

Infection Control Training/Review Key Points
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Learning Objectives

- Explain the difference between OSHA Bloodborne and HazCom Standards.
- Describe CDC recommendations for infection prevention in the dental setting.
- Define a variety of diseases, their transmission mode and how they can potentially be transmitted in the dental setting.
- Describe cross contamination and the best methods for prevention.
- Explain the proper use, wear and disposal of PPE.
- Describe the proper methods for dental instrument processing, sterilization and storage.
- Demonstrate acquired knowledge by implementing infection control safety techniques in the dental office.

Regulatory and non-regulatory agencies. It is important to follow both to adhere to “Best Practices”

OSHA/Regulatory Hazardous Communication Standard (HazCom) Chemical Safety,
Safety Data Sheets, Labeling, Pictograms (*new)
Bloodborne Pathogens Standard – Blood, Saliva, OPIM
Easily accessible/understand
Enforced, update regularly

Oregon Board of Dentistry/Regulatory Infection Control Guidelines include dentist is ultimately responsible for infection control training in the dental office.

CDC – Non-Regulatory Guidelines for Infection Control in Dental Health-Care Settings – 2003
Summary of Infection Prevention Practices in Dental Settings, Basic Expectations for Safe Care, 2016

FDA, EPA, local agencies may have additional standards that must be followed

Treat ALL dental patients the same by using Universal/Standard Precautions

Modes of disease transmission – Direct, Indirect, Droplet, Inhalation

Many bacteria and viruses are able to live on environmental surfaces for long periods of time. Colds and flu for up to 7 days, HBV 1 week, HCV 6 weeks, MRSA days to weeks, TB up to months.

Prevention:

Vaccination when available, PPE, Engineering Controls, Work Practice Controls

Hand Hygiene; wash hands when first arriving at work, before eating, after using the restroom and if visibly soiled. Lather and scrub for 20 seconds (When refilling liquid soap container, empty and rinse prior to refilling)

Use alcohol handrub in-between glove changes and whenever hands are not visibly soiled. Follow manufacturer guidelines for amount of product and length of scrub.

Appropriate PPE

Mask, Protective Eyewear, Face Shields – Must wear a mask and either eye protection with solid side shields or a face shield when chance of splash or spatter from chemicals or BBP. Impact resistance eyewear, ANSI Z87.1-1998. Flimsy sideshields will not protect from flying objects or fluids. Wear eyewear and masks properly. Change mask between all patients and more often if mask becomes damp. Must be removed when leaving the work area.

Wash eyewear and face-shields with warm soapy water and rinse well. Small traces of disinfectant can irritate the skin if not rinsed well. Must wear gloves when washing eyewear and face-shields

Protective clothing: gowns, lab coats or uniforms that cover the skin and personal clothing likely to become soiled with blood, saliva and infectious material. Should be changed if they become visibly soiled and should always be removed when leaving the work area. Can be worn an entire day but must be disposed of daily or laundered by employer if reusable.

Procedure (exam) gloves should be changed between all patients and not worn when reaching into drawers or cupboards. When they are removed hands must be washed or handrub used. Immediately prior to donning new gloves, handrub should be used.

Order of Donning PPE; Wash hands or use handrub if hands are not visibly soiled, Gown, Facemask, Eyewear (or face Shield), use handrub, gloves.

Order of Doffing PPE; Gloves, Eyewear (lay on paper towel until able to clean) Facemask, Gown, use handrub.

Utility Gloves should be worn when cleaning up spills, gathering contaminated instruments after use and placing into transport container, processing instruments and disinfecting treatment rooms.

Sharps should be disposed of “close to point of use” (in treatment room), Regulated medical waste (bloody and saliva soaked disposable items, extracted teeth without amalgam) placed into bio-bag in treatment room.

Extracted teeth can be given to patients who want them. They should be cleaned, disinfected and placed into a sealed pouch prior to giving them to the patient.

Amalgam waste from traps, scrap not used including empty amalgam capsules, should be disposed of in separate containers not disposed of into regular trash. It is not recommended to stored amalgam scarp in jars in operatories.

Vacuum system line cleaning should be performed at the end of every work day and after all surgical procedures. Must use enzymatic cleaners without chlorides which can interfere with amalgam separator function.

The instrument processing center/room should have well designed sections; cleaning, preparation/packaging, sterilization and storage.

Steps of Instrument Processing:

Contaminated dental instruments are considered “sharps” and should be enclosed in containers that are leak proof with a biohazard label and secure lid while transporting them to instrument processing room while wearing utility gloves.

Place instruments into washer or ultrasonic cleaner following manufacturer instructions. (instruments should be completely covered with solutions and lid should be in place and secure while running ultrasonic cleaner).

Following bur and endo file cleaning in ultrasonic, rinse them thoroughly and inspect for any remaining debris, hand scrubbing may be necessary. Package burs and files to sterilize. (files should not be inserted into clean sponge during sterilization). Follow manufacturers recommendations for sterilization and reuse. It is suggested to consider burs and files as “one time use”.

