##### C.1 DENTAL INFECTION CONTROL

PURPOSE

To establish policies and procedures to protect dental personnel from work related exposures to infectious diseases. To also protect dental patients from exposures to infectious diseases resulting from dental treatment. This policy and these procedures will be reassessed at least annually and updated by the infection control coordinator assigned by the Chief Dental Officer (CDO)

PROCEDURE

 **Personnel Health Elements of an Infection Control Program**

* **General Recommendations**: the Dental Staff will follow the general recommendations of the Service Unit Infection Control Policy.
* **Education and Training**: the Dental Staff will follow the education and training recommendations of the Service Unit Infection Control Policy.
* **Immunization Programs**: the Dental Staff will follow the immunization recommendations of the Service Unit Infection Control Policy.
* **Exposure Prevention and Post Exposure Management**: the Dental Staff will follow the exposure recommendations of the Service Unit Infection Control Policy.
* **Medical Conditions, Work-Related Illness, and Work Restrictions**: the Dental Staff will follow the work restriction recommendations of the Service Unit Infection Control Policy. If a team member is ill with a suspected contagious sickness/cold, he/she should contact their supervisor and not work when sick.
* **Records Maintenance, Data Management, and Confidentiality**: the Dental Staff will follow the records management and confidentiality recommendations of the Service Unit Infection Control Policy.

**General:**

1. Infection control guidelines from the Center of Disease Control (CDC) Guidelines for Infection Control in Dental Health-Care Settings will be followed. OSHA, FDA and EPA standards will be adhered.

2. Patients who report to the Dental Clinic with a contagious disease (strep throat, measles etc.) in conjunction with their dental problem will be evaluated. Procedures that might pose a higher risk of transmission of the disease should be delayed if possible. The dental officer will take the necessary steps to protect him/her, the dental staff and other patients when treating these patients when emergent or urgent treatment is indicated.

**Preventing Transmission of Blood borne Pathogens**

OSHA’s Bloodborne Pathogens Standard is an integral part of keeping both staff and patients safe. We require that staff adhere to this safety standard. Not following office safety procedures is cause for disciplinary action, up to and including termination.

Listed below are our office policies on the basic requirements of OSHA's Bloodborne Pathogens Standard. For further information, please refer to the Exposure Control Plan of the Service Unit.

**Exposure Control Plan:** This office has a written Exposure Control Plan on file that is accessible to Team Members by contacting the OSHA compliance manager. It is reviewed and updated at least once a year or whenever changes are made in procedures that affect occupational exposure. The Exposure Control Plan addresses the following topics:

* When and how Team Members are trained
* How medical and training records are maintained and who can access them
* Exposure determination
* Protocol for post-exposure evaluation and follow-up
* Procedure for evaluating circumstances surrounding an exposure incident.

**Methods:** methods of compliance include the following:

* **Personal protective equipment (PPE):** PPE helps protect dental staff from infection in the dental clinic, sterilization area and laboratory office. This includes gloves, gowns, lab coats, eye protection and facemasks, among other items.
* **Housekeeping:** Housekeeping refers to the cleaning and decontamination of all equipment and environmental and work surfaces after contact with blood or other potentially infectious materials. This includes contaminated work surfaces, bins, pails, cans and other receptacles intended for reuse.

**Post-Exposure Evaluation and Follow-Up Procedures:** An “exposure incident” is defined by the Bloodborne Pathogens Standard as “a specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood or other potentially infectious materials that results from performance of the team member’s duties.”

If a team member has had an exposure incident, ***the exposure will be reported immediately to the office compliance manager*.** The following steps will then be taken:

* The clinic will arrange for a confidential post-exposure evaluation and follow-up services by a licensed healthcare professional at no cost to the team member.
* The team member will be offered any medically indicated prophylaxis recommended by the U.S. Public Health Service.
* Within 15 days after the evaluation has been completed, the team member will obtain from the healthcare professional a written opinion stating that the team member has been informed of the results of the evaluation and any medical conditions that may require further evaluation and treatment.
* The team member will be given a copy of the opinion, and the original will be kept in the team member’s confidential medical record.
* The circumstances of the exposure incident will be reviewed to determine if the procedures, protocols and/or training need to be revised to prevent the incident from happening again.

**Training:** This practice provides training during work hours and at no cost to Team Members with risk of occupational exposure. The training will begin before the team member starts work involving occupational risk and annually thereafter. The training will cover such topics as the Bloodborne Pathogen Standards, symptoms of bloodborne diseases, modes of transmission, and use of standard precautions and personal protective equipment.

**Medical Records**: This practice maintains accurate team member medical records. Records include:

* The team member’s name and Social Security number
* A copy of the team member’s hepatitis B vaccination status
* Any of the following that apply:
* Exposure incident report
* Written opinion of a health care professional
* Form refusing hepatitis B vaccination
* Form refusing post-exposure evaluation and follow-up (not required by OSHA, but highly recommended)

Records will be kept confidential and will not be disclosed or reported without the team member’s express written consent to any person within or outside the workplace except as required by law.

