CASE WESTERN RESERVE UNIVERSITY
SCHOOL OF DENTAL MEDICINE

INFECTION CONTROL MANUAL

EXPOSURE CONTROL PLAN & BEST MANAGEMENT PRACTICES (BMPs) For Minimization of Mercury Discharges from Dental Offices to the Sewage System

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Infectious diseases have been a concern of dentistry for a long time, but it has only been during the past two decades, with the emergence of the Hepatitis virus and the Human Immunodeficiency Virus (HIV) and its deadly sequela AIDS, that more attention has been turned to infection control. As a result, professional and governmental agencies have increased their recommendations and laws governing the practice of dentistry. This has been done to ensure that the health care givers and their patients alike are protected. The CWRU Infection Control Manual follows the laws as written by our state and federal government in addition to following the recommendations of various organizations such as the American Dental Association, the Center for Disease Control, and the Ohio Dental Association.

THE PURPOSE OF THE BLOODBORNE PATHOGENS STANDARD

When brought to its attention, The Occupational Safety and Health Administration (OSHA) recognized that workers who came into contact with blood and other potentially infectious materials (such as saliva in the case of dental health care providers) were at risk of contracting a variety of infectious diseases. OSHA's purpose in writing the Bloodborne Pathogens Standard, was to minimize of eliminate exposure of health care employees to these bloodborne diseases by a variety of means as enumerated in an Exposure Control Plan which was to be developed by every employer. The exposure control plan is, in essence, an infection control plan. The means by which exposure for these workers is to be minimized or eliminated include the following:

- Identifying those workers who, in fact, are at risk ***(Exposure Determination)***
- Identifying work practices or engineering controls that minimize or eliminate exposure ***(Methods of Compliance)***
- Providing a schedule of training for health care workers to educate and train them ***(Awareness)***
- Providing Hepatitis B vaccination for employees ***(Prevention)***
- Providing post-exposure evaluation and any post-exposure follow-up as required by the Standard ***(Post-Exposure follow-up)***
- Communicating hazards to employees by labels, signs, and training ***(Warning)***

- Keeping medical records and training records for the employees ***(Documentation)***

The provisions of the CWRU School of Dental Medicine's Infection Control Manual apply equally to students, faculty and staff. For that reason, throughout the Infection Control Manual the term "HCW" shall be used to designate anyone in the School of Dental Medicine, be it student, faculty or staff, who may have potential for exposure to infectious or contaminated materials.

This infection control manual applies to all personnel in the dental school except where otherwise noted.

The Occupational Safety and Health Administration (OSHA) of the Department of Labor have put into law the Occupational Exposure to Bloodborne Pathogens Standard. The Exposure Control Plan and Infection Control Manual will be modified or updated during the year to reflect changes in procedures, materials, techniques, whenever new or modified procedures affect occupational exposure or if new job titles that have occupational exposure.

The Infection Control Officer at the School of Dental Medicine at present is Dr. Fady F. Faddoul. All questions relating to infection control should be referred to him. However, since one person cannot oversee the day-to-day adherence to the provisions of this manual, **the faculty – especially the preceptors in the predoctoral clinics, the faculty in the pre-clinical areas, and the attending faculty in the postdoctoral clinics – will have to be responsible for seeing that infection control is carried out in those areas for which they are responsible.**

I. EXPOSURE DETERMINATION

According to the Bloodborne Pathogens Standard, an exposure determination must be made if any health care worker has occupational exposure; that is, reasonably anticipated skin, eye, mucous membrane, or parental contact with blood, body fluids, or other potentially infectious materials. For the purposes of the School of Dental Medicine, all clinical faculty, staff and students come under the purview of The Bloodborne Pathogens Standard. In addition, research efforts may necessitate the handling of body tissues, body fluids and cultures. Therefore, the majority of our health care workers will have occupational exposure.

A. Tasks and procedures which could result in possible occupational exposure at our School include the following:

- Patient treatment procedures
- Radiographic procedures
- Cleaning, disinfection and sterilization of instruments
- Environmental surface and equipment disinfection
- Dental laboratory procedures
- Handling contaminated laundry
- Handling infectious waste
- Repairing dental equipment
- Handling infectious tissues and body fluids in the research laboratory

Reflecting the tasks listed above, the job classifications which have occupational exposures include the following:

- Research laboratory technicians

- Maintenance technicians.
- Dental Assistants
- Dental Hygienists
- Expanded Function Dental Assistants

NOTE: Janitorial personnel are not employees of the Dental School and, as such, are not part of our Exposure Determination Plan.

