Reprocessing Foot Care Devices

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Reprocessing of medical devices (instruments) used to provide patient care is an important, but often misunderstood area of infection prevention and control. Reprocessing is defined as preparing a used device for use.

Critical medical devices present a high risk of infection if the device is contaminated with any microorganisms including bacterial spores. Examples of critical devices include but are not limited to needles, syringes, scalpels and invasive/surgical devices, all implantable devices, biopsy forceps and all instruments used for foot care.

The purpose of this article is to provide information for foot care nurses on reprocessing. It is essential that licensed practical nurses understand and apply the standards for reprocessing of medical devices in order to ensure safe and competent practice when providing foot care.

In Alberta, Alberta Health and Wellness (AHW) released a document “Standards for Cleaning, Disinfection and Sterilization of Reusable Medical Devices for all Health Care Facilities and Settings in January of 2008. This document states that all critical devices, including foot care devices, shall be sterilized and maintained sterile until point of use. The designation of foot care devices as ‘critical’ is made by using Spaulding’s classification system which classifies items
based on the intended use. Items are considered critical if there is any chance that the item will enter sterile tissue or the vascular system because any microbial contamination could result in disease transmission. (APIC, 2009 p. 21-2)

In addition to AHW standards, practitioners must be aware of the Canadian Standards Association (CSA) standards for reprocessing medical devices to ensure they are in compliance with the expected standard of practice.

Reprocessing (in an office or community setting presents many challenges. The most obvious challenge is the limited space that is available to perform the tasks. This limited space requires staff performing reprocessing tasks to have a clear understanding of the process and the steps involved. **All reusable items must be meticulously cleaned before they can be sterilized and all items must be wrapped and properly stored to maintain sterility.** Liquid chemical sterilants are not appropriate as it is not possible to maintain device sterility until use.

Points to consider when reprocessing include, but are not limited to:

1. There must be an office/practice specific reprocessing manual available that outlines the details of reprocessing in the practice.
2. A dedicated reprocessing area that is not used for other tasks must be available. This area must have a clear one way work flow. All surfaces in the area must be smooth, non-absorbent and washable. There must be a dedicated hand hygiene (HH) station in the reprocessing area. The sink used to clean and rinse soiled devices must not be used for HH.
3. All medical devices that are reprocessed must have validated manufacturers’ instructions for reprocessing. These instructions must be available in the office/practice specific reprocessing manual.

4. Meticulous cleaning is the first step in reprocessing. Devices cannot be sterilized if they are not clean. Gross debris must be removed immediately after use. If devices cannot be cleaned immediately, they must be treated to prevent hardening of soil. Cleaning and rinsing of cleaned devices should be conducted under the surface of the water not under running water.

5. Detergents and/or enzymatics used to clean used devices must follow manufacturers’ instructions for both the devices and the product (household products are not suitable for this use). Correct dilutions and soak times must be used and the product must be changed according to the manufacturers’ recommendations.

6. Personal protective equipment (PPE) must be used when cleaning devices in the reprocessing area. The correct procedures for donning and doffing PPE must be followed. There should be access to written information detailing the correct procedures for the donning and doffing of PPE.

7. If an ultrasonic cleaner is used, the manufacturers’ instructions for use must be followed. These instructions should be available for reference and should provide information on the maintenance and the testing required to verify that the device is functioning properly. Performance testing and preventive maintenance conducted must be documented. When in operation, the lid of the ultrasonic cleaner should be in place to prevent the spread of aerosols. The cleaning solution in the ultrasonic cleaner must be replaced according to manufacturers instructions for both the ultrasonic cleaner and the enzymatic/detergent
used in it. The cleaning solution must also be replaced if there is heavy soiling of the solution.

8. Items must be thoroughly rinsed following cleaning. The detergent or enzymatic that is used to clean must be removed from the devices before they can be packaged for sterilization. Rinsing must be done by submerging the items in water, not by holding them under running water. Rinsing under running water often does not adequately remove detergent or enzymatic and can result in splashing and generation of aerosols.

9. Once devices have been cleaned and rinsed, they must be inspected to ensure they are clean and in good condition.

10. Devices must be dry prior to being packaged. Drying must be done with a clean, lint free, soft absorbent towel. Drying is an essential step as it prevents microbial growth. Drying also helps to prevent corrosion of certain materials such as stainless steel. This means devices must not be left to air dry.

11. Devices must be packaged correctly. The type of packaging used to wrap will depend on the device. The instructions for the use of the packaging must be followed.

12. The sterilization process must be monitored physically. At the conclusion of the sterilization cycle, staff must check that the required physical parameters of sterilization (time, temperature, pressure) were met and that no errors are apparent. The results of physical monitoring must be documented.

13. The sterilization process must be monitored chemically. All packages must include a process indicator on the outside of the package and an internal chemical indicator (CI) on the inside of the package. These indicators do not verify sterility, but alert the user to potential failures in the sterilization process. Results of internal CI must be documented.
14. The sterilization process must be monitored biologically. Biological Indicators (BI) must be run each day the sterilizer is used. The BI should be run in a process challenge device (PCD). The PCD can be one that is commercially prepared or can be constructed in-house by placing a BI inside a pack that is the most difficult to sterilize among those most frequently processed. The BI PCD should be placed in the area of the sterilizer considered least favorable to sterilization. The “cold-point” in table-top sterilizers varies with sterilizer design but is normally located in an area near the drain in a normally fully loaded chamber (check your sterilizer’s user manual for detail). The results of the BI must be recorded.

15. Sterilizers must be loaded correctly. Review and follow the manufacturers’ instructions for the both the sterilizer and packaging to determine how packages should be placed in the sterilizer.

16. Packages must be dry and cool to touch before being handled. If the packages are handled before they are cool and dry, the package integrity is considered compromised and the contents contaminated.

17. Sterile packages must be stored in a manner which will maintain package integrity.

18. There must be documentation of the preventative maintenance of the sterilizer.

Reprocessing is detailed process which requires a dedicated location and practice specific policies and procedures. Adherence to the Canadian Standards Association (CSA) standards and AHW standards on reprocessing will help ensure safe patient care and public protection.

References:


