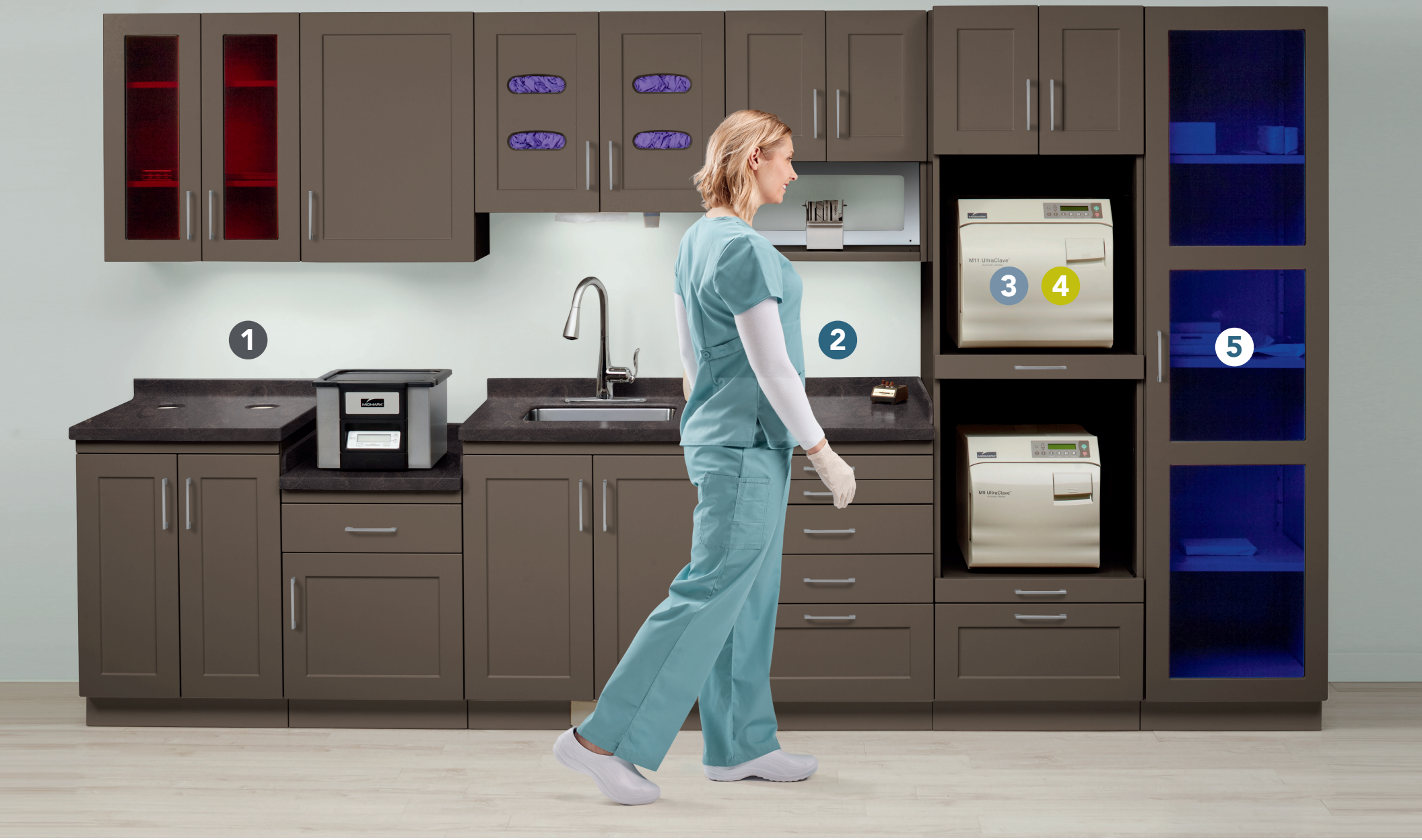

INSTRUMENT PROCESSING BEST PRACTICES

Effective sterilization practices require a comprehensive program using proven standards.

