

## Professional guidelines

# AORN updates recommended practices

**A**ORN has updated 7 recommended practices (RPs) for 2008. Highlights were covered at the AORN Congress March 30 to April 4 in Anaheim. Here are selected highlights, which were presented by members of the Recommended Practices Committee. For the complete text, see AORN's *2008 Perioperative Standards and Recommended Practices*.

Each RP now includes a section on education and competency, documentation when appropriate, policy and procedure, and quality management.

One completely new RP is added this year: prevention of hypothermia. The others are updates and expansions of existing RPs.

### **Sterilization**

Recommendations on loaner instruments, an emphasis on manufacturers' instructions, and a weight limit for instrument sets are key highlights of the revised sterilization RP.

#### **Loaner sets**

A new recommendation advises health care organizations to have a formal program with industry reps for managing the loaner sets, which can be a major challenge to reprocessing departments.

"We need to implement tracking and quality control. We need to include a process for ordering implants, receipt, use and return of the instrument trays," said Nancy Chobin, RN, CSPDM, ACSP, who discussed the updates. "Coordinate delivery in sufficient time for the loaner sets to be processed by the conventional sterilization method—that is probably the most important component."

#### **Manufacturers' instructions**

Chobin stressed the need to have manufacturer's instructions for "every single device that is reprocessed, either wrapped or unwrapped. I urge you to begin collecting this information—someone has to be a gatekeeper on this."

She said that in her experience, the number of items that have manufacturers' instructions for flash sterilization is down by 70%. "The bottom line—if you are attempting to flash sterilize a device and do not have the manufacturer's instructions, the liability is going to fall on you."

For wrapped items, the number of types of sterilization cycles manufacturers are recommending has mushroomed.

"This impacts our productivity and turnaround time," she said. "We have devices that require 4 to 8 times the normal sterilization cycle—I can tell you there is no more normal cycle."

#### **Weight limits on sets**

To audience applause, Chobin noted that AORN has adopted a weight limit of 25 pounds for instrument sets, consistent with the limit in the Association for the Advancement of Medical Instrumentation ST77 standard for sterilization containers.

"We negotiated with the vendors for 4 years to get a maximum weight on loaner sets," she says. There are 2 major issues with heavy sets: the ergonomic stress on staff from carrying the sets and the ability to dry large instrument sets.

## **Instruments and powered equipment**

The need for manufacturers' instructions is also underlined in the updated RP for cleaning and care of surgical instruments and powered equipment.

"We shouldn't be doing anything if we don't have it in writing from the vendors," said Judith Goldberg, RN, BSN, CNOR, in reviewing the changes.

In addition to cleaning and decontamination, the RP covers specialized instrumentation, including powered devices and instruments used for electrosurgery, robotics, and ophthalmology as well as advice for minimizing risk of transmission of prion disease.

## **Environment of care**

This RP covers a broad range of issues related to a safe perioperative environment, including security, privacy, and ergonomics. Also addressed are hazards from electrical and HVAC (heating, ventilation, and air conditioning) systems, fire, medical equipment, clinical alarms, blanket/solution warmers, medical and anesthetic gases, surgical smoke, chemicals, chemotherapy, hazardous waste, and tubing misconnections. A new chart displays recommended HVAC settings.

### **Blanket/solution warmers**

The recommendations on blanket- and solution-warming cabinets warn that warmed blankets and solutions can lead to patient burns.

"Even though solutions and blankets don't feel hot to us, the heat does build up and can be transferred to the patient," Goldberg said. Research by ECRI Institute found risks from blankets and solutions heated even slightly above normal body temperature, and the risk increased exponentially with temperature.

A few of the recommendations: Cabinet temperatures should be checked regularly and documented. Cabinets used for solutions should be labeled with the safe temperature range as determined by the solution manufacturer. Blanket-warming cabinet temperatures should not exceed 110°F (43°C). IV solutions need to be warmed with technology intended for that purpose, and IV bags should not be used as patient warming devices. Also, skin prep solutions should not be warmed in warming cabinets unless allowed in the solution manufacturer's instructions.

