MOR NA GAUZETTE

13-05-30

President's Corner

I can't believe winter is finally over already. We have made it through another long winter. We hardy Manitobans have endured colder days than we have had in 3 years.

We have had a change in venue for our monthly meetings since January until the end of the year due to renovations at the CRNM building.. We were fortunate to find it at no cost to the group.

I am proud of our members. Our membership includes nurses from Winnipeg and throughout the province. The contacts that you have made at your different workplaces have provided us all with very interesting educational sessions. I am pleased to say that we have welcomed new members into our group this year, including both new and senior nurses. Please continue to encourage people to join us.

This is our second year that we have Telehealth link-ups to our rural OR nurses and I hope to see more of you in the future.

The ORNAC National & International Conference with IFPN was held in Ottawa, April 21-25m 2013 and I am excited that many nurses were able to attend. I'm sure we all had a great time learning, networking and of course socializing. It was an opportunity to make some lasting memories with cherished colleagues and friends.

Monica Palmquist
President MORNA

2013-2014 EXECUTIVE

President
Monica Palmquist
OR-HSC-Adult
(204) 787- 3524
(204) 787- 3095 Fax
palmtre1@mymts.net

President-Elect
Karen Sagness
OR- HSC-Adult
RN-CRN-Plastics
(204) 787 3524
(204) 787 3095 Fax
ksagness@hsc.mb.ca

Past President
Leah Restall
CRN OB/Gyne
OR Women's
(204) 787- 2325
(204) 787- 1078 Fax
lrestall@HSC.MB.CA

Secretary
Iris Mac Millan
OR Seven Oaks
(204) 632 3176
(204) 697 3077 Fax
lifeandhome@shaw.ca

Treasurer
Gladys Zinnick
Patient Team Care Manager
OR Seven Oaks
(204) 632- 3216
(204) 697- 3077 Fax
gzinnick@sogh.mb.ca

Educational Coordinator
Karen Warcimaga
RN.,C.P.N. (C)
Nurse Manager OR/PACU/MDR
Day Surgery
Selkirk & District General Hospital
(204) 785- 7418
(204) 482- 1293 Fax
kwarcimaga@irha.mb.ca

MORNA AGM



DINNER & BUSINESS Meeting was held on May 24th, 2013 and we are please to welcome Wendy Rodgers as our new Treasurer , while Graciana Medeiros has taken on the role of our Educational Coordinator. This will once again be two exciting years with many changes in the fall, with Ornac registations on-line- which is still in the works, instead of provincial registrations.

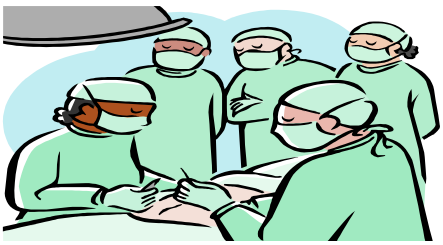
We will surely miss you Gladys Zinnick as Treasurer during the last 10 years, for always keeping our budget within our guidelines, our books balanced, and our funding organized and available to those members who wished to attend educational sessions. You have been a foundation and valued resource to each of your members whom you have assisted. We know you are only a phone call away!!!

Karen Warcimaga has finished her 2 year term as Educational Coordinator, and is stepping down at this time. Once again Karen you have inspired us with your Spring Workshop Themes- and Guest Speakers who were relevent to "Keeping it Green In the OR"



then "Communication Whose Job is it Anyways?"





There are many benefits to taking on a position with the executive and hospital representatives, as you get to network with peers, share ideas, meet new members, share current issues, provide support and ideas for each of our members with common goals directed to patient and staff advocacy. The educational sessions are always well attended, extremely interesting and relevent to our roles.

ADVANCES IN SURGICAL SITE INFECTION
Speaker: Maureen Spencer, RN, M.Ed, CIC (USA)

Maureen's talk was sponsored by J&J and was given at a breakfast session on Wednesday, April 24th.

She indicated the following:

- Safety – Is the OR safe?
- Screening – Are you screening for risk factors and the presence of MRSA?
- Showers – Is the patient showering the night before and the morning of surgery?
- Skin preparation – Are alcohol-based antiseptics being utilized?
- Solutions – Is the wound being irrigated prior to closure to remove exogenous contaminants?
- Sutures – Are antimicrobial sutures being utilized?
- Skin closure – Is the incision sealed with an antimicrobial dressing?

