Module 5 Sharps Safety

This slide series was created to complement the Centers for Disease Control and Prevention’s (CDC’s) publication titled, *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*. This publication was developed to help increase adherence with established infection prevention practices.

This slide series provides an overview of the basic principles of infection prevention and control that form the basis for CDC recommendations for dental health care settings. It can be used to educate and train infection prevention coordinators, educators, consultants, and other dental health care personnel (DHCP).

The *Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care* can be found at www.cdc.gov/oralhealth/infectioncontrol/pdf/safe-care2.pdf.

Most percutaneous injuries, such as needlesticks or cuts with a sharp object, among DHCP involve burs, needles, and other sharp instruments. Implementation of the Occupational Safety and Health Administration’s (OSHA’s) Bloodborne Pathogens Standard has helped to protect DHCP from blood exposure and sharps injuries. However, sharps injuries continue to occur and pose the risk of bloodborne pathogen transmission to DHCP and patients.

Most exposures in dentistry are preventable; therefore, each dental practice should have policies and procedures in place that address sharps safety. DHCP should be aware of the risk of injury whenever sharps are exposed. When using or working around sharp devices, DHCP should take precautions while using sharps, during cleanup, and during disposal.

Engineering controls remove or isolate a hazard in the workplace and are frequently technology-based. Examples include self-sheathing anesthetic needles, needle recapping devices, safety scalpels, needleless IV ports, and sharps containers.

When engineering controls are not available or appropriate, DHCP should use work practice controls. Work practice controls are behavior-based and are intended to reduce the risk of blood exposure by changing the way DHCP perform tasks. Examples include not bending or breaking needles before disposal, not passing a syringe with an unsheathed needle by hand, removing burs before disassembling the handpiece from the dental unit, and using instruments in place of fingers for tissue retraction or palpation during suturing and administration of anesthesia.
The recommended work practices that help ensure safety can be simplified into three quick points:

- Be prepared.
- Be aware.
- Dispose with care.

Before beginning a procedure that involves the use of a needle or other sharps device, DHCP should:

- Ensure that equipment necessary for performing a procedure is available within arm's reach and organized so that the procedure can be performed safely.
- Assess the work environment before starting and make sure there is adequate lighting and work space for the procedure.
- Ensure that the sharps object being used is always pointed away from the user.
- Identify the location of the sharps disposal container. If moveable, place it as close to the point of use as appropriate for immediate sharps disposal. If sharps are reusable, determine in advance where to place sharps for safe handling after use.

During a procedure that involves the use of needles and other sharps devices you should:

- Maintain visual contact with the procedure site and location of sharps.
- Be aware of other DHCP in the immediate environment.
- Take steps to control the location of sharps to avoid injury to yourself and other staff.
- Do not pass needles unsheathed.
- Consider alerting others when passing sharps and consider a neutral zone for placing and retrieving sharps.
- If using an engineered sharps injury prevention device, activate the safety feature as the procedure is being completed. Listen and watch for audible or visual cues that the feature is locked in place.

During cleanup following a procedure, DHCP should:

- Be accountable for sharps used. Visually inspect procedure trays or other surfaces containing waste materials for exposed sharps used during a procedure before handling them.
- Look for sharps that may have been inadvertently left on the tray after the procedure.
- Transport reusable sharps in a closed container.
- Secure the container to prevent spilling contents.

All used disposable syringes and needles, scalpel blades, and other sharps devices should be placed in appropriate puncture-resistant containers located close to the area where they are used. Sharps containers should be disposed of according to state and local regulated medical waste rules. DHCP should keep their hands behind the tip of any sharps during disposal. Never place hands or fingers into a container to facilitate disposal of a device. Visually inspect the sharps container for hazards caused by overfilling and replace containers before they become overfilled.

Mandated by the Needlestick and Prevention Act, changes to the OSHA Bloodborne Pathogens Standard were published on January 18, 2001, and took effect April 18, 2001. The revisions clarify the need for employers to involve DHCP who are directly responsible for patient care—including dentists, hygienists, and dental assistants—in identifying, evaluating, and selecting devices with engineered safety features at least annually and as they become available. If, after inquiring about the availability of new safety devices or safer options, none are identified, DHCP should document these findings in their office exposure control plan. As a reminder, engineering controls should be used whenever possible as the primary method to reduce exposures to bloodborne pathogens. When engineering controls are not available or appropriate, use work practice controls.

Every dental office should develop and implement a program to prevent sharps injuries to DHCP and patients. A staff person knowledgeable about or willing to be trained in injury prevention, such as a safety coordinator or an infection control coordinator, should be assigned to:

- Promote safety awareness.
- Facilitate prompt reporting and postexposure management of injuries.
- Identify unsafe work practices and devices.
- Coordinate the selection and evaluation of safer dental devices.
- Organize staff education and training.
- Complete the necessary reporting forms and documentation.
- Monitor safety performance.

Screening helps DHCP make decisions about clinical and safety considerations before evaluating a dental device in the clinical setting. Screening usually consists of physically examining the safer device, then comparing it to the traditional device and established evaluation criteria. No device should be used on a patient before it has been screened to ensure that it meets clinical and patient safety needs.

Device evaluation involves a trial (or pilot test) to determine the acceptability of the device in an actual clinical setting. This process includes identifying a new device to test; selecting the area of the facility to be used as the test site, as well as the staff who will be the end users of the device; selecting evaluation criteria; and determining how long the test will last. The testing should include plans for quickly bringing back the traditional device should the device being tested be determined unsafe. The device evaluation should provide the coordinator with enough information to make an informed decision on whether to continue using the new device.

CDC provides two sample forms to help DHCP screen and evaluate devices for clinical acceptability. These forms are available at www.cdc.gov/OralHealth/infectioncontrol/forms.htm.

Despite best efforts, blood exposures can occur. Exposures occur through percutaneous injury (such as a needlestick or cut with a sharp object) as well as through contact between potentially infectious blood, tissues, or other body fluids and mucous membranes of the eyes, nose, mouth, or non-intact skin (including exposed skin that is chapped, abraded, or showing signs of dermatitis).

Postexposure management is an important component of a complete program to prevent infection following exposure to blood. Elements of an effective post-exposure management program include:

- Policies and procedures that clearly state how to manage exposures.
- Education of DHCP in prevention strategies, including evaluation of safety devices, principles of postexposure management, the importance of prompt reporting, and postexposure prophylaxis (PEP) efficacy and toxicity.
- Resources for rapid access to clinical care by a qualified health care professional educated in infectious diseases and postexposure management. The health care professional should be able to provide PEP, if needed, as well as testing for both source patients and exposed DHCP.

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The key elements of postexposure management include wound management and exposure reporting.

The health care professional conducting the evaluation should assess the risk of infection by examining the type and severity of exposure, the bloodborne pathogen status of the source person, and the susceptibility or immune status of the exposed person. All of these factors should be considered in assessing the risk of infection and the need for further follow-up, such as postexposure prophylaxis.

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For more information on sharps safety, see:


- CDC. Oral Health website. Screening and Evaluating Safer Dental Devices at [www.cdc.gov/oralhealth/infectioncontrol/forms.htm](http://www.cdc.gov/oralhealth/infectioncontrol/forms.htm).