All dental team members will be offered annual influenza vaccinations

**Needle stick Procedure:** according to the CDC, when a team member experiences a needle stick or sharps injury or was exposed to the blood or other body fluid of a patient during the course of their work, ***immediately follow these steps***:

* Wash needle sticks and cuts with soap and water
* Flush splashes to the nose, mouth, or skin with water
* Irrigate eyes with clean water, saline, or sterile irritants
* Report the incident to your supervisor
* Immediately seek medical treatment
1. **HBV Vaccination:** the Service Unit will provide the following for all dental health workers:
2. Offer the HBV vaccination series to all DHCP with potential occupational exposure to blood or other potentially infectious material.
3. Always follow U.S. Public Health Service/CDC recommendations for hepatitis B vaccination, serologic testing, follow-up, and booster dosing.
4. Test DHCP for anti-HBs 1--2 months after completion of the 3-dose vaccination series.
5. DHCP should complete a second 3-dose vaccine series or be evaluated to determine if they are HBsAg-positive if no antibody response occurs to the primary vaccine series.
6. Retest for anti-HBs at the completion of the second vaccine series. If no response to the second 3-dose series occurs, non-responders should be tested for HBsAg.
7. Counsel non-responders to vaccination who are HBsAg-negative regarding their susceptibility to HBV infection and precautions to take.
8. Provide team members appropriate education regarding the risks of HBV transmission and the availability of the vaccine. Team members who decline the vaccination should sign a declination form to be kept on file with the team member.
9. **Preventing Exposures to Blood and OPIM**
10. General recommendations
11. Use standard precautions (OSHA's blood borne pathogen standard retains the term universal precautions) for all patient encounters.
12. Consider sharp items (e.g., needles, scalers, burs, lab knives, and wires) that are contaminated with patient blood and saliva as potentially infective and establish engineering controls and work practices to prevent injuries.
13. Follow a written, comprehensive program designed to minimize and manage DHCP exposures to blood and body fluids.
14. **Sharp Safety**

1. Engineering and work-practice controls

1. Identify, evaluate, and select devices with engineered safety features at least annually and as they become available on the market (e.g., safer anesthetic syringes, blunt suture needle, retractable scalpel, or needleless IV systems).
2. Place used disposable syringes and needles, scalpel blades, and other sharp items in appropriate puncture-resistant containers located as close as feasible to the area in which the items are used.
3. Do not recap used needles by using both hands and any other technique that involves directing the point of a needle toward any part of the body. Do not bend, break, or remove needles before disposal.
4. Use either a one-handed scoop technique or a mechanical device designed for holding the needle cap when recapping needles (e.g., between multiple injections and before removing from a non-disposable aspirating syringe).

2. Post-exposure management and prophylaxis: follow CDC recommendations after percutaneous, mucous membrane, or non-intact skin exposure to blood or other potentially infectious material.

**Facility**

 1. The dental clinic will have a system in place to detect and manage potential infections patients at initial points of the patient encounter. This will be includes in the patients’ health history and through observation of the patient by dental team members. Some of these elements will be found and described under the **respiratory hygiene/cough etiquette section**.

**Personnel**

1. Training will be provided to all dental staff officers and dental auxiliaries on occupational exposure to potentially infectious agents and specific infection control policies, procedures and protocols. This will include training on OSHA bloodborne pathogens standards. These trainings will be accomplished on initial employment, when a new task or procedure affects the Team members’ exposure, and at least annually. Training records will be maintained for at least 3 years with the names and date of the training.
2. Community Health Nursing will keep all of dental staff member’s immunization records. Community Health Nursing will keep a list of all required immunization. At least yearly or more frequently if there is a probable exposure to tuberculosis all dental staff members will be tested for tuberculosis if they have not had a previous positive test. All staff members are encouraged and advised to receive the hepatitis A and B vaccines as well as annual flu vaccinations. (USPHS)/CDC recommendations will be followed concerning hepatitis B vaccinations.
3. Any staff member with any type of infection or illness shall report his/her illness to their immediate supervisor. A dental staff member will not be penalized with loss of wages, benefits or job status due to illness. All Team Members must seek definitive diagnosis by a qualified health care professional for any suspected latex allergy to determine specific etiology, appropriate treatment and work restrictions.
4. When a dental staff member nicks, pokes or cuts himself or herself on a dental instrument they will **immediately** wash the wound with soap and water. The incident must then be reported to the immediate supervisor. CDC recommendations for percutaneous, mucous membrane or no intact skin exposure to blood or other potentially infectious materials will be followed. An I-star will then be entered for the exposure.
5. All dental officers and dental auxiliaries are required to be clean and neat.
6. Dental staff will wash hands with either plain or antimicrobial soap and water when hands are visibly dirty or contaminated with blood or other potentially infectious material. If hands are not visibly soiled, an alcohol-based hand rub can be used. Hands should be washed using friction with an anti-microbial hand soap and water or with an alcohol-based hand rub before and after treatment of each patient.
7. For oral surgical procedures, scrub hands before donning sterile surgeon’s gloves. Follow the manufacturer’s instructions by using either an antimicrobial soap and water or soap and water followed by drying hands and application of an alcohol-based surgical hand-scrub product with persistent activity.
8. Special considerations for Hand Hygiene and Glove Use
9. Use hand lotions to prevent skin dryness associated with handwashing.
10. Consider the compatibility of lotion and antiseptic products and the effect of petroleum or other oil emollients on the integrity of gloves during product selection and glove use. Lotion and antiseptic manufacturers can provide compatibility information.
11. Keep fingernails short with smooth, filed edges to allow thorough cleaning and prevent glove tears.
12. Do not wear artificial fingernails or extenders when having direct contact with patients at high risk (those in intensive care units or operating rooms).
13. Use of artificial fingernails is usually not recommended.
14. Do not wear hand or nail jewelry if it makes donning gloves more difficult or compromises the fit and integrity of the glove.
15. Team Members will wear appropriate personal protective equipment (PPE) as described in the section below. All PPE will be provided by the clinic and will be FDA cleared.