Providing a safe OR involves:
Traffic control to limit the number of personnel in a room
Appropriate air-handling systems
Clipping (not shaving) hair, warming the patient, oxygenation, Foley catheters in and out in 48 hours
Good between-case and terminal cleaning practices
Instrument cleaning and sterilization
Supply storage including clean supply bins
Surgical technique and handling of tissue

Common organisms associated with SSI includes:

- *Staphylococcus aureus* – 30%
- *Coagulase negative staphylococcus* – 14%
- *Enterococci* – 11%
- *E coli* – 10%
- *Pseudomon*

A patient with a surgical site infection (SSI) is:

- 5 times more likely to be re-admitted to hospital
- 2 times more likely to spend time in critical care, and
- 2 times more likely to die.

The mortality risk for a patient who becomes infected with MRSA is 12 times higher.

Risks to patients who undergo surgery for orthopaedic implants include:

- Hip or knee aspiration
- Irrigation or debridement
- Insertion of antibiotic spacers
- Future revisions
- Long term IV antibiotic therapy, and
- Future worry about their joint

These negative outcomes associated with a SSI can be devastating to the patient and to the surgeon.

*Maureen presented the concept of a **7 'S' Bundle** to prevent SSI:as* – 4%

Risk factors which increase risk for SSI include diabetes, obesity, pre-existing infection and sub-optimal nutrition. Antimicrobial prophylaxis should be infused within 60 minutes before the incision or within 60 minutes before a tourniquet is inflated. Shaving increases the risk for a SSI. Maureen spoke about a type of hair clipper available that provides a vacuum to removes cut hair as it clips.

She indicated that skull caps are not appropriate surgical attire as they collect sweat. Skull caps should be covered with a bouffant. Personal items such as stethescopes when worn around the neck, become highly contaminated with droplets from our mouths as we speak and 'spray'. Jewellery worn in the OR has been cultured and was shown to be contaminated with gram negative bacilli.

Screening for risk factors associated with ARO is very valuable because:

- Prior room occupancy by a patient with an ARO increases the risk to the next patient by 2-4 times
- Organisms may survive on a surface for up to one year
- One study demonstrated that patients who were decolonized preoperatively with 5 days of mupirocin and CHG washes before surgery had a 60% lower *staphylococcus aureus* SSI rate than the placebo group
    - Preadmission cultures provide an opportunity to teat patients with MRSA prior to surgery (Spencer, *Journal of Bone and Joint Surgery*)
    - Screening may be done with rapid read-out technology which provides a one hour read-out (rather than 3 lab days)

AORN recommends the use of contact precautions which has demonstrated a 60% reduction in MSSA infections and a 50% reduction in MRSA infections

The CDC (1999) Guideline for Prevention of Surgical Site Infection is being revised this year.

The recommendation for skin prep solutions will be for CHG and iodine with alcohol. Iodophors are inactivated by blood and mucous and have minimal residual action. In contrast the effect of CHG lasts for days on the skin.

Maureen promoted the use of antimicrobial sutures, which she estimated would be about a 1% increase in an OR budget. The use of antimicrobial sutures has been shown to reduce SSI infections by 45%. A meta-analysis shows a statistically-significant reduction in infection.

A new CHG irrigation solution with a 0.05% CHG concentration is safe for use on mucous membranes. For more information go to www.irrisept.com After irrigating for one minute, and following up with a saline irrigation, the antimicrobial effect has been shown to last for 2 weeks. Stapling into sebaceous glands pushes organisms deeper into the tissue.

Maureen promoted the use of a derma-bond product for incision sealing. Topical adhesives provide 7 days of wound-healing strength in one minute. The patient can also shower immediately.

One study which compared staple to suture use in orthopaedic hip surgery demonstrated that the infection rate was 4 times greater with staples versus suture use.





Submission to the MORNA Gauzette from Joan Porteous.
Thank you for the funding opportunity to attend the
ORNAC International Alliance for Perioperative Best practice in Ottawa.

Do you know where those scrubs have been?



Keep your family safe

Leave your scrubs at work
Return them to the soiled hamper
for proper laundering

CANADIAN NURSES ASSOCIATION
ASSOCIATION DES INFIRMIÈRES ET INFIRMIERS DU CANADA

Certified Perioperative Nurse Canada

CNA CERTIFICATION/RECERTIFICATION

Consider becoming certified in your specialty as a perioperative nurse – CPN(C). The deadline for applications to write in 2012 is usually in November 2012, so check out the website and plan now to write in 2012. The deadline for certification renewal application for 2012 will be around the same time (Nov. 2012).

You must have completed 3900 hours in your specialty prior to applying. Applications are accepted from Sept 1, of each year to ~mid Oct/Nov. Visit www.ornac.ca and www.cna-aiic.ca for more information. MORNA has funding available for active members, $150.00 toward certification or recertification fees. This is separate from the educational funding and does not influence the amount of educational funding available to you. There are other sources of funding available follow the financial assistance link under obtaining certification on the CNA website.

The fee schedule is available on the CNA website noted above. Click on **Become Certified!** on the left hand side of the home page.