B. Tasks that could result in possible occupational exposure are the following:

- Filing and handling dental patient records at the main and auxiliary reception areas
- Filing and handling dental patient records at the specialty clinic reception areas
- Handling patient records in the dental insurance area
- Handling patient records at the data processing areas
- Handling patient records at the Cashiers' Office
- Handling patient records at the Office of the Director of Patient Services
- Handling prosthetic cases for shipment to outside dental laboratories

Reflecting the tasks listed above, the job classifications that have possible occupational exposure include the following:

- Receptionists
- Records clerks
- Data processing personnel
- Insurance clerks

- Cashiers
- Patient Care Coordinators
- Clinical Secretaries

C. Tasks at our School that have no occupational exposure include the following:

- Routine secretarial work in non-treatment areas
- Dental School student admissions
- Dental School finances and accounting
- Dental School student affairs
- Dental School Student record keeping
- Dental School fund raising and development
- Handling and maintaining audio-visual equipment

Reflecting the tasks listed above, the job classifications that have no occupational exposure include the following:

- Secretaries in non-treatment areas
- Dental School finance personnel
- Dental School admissions personnel
- Director of Student Services
- Dental School development personnel
- Dental School Registrar

A listing of health care workers by extent of occupational exposure is available in the Dean's Office.

II. METHODS OF COMPLIANCE

A. General

The Bloodborne Pathogens Standard requires that health care workers practice dentistry using the concept of Standard/Universal Precautions. According to this concept, all body fluids including saliva are treated as if they are infectious of HIV, HBV and other bloodborne pathogens (BBP). Additionally, all patients are treated as if they are infections with BBP.

B. Engineering and Work Practice Controls

1. Under the Standard, engineering and work practice controls shall be used to minimize or eliminate exposure of infectious diseases. When these controls cannot effectively protect the health care workers, personal protection equipment as provided by the School:

    a) Engineering controls are those controls (e.g. sharps containers, needle recappers, self-sheathing or safety needles, foot controls etc.) that isolate or remove the bloodborne pathogen from the workplace.

    b) Work practice controls are controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g. prohibiting recapping of needles using a two-handed technique).

2. Engineering controls will be examined or maintained or replaced on a regular schedule. For example, sharps containers and regulated waste will be removed on a regular basis. This task will be facilitated by the Dispensary Manager. See Appendix B & F, Addendum I & II for cleanup and disinfection of clinic spaces and equipment.

3. Hand-washing facilities are available in every cubicle and in other appropriate convenient locations. These hand-washing facilities include a sink, disposable paper towel dispenser, soap, alcohol hand rub and an appropriate waste disposal container for the used paper towels. Washing hand is one of the most effective ways of controlling microorganisms on your hand whether they are resident or transient.

4. Health care workers at the School of Dental Medicine must wash their hands:
   - At the beginning of the day.
   - Before and after breaks.
   - Before and after using the restrooms
   - At the end of the day.
   - Before and after gloving (alcohol hand rub may be used as long as hands are not visibly soiled.)

5. Gloves must be changed between patients and in the event of any interruption of treatment that results in hands coming into contact with objects other than those items being directly used in the treatment of that patient. For example, **if you drop an instrument, you must pick up the instrument with your gloved hand, place the dirty instrument in your sink, then deglove, wash hands or use an alcohol based rub and reglove before resuming treatment of the patient.**

6. Health care workers must wash hands and any other skin or flush mucous membranes with water immediately after contact of said body area with blood or OPIM (e.g. saliva). Such contact could occur if ungloved hands or any other area of unprotected skin comes into direct contact with the patient or if ungloved hands happen to come in contact with an inanimate object that is likely to be contaminated with body fluids from a patient. Contact could also occur if blood or OPIM penetrate personal protection such as gloves, mask, eye protection or clothing.

7. Contaminated needles shall not be bent, recapped or removed unless they need to be recapped for specific medical reasons. In the case of many dental procedures, it is desirable to perform multiple injections during treatment. The needles can be recapped between injections on the same patient if the recapping is accomplished using the one handed “swoop” technique or using a mechanical distancing device such as the Jenker Needle Recapper. After using the needle for the last time, recap it; and, with the used anesthetic cartridges, deposit them in the nearest sharps container. **The School of Dental Medicine uses the Jenker Needle Recappers**.

8. Sharps containers are provided at accessible locations throughout clinical areas and close to the immediate area

where sharps are found. Sharps containers will be as follows:

- Closable
- Puncture resistant
- Leakproof on sides and bottom
- Labeled or color coded (red) in accordance with the labeling requirements of the Standard
- Maintained upright throughout use

If a sharps container needs to be moved, close the container immediately to prevent spillage or protrusion of contents before handling or moving it. If it appears leakage is possible, place it in a secondary container that is closable, leakproof and color coded or labeled.