**Hand Hygiene**

**A. General Considerations**

1. Team members will be train and will perform hand hygiene with either a non-antimicrobial or an antimicrobial soap when hands are visibly dirty or contaminated with blood or other potentially infectious material. If hands are not visibly soiled, an alcohol-based hand rub (70% or greater ethyl alcohol) can also be used. The team member will follow the manufacturer's instructions for the hand hygiene products.
2. Indications for hand hygiene include
3. When hands are visibly soiled
4. After barehanded touching of inanimate objects likely to be contaminated by blood, saliva, or respiratory secretions
5. Before and after treating each patient
6. Before donning gloves
7. Immediately after removing gloves
8. For oral surgery procedures, DHCP will perform surgical hand antisepsis before donning sterile surgeon's gloves. Follow the manufacturer's instructions by using either an antimicrobial soap and water, or soap and water followed by drying hands and application of an alcohol-based surgical hand-scrub product with persistent activity.
9. Store liquid hand-care products in either disposable closed containers or closed containers that can be washed and dried before refilling per manufacturer’s instructions. Do not add soap or lotion to (i.e., top off) a partially empty dispenser.
10. **Special Considerations for Hand Hygiene and Glove Use**
11. Team members may use hand lotions to prevent skin dryness associated with handwashing.
12. Team members will consider the compatibility of lotion and antiseptic products and the effect of petroleum or other oil emollients on the integrity of gloves during product selection and glove use.
13. Team members will keep fingernails short with smooth, filed edges to allow thorough cleaning and prevent glove tears.
14. Team members will be encouraged to not wear artificial fingernails or extenders.
15. Team members will not wear hand or nail jewelry if it makes donning gloves more difficult or compromises the fit and integrity of the glove.

**Personal Protective Equipment (PPE)**

1. **Masks, Protective Eyewear, and Face Shields**
2. Team members will wear at least a surgical mask ASTM Level 3 and eye protection with solid side shields or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures likely to generate splashing or spattering of blood or other body fluids. The eye protection will also protect the bottom gap as outline in the ANSI/ISEA Z87.1-2020 Standard
3. Team members will change masks between patients or during patient treatment if the mask becomes wet or soiled in accordance with manufacturer’s IFUs.
4. Team members will clean/ disinfect face shields and eye protection per manufacturer’s instructions. If no instructions are given eye protection will be cleaned with soap and water and disinfected with intermediate level disinfectant.
5. **Protective Clothing**
6. Team members will wear protective clothing (e.g., reusable or disposable gown, laboratory coat, or uniform) that covers personal clothing and skin (e.g., forearms) likely to be soiled with blood, saliva, or OPIM.
7. Team members will change protective clothing if visibly soiled; change immediately or as soon as feasible if penetrated by blood or other potentially infectious fluids.
8. Team members will remove barrier protection, including gloves, mask, eyewear, and gown before departing work area (e.g., dental patient care, instrument processing, or laboratory areas).
9. **Gloves**
10. Team members will wear FDA approved medical gloves when a potential exists for contacting blood, saliva, OPIM, or mucous membranes during patient care.
11. Team members will wear a new pair of medical gloves for each patient, remove them promptly after use, and wash hands immediately to avoid transfer of microorganisms to other patients or environments.
12. Team members will remove gloves that are torn, cut, or punctured as soon as feasible and wash hands before re-gloving.
13. Surgeon gloves or patient examination gloves will not be washed before use or wash, disinfect, or sterilize gloves for reuse.
14. Team members will ensure that appropriate gloves in the correct size are readily accessible.
15. Appropriate gloves will be used (e.g., puncture- and chemical-resistant utility gloves) when cleaning instruments and performing housekeeping tasks involving contact with blood or OPIM.
16. Glove manufacturers will be consulted regarding the chemical compatibility of glove material and dental materials used.
17. Utility gloves are not FDA regulated and therefore are permitted to be reprocess according the manufactures IFUs.
18. **Sterile Surgeon's Gloves and Double Gloving During Oral Surgical Procedures**: Team members will wear sterile surgeon's gloves when performing oral surgical procedures, when a sterile field is required.
19. **PPE Provided**: The Dental Program will provide suitable gowns, eye protection, masks, gloves, hair covers and shoe covers needed to provide dental treatment and duties requiring PPE.
20. **Protection for Patients**
21. Patients will be provided safety glasses that will be worn throughout dental treatment.
22. When the introduction of minimal contaminants would compromise dental treatment, additional protection such as towel draped over the patient may be used.

 **Contact Dermatitis and Latex Sensitivity**

1. DHCP will be educated regarding the signs, symptoms, and diagnoses of skin reactions associated with frequent hand hygiene and glove use.
2. All patients will be screened for latex allergy (e.g., take health history and refer for medical consultation when latex allergy is suspected)
3. A latex-safe environment will be provided for patients and DHCP with latex allergy.
4. Emergency treatment kits with latex-free products will be available at all times.

**Respiratory Hygiene/Cough Etiquette**

1. All patients will be screen for signs and symptoms of a respiratory infection. This will begin at the point of entry. Some of the practices that the dental clinic will do to reduce the spread of respiratory illnesses include:
	1. Posting of signs at the entrance of the health clinic and signs in the dental clinic waiting area that instructs patients with symptoms of respiratory infections to cover their mouth/nose when coughing or sneezing, use and dispose of tissues, and perform hand hygiene after hands have been in contact with respiratory secretions.
	2. Providing tissues and no-touch receptacles for disposal of tissues.
	3. Providing resources for patients to perform hand hygiene in or near waiting areas.
	4. Offering face masks to coughing patients and other symptomatic persons when they enter the setting.
	5. Providing space and encouraging persons with respiratory symptoms to sit as far away from others as possible at least 6 feet. The dental clinic will provide barriers between chairs to help reduce this risk.

**Sterilization and Disinfection of Patient-Care Items**

## Infection Control Categories of Patient-Care Instruments

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| **Category** | **Definition** | **Dental Instrument or Item** |
| **Critical** | Penetrates soft tissues, contacts bone, enters into the blood stream or other normally sterile tissue. | Surgical instruments, periodontal scalers, scalpel blades, surgical dental burs |
| **Semicritical** | Contacts mucous membranes or non-intact skin; will not penetrate soft tissue, contact bone, enter into or contact the bloodstream or other normally sterile tissue. | Dental mouth mirror, amalgam condenser, reusable dental impression trays, dental handpieces |
| **Noncritical** | Contacts intact skin | Radiograph head/cone, blood pressure cuff, facebow |

CDC, 2003, p. 20, Levels of Sterilization and Disinfection

Sterilization (autoclave): used for heat-tolerant critical and semi-critical patient care items

High-level disinfection: liquid immersion

Intermediate-level disinfection: Liquid contact- EPA registered hospital disinfectant with label claim of tuberculocidal activity (Chlorine containing products - 1:100 dilution (1/4 cup of 5.25%-6% household chlorine bleach to 1 gallon of water)

Alternative products may be biocide or Lysol-IC for surfaces that may be damaged by bleach products

Low-level disinfection: liquid contact- EPA registered disinfectant with no claim of tuberculocidal activity (soap and water, alcohol)

CDC, 2003, p. 66

1. **General Recommendations**
2. Only FDA-cleared medical devices will be used for sterilization. Manufacturer’s instructions will be followed for correct use.
3. Critical dental instruments will be cleaned and heat-sterilized before each use per manufacturer’s instructions.
4. Semi critical items will be heat-sterilize before each use or per manufacturer’s instructions.
5. Team members will allow packages to dry in the sterilizer before they are handled to avoid contamination.
6. The clinic will encourage heat-stable semi critical alternatives.
7. If needed, heat-sensitive critical and semi-critical instruments may be reprocessed by using FDA-cleared sterilant/high-level disinfectants or an FDA-cleared low-temperature sterilization method (e.g., ethylene oxide). Follow manufacturer's instructions for use of chemical sterilants/high-level disinfectants.
8. Single-use disposable instruments are acceptable alternative. These items must be used only once and disposed of correctly.
9. Liquid chemical sterilants/high-level disinfectants will not be used for environmental surface disinfection or as holding solutions.
10. If an instrument is visibly contaminated with blood, team members will use an EPA-registered hospital disinfectant with a tuberculocidal claim (i.e., intermediate level).
11. All team members will be informed of all OSHA guidelines for exposure to chemical agents used for disinfection and sterilization.
12. **Instrument Processing Area**
13. The clinic will designate a central processing area. The clinic will divide the instrument processing area, physically or, at a minimum, spatially, into distinct areas for
14. Receiving, cleaning, and decontamination
15. Preparation and packaging
16. Sterilization
17. Storage:
18. Team members will be trained to employ work practices that prevent contamination of the clean areas.
19. **Receiving, Cleaning, and Decontamination Work Area**
20. Team members will minimize handling of loose contaminated instruments during transport to the instrument processing area. They will use work-practice controls (e.g., carry instruments in a properly labeled covered container) to minimize exposure potential. All visible blood and other contamination from dental instruments and devices will be cleaned before sterilization or disinfection procedures.
21. The clinic will use automated cleaning equipment (e.g., ultrasonic cleaner or washer-disinfector) to remove debris and improve cleaning effectiveness and decrease worker exposure to blood. Manual cleaning will only be use if required by instrument IFU.
22. Team members will use work-practice controls that minimize contact with sharp instruments if manual cleaning is necessary (e.g., long-handled brush).
23. Team members will wear puncture- and chemical-resistant/heavy-duty utility gloves for instrument cleaning and decontamination procedures.
24. Team members will wear appropriate PPE (e.g., mask, protective eyewear, and gown) when splashing or spraying is anticipated during cleaning.
25. **Preparation and Packaging**
26. The clinic will use a container system, or wrapping compatible with the type of sterilization process used that has received FDA clearance.
27. Before sterilization of critical and semi-critical instruments, team members will inspect instruments for damage, cleanliness, then wrap or place them in containers designed to maintain sterility during storage (e.g., cassettes and organizing trays).
28. **Sterilization of Unwrapped Instruments** (not recommended)
29. Team members will clean and dry instruments before the unwrapped sterilization cycle.
30. Team members will use mechanical and chemical indicators for each unwrapped sterilization cycle (i.e., place an internal chemical indicator among the instruments or items to be sterilized).
31. Team members will allow unwrapped instruments to dry and cool in the sterilizer before they are handled to avoid contamination and thermal injury.
32. Semi-critical instruments that will be used immediately or within a short time can be unwrapped on a tray or in a container system, if the instruments are handled aseptically during removal from the sterilizer and transport to the point of use.
33. Team members will make sure that critical instruments intended for immediate reuse can be unwrapped if the instruments are maintained sterile during removal from the sterilizer and during transport to the point of use (e.g., transported in a sterile covered container).
34. Team members will make sure that implantable devices are not sterilized unwrapped.
35. Team members will make sure that critical instruments are not stored unwrapped.
36. **Sterilization Monitoring**
37. The clinic will use mechanical, chemical, and biological monitors according to the manufacturer's instructions to ensure the effectiveness of the sterilization process.
38. Each load will be monitored (e.g., time, temperature, and pressure) by chemical indicators (V).
39. Team members will place a chemical indicator on the inside of each package. If the internal indicator is not visible from the outside, an exterior chemical indicator will be placed on the outside of the package.
40. Team members will place items/packages correctly and loosely into the sterilizer so as not to impede penetration of the sterilant.
41. The clinic will not use instrument packs if mechanical or chemical indicators indicate inadequate processing.
42. The clinic will monitor sterilizers at least weekly by using a biological indicator with a matching control (i.e., biological indicator and control from same lot number). If supply allows, biological indicators will be used for each load or used once a day per sterilizer.
43. The clinic will use a biological indicator for every sterilizer load that contains an implantable device. Negative results will be verified before using the implantable device whenever possible.
44. The following are steps the clinic will use in case there is a positive spore test:
	1. Take the sterilizer out of service– Clearly mark Autoclave as ‘Out Of Service’ immediately. Investigate cause of failure.
	2. If cause of failure is immediately identified (usually operator error) and confined to one load or an item within the load (internal CI), correct the cause, repackage using unprocessed wrap material and reprocess the item or load. If cause of failure is not immediately identified, quarantine the load and recall all loads back to the last negative BI.
	3. Determine cause of failure:
		1. Sterilizer/utilities malfunction
			1. Determine cause of sterilizer/utilities malfunction
				1. Repair sterilizer

Minor repair- monitor and return sterilizer to use

Major repair-Run 3 consecutive BI,PCD tests

Pass return sterilizer to use

Fail repair sterilizer and re-run BI, PCD tests

* + 1. Positive BI
			1. Failure cannot be attributed to cause other than sterilizer/utilities malfunction.

Minor repair- monitor and return sterilizer to use

Major repair-Run 3 consecutive BI,PCD tests

Pass return sterilizer to use

Fail repair sterilizer and re-run BI, PCD tests

* + - 1. Failure can be attributed to cause other than sterilizer/ utilities malfunction
				1. Correct error
				2. Return sterilizer to service
		1. CI Failure
			1. Failure cannot be attributed to cause other than sterilizer/utilities malfunction.

Minor repair- monitor and return sterilizer to use

Major repair-Run 3 consecutive BI,PCD tests

Pass return sterilizer to use

Fail repair sterilizer and re-run BI, PCD tests

* + - 1. Failure can be attributed to cause other than sterilizer/ utilities malfunction
				1. Correct error
				2. Return sterilizer to service
		1. Operator Error
			1. Failure cannot be attributed to cause other than sterilizer/utilities malfunction.

Minor repair- monitor and return sterilizer to use

Major repair-Run 3 consecutive BI,PCD tests

Pass return sterilizer to use

Fail repair sterilizer and re-run BI, PCD tests

* + - 1. Failure can be attributed to cause other than sterilizer/ utilities malfunction
				1. Correct error
				2. Return sterilizer to service
			2. Unknown Failure cannot be attributed to cause other than sterilizer/utilities malfunction.

Minor repair- monitor and return sterilizer to use

Major repair-Run 3 consecutive BI,PCD tests

Pass return sterilizer to use

Fail repair sterilizer and re-run BI, PCD tests

* + - 1. Failure can be attributed to cause other than sterilizer/ utilities malfunction
				1. Correct error
				2. Return sterilizer to service
	1. CONFIRM INITIAL BI FAILURE *(BI TEST FAILURES ONLY)* - Perform a second BI test on failed autoclave on the same setting as the original failure with a full load of instruments. Record results in the Biological Monitoring Log Book. This verification test will help assess the risk posed to patients if instruments / materials were used since the last negative BI test. Instruments run in this confirmation load are quarantined and are not cleared for use unless the confirmation BI is negative. If the confirmation BI is positive, follow step 2 (above).
	2. WORK ORDER – Enter a Work Order Request to initiate Biomed repair / replacement of autoclave.
	3. TESTING OF AUTOCLAVE - Following repair or replacement, autoclave must pass 3 BI tests in 3 fully loaded sterilizer cycles prior to clearance for use in Dental Department. These tests should be performed using different cycles (pouches & cassettes cycles). This testing is performed by dental staff. Instruments run in these confirmation loads are quarantined and are not cleared for use unless the confirmation load BI is negative.
	4. ISTAR – If instruments / materials were utilized on patients from loads run between the negative and two consecutive positive BI test results, an ISTAR report is submitted to administratively document the occurrence. All sterilization / infection control incidents that indicate possible or probable risk to patient or team member safety must be reported in ISTAR
	5. NOTIFY ADMINISTRATION – Notify infection control coordinator of all sterilization failures. If any of the sterilization failures pose possible or probable risk to patient safety, Dental Chief, Infection Control Committee Chairman, and CEO are notified ASAP.
	6. PATIENT NOTIFICATION – When notified of possible or probable risk to patient safety, CEO will consult with the Dental Chief and then make decision if patients will be notified of sterilization failure.

9. The clinic will maintain sterilization records (i.e., mechanical, chemical, and biological) in compliance with state and local regulations. Routine maintenance will be performed according to manufacturer instructions. Written maintenance records will be maintained.