Important notice re Canadian Operating Room Nursing Journal (CORNJ) subscriptions Please ensure that MORNA has your correct & current address. These addresses are submitted at the beginning of each year to Clockwork. If the journal is considered undeliverable, the cover is ripped off and the journal is discarded by Canada Post. The cover is then delivered back to the publisher with a C.O.D. charge of $0.65 for each cover. ORNAC pays for all returned journals decreasing final profits. Any changes of address also need to be submitted as soon as possible to prevent any delays in subsequent mailings. Subscription problem inquiries should be directed to the MORNA executive, not directly to Clockwork/CORNJ.***Your change of address can be done directly on the ORNAC website. Go to http://www.ornac.ca, then journals, select subscriptions. The change of address window can be found here.

HIGH PERFORMING SYSTEMS
Submitted by Joan Porteous

Presented by Steven Lewis, Health policy and Research consultant and Adjunct Professor of Health Policy at the University of Calgary and Simon Fraser University

Steven Lewis was the speaker for the Val Shirreff Memorial Lecture at the 2011 ORNAC conference. His talk focused on patient-centered care, work force well-being issues and public interest in health care wait times. The lecture was very thought-provoking and was a great beginning for the conference. The report below is a brief summary of his talk.

He identified that the goals of health care today are to achieve better quality health care, better value for our health care dollar, and to decrease disparities between professional groups. Productivity should not be described only in terms ov volume, but should include work force well-being. Things that improve work force well-being include:

- Specialization with a high degree of regulation;
- An elevated entry to practice credentials within specialties;
- Less turf claims and protection within turfs: and
- Reducing hierarchies and power inequalities.

Dr Lewis indicated that **competency**, and not only credentials, **should define competency**. The health care system has evolved into what it is today, because of:

- Increased complexity;
- Increased scientific knowledge;
- A rise of new technologies;
- Regulation was seen to be the foundation for quality and safety;
- More credentials results in a higher status
- Turf control = control = power = money

Within this system the quality of health care has suffered because:

- Productivity is defined as volume, not result;
- Funding systems do not distinguish between good and bad care;
- Clinical autonomy resists standardization of work;
- There are no expectations that variations in practice will narrow;
- The public is fixated on access and not quality; and
- Canadian Health Care information technology is underdeveloped.

Accountability today should focus on quality, efficiency, value for money, timelines and improved patient experience. When considering improvement and standardization, teamwork trumps autonomy. Physicians should use decision-support technology to prescribe drugs. Standardization transforms practice in many ways:

- Less latitude for judgement
- Less variation about how things are done
- Increased reliability
- Emphasis is shifted from what one knows to how one does things;

This breaks down hierarchies, because every member of the team can stop the assembly line. A quality-organized standardized system works.

Standardization enhances work life because it:

- Frees time to spend on higher value-added issues;
- Reserves judgement for areas where genuine uncertainty exists;
- Removes clutter from daily work; and
- Decreases anxiety and stress.

Wait times are defined as a capacity problem. Sometimes the solution is money, capacity or re-engineering. The volume of diagnostic imaging services in the last 15 years has increased 5-fold. This has bottle-necked consultations and specialties. Dr Lewis reported that typical wait times for primary care in Canada is 5-7 weeks.

In order to work towards patient-centered care and workforce well-being, health care requires more than technical excellence to succeed. Great service industries are organized around clients needs, not technical supplies. Human interactions are of high importance when the customer is sick, vulnerable and scared. What does this mean for nurses? It means:

- Less time for useless work to improve the patient experience;
- Great workplaces;
- Freeing up time to care, as technology and standardization free up time.

Professional autonomy is not about control….it is about teamwork. Protocols and standardization free up time. It is not a loss to delegate work….it is a gain of space to maximize our capacities. Challenging questions increase growth and development. Efficiency can liberate the workforce to enhance relationships and devote talent to solve complex problems. A general model for health care improvement would include:

- Patient centered care;
- Value for the dollar;
- Evidence-based and needs-based practice; and
- A population-oriented focus.
-

A First of Many

The conference in Ottawa was amazing on so many levels. I would highly recommend going to the next Canadian or American conference if able. This was my first 'away' conference and the first time in Ottawa. Both were amazing experiences. There were many valuable lectures and presentations that we have been able to take back to our home OR. It was also amazing to see how far ahead we are in some aspects of the OR, ie smoke evacuators. It was neat to see how other countries and cities operated and some where able to give us a glimpse of a day in their OR's. It was a great way to meet new people from your own city to other countries. On this trip I was able to bond with fellow nurses - Tannis, Karen W, Iris, Karen S, and Monica. I enjoyed the adventures the city had to offer, with the reps providing entertaining evenings which left only 25% of the people signed up for the 5 km run come out at 6:30 am. Too much partyin for some, but Manitoba represented well in the run as we were the front runners. There were also many of us who won prizes at the exhibits. There were many memories made and are looked back on fondly, such as culture night (Jets) and all the laughs that were accrue.

