Flash sterilization is a hot topic. It has received a bad name over the years due to abuse and inappropriate procedures, resulting in many issues and concerns related to sterilization for immediate use.

Sterilizers used for “flashing” are smaller sterilizers that are as efficacious as the larger ones found in sterile processing departments (SPD) designed for terminal sterilization. The issues and concerns surrounding flashing are related to what happens before devices go into the sterilizer (the disassembly, pre-cleaning, cleaning, and packaging of the instrumentation), and what happens after they come out (the transportation of the sterilized items to the point of use). Some of these necessary processes are often skipped or performed improperly due to the demand for quick turnarounds. Other common errors include using the wrong type of sterilization cycle (either gravity, pre-vacuum, or steam-flush pressure-pulse), the wrong temperature, or an insufficient amount of exposure time to ensure sterility.

In the past, flash sterilization was defined as a sterilization cycle of an unwrapped object at 132°C (270°F) for 3 minutes at 27-28 lbs. of pressure in a gravity displacement sterilizer. Today’s instrumentation is more sophisticated due to complex designs, which increases the challenge of sterilization. As a result, these complicated devices require specific cleaning and sterilization instructions. Current published recommended practices and guidelines say that the manufacturer’s written instructions for use must be followed, or sterilization cannot be assured.

Confusion surrounding sterilization
In the summer of 2009, The Joint Commission (TJC) announced its updated position on steam sterilization, which describes how the surveyors are instructed to evaluate or review sterilization practices to include close observation of all critical aspects of the sterilization method and process-related issues. Rather than referring to flash sterilization, TJC described this process as “less than a full sterilization cycle.” This statement caused some confusion and misunderstanding among healthcare professionals concerning the safe performance of flash (or immediate-use) sterilization cycles.

Additionally, in the fall of 2009, the Centers for Medicare & Medicaid Services (CMS) acknowledged that state survey agencies had experienced challenges evaluating the use of “flash sterilization.” The CMS memorandum described how to distinguish appropriate from inappropriate use of flash sterilization in ambulatory surgery centers (ASCs). To help surveyors review the appropriateness of a sterilization process, CMS developed a list of questions for the surveyors to use during the survey. CMS used the term “short cycles” in reference to flash sterilization. The variety of sterilization terms – such as flashing, short cycle, less than full cycle, immediate-use – has added to the confusion among healthcare providers.

Flash sterilization is an outdated term that does not reflect the necessary sterilization processes needed for immediate-use sterilization.

The need for consensus and collaboration
Both the Association of periOperative Registered Nurses (AORN) and the Association for the Advancement of Medical Instrumentation (AAMI) published guidelines and recommendations on sterilization. AORN and AAMI describe flash sterilization as a process designed for the steam sterilization of patient care items for immediate use. Perioperative and SPD professionals use these guidelines when developing policies regarding sterilization.

Because of the ongoing confusion, AAMI organized a meeting on flash sterilization in the spring of 2010 to help clarify sterilization recommendations. The meeting’s attendees included representatives from AORN, AAMI, CMS, TJC, the Association for Professionals in Infection Control and Epidemiology (APIC), the International Association of Healthcare Central Service Materiel Management (IAHCSMM), the American Dental Association (ADA), the American Society of Cataract and Refractive Surgery (ASCRS), the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the American Association for Accreditation for Ambulatory Surgery Facilities, Inc. (AAAASF), and the Accreditation Association for Ambulatory Health Care (AAAHC).

During the collaborative meeting, each respective organization’s guidelines and positions concerning flash...
Immediate-use sterilization were reviewed. The organizations then drafted a multi-society position statement titled "Immediate-Use Steam Sterilization (IUSS)."

**Flash versus IUSS**

The term "flash" implies a hurried process that can lead to skipping steps or performing an incomplete process, resulting in questionable sterility. Therefore, flash sterilization is an outdated term that does not reflect the necessary sterilization processes needed for immediate-use sterilization.

There is no single standard "flash" cycle for all devices. To ensure effective sterilization processes, multiple factors must be evaluated, including the device manufacturer’s written instructions for cleaning, cycle type (gravity or dynamic air removal), exposure time, load composition and containment.

Sterilization cycles with little or no dry time are available, safe, and efficacious when done correctly and when only used to process instruments intended for immediate use. The term “immediate-use sterilization” more accurately describes the recommended sterilization process for items that are not intended to have a shelf life.

**Important considerations**

If all of the reprocessing steps are not properly performed, IUSS may increase the risk of infection. Therefore, IUSS should be kept to a minimum and only used when there is insufficient time to process by the preferred terminal sterilization method. IUSS should not be a result of insufficient instrument inventory.

Devices sterilized for immediate use should have the same level of cleaning and preparation as instruments being terminally sterilized. The most current AORN recommendations state:

- Immediate-use sterilization should be performed only if all of the following conditions are met:
  - The device manufacturer’s written instructions on cycle type, exposure times, temperature setting, and drying times (if recommended) are available and followed.
  - Items are disassembled and thoroughly cleaned with detergent and water to remove soil, blood, body fats, and other substances.
  - Lumens are brushed and flushed under water with a cleaning solution, and rinsed thoroughly.
  - Items are placed in a closed sterilization container or tray, validated for flash sterilization, in a manner that allows steam to contact all instrument surfaces.
  - Measures are taken to prevent contamination during transfer to the sterile field.

TJC and CMS also require that instruments be protected during transportation from sterilizer to point of use.

The sterilization process should be monitored to ensure that cycle parameters have been met. To establish accountability, sterilization records should include the item(s) processed; the patient receiving the item(s); the cycle parameters; the date and time the cycle was run; the operator’s name; and the reason for IUSS.

The process of IUSS is efficacious if, and only if, all of the critical steps of cleaning, decontamination, and aseptic transportation accompany the sterilization cycle.

**Getting support**

APIC, AORN, AAAHC, ASC Quality Collaboration, IAHCSMM, AAMI and the Association of Surgical Technologists (AST) have officially endorsed the IUSS multi-society position statement.

The FDA and TJC do not endorse single documents; however, they stated that they are in agreement with this document. A copy of the position statement with the official endorsements and the organizations’ logos is available on the AAMI website:


**References**


**Additional Resources**

**Immediate-Use Steam Sterilization**

Available at: www.aami.org/publications/standards/ST79_Immediate_Use_Statement.pdf

ANSI/AAMI ST79:2010 – Comprehensive Guide to Steam Sterilization and Sterility Assurance in Health Care Facilities is a complete guideline for all steam sterilization activities.

AORN’s Perioperative Standards and Recommended Practices contains many recommended practices related to sterile processing department (SPD) procedures, such as high-level disinfection, cleaning and processing of endoscopes, cleaning and care of instruments and powered equipment, selection and use of packaging systems, and sterilization in the perioperative practice setting.

The CDC’s Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 is another resource for valuable information.

New APIC ANYWHERE™ Disinfection/Sterilization Course

Available at: www.apic.org/anywhere