1. **Storage Area for Sterilized Items and Clean Dental Supplies**
2. The shelf life of packaged sterilized items will be determined by the manufacture of the wrap or packaging of the manufacturer. If the manufacturer does not give a specific expiration on the wrap or packaging, expiration will be in accordance to the presentation and state of the wrap or packaging. Example (until the wrap or packaging has been compromised)
3. The clinic at a minimum will place the initials of team member, date, sterilizer number, load number of sterilization to facilitate the retrieval of processed items in the event of a sterilization failure.
4. Team members will examine wrapped packages of sterilized instruments before opening them to ensure the barrier wrap has not been compromised during storage.
5. Team members will re-clean, re-pack, and re-sterilize any instrument package that has been compromised.
6. The clinic will store sterile items and dental supplies in covered or closed cabinets, when possible.

# Materials

1. Sterile single use disposable items will be purchased and used whenever possible.

2. All purchased sterile disposable or autoclaved items, must be inspected for breaks or tears of the packages by a team member. If these are noted by the team member, items must be rewrapped and sterilized before use. Event related packaging will be used for storage of sterilized instruments. Sterilized instruments will not be used if the package or wrapping is compromised.

3. All sterile packages are inspected before use. Packages that are torn or compromised will not be used.

4. Needles, disposable syringes, surgical blades, endodontic files and broaches will

be placed in a closed container with a slot in the top. When the containers are 3/4th

filled housekeeping will collect the containers and dispose of the contents.

**Equipment**

1. Each dental hand piece and motor is cleaned, packaged and sterilized after each patient use as per manufacturer’s instructions.

1. Autoclaves are tested for accurate sterilization at least weekly with Attest biological indicators. These tests are checked 1 or 3 hours later as per manufacturer’s instructions and a record of these tests is maintained in the Dental Clinic. In the event the biological test is positive, the above steps found in section F8 will be followed. The clinic’s CEO, Infection Control Manager and Safety Officer will be notified and informed of positive spore test if instruments are believed to have been used on patients.
2. Daily ultrasonic cleaner is drained per manufacturer instructions. The ultrasonic will be tested per manufacturer’s instruction.
3. Cabinet tops are to be wiped off with an EPA-registered hospital disinfectant with a tuberculocidal claim (i.e., intermediate level). After each patient use. Weekly these areas are wiped down with antibacterial disinfectant.

5. Dental units will receive a thorough scrub down with antibacterial detergent weekly, drawer liners are changed monthly. Keyboards and mice may be cleaned with an EPA-registered hospital disinfectant with a tuberculocidal claim (i.e., intermediate level). or soap and water. Staff will wear proper PPE while cleaning operatories.

**Environmental Infection Control**

1. **General Recommendations**
2. Team members will follow the manufacturers' instructions for correct use of cleaning and EPA-registered hospital disinfecting products.
3. Team members will not use liquid chemical sterilants/high-level disinfectants for disinfection of environmental surfaces (clinical contact or housekeeping).
4. Team members will use PPE, as appropriate, when cleaning and disinfecting environmental surfaces. Such equipment include gloves (e.g., puncture- and chemical-resistant utility), protective clothing (e.g., gown, jacket, or lab coat), and protective eyewear/face shield, and mask.
5. **Clinical Contact Surfaces**
6. Team members will use surface barriers to protect clinical contact surfaces, particularly those that are difficult to clean (e.g., switches on dental chairs) and change surface barriers between patients.
7. Surfaces that are not barrier-protected will be cleaned and disinfected using an EPA-registered hospital disinfectant with a low to intermediate-level activity after each patient. An intermediate-level disinfectant will be used if surface is visibly contaminated with blood.
8. **Housekeeping Surfaces**
9. Team members will clean housekeeping surfaces (e.g., floors, walls, and sinks) with a detergent and water or an EPA-registered hospital disinfectant/detergent on a routine basis, depending on the nature of the surface and type and degree of contamination, and as appropriate, based on the location, and when visibly soiled.
10. Team members will clean mops and cloths after use and allow to dry before reuse; or use single-use, disposable mop heads or cloths.
11. Team members will prepare fresh cleaning or EPA-registered disinfecting solutions daily and as instructed by the manufacturer.
12. Team members will clean walls, blinds, and window curtains in patient-care areas when they are visibly dusty or soiled.
13. **Spills of Blood and Body Substances:** Team members willclean spills of blood or OPIM and decontaminate surface with an EPA-registered hospital disinfectant with low to intermediate-level activity, depending on size of spill and surface porosity.
14. **Carpet and Cloth Furnishings**: The clinic will avoid using carpeting and cloth-upholstered furnishings in dental operatories, laboratories, and instrument processing areas.
15. **Regulated Medical Waste**
16. General Recommendations
17. The dental clinic will follow the medical waste management program as outline. Disposal of regulated medical waste will follow our federal, state, and local regulations.
18. The dental clinic will ensure that DHCP who handles and disposes of regulated medical waste are trained in appropriate handling and disposal methods and informed of the possible health and safety hazards.
19. Management of Regulated Medical Waste in the Dental Clinic.
20. The dental clinic will use a color-coded or labeled container that prevents leakage (e.g., biohazard bag) to contain non-sharp regulated medical waste.
21. Team members will place sharp items (e.g., needles, scalpel blades, orthodontic bands, broken metal instruments, and burs) in an appropriate sharps container (e.g., puncture resistant, color-coded, and leak-proof). Team members will close container immediately before removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
22. Team members will pour blood, suctioned fluids or other liquid waste carefully into a drain connected to a sanitary sewer system, if local sewage discharge requirements are met and the state has declared this an acceptable method of disposal. Team members will wear appropriate PPE while performing this task.