All hinged instruments should be in “open” position during sterilization process.

Use appropriate size pouch for individual instruments. Packages must be wrapped and sealed correctly to avoid gaps.

Identify sterilizer and date on outside of instrument cassettes and packs of every load

Do not overload sterilizers. Refer to sterilizer manufacturer manual of instructions. Allow instruments to dry completely prior to removal for storage.

High level disinfectant used for heat sensitive items should be changed daily or when debris forms in bottom. When adding additional instruments the time should be restarted. Keep solution covered at all times.

Dry heat sterilization requires post sterilization packaging for storage.

Instruments including burs should be stored in sterilizing pouches or covered containers.

Sterilization Monitoring Indicators include *Mechanical* which is the digital readings on the sterilizer, *Chemical* which includes indicator strips, tape and pouches. (Review classification of indicator strips to choose best for dental practice) *Biological spore tests* are placed into sterilizers weekly and results should be recorded and kept for 3 years.

Store all instruments covered in drawers or cupboards and open at “time of use”.

When setting up instruments and all items that will be used intra-orally, do not touch with bare hands even if they are clean. Wear clean gloves at all times when touching the items that will be placed into the oral cavity. Do not wear gloves when reaching into drawers or cupboards to obtain additional items, remove gloves, use handrub.

Dental handpiece processing should be followed according to manufacturer instructions.

CDC guidelines are to make sure handpieces are clean and dry prior to sterilization, an indicator strip should be in each cycle of not packaged instruments, they should be allowed to dry and cool, and be handled aseptically. Thus post sterilization packaging is acceptable.

The CDC recommends a 20 to 30 second flush prior to using a highspeed handpiece. All handpieces, including slowspeed motors (and couplers when heat sterilizable) should be sterilized between patient use.

Single use (disposable) Devices & Products: Infection Control Experts recommend the use of single unit dosage packaging to eliminate the potential of cross contamination when items are stored in open containers and drawers. This includes cotton products (cotton rolls, tipped applicators, 2x2 sponges, etc.)

Patient bib clips are no longer recommended as studies have shown debris and bacteria can be harbored in-between the chain and clips. Disposable bid holders are recommended.

Clean and Disinfect according to the CDC Guidelines which includes using an intermediate level disinfectant. Perform a two-wipe method; *cleaning* wipe to remove debris, dispose of wipe and gloves, use handrub, don new gloves, perform *disinfecting* wipe. Always follow manufacturer instructions. Wipe all touch areas except those that were covered with barriers. If upholstery becomes visibly soiled, clean with warm soapy water (less soap is better). If upholstery is touched during treatment and the area was not covered with barrier tape it can be disinfected. This should not be a routine practice as it is

not a manufacturer recommendation. If disinfection of upholstery is performed it is recommended to wipe with a clean, moist cloth at the end of the day to remove any chemical build-up.

X-ray exposure buttons should be covered with barrier tape and disposed after every patient.

While exposing radiographs gloves must be worn. Masks and eyewear are options that will prevent saliva from contacting the operators' eye, nose and mouth mucous membranes. This may occur when a patient sneezes or coughs.

All lead aprons should be hung flat not folded, to reduce the development of cracks and holes in the apron. Touch lead aprons with clean hands only.

OSHA requires the work areas to be "Clean and Organized" to provide a healthy and safe environment.

Dental Unit Water Quality: Using water of uncertain quality is inconsistent with infection control principles. Recommendation is to maintain a level of <500CFU's.

Saliva ejector studies have shown that if patients seal their lips tightly around the tip there is potential that previously suctioned fluids might be retracted into the patient's mouth. Instruct patients to gently close their lips around the tip.

Nitrous Oxide Equipment should be checked and leak tested frequently.

Dental casts (gypsum and stone) can harbor microorganisms that will live up to 7 days if impressions are not properly disinfected prior to pouring. Impressions should be rinsed, disinfected and bagged before sending to the dental lab.

Engineering Controls/Devices (sharps containers, needle protection, handwashing facilities, PPE, etc.) must be made available by employers for employees. *Work Practice Controls* are employees using the provided engineering controls/devices. It is the responsibility of the employer to enforce the use of Engineering Controls/Devices.

OSHA Ergonomic Standard requires employers to provide ergonomic training and reasonable modifications to work environment and equipment to prevent ergonomic injury to employees.

Hearing protection must be provided by employers to employees when exposed to noise from highspeed handpieces, HVE, ultrasonic scalers, etc. as prolonged exposure can cause hearing loss.

Signage throughout the workplace is required to protect injuries or prevent use of a door that is not an exit in the case of an emergency.

Eyewash stations/facilities must be available (within 10 seconds walking distance from work area) and checked weekly, to make sure they are working properly. (This should be documented)

Post Exposure Plan for contaminated injuries must be written and easily accessible to all employees.