A .gov website belongs to an official government organization in the United States. A lock ( ) or https:// means you've safely connected to the .gov website. Share sensitive information only on official, secure websites. Instrument processing requires multiple steps using specialized equipment. Each dental practice should have policies and procedures in place for containing, transporting, and handling instruments and equipment that may be contaminated with blood or body fluids. Manufacturer’s instructions for reprocessing reusable dental instruments and equipment should be readily available—ideally in or near the reprocessing area. Most single-use devices are labeled by the manufacturer for only a single use and do not have reprocessing instructions. Use single-use devices for one patient only and dispose of appropriately. Cleaning, disinfection, and sterilization of dental equipment should be assigned to dental health care personnel (DHCP) with training in the required reprocessing steps to ensure reprocessing results in a device that can be safely used for patient care. Training should also include the appropriate use of personal protective equipment (PPE) necessary for safe handling of contaminated equipment. Patient-care items (e.g., dental instruments, devices, and equipment) are categorized as critical, semicritical, or noncritical, depending on the potential risk for infection associated with their intended use. Note: Dental handpieces and associated attachments, including low-speed motors and reusable prophylaxis angles, should always be heat sterilized between patients—not high-level or surface disinfected. Although these devices are considered semicritical, studies have shown that their internal surfaces can become contaminated with patient materials during use. If these devices are not properly cleaned and heat sterilized, the next patient may be exposed to potentially infectious materials. Digital radiography sensors are also considered semicritical and should be protected with a Food and Drug Administration (FDA)-cleared barrier to reduce contamination during use, followed by cleaning and heat sterilization or high-level disinfection between patients. If the item cannot tolerate these procedures then, at a minimum, protect with

an FDA-cleared barrier. In addition, clean and disinfect with an Environmental Protection Agency (EPA)-registered hospital disinfectant with intermediate-level (i.e., tuberculocidal claim) activity between patients. Because these items vary by manufacturer and their ability to be sterilized or high-level disinfected also vary, refer to manufacturer instructions for reprocessing. Cleaning to remove debris and organic contamination from instruments should always occur before disinfection or sterilization. If blood, saliva, and other contamination are not removed, these materials can shield microorganisms and potentially compromise the disinfection or sterilization process. Automated cleaning equipment (e.g., ultrasonic cleaner, washer-disinfector) should be used to remove debris to improve cleaning effectiveness and decrease worker exposure to blood. After cleaning, dried instruments should be inspected, wrapped, packaged, or placed into container systems before heat sterilization. Packages should be labeled to show the sterilizer used, the cycle or load number, the date of sterilization, and, if applicable, the expiration date. This information can help in retrieving processed items in the event of an instrument processing/sterilization failure. The ability of a sterilizer to reach conditions necessary to achieve sterilization should be monitored using a combination of biological, mechanical, and chemical indicators. Biological indicators, or spore tests, are the most accepted method for monitoring the sterilization process because they assess the sterilization process directly by killing known highly resistant microorganisms (e.g., Geobacillus or Bacillus species). A spore test should be used at least weekly to monitor sterilizers. However, because spore tests are only performed periodically (e.g., once a week, once a day) and the results are usually not obtained immediately, mechanical and chemical monitoring should also be performed. Mechanical and chemical indicators do not guarantee sterilization; however, they help detect procedural errors and equipment malfunctions. Mechanical monitoring involves checking the sterilizer gauges, computer displays, or printouts; and documenting the sterilization pressure, temperature, and exposure time in your sterilization records.

Since these parameters can be observed during the sterilization cycle, this might be the first indication of a problem. Chemical monitoring uses sensitive chemicals that change color when exposed to high temperatures or combinations of time and temperature. Examples include chemical indicator tapes, strips, or tabs, and special markings on packaging materials. Chemical monitoring results are obtained immediately following the sterilization cycle and therefore can provide more timely information about the sterilization cycle than a spore test. A chemical indicator should be used inside every package to verify that the sterilizing agent (e.g., steam) has penetrated the package and reached the instruments inside. If the internal chemical indicator is not visible from the outside of the package, an external indicator should also be used. External indicators can be inspected immediately when removing packages from the sterilizer. If the appropriate color change did not occur, do not use the instruments. Chemical indicators also help to differentiate between processed and unprocessed items, eliminating the possibility of using instruments that have not been sterilized. Note: A single-parameter internal chemical indicator provides information regarding only one sterilization parameter (e.g., time or temperature). Multiparameter internal chemical indicators are designed to react to ≥ 2 parameters (e.g., time and temperature; or time, temperature, and the presence of steam) and can provide a more reliable indication that sterilization conditions have been met. Sterilization monitoring (e.g., biological, mechanical, chemical monitoring) and equipment maintenance records are an important component of a dental infection prevention program. Maintaining accurate records ensures cycle parameters have been met and establishes accountability. In addition, if there is a problem with a sterilizer (e.g., unchanged chemical indicator, positive spore test), documentation helps to determine if an instrument recall is necessary. Ideally, sterile instruments and supplies should be stored in covered or closed cabinets. Wrapped packages of sterilized instruments should be inspected before opening and use to ensure the packaging material has not been compromised

(e.g., wet, torn, punctured) during storage. The contents of any compromised packs should be reprocessed (i.e., cleaned, packaged, and heat-sterilized again) before use on a patient. Recommendations for the cleaning, disinfection, and sterilization of dental equipment can be found in the Guidelines for Infection Control in Dental Health-Care Settings—2003. Recommendations for the cleaning, disinfection, and sterilization of medical equipment are available in the Guideline for Disinfection and Sterilization in Healthcare Facilities (2008). FDA regulations on reprocessing of single-use devices are available by visiting FDA regulations on reprocessing of single-use devices. Policies and procedures for routine cleaning and disinfection of environmental surfaces should be included as part of the infection prevention plan. Cleaning removes large numbers of microorganisms from surfaces and should always precede disinfection. Disinfection is generally a less lethal process of microbial inactivation (compared with sterilization) that eliminates virtually all recognized pathogenic microorganisms but not necessarily all microbial forms (e.g., bacterial spores). Emphasis for cleaning and disinfection should be placed on surfaces that are most likely to become contaminated with pathogens, including clinical contact surfaces (e.g., frequently touched surfaces such as light handles, bracket trays, switches on dental units, computer equipment) in the patient-care area. When these surfaces are touched, microorganisms can be transferred to other surfaces, instruments, or to the nose, mouth, or eyes of DHCP or patients. Although hand hygiene is the key to minimizing the spread of microorganisms, clinical contact surfaces should be barrier protected or cleaned and disinfected between patients. EPA-registered hospital disinfectants or detergents/disinfectants with label claims for use in health care settings should be used for disinfection. Disinfectant products should not be used as cleaners unless the label indicates the product is suitable for such use. DHCP should follow manufacturer recommendations for use of products selected for cleaning and disinfection (e.g., amount, dilution, contact time, safe use, and disposal). Facility policies and procedures should also address prompt and

appropriate cleaning and decontamination of spills of blood or other potentially infectious materials. Housekeeping surfaces, (e.g., floors, walls, sinks) carry less risk of disease transmission than clinical contact surfaces and can be cleaned with soap and water or cleaned and disinfected if visibly contaminated with blood. Additional guidance for the cleaning and disinfection of environmental surfaces—including for cleaning blood or body substance spills—is available in the Guidelines for Environmental Infection Control in Health-Care Facilities (2003) and the Guideline for Disinfection and Sterilization in Healthcare Facilities (2008). CDC protects patients and providers by developing recommendations that guide infection prevention and control practices wherever dental care is delivered. Languages Language Assistance Languages Language Assistance