STEP 1 Receiving, Cleaning, and Decontamination
STEP 2 Preparation and Packaging
STEP 3 Sterilization
STEP 4 Monitoring/Sterility Assurance
STEP 5 Storage

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OVERVIEW OF INSTRUMENT PROCESSING BEST PRACTICES

STEP 1

RECEIVING, CLEANING, AND DECONTAMINATION

- Instruments should be placed in an appropriate container at the point of use to prevent percutaneous injuries during transportation to the instrument processing area[1]
- Wear puncture-resistant, heavy duty utility gloves, facemask, eye protection and a gown[1]
- Reusable instruments, supplies and equipment should be received, sorted, cleaned and decontaminated in one section of the processing area[1]
- If manual cleaning cannot be performed immediately after use, presoak with a specialized product (e.g. disinfectant, enzymatic cleaner)[1]
- After cleaning, instruments should be rinsed with water to remove chemical or detergent residue. (Certain situations may require rinsing with distilled water.)[1]
- Follow the instructions for use (IFUs) on cleaning for each instrument[2]
- Using automated equipment can be safer and more efficient than manually cleaning contaminated instruments[1]
- Visually review all instruments after cleaning for residual debris and damage[2]
- If instruments are not thoroughly cleaned, sterilization may not be achieved[2]

STEP 2

PREPARATION AND PACKAGING

- Separate instruments into functional sets or trays[1]
- Jointed/hinged instruments should be in the open position so that all surfaces are exposed[1]
- Rubber bands or tape should not be used to hold instruments together in a group[2]
- All instruments should be thoroughly rinsed and then dried before packaging or sterilization[2]
- Use a container system or wrapping that has received FDA clearance and is compatible with the type of sterilization process used[1]
- An internal chemical indicator (CI) should be placed in every package. An external chemical indicator (e.g. chemical indicator tape) should be used when the internal indicator cannot be seen from outside the package[1]
- Sterilization cycles should be verified for each sterilizer by the periodic use (at least weekly) of a biological indicator (e.g. spore test)[1]
- For unwrapped loads, at a minimum, an internal chemical indicator should be placed in the tray or cassette with items to be sterilized[1]

STEP 3

STERILIZATION

- Steam sterilization, which is dependable and economical, is the most widely used for wrapped and unwrapped critical and semicritical items that are not sensitive to heat and moisture[1]
- Utility gloves are suggested for loading the sterilizer[1]
- Use only FDA-cleared medical devices for sterilization and follow the manufacturer's instructions for correct use[1]
- Handpieces can be contaminated internally with patient material and should be heat sterilized after each patient[3]
- Items to be sterilized should be arranged to permit free circulation of the sterilizing agent (e.g. steam)[1]
- Pouches should be placed on edge.[3]
- Allow packages to dry in the sterilizer before they are handled to avoid contamination[1]
- Items requiring the same cycle parameters (i.e. time, temperature) should be processed in the same load[2]

STEP 4

MONITORING/STERILITY ASSURANCE

- Use mechanical, chemical and biological monitoring to ensure effectiveness of the sterilization process[1]
- Results of biological monitoring should be recorded and sterilization monitoring records retained long enough to comply with state and local regulations[1]

MECHANICAL MONITORING

- Mechanical techniques for monitoring sterilization include assessing cycle time, temperature and pressure by observing the gauges or displays on the sterilizer and noting these parameters for each load[1]

CHEMICAL MONITORING

- Place a chemical indicator on the inside of each package[1]
- If the internal chemical indicator is not visible, place an exterior chemical indicator on the package[1]

BIOLOGICAL MONITORING/SPORE TEST

- Biological indicators (i.e. spore tests) are the most accepted method for monitoring the sterilization process[1]
- Biological monitoring is recommended at least weekly and with all implantable devices[1]
- For table-top sterilization, a biological indicator should be run in a fully loaded chamber[2]

STEP 5

STORAGE

- Storage, even temporary, of unwrapped instruments is discouraged because it permits exposure to dust, airborne organisms, and other unnecessary contamination before use on a patient[1]
- Storage practices for wrapped sterilized instruments can be either date or event related[1]
- Instruments should be stored in closed or covered cabinets[1]
- Do not store instruments in an area where contaminated instruments are held or cleaned[1]
- Before it is opened, the package should be inspected for the appropriate appearance of the external CI(s) and the physical integrity of the packaging[2]
- If packaging is compromised, the instruments should be recleaned, packaged in new wrap, and sterilized again[1]
- Dental supplies and instruments should not be stored under sinks or in other locations where they might become wet[1]

These tips are generally accepted practices as recommended by:
[1]CDC Guidelines for Infection Control in Dental Health Care Settings – 2003
[2]ANSI/AAMI ST79:2010 & A1:2010 & A2:2011 & A3:2012 Comprehensive guide to steam sterilization and sterility assurance in health care facilities
[3]CDC Guidelines for Disinfection and Sterilization in Healthcare Facilities, 2008

Please refer to your particular state's oral health regulations for instrument processing protocol specific to your area.

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