### **Medical, anesthetic gases**

The RP notes that the Food and Drug Administration (FDA) considers medical gases to be prescription drugs, which must be stored in a secure area with limited access.

For anesthetic gases, the occupational risk from trace gases is unclear.

"We say it remains prudent to limit the amount of waste anesthetic gases in the perioperative environment," Goldberg commented.

## **Surgical smoke**

New recommendations on surgical smoke note that the plume has been found to have toxic gases and vapors, the smoke may have more than 600 chemicals, and smoke in high concentrations can cause ocular and respiratory tract irritation. The RP refers to the National Institute for Occupational Safety and Health recommendation that a smoke evacuation system be used and says smoke should be evacuated in both open and laparoscopic procedures.

## **Environmental cleaning**

The familiar recommendation remains: All horizontal surfaces should be damp dusted before the first surgical case of the day. Added is a more in-depth rationale. Three examples:

- Gram-positive cocci can grow in dust and dry conditions.
- Gram-negative bacilli can grow in dust in moist areas.
- Fungi can grow in moist fibrous materials.

Regarding cleaning supplies, the RP gives a nod to mops that dispense a cleaning and disinfection solution (ie, Swiffer mops) and microfiber mops—the subject of many questions fielded by AORN staff, noted Diana McDowell, RN, MSN, CNOR, who gave the update.

Microfiber mops are sturdy, positively charged (ie, draw negatively charged particles), and lighter so they cause less injury to the staff.

Areas not to forget in cleaning are the HVAC system, refrigerator, ice machines, pneumatic tubes, and eyewash stations. Ice scoops should be cleaned weekly and not kept in the ice compartment.

There is a reminder not to use alcohol to clean large surfaces. Alcohol is not an Environmental Protection Agency (EPA)-registered disinfectant, does not remove debris or soil, and is flammable, McDowell noted.

### **Electronic equipment**

For electronic equipment, such as computer keyboards, monitor screens, and phones, the RP advises following the manufacturer's instructions. If appropriate, these items can be cleaned with detergent and a moist, lint-free cloth. If not, keyboards and other items should be covered with a moisture-proof covering that can be cleaned or discarded after each use.

### **Special situations**

A new section covers special situations that require a different method of cleaning and disinfection. Cases with drug-resistant pathogens like MRSA or VRE do not require closure of the room or procedures beyond normal cleaning and disinfection. But contact precautions should be used because studies show these organisms can live on surfaces for days if not cleaned properly. *Clostridium difficile* requires cleaning with EPA-registered hypochlorite- or bleach-based disinfectant.

For Creutzfeldt-Jakob disease (CJD), probably the best approach is prevention, McDowell said. Work surfaces should be covered with a disposable impervious material that is incinerated afterward. Linens should be disposable when CJD is suspected or diagnosed. If cloth is used, it needs to be incinerated if the patient is diagnosed with CJD. But if CJD is only suspected and there is no exposure to high-risk tissue, such as central nervous system tissue or cerebral spinal fluid, cloth may be sent to a regular laundry.

A new section on construction addresses issues such as barriers and surveillance.

### **Patient positioning**

The positioning RP has significant changes, with 7 new statements and recommendations covering support surfaces, morbidly obese patients, and protection of staff, among others.

Positioning of the morbidly obese patient applies to any patient, not only those having bariatric surgery, advised Alice Comish, RN, BSN, CNOR, who discussed the revisions. OR beds used for these patients need to be capable of supporting people up to 800 to 1,000 pounds in various positions. Mattresses need to provide sufficient support and padding and not bottom out. Extra-wide and extra-long safety belts need to be available.

For all patients, there should be a program for assessing risk for pressure injury. The RP notes the most frequent predictors of perioperative pressure ulcers have been found to be:

- increased age of the patient
- diabetes or vascular disease
- vascular procedures.

### **Support surfaces**

Updated information on support surfaces is based on research. Still, said Comish, "we have to recognize that despite the new types of mattresses, overlays, and positioning devices, no device completely eliminates pressure."

