

Steam sterilization- Update on The Joint Commission's position

The Joint Commission has been in discussion with multiple professional and trade organizations in regards to the common and proper use of sterilization using steam. Recently, some decisions have been made which will have an impact on the interpretation of standards as well as the survey process.

In reviewing this method of sterilization, several issues have emerged including:

- The terminology used to describe the sterilization process. Flash sterilization is the most common term used to describe certain types of steam sterilization that do not utilize a full (also known as terminal) cycle. Originally, this term meant sterilizing unwrapped instruments using steam for 3 minutes, at 270 F. at 27 to 28 lbs of pressure. Over the last several decades, a number of improvements have been made to this process, such as longer exposure of the instruments to steam, the use of special trays and packs to hold and protect the instruments, and the routine use of biological indicators. To help sort out confusion about nomenclature, this document will only refer to steam sterilization as described above (3 minutes at 270 F at 27 to 28 lbs of pressure).
- Indication-related issues that involve the selection of the sterilization cycle or method. Previously, the selection of a sterilization cycle or method was a primary focus during a survey. Now surveyors will be looking more closely into all aspects of the sterilization method or cycle (see the next bulleted item regarding process-related issues). Examples of findings would be a high percentage of steam sterilization using less than a full sterilization cycle, as well as exclusive use of this process for certain types of instruments.
- Process-related issues involving the way that a given sterilization method is executed. Examples of findings would be failure to adequately clean the instruments before sterilization, lack of chemical indicators, and transporting uncovered instruments back to the operating room after they have been sterilized.

Based on discussions with experts in the field, professional organizations, and government organizations, The Joint Commission has decided to refocus its survey efforts on all of the critical processes included in sterilization. If a complete and effective process of sterilization is used, it will be considered an effective sterilization method. Therefore, surveyors will review the critical steps of disinfection and sterilization to determine if the process is appropriate.

Here is a brief overview of the three critical steps of reprocessing:

1. Cleaning and decontamination. All visible soil must be removed prior to sterilization because steam and other sterilants cannot penetrate soil, particularly organic matter. Manufacturers' instructions are available for all instruments; these include directions for the cleaning and decontamination process. Some smooth metal instruments may be easily brushed clean, while complex products may require disassembly and special cleaning techniques. Many manufacturers specify that an enzymatic soak be used as well.
2. Sterilization. Most sterilization is accomplished via steam, but other methods are also available. Steam sterilization of all types, including flashing, must meet parameters (time, temperature and pressure) specified by both the manufacturer of the sterilizer, the maker of any wrapping or packaging, and the manufacturer of the surgical instrument. In addition to these instructions, parametric, chemical and biological controls must be used as designed and directed by their manufacturers.
3. Storage or return to the sterile field. Each newly sterilized instrument must be carefully protected to ensure that it is not re-contaminated. For full steam sterilization cycles, packs of instruments are wrapped and sealed. Instruments subjected to steam sterilization using methods other than full cycle sterilization may be transported in "flash pans" or other devices specifically designed for the prevention of contamination during and after the steam process.

In summary, Joint Commission surveyors will focus on all of the critical steps and the integrity of the sterilization process.

Surveyors will, among other activities:

- Observe instruments from the time they leave one operating room to when they are returned to the next.
- Ask health care workers to provide the manufacturers' instructions for instrument sterilization, and to describe and demonstrate how instruments are being cleaned and decontaminated according to those written instructions.
- Observe the cleaning of instruments. Rinsing is rarely enough to properly remove soil from instruments; meticulous cleaning is needed.
- Verify that staff members are wearing appropriate personal protective equipment.
- Observe the sterilization process. The surveyor will ask for the manufacturer's instructions for the following items: the sterilizer, wrapping or packing, and the instruments.
- Review sterilization logs. Surveyors will ask about parametric, chemical and biological indicators.
- Observe the return of instruments to the sterile field and verify that they are being protected from recontamination.

For more information, please see the CDC/HICPAC guideline at this link:

http://www.cdc.gov/ncidod/dhqp/pdf/guidelines/Disinfection_Nov_2008.pdf

Please feel free to submit any questions at the following web address:

<http://jcwebnoc.jcaho.org/SigSub/onlineform.asp>