**Environmental Infection and Prevention in Treatment Areas**

**Team members will:**

1. Uses an EPA-registered hospital intermediate level (tuberculocidal) disinfectant on all contaminated surfaces according to manufacture instructions
2. Uses surface barriers to protect clinical contact surfaces that are difficult to clean (switches, computer keyboard, hose connections)
3. Follows manufacturer’s instructions for use for surface disinfectant
4. Regulated medical waste is handled and disposed of according to local, state, and federal regulations (puncture-resistant red bag)
5. Extracted teeth are disposed of as regulated waste unless returned to patient or containing amalgam

**Dental Waterlines, Biofilm and Water Quality**

1. **Team members will:**
2. Use water that meets EPA regulatory standards for drinking water (i.e., <500 CFU/mL of heterotrophic water bacteria) for routine dental treatment output water.
3. Follow the dental unit manufacturer recommended methods to maintain the recommended quality of dental water.
4. Monitor water quality per manufacturer’s instruction or at least quarterly if frequency not indicated.
5. Discharge water and air for a minimum of 20--30 seconds after each patient, from any device connected to the dental water system that enters the patient's mouth (e.g., hand pieces, ultrasonic scalers, and air/water syringes).
6. Maintain a log of water line test results in the dental clinic.
7. **Boil-Water Advisories**

Definition: A boil-water advisory is a public statement-advising people to boil their tap water before using it, typically in response to an event that could allow contaminants to enter the water distribution system. Such events include a large water main break, widespread loss of system pressure, or a natural disaster.

1. Dental team members will adhere to the following while a boil-water advisory is in effect:
2. Do not deliver water from the public water system to the patient through the dental operative unit, ultrasonic scaler, or other dental equipment that uses the public water system.
3. Do not use water from the public water system for dental treatment, patient rinsing, or hand washing.
4. For hand washing, use antimicrobial-containing products that do not require water for use (e.g., alcohol-based hand rubs). If hands are visibly contaminated, use bottled water, if available, and soap for hand washing or an antiseptic towelette.
5. Dental team members will adhere to the following when the boil-water advisory is cancelled:
6. Follow guidance given by the local water utility regarding adequate flushing of waterlines. If no guidance is provided, flush dental waterlines and faucets for 1--5 minutes before using for patient care.
7. Disinfect dental waterlines as recommended by the dental unit manufacturer.

**Special Considerations**

1. **Dental Hand pieces and Other Devices Attached to Air and Waterlines**
2. Team members will clean and heat-sterilize hand pieces and other intraoral instruments that can be removed from the air and waterlines of dental units between patients.
3. Team members will follow the manufacturer's instructions for cleaning, lubrication, and sterilization of handpieces and other intraoral instruments that can be removed from the air and waterlines of dental units.
4. Team members will not use surface-disinfect, use liquid chemical sterilants, or ethylene oxide on handpieces and other intraoral instruments that can be removed from the air and waterlines of dental units.
5. Team members will not advise patients to close their lips tightly around the tip of the saliva ejector to evacuate oral fluids or to suck on the saliva ejector.
6. **Single-Use (Disposable) Devices**: Team members will use single-use devices for one patient only and dispose of them appropriately.
7. **Handling of Biopsy Specimens**
8. During transport, team members will place biopsy specimens in a sturdy, leak-proof container labeled with the biohazard symbol.
9. If a biopsy specimen container is visibly contaminated, team members will clean and disinfect the outside of a container or place it in an impervious bag labeled with the biohazard symbol.
10. **Handling of Extracted Teeth**
	1. Team members will dispose of extracted teeth as regulated by medical waste unless returned to the patient*.*
	2. Team members will not dispose of extracted teeth containing amalgam in regulated medical waste intended for incineration.
	3. Team members will clean and place extracted teeth in a leak proof container, labeled with a biohazard symbol, and maintain hydration for transport to educational institutions or a dental laboratory.
	4. Team members will heat-sterilize teeth that do not contain amalgam before they are used for educational purposes.
11. **Dental Laboratory**
	1. Team members will use PPE when handling items received in the laboratory until they have been decontaminated.
	2. Before they are handled in the laboratory, team members will clean, disinfect, and rinse all dental prostheses and prosthodontic materials (e.g., impressions, bite registrations, occlusal rims, and extracted teeth) by using an EPA-registered hospital disinfectant having at least an intermediate-level (i.e., tuberculocidal claim) activity.
	3. Team members will consult with manufacturers regarding the stability of specific materials (e.g., impression materials) relative to disinfection procedures.
	4. Team members will include specific information regarding disinfection techniques used (e.g., solution used and duration), when laboratory cases are sent off-site and on their return.
	5. Team members will clean and heat-sterilize heat-tolerant items used in the mouth (e.g., metal impression trays and face-bow forks).
	6. Team members will clean and heat-sterilize heat-tolerant items or clean and disinfect with an EPA-registered hospital disinfectant with low- (HIV, HBV effectiveness claim) to intermediate-level (tuberculocidal claim) activity, depending on the degree of contamination.
	7. **Dental Laboratory processes**

1. All prosthetic appliances coming into the dental laboratory will be rinsed with tap water to remove the disinfectant in which they are packaged.

2. All impressions taken in-house will be rinsed in tap water and sprayed with Cavicide per manufacture instructions. Alginate impressions will then be rinsed off after spraying with Cavicide and poured in stone immediately. Impressions for commercial labs will be rinsed off with tap water after Cavicide spray and then sealed in a “zip-lock” bag for transport to the commercial laboratory.

3. All rag wheels; brushes, knives, spatulas, polishing stones and finishing burs will be rinsed, packaged and sterilized after each use. Contaminated instruments will be placed in the appropriate container.

