

Sterilization & Infection Control

AORN updates sterilization guideline

The Association of periOperative Registered Nurses (AORN) has updated and expanded its recommended practice (RP) for sterilization. The major changes were highlighted in an interview with *OR Manager* by Nancy Chobin, RN, CSPDM, chair of the committee that revised the RP. She is corporate consultant/educator for the Saint Barnabas Health Care System based in West Orange, NJ. Here are highlights:

Steam sterilization

Peel pouches

The revised RP says, "Paper/plastic peel pouches should not be placed in a container or wrapped set" (RP II:2).

Packaging manufacturers do not validate packaging placed inside of other packaging, Chobin explains. "When you take one type of packaging and place it into another packaging system, you have exceeded the original packaging manufacturer's recommendations for use." That means the facility assumes the liability for a sterilization failure.

A peel pack needs to be kept on its side to enhance air removal and sterilant penetration, and that can't be done inside a tray, she adds. Not placing a peel pack on its side encourages moisture retention.

Some manufacturers are responding with products with pockets that are similar to peel pouches but aren't considered packaging and can be placed inside containers and trays.

"This allows you to segregate your items without having to worry about exceeding the packaging manufacturers' recommendations," Chobin says.

Weight of instrument sets

The RP provides more direction on the weight of instrument sets (RP II:3). The major concerns are:

- ability to dry the set at the end of a cycle
- ability to lift the tray without injury.

AORN recommends that sets be of a weight specified by the manufacturer. If sterilization containers are used, AORN advises following the manufacturers' instructions for weight and other parameters. The RP goes on to say, "Sets weighing more than about 20 lbs are known to be difficult to dry without lengthy drying times." The manufacturer should provide written data to support its recommendations.

The Association for the Advancement of Medical Instrumentation (AAMI) in its steam sterilization standard (ANSI/ AAMI ST 46:2002) recommends that facilities conduct dry-time studies, at least on their heaviest sets, Chobin notes.

The issue of heavy instrument sets is a "mess," she acknowledges. Though sterilizer manufacturers validate their cycles for 16-pound trays, some device manufacturers, particularly in orthopedics, have had much heavier trays for years. As a result, central service departments must deal with a host of extended sterilization cycles that are difficult to manage. (See *OR Manager*, March 2006, p 31.)

Later this year, AAMI is expected to address the weight of sets in its standard for rigid containers and organizing cases.

Regarding the lifting issue, AORN refers to the National Institute for Occupational Safety and Health (NIOSH), which has an equation for calculating the recommended weight for specific lifting tasks (www.cdc.gov/niosh/topics/ergonomics/).

Wet packs

The RP has a stronger statement on wet packs, saying they should be considered unsterile (previous language said they should be “questioned”) (RP III:4).

Packs are especially vulnerable when they just come out of the sterilizer. Too often, sets are rushed to the OR without allowing sufficient cooling time.

“There’s still steam vapor in the package, and someone picks it up. Did they allow bacteria to wick through? We don’t know. And when we don’t know, we shouldn’t be using it,” she says. “This is really an education and scheduling issue. We’re in a lot of trouble with this. People had better be looking at their practices.”

Chobin says she consulted in 9 situations last year related to infections after orthopedic surgery. “In every incident, there was a common denominator—sets not coming in in sufficient time,” she says.

Physicians understand the need to wait for sets to dry once you educate them, she says. “I will go into the room and say, ‘Doctor, you want to use this? Fine. I’m telling you it’s not ready, and I’m filing an incident report.’ He will say, ‘Well, I don’t want to use it if it’s not ready.’”

Flash sterilization

AORN has strengthened language on the controversial practice of flash sterilization (RP IV). The RP now says “use of flash sterilization should be kept to a minimum” and lists conditions that should be met. The RP also explicitly states that “flash sterilization should not be used as a substitute for insufficient inventory.”

A study from one hospital published in the March 2006 *AORN Journal* showed that in 121 instances of flash sterilization, 78% were because instrumentation from a previous procedure was not available.

Chobin also notes that many manufacturers no longer provide instructions for flash sterilization.

As before, the RP says flash sterilization should not be used for implantable devices.

If an emergency makes flash sterilization unavoidable, the RP states:

- A rapid-action biological monitoring device should be used with a Class V chemical integrator.
- The implant should not be released until the rapid-action indicator gives a negative result. After the negative result is obtained, the implant can be released for immediate use.
- If not used immediately, the implant cannot be saved as sterile for future use. Resterilization is required.
- If the biological indicator later has a positive result, the surgeon should be notified as soon as the results are known.

A flash-sterilized load with an implant should not be released based on a Class V chemical integrator alone, AORN notes.

What is the purpose of the Class V integrator?

“A Class V integrator, in my opinion, should be used in every flash cycle, not just implants. A Class V integrator gives you the most accurate information other than a BI [biological indicator],” Chobin says.

“You can’t use it in lieu of a BI, but it does give you a higher confidence level. The Class V integrator gives you information immediately, so if you have a failure, you can rerun the load rather than waiting for the rapid-action indicator.”

Ethylene oxide

Use of ethylene oxide (EO) is diminishing, though it is still used in smaller facilities and for certain devices. Changes in RP VII refer primarily to occupational exposure:

- wearing of monitoring badges
- documentation of breathing zone monitoring

- informing personnel about health effects and hazards, including making sure they are familiar with the spill plan.

Peracetic acid

“We emphasize again that peracetic acid is a just-in-time system,” Chobin says. The process should not be used for items to be stored without additional processing.

“In my opinion, this is probably one of the most misused systems in the marketplace,” she says. “People are putting things in the processor far in advance of the schedule and hoping the item is going to remain sterile when they need it. In the RP, we have really focused on not exceeding the manufacturer’s instructions for use of that system.”

Ozone sterilization

A recommended practice is added for ozone sterilization, which has entered the market since the previous RP was issued. ❖

Reference

Association of periOperative Registered Nurses. 2006 *Standards, Recommended Practices, and Guidelines*. Denver: AORN, 2006. www.aorn.org. Phone 800/755-2676.