Thank you for the support.
Jane Stone, Childrens Hospital

Best Practice in the Management of Surgical Smoke

Evidence based research has identified that surgical smoke is a workplace safety hazard that can negatively impact the health of surgical patients and members of the perioperative team. Despite the compelling evidence that researchers have shown on the hazards of exposure to surgical smoke in the surgical suites, one of the greatest challenges confronting perioperative nurses is compliance by team members in controlling the plumes by using an adequate smoke evacuation method (Ball, 2010). It is unfortunate that some healthcare professionals feel indifferent regarding proper management of surgical smoke and do not feel the need in using proper smoke evacuation practices thus placing patients and other team members at risk (Ball, 2004).

Surgical smoke is created when fluid within the tissue cells heat to a point of vaporization by an energy device such as an electrosurgical device, powered equipment such as drills and saws, and laser. The noxious smell of the surgical smoke is caused by toxic gases being released when the tissues are destroyed by the heat source (Ball, 2004). Some of the toxic chemical byproducts identified in surgical smoke due to tissue cauterization are:

- **Acetylene**
- **Benzene**
- **Carbon Monoxide**
- **Formaldehyde**
- **Methane**
- **Phenol**
- **Hydrogen Cyanide**

These toxins have been labelled as carcinogenic, mutagenic and poisonous. Surgical smoke also may contain viable bacteria and viruses with a potential for transmission if inhaled by the surgical team. Kay Ball, PhD, RN, CNOR, FAAN, associated Professor of Nursing at the Otterbein University in Ohio, USA, remarked that researchers have shown that when one gram of tissue is cauterized with an ESU device, inhaling the resulting plume is compared to smoking six unfiltered cigarettes. Furthermore, Ball (2010) added when the same amount of tissue is heated using a laser, inhaling the smoke is equivalent to smoking three unfiltered cigarettes.

Ball (2010) described that 77% of surgical smoke particles are less than 1.1 microns in size. Most standard surgical masks will only filter particles up to 5 microns in diameter therefore the mask will not protect the perioperative team member from most of the surgical smoke particles. The majority of the plume particles will pass through the surgical mask and be deposited in the alveoli of the lungs when inhaled by the surgical team member (Ball, 2010). With repeated exposure to the hazardous surgical plume, the surgical team members are at risk for the development of acute and chronic respiratory conditions. These conditions include:

- **Chronic Irritation (Coughing)**
- **Bronchitis**
- **Asthma**
- **Emphysema**

Other conditions and symptoms that have been associated to long term exposure to surgical smoke particles by perioperative team members are:

- **CV Disease and Death among Postmenopausal Women**
- **Eye, Nose, and Throat Irritation**
- **Headaches**
- **Dizziness and Nausea**
- **Fatigue**

- **Allergies**
- **Skin Irritation**

Exposure to surgical smoke is also a concern for patient safety. When surgical plume is not evacuated during endoscopic procedures, many patients present with nausea and headaches post-operatively. Research has shown that these symptoms are caused by an increase in the formation of methemoglobin and carboxyhemoglobin due to the presence of surgical plume. These modified forms of hemoglobin cannot carry oxygen to the tissue causing the symptoms of nausea and headaches (Ball, 2004).

The hazards of surgical smoke exposure have been clearly identified by evidence based research and the results conclusively demonstrate the risks. Striving for clean air within our surgical suites is a goal that should be a priority in every Operating Room environment in order to achieve good health for our patients and our perioperative teams. Stricter guidelines and recommendations for proper surgical smoke evacuation practices should be incorporated in the workplace and followed closely by all health care professionals.

Some solutions to minimize surgical smoke exposure include:

- **The use of efficient smoke evacuation devices and supplies such as in-line filter within wall suction system and individual smoke evacuator units with sophisticated filter systems that include Charcoal filter or ULPA filter.**
- **Regular Smoke Evacuator System Maintenance which includes accurate timing in changing the smoke evacuation filter and proper filter disposal guidelines.**
- **Smoke evacuation during laparoscopic procedures to minimize the absorption of toxic gases by the tissues. This is achieved by using hand controlled suction devices and purge systems designed to provide a gentle movement of the plume.**
- **Smoke evacuation tube position is critical in controlling the spread of surgical smoke in the operating room environment. The smoke evacuator pencil or tubing must be positioned close to the tissue site where smoke is being generated. This will help to capture as much smoke as possible and prevent it from spreading throughout the surgical suite.**
- **Adequate supply of smoke evacuator supplies available such as cautery pencils with smoke evacuator tubing, filters, and smoke evacuator units.**
- **Availability of high filtered surgical masks to be worn to protect against residual plume that escaped the smoke evacuation system. The mask should fit snuggly around face to provide adequate protection.**
- **Providing continuing education for the entire surgical team on the hazards of surgical smoke inhalation and methods to minimize exposure. Evidence based research and results must be promoted in order to bring a change in practices and attitudes towards best practices on smoke evacuation.**
- **Creating a policy and procedure for addressing smoke evacuation practices.**

