honey, favoured by healers throughout history, fell into disfavour with the development of antibiotics more than a half century ago.

Even the most sophisticated modern preparations have proved unable at times to overcome the hearty bacteria that live in deep wounds. Thus, a handful of doctors, especially in Europe, are turning once again to sugar.

"It's a very old and very simple treatment that was forgotten for a while but is now coming back, like a fashion," said Professor Rudy Siewert, chairman of the department of surgery at the Klinikum Rechts der Isar in Munich, West Germany.

Experts say the ancient treatment probably works because sugar tends to draw water into its gritty midst through osmosis. This action both dries the bed of the wound to promote tissue growth and dehydrates the bacteria that cause infection, leaving them weak. ■

## All new medical technologies to be assessed in new offices in Ottawa

Technological change is having what Health and Welfare Minister Perrin Beatty describes as "a profound and positive effect" on health care, but the pace of development is such that it's hard for government (and some hospital departments) to keep abreast of it. (See "Implications of high tech surgery, pg. 15)

For this reason a new Co-ordinating Office for Health Technology Assessment (COHTA) has been set up in an attempt "to ensure that all Canadians are benefitting from the advances being made."

Chaired by Debi Mauro, executive director of the Ontario Ministry of Health's planning division, the COHTA was announced by Beatty after a recent meeting in Ottawa with his provincial counterparts.

The primary mandate of the new body, which will be managed by a board appointed by each health ministry, will be to function as a clearing house for information on existing and emergent technologies. The organization, headquartered and funded from Ottawa, will also collaborate with funding bodies to ensure that research is given proper priority. ■

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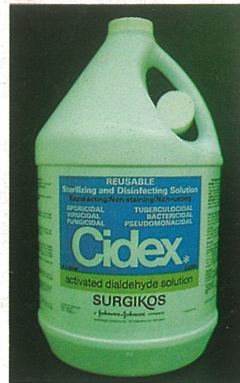
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