4. A fresh pumice mixture will be used for each case.

1. **Dental Radiology**
	1. The clinic will use heat-tolerant or disposable intraoral devices whenever possible (e.g., film-holding and positioning devices). Clean and heat-sterilize heat-tolerant devices between patients. At a minimum, high-level disinfect semi-critical heat-sensitive devices, according to manufacturer's instructions.
	2. The clinic will follow the following for digital radiography sensors:
		1. Use FDA-cleared barriers.
		2. Clean and heat-sterilize, or high-level disinfect, between patients, barrier-protected semi-critical items. If the item cannot tolerate these procedures then, at a minimum, protect with an FDA-cleared barrier, clean, and disinfect with an EPA-registered hospital disinfectant with intermediate-level (i.e., tuberculocidal claim) activity, between patients. Consult with the manufacturer for methods of disinfection and sterilization of digital radiology sensors and for protection of associated computer hardware.
2. **Oral Surgical Procedures**: The clinic will follow the following when performing oral surgery procedures
	* 1. Perform surgical hand antisepsis by using an antimicrobial product (e.g., antimicrobial soap and water, or soap and water followed by alcohol-based hand scrub with persistent activity) before donning sterile surgeon's gloves.
		2. Use sterile surgeon's gloves.
		3. Use sterile saline or sterile water as a coolant/irrigant when performing oral surgical procedures. Use devices specifically designed for delivering sterile irrigating fluids (e.g., bulb syringe, single-use disposable products, and sterilizable tubing).
3. ***Mycobacterium tuberculosis***
	1. The clinic will follow these general recommendations:
4. Educate all team members regarding the recognition of signs, symptoms, and transmission of TB.
5. Conduct a baseline TST, preferably by using a two-step test, for all team members who might have contact with persons with suspected or confirmed active TB, regardless of the risk classification of the setting.
6. Assess each patient for a history of TB as well as symptoms indicative of TB and document on the medical history form.
7. Follow CDC recommendations for
* Developing, maintaining, and implementing a written TB infection-control plan
* Managing a patient with suspected or active TB
* Completing a community risk-assessment to guide team member TSTs and follow-up
* Managing DHCP with TB disease.
1. The following apply for patients known or suspected to have active TB:
2. Evaluate the patient away from other patients and DHCP. When not being evaluated, the patient should wear a surgical mask or be instructed to cover mouth and nose when coughing or sneezing.
3. Defer elective dental treatment until the patient is noninfectious.
4. Refer patients requiring urgent dental treatment to a previously identified clinic with TB engineering controls and a respiratory protection program.
5. SARS-Cov-2
	1. The dental clinic will follow the CDC’s Interim Infection Prevention and Control Guidance as the Coronavirus Disease 2019 (COVID-19) Pandemic continues to manifest in the community. The dental clinic will continue to monitor the situation and update procedures as/when indicated.

Clinic’s approach to an infection control breach

In the event of a possible infection control breach, the dental clinic with follow CDC guidance for infection control breach.

Infection control breach recommended by CDC

1. Identification of infection control breach
	1. The dental clinic’s CDO or Infection Prevention and Control Coordinator will identify the nature of the breach, type of procedure, and biologic substances involved.
	2. The dental clinic’s CDO or Infection Prevention and Control Coordinator will review the recommended reprocessing methods or aseptic technique.
	3. The dental clinic’s CDO or Infection Prevention and Control Coordinator will iinstitute corrective action as early as possible.
2. Additional data gathering
	1. The dental clinic’s CDO or Infection Prevention and Control Coordinator will determine the time frame of the breach and number of patients who were exposed.
	2. The dental clinic’s CDO or Infection Prevention and Control Coordinator will identify exposed patients with evidence of HBV, HCV, or HIV infections through medical records and/or public health surveillance data.
	3. The dental clinic’s CDO or Infection Prevention and Control Coordinator will conduct literature review and consult experts
3. The CDO will notify and involve key stakeholders
	1. Infection control professionals
	2. Risk management
	3. Local and State health departments
	4. Affected healthcare providers
	5. Licensing or other regulatory agencies, if appropriate
4. Qualitative assessment of breach. (If possible, Classify breach as Category A or B):
5. Category A involves a gross error or demonstrated high-risk practice
6. Category B involves a breach with lower likelihood of blood exposure
7. Decision regarding patient notification and testing
	1. If Category A, patient notification and testing is warranted
	2. If Category B, consider the following factors
		1. Potential risk of transmission
		2. Public concern
		3. Duty to warn vs. harm of notification
8. Communications and logistical issues
	1. Develop communication materials
	2. Consider post-exposure prophylaxis if appropriate
	3. Determine who will conduct testing, obtain consent, and /or perform counseling, if appropriate
	4. Determine if follow-up testing is needed
	5. Facilitate public inquiry and communication
	6. Address media and legal issues

**Program Evaluation**

1. The dental clinic will establish routine evaluations of the infection-control program, including evaluation of performance indicators, at an established frequency. This will be done through annual trainings infection control trainings, competencies and program reviews.

**Authority**

* [Interim infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic.](https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html)
* Centers for Disease Control and Prevention. Guidelines for Infection Control in Dental Health-Care settings-2003. MMWR 2003;52 (No. RR-17)

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr57a1.htm>

* Kavo recommendation for maintenance and sterilization of high speed and low speed handpieces
* Attest manufacturer’s instructions
* Service Unit infection control policies relating to ambulatory patient care
* Service Unit safety policies relating to infection control
* Service Unit personnel policies relating to infection control
* HIPAA Act of 1998