Controlling the exposure of surgical smoke in the operating rooms involves a team approach with all members of the surgical team dedicated to maintaining a smoke-free and clean air environment. Without a team effort in implementing best practices for eliminating surgical smoke, our workplace will continue to be a toxic and hazardous environment which will negatively impact the health of all perioperative team members as well as our patients.

Dr. Kay Ball's presentation at the ORNAC International Conference in April 2013 titled ***The Global Effects for Best Practices in Smoke Evacuation: What's Wrong*** clearly emphasized the alarming hazards of surgical smoke inhalation by perioperative team members. Dr. Ball encouraged the audience in being proactive in facilitating and maintaining a smoke-free environment in our surgical suites. This would include a team effort commencing with the education about the hazards of surgical smoke and the implementation of best practices in creating a clean air, smoke-free workplace. Upon my return from

the ORNAC Conference, I elected to bring forward Dr. Ball's message to my colleagues and surgeons in the Orthopedic and Spine surgical areas at the Health Sciences Centre. Unfortunately, it was not a practice in the Orthopedic and Spine OR Theatres to use any type of device for smoke evacuation. Astonishingly, I received positive feedback from all of my colleagues including the surgeons with the desire to change our practices and embark immediately on using a smoke evacuation device for all of our surgical procedures. Currently, the use of a smoke evacuation system in Ortho and Spine surgery has become the standard of practice. The compliance to the use of a smoke evacuation system in the Operating Rooms has contributed to a clean air and safe environment for all perioperative members and patients.

References:

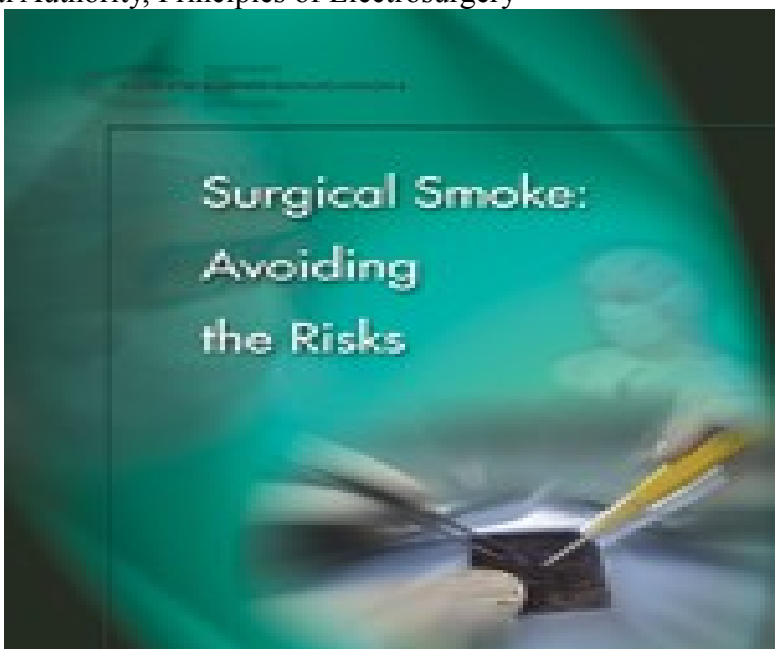
Ball K. (2004). *Lasers: The perioperative challenge* (3rd ed.). Denver, CO: AORN, 101.

Ball, K. (2010). Surgical smoke evacuation guidelines: Compliance among perioperative nurses. *AORN Journal,* 92(8): e1-e23. Doi: 10.1016/j.aorn.2009.10.026

AMT Electrosurgery. Megadyne, The Electrosurgical Authority, Principles of Electrosurgery

Shelley Andre CRN CPN(C)
Health Sciences Centre







HEALTHCARE
Supply Chain Network

INFORMATION SHEET

HSCN National Standard for Vendor Credentialing

Vendor Credentialing (VC) is the process of qualifying vendors by assessing their background and legitimacy against criteria as part of a credentialing process for calling on restricted areas of Canadian healthcare facilities.