The traditional foam mattress is the least effective. Viscoelastic mattresses are better. In one study, polyether mattresses generated less capillary pressure when the patient was in the supine position than gel or foam mattresses. Viscoelastic surfaces overlays have been found effective in preventing both skin changes and pressure sore formation.

But more research is needed.

Though there are a lot of studies, some have conflicting results, she noted. They have used different criteria, different assessment methods, and some have had small sample sizes.

### **Staff safety**

Though nurses were taught that if they used proper body mechanics, they could safely move or transfer any patient, that's a fallacy, Comish noted. "Even with proper mechanics, a task may be beyond a nurse's capabilities."

She referred to examples for safely moving patients:

- For a supine-to-supine transfer, 3 caregivers plus the anesthesia care provider can safely transfer a patient up to 157 lbs. If the patient is more than 157 pounds, a lifting device, such as a mechanical lift or transfer device, and a minimum of 3 to 4 caregivers should be used.
- For a supine-to-prone transfer, 3 caregivers plus an anesthesia provider can safely transfer a patient of up to 72.7 pounds. If the patient is more than 73 pounds, assistive technology and a minimum of 3 to 4 caregivers are needed.

### **Moderate/sedation analgesia**

The RP provides guidance for perioperative RNs who administer moderate sedation/analgesia and monitor patients.

Moderate sedation/analgesia involves a continuum of care, from oral sedation to full-blown loss of consciousness, explained Cecil King, RN, MS, CNOR.

He said the committee had a lot of discussion about whether the RP should provide guidelines on the controversial issue of nurse-administered propofol sedation.

The decision was made to adopt and endorse the AANA-ASA Joint Statement Regarding Propofol Sedation by the American Association of Nurse Anesthetists and the American Society of Anesthesiologists. The statement says that a person providing propofol sedation should be prepared in general anesthesia; in other words, be a licensed anesthesia provider. Though the committee reviewed the gastroenterology literature, which documents that nurse-administered propofol sedation can be safe, King said, "We feel it is in the best interest of our patients and members to support the joint position statement."

### **Preoperative skin antisepsis**

This updated RP now includes a handy table for selecting types of preop skin antiseptics. Other highlights include:

#### **Preoperative shower and shampoo**

Two showers are now recommended for patients having Class I procedures below the chin, with chlorhexidine gluconate (CHG), when appropriate.

"This has to do with persistence—4% CHG has shown excellent persistence on skin," Andrea Spalter, RN, MSN, CNOR, noted in her update.

Patients having surgery on the head should have 2 preop shampoos with 4% CHG. Research has shown that 2 preop shampoos before head and neck surgery with CHG reduce both transient and resident microorganisms.

Care should be taken because CHG can cause damage to corneal tissue and the tympanic membrane.

#### **Surgical site marking**

The RP advises using alcohol-based surgical site markers—not ballpoint pens, which can damage skin.

"Any risk of damage to skin integrity is a risk for infection," Spalter said. "Only use site markers approved for that purpose."

#### **Hair at the surgical site**

"All of the studies recommend hair should be left at the site when possible," Spalter advised. Only clippers—no razors—should be used when hair removal is necessary.

She said most neurosurgeons at her facility have stopped clipping the hair entire-

ly. "Braiding the hair is an excellent way to go, or use nonflammable gel," she suggested.

***Prepping technique***

Use of sterile supplies for skin prep is still recommended. The literature is not strong enough to determine that outcomes with nonsterile supplies are no different than with sterile supplies, she noted.

The RP recommends that nonscrubbed personnel do the skin prep because of the risk of contaminating the sterile gown and gloves if the scrubbed person performs the prep. Spalter said the committee felt strongly, after much discussion and review of the literature, that the risk of contamination was too great if the prep is performed by the scrubbed person. ❖

*The AORN 2008 Perioperative Standards and Recommended Practices can be ordered at [www.aorn.org](http://www.aorn.org). Look under Practice Resources.*