Recommended Steps for Instrument Reprocessing

1. CLEANING - cleaning is the first and most important step and should be performed as soon as possible, in a designated area, using appropriate PPE (personal protection equipment). Quick cleaning removes blood and other body fluids much easier and also minimizes instrument staining, corrosion and/or pitting. Be sure to clean instruments according to the manufacturer's instructions for use (IFU) paying attention to detergent type and dilution, water quality and temperature, brush type and size, etc...

2. INSPECTION - after cleaning, each instrument should be inspected for function and cleanliness. Never sterilize a dirty instrument as there is no such thing as sterile blood. If the instrument is in need of repair, be sure to set it aside and/or contact a supervisor to review. In addition, be sure to check each instrument for proper function and lubricate as required by the instrument manufacturer's IFU.

3. PACKAGING - after inspecting, package instruments using FDA approved pouches, wrappers and/or rigid sterilization containers. Sterile packaging, combined with proper handling and storage, allows instruments to maintain sterility until point of use. Peel pouches should be used for single, light weight items. Instruments placed inside a tray or cassette should be wrapped and secured with sterilization tape or placed inside a reusable rigid container and sealed. For quality assurance, each packaging system should have an external chemical indicator along with an internal chemical indicator to show the sterilant reached inside the package where the instruments are located.

4. STERILIZATION - after packaging, load the sterilizer with lighter items on top and heavier items on the bottom. Peel pouches should be placed on edge, facing the same direction. Wrapped trays or cassettes can be placed flat or on their side, depending on their design. Rigid containers should always be placed flat on the sterilizer shelf and not stacked unless validated by the manufacturer. Steam sterilization should be used whenever possible and autoclaves are available in either Gravity Displacement or Dynamic Air Removal cycles. Be sure to check with the instrument manufacturer's IFU to confirm the cycle type and parameters (e.g. exposure time and temperature). In addition to exposure time, a dry time is needed at the end of the cycle to ensure all packages are dry after processing. The appropriate dry time should be included in the instrument manufacturer's IFU.

5. STERILE STORAGE - after sterilization, inspect all packages for proper color change by the external chemical indicator. Do not handle any package that is visibly wet as this will compromise sterility of the items inside. Sterile packages should be stored in a clean, dry location. The shelf-life of sterile items is event-related and depends on the quality of the packaging material, storage conditions and amount of handling. Prior to distribution, be sure to inspect sterile packages and do not use any that are damaged, wet or opened.

6. QUALITY ASSURANCE - sterility assurance should be verified using three types of indicators (physical, chemical and biological). Physical indicators are the time, temperature and pressure gauges built into sterilizers. These readings should be recorded for every cycle and verified prior to unloading the sterilizer. A sterilizer print out is ideal and should be kept as part of your formal infection prevention records. Chemical indicators should be used on the outside and inside of every package. For steam sterilization, a Class 5 integrating chemical indicator may be used with every load for increased sterility assurance. Special Note: Dynamic air removal steam sterilizers (also known as prevacuum or Class B) should be tested daily using a Bowie-Dick type test. This test checks for proper air removal which allows this type of steam sterilizer to run a much faster cycle. Biological indicators (also known as spore tests) should be used at least weekly, preferably daily and every load with an implant. BIs are available in either a mail-in service or an in-office system for user convenience. A BI is processed along with the load and then sent to an outside lab for incubation (mail-in service) or activated and incubated by the user (in-office system). Sterilizer failure is noted if the spores grow during incubation. While sterilizers can and do mechanically fail, the leading cause of sterilizer failure is operator error (e.g. running from a cold start, wrong cycle, over loading or improper packaging).

This SPSmedical educational poster (CPS-2012) is intended to assist private-offices and clinics with instrument reprocessing. Users should refer to published standards and CDC guidelines for more comprehensive information.

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