The goal of creating a national VC standard is to minimize the costs to the Canadian healthcare system, simplify the process, avoid unnecessary duplication and protect the privacy rights of individuals. To this end, the HSCN National Standard for Vendor Credentialing was developed by a committee of Providers and Suppliers from across Canada. The Standard makes Vendors responsible to ensure and attest that their employees who call on healthcare facilities meet the Standard.

Vendors doing business with healthcare facilities who have adopted the Standard must sign a letter of attestation annually, confirming that each of their representatives who visit Canadian healthcare facilities comply with the Standard and to post their attestation on a password-protected website repository. Vendors will pay a nominal annual administration fee for this service. Vendors might find that some hospitals that have adopted the Standard may also use a vendor badge access system.

Names of healthcare organizations who have adopted the Standard will be listed on the website to enable Vendors to know which healthcare organizations have adopted the Standard.

Benefits of the Standard for Healthcare Providers:

- Appropriately safeguard the health and safety of patients, residents and staff
- Ensuring that vendor representatives attending restricted areas of healthcare facilities have the appropriate immunizations, background, education and training
- Minimize the risk associated with allowing vendor representatives to call on restricted areas
- Manage vendor credentialing in an efficient and cost-effective manner
- Bring further awareness to your hospital vendor guidelines

Key steps in the Implementation of this policy for Healthcare Providers include:

1. Provider or Provider's SSO advises HSCN of the adoption of the Standard
2. The Provider's organization is listed on the HSCN Vendor Credentialing website to inform vendors that the organization has adopted the Standard
3. Provider to include language in RFX / Terms & Conditions documents indicating vendors awarded contracts must comply with the Standard
4. Vendor agrees to comply with the Standard as part of the normal contracting process
5. Vendor takes the appropriate steps to ensure that they comply with the Standard
6. Vendor submits a signed attestation annually to HSCN verifying compliance with the Standard
7. Provider confirms that the Vendor has submitted the required annual attestation and takes any steps it considers appropriate to ensure Vendor compliance with the Standard

Benefits of the Standard for Vendors

- Vendor complies with terms and conditions of their customer's contract
- Vendor has a single annual credentialing attestation requirement for all the Canadian healthcare organizations who adopt the Standard
- Vendor pays a nominal annual administration fee for having their attestation posted on a password protected website repository for view by healthcare organizations who have adopted the Standard.

Jan '13

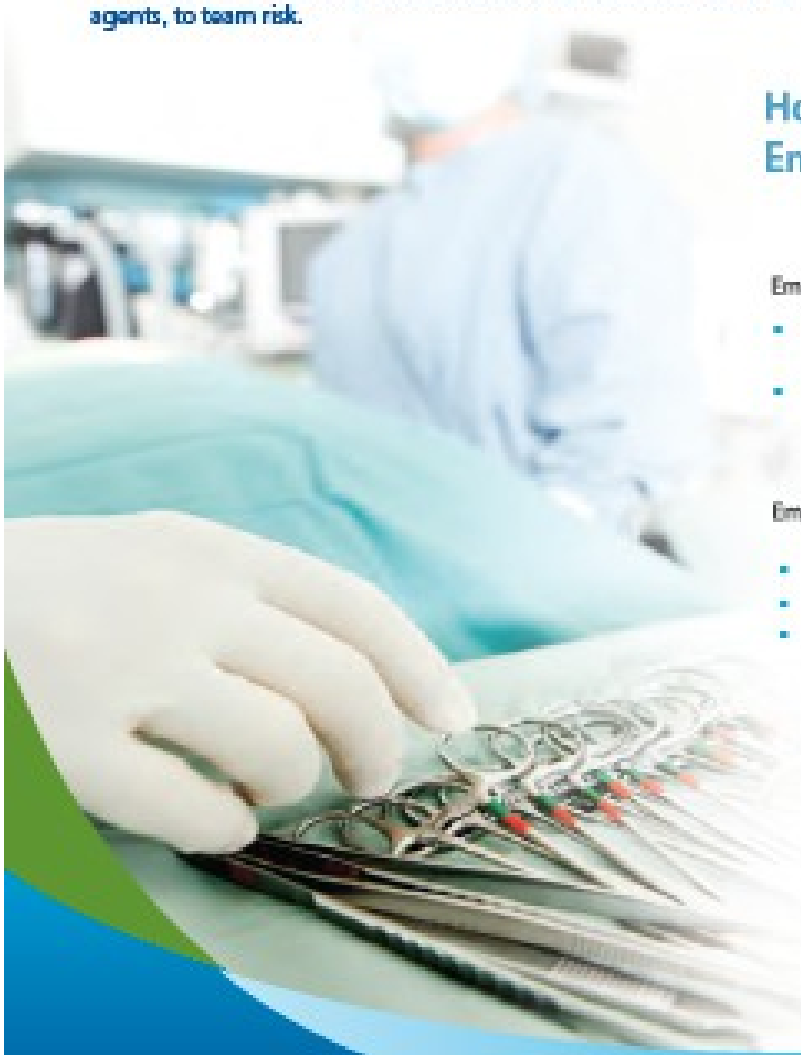
CSA Group

Coming Soon

Z305.0 Safety in perioperative environments

Perioperative environments and their associated risks and hazards are found in the traditional acute care hospital but are are increasingly common in a wide variety of health care settings (e.g. surgi-centres, vision correction practices, medical and dental offices). CSA Group's upcoming voluntary Standard on Perioperative Safety will provide organizations with systematic guidelines enabling them to develop and continuously improve safer work environments.

Focusing on the hazards and risks associated with perioperative environments, a key goal of the new standard is to provide a framework for prevention and mitigation of a range of issues from medical devices, chemical and anesthetic agents, to team risk.



How the Standard Benefits Employers & Employees

Employees may benefit through:

- Protection from risks and hazards associated with perioperative environments
- Promotion of staff education and healthier perioperative teams

Employers may benefit through:

- Guidance on appropriate policies and procedures
- Improve risk management
- Protection and retention of staff

Advancing Today
Anticipating Tomorrow



BACKGROUND

ORNAC and other stakeholders are championing the development of this standard and it is being undertaken by CSA Group with the participation of a multi-stakeholder Technical Committee representing health professionals, medical industry, health care management, and government.

Related Products

Z314.0 – Medical device reprocessing – General requirements ***NEW***
Z314.3 – Effective sterilization in health care facilities by the steam process
Z314.8 – Decontamination of reusable medical devices
Z305.12 – Safe storage, handling, and use of portable oxygen systems in residential buildings and health care facilities
Z305.13 – Plume scavenging in surgical diagnostic, therapeutic, and aesthetic settings
Z386 – Safe use of lasers in health care facilities
Z387 – Safe use of electrosurgical medical devices and systems in health care ***NEW***
Z7396.1 – Medical gas pipeline systems – Part 1: Pipelines for medical gases, medical vacuum, medical support gases, and anaesthetic gas scavenging systems
Z1000 – Occupational health & safety management
Z1003 – Psychological health & safety in the workplace – Prevention, promotion, and guidance to staged implementation
Z8000 – Canadian health care facilities

RELATED TRAINING PRODUCTS

Safety at work – An Introduction to Z1000

Safety at work – Implementing an OH&S Management System

Medical Device Reprocessing Online Training

Fundamentals of Infection Control During Construction

Z8000 – Facilities that Work for the Staff
Planning for Clinical Support Services

CONTACT INFORMATION

WEB: shop.csa.ca
EMAIL: training.csagroup.org
TEL: 800-463-6727

For more information contact:
Cathryn Cortissoz, Project Manager
Cathryn.cortissoz@csagroup.org

About CSA Group

CSA Group is an independent, not-for-profit membership association dedicated to safety, social good and sustainability. Its knowledge and expertise encompass standards development; training and advisory solutions; global testing and certification services across key business areas including hazardous location and industrial, plumbing and construction, medical, safety and technology, appliances and gas, alternative energy, lighting and sustainability; as well as consumer product evaluation services. The CSA certification mark appears on billions of products worldwide. For more information about CSA Group visit www.csagroup.org

Care of Surgical Instrumentation in the Operating Room

Instrumentation that is sterile and functioning properly is necessary when performing procedures in outpatient clinics, acute care patient care areas, ambulatory care patient care areas, and long term care facilities. Not all instrumentation is the same. Surgical instrumentation required for performing surgical procedures is constructed from high quality products. Meticulous care by operating room personnel and Medical Device Reprocessing (MDR) personnel is required. Proper care of instrumentation ensures that the instrument functions as intended during the surgical procedure and prolongs the life of the instrument. Nurses at the sterile field are the first to begin the decontamination process.

Most surgical instrumentation is constructed of Stainless Steel. Not all stainless steel is the same. Martensitic (400 series) stainless steel is used for instruments that require sharp cutting edges such as scissors, osteotomes, chisels, rongeurs, forceps, hemostats, needle holders). Austenitic (300 series) stainless steel is resistant to corrosion, but is malleable. Austenitic steel is used to construct malleable instrumentation such as retractors, cannulas, rib-spreaders, and suction devices. Surgical grade instruments may have a shiny or matte finish depending on the use of the instrument. During the manufacturing process, the steel is tempered to ensure hardness. Following this step, the instrument undergoes a process that will increase resistance to corrosion, be polished, and undergo passivation (removal of iron content found on the outside of the instrument)

All surgical instrumentation should be marked with the company name, item number, and country of origin (usually Germany). Instruments marked as Pakistan made

should not be used as surgical instrumentation. Pakistan made instruments are manufactured to be disposable or semi-disposable. It is not cost effective to sharpen or repair these instruments. Pakistan made instruments will rust quickly; therefore if they are sterilized with surgical grade instrumentation staining of surgical grade instruments may occur.

Ratcheted instruments must be open for the sterilization process. Any instruments sterilized with closed ratchets are considered contaminated. Also, some instruments may be required to be sterilized apart. This is dependent on the manufacturer's validated instructions and the construction of the instrument. For example laparoscopic instruments may be sterilized together or apart dependent on the manufacturer. Karl Storz click line laparoscopic instruments may be sterilized together whereas laparoscopic instruments manufactured by Stryker are required to be sterilized apart. If your site uses laparoscopic instrumentation from various vendors, they may opt to sterilize all of the instruments apart to avoid confusion. Regardless of whether the instrument can be sterilized together or not, the instrument is taken apart, decontaminated, and checked for functionality each time it arrives in the MDR department.

Care of surgical instruments is a joint responsibility or operating room theatre personnel and the MDR personnel. Improper use of the instruments and rough handling or dumping of instruments may cause damage. Instruments should only be used for their intended purpose. Following a surgical procedure heavy instrumentation should be separated from smaller delicate instrumentation. Heavy instruments should never be placed on top of smaller instrumentation. Allowing blood to dry onto instruments makes

the decontamination process in MDR more difficult. This is even more of a challenge for difficult to clean instruments such as orthopedic and small lumened instruments. The scrub nurse is responsible to remove gross debris and soil at the sterile field by rinsing instruments in sterile water and/or wiping with a dampened sponge during the surgical procedure. Instrumentation should not be sent to MDR until gross soil and debris is removed. Never use saline to clean surgical instruments. Any and all long-term soaking will damage surgical instruments.

Nurses may be concerned about stains that may be found on instrumentation. Not all stains are rust or contamination. When trying to determine “is it rust of a stain” remember that stains can be removed whereas rust can not. Dark brown or black stains may be caused from the use of low pH detergents and soaps or may be dried on blood. Bluish Black stains can result when metals of different types are put into the ultrasonic machine together or as a result of exposure to saline, blood, or potassium chloride. Multicolored stains result from excessive heat in the processing cycle. Light and dark spots result from water spots allowed to air-dry, or from the slow evaporation of water resulting in minerals being left on the instrument surface. Black stains may result from exposure to ammonia.

Instrumentation over the years has become more complicated. Care of surgical instrumentation requires team work. Understanding of the process of reprocessing of surgical instrumentation is imperative for all members of the team. Additional information related to care and inspection of surgical instruments can be found in the following references.

- CSA Standard Z314.3-09 Effective sterilization in health care facilities by the steam process.
- CSA Standard Z314.8-08 Decontamination of reusable medical devices.
- Operating Room Nurses Association of Canada (2009) *Recommended standards, guidelines, and position statements for perioperative registered nursing practice.* (9th ed). Canada: author.
- Phillips, N. (2007). Berry & Kohn's operating room technique (11th ed.). St. Louis: Mosby.
- Provincial Infectious Diseases Advisory Committee (PIDAC). Best practices for cleaning, disinfection and sterilization of medical equipment/Devices found at http://www.health.gov.on.ca/english/providers/program/infectious/diseases/ic_cds.html
- Rothrock, J. (2010). *Alexander's care of the patient in surgery* (14th ed.). St. Louis: Mosby.
- Schultz, R. (2005). Inspecting surgical instruments; an illustrated guide. IAHCSMM.
- Tighe, S. (2007). *Instrumentation for the operating room; a photographic manual.* (7th ed.). St. Louis: Mosby.

Labeling medications on the Sterile Field

ORNAC and AORN standards indicate that labeling of medications on the sterile field is required EVEN if there is only ONE medication. Labeling to include: name, strength and dose of medication.

No more than one medication and label should be handled at a time.

Literature indicates that there is more compliance with this recommendation from junior staff compared with more experienced staff members.

The most common causes of medication errors include:

Miscommunication,

Inadequate documentation;

Failure to follow procedures and protocols.

Despite recommendations medication errors continue to occur. Some errors/near misses reported include:

Mistaking Gluteraldehyde as spinal fluid during an enucleation of a cancerous eye

Injection with antiseptic skin preparation solution instead of the intended contrast media.

Mistaking chlorhexidine for saline.

Additional information related to medications available at:

CPSI http://www.ismp-canada.org/index.htm

Brumfield, D. (2010). Adherence to a medication safety protocol: current practice for labeling medications and solutions on the sterile field. *AORN Journal, 91(5), 610 – 617.*