Any other sharps, such as scalpel blades or orthodontic wire, must be deposited in the sharps container after use. Use a mechanical device or hemostat to remove a disposable blade from the handle.

9. Other regulated waste, such as blood-soaked gauze, will also be placed in appropriate containers. Regulated waste is liquid or semi-liquid blood or OPIM plus the following: contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM. In the clinical area of the School of Dental Medicine, waste is classified as

    - Biohazardous waste
    - Regular or non-biohazardous waste
    - Hazardous waste

a. Regular waste is to be disposed of in the regular waste cans provided in each cubicle, rest rooms and non-clinical areas.

b. Biohazardous waste must be disposed of into the red

bags available in the Dispensary which in turn must be discarded into the large biohazard bins available in each clinical area. Biohazard bins have foot control operation for opening and must not be touched with ungloved hands.

c. Hazardous Waste
Amalgam contains small amounts of mercury which is considered Hazardous Waste. All excess amalgam from dental procedures will be collected in properly labeled amalgam waste containers. Once a container is full it will be removed by CWRU, Department of Occupational and Environmental Safety as hazardous waste and disposed of according to federal regulations.

Suitable containers are as follows:

- Closable, Plastic Container
- Labeled as Hazardous Waste, Amalgam Scrap, Mercury/Silver.
- Closed prior to removal to prevent spillage during transport

10. All faculty, staff, students and patients
- No applying cosmetics or lip balm, or handle contact lenses in dental treatment areas, dental laboratory areas or sterilization areas.
- **NO EATING OR DRINKING IN ALL CLINICAL AND PRE-CLINICAL AREAS.**

11. Also, do not keep food or drink in refrigerators, freezers, shelves, cabinets, or on countertops or benchtops where blood or OPIM are present.

12. Perform all dental procedures in such a manner so as to minimize splashing, spraying, and spattering or generation of droplets that might contain infectious materials. This would include the use of high volume suction, the rubber dam, judicious use of the air/water syringe, and properly positioning the patient.

13. Do not mouth pipette or mouth suction blood or any OPIM.

14. Before servicing or shipping any dental equipment that may have been contaminated, decontaminate the equipment. Label the parts of the equipment that have not been

decontaminated and be sure to tell any serviceman, shipper or manufacturer the exact state of contamination the equipment is in.

C. Personal protective equipment

OSHA requires the use of personal protective equipment as an additional layer of protection against blood and OPIM (that do not leak or allow fluid to pass through and reach work clothes under normal condition of use).
OSHA requires that employers (in our case the School of Dental Medicine), provide at no cost to employees appropriate personal protective equipment such as, but not limited to, gloves, gowns, face shields or masks, eye protection, (loupes are the responsibility of individuals needing them) resuscitation bags or other ventilation devices. Students shall be provided with gloves, gowns and masks but must provide their own eye protection. The School of Dental Medicine will also provide eye protection to all patients. Students and Faculty must ensure that patients are wearing eye protection during any and all dental procedures.

1. Protective garments

The School of Dental Medicine has made available clinic gowns that are high-necked, long-sleeved is of sufficient length and size, and is of a material that will not allow body fluids to pass through under normal conditions. This gown must be worn whenever there is likely to be exposure to infectious fluids or contaminated materials.

All faculty, students and staff are required to wear protective clinic gown, when performing dental treatment, when handling or exposing radiographs, or performing any other task in which exposure to OPIM is likely to occur. Dispensary personnel and dental laboratory personnel will wear appropriate protective clothing such as aprons or lab coats when performing non-treatment tasks.

You will draw a protective clinic gown from the Dispensary at the start of each clinic day. Gowns will be turned in to the appropriate area at the end of each day, unless the gown becomes soiled during the day. In that case you will return the soiled gown as soon as possible and draw a clean gown. **Under no circumstances are protective clinic gowns to be left in a clinic spaces overnight.** Protective clinic gowns, white faculty coats, and white resident coats will be

cleaned, laundered, repaired or replaced as necessary by the School of Dental Medicine.

NOTE: PROTECTIVE CLINIC GOWNS MUST NOT BE WORN OUTSIDE OF CLINICAL AREAS.

2. **Gloves**

Gloves protect both the patient and health care worker. OSHA has ordered that all health care workers wear gloves when it can be reasonably anticipated that health care workers may have hand contact with blood or OPIM, non-intact skin, or when handling or touching contaminated items or surfaces.

a) Disposable (single use) gloves, such as surgical examination gloves, shall be replaced as soon as feasible when contaminated, torn or punctured, when their ability to function as a barrier is compromised.

b) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

c) Utility gloves may be decontaminated for re-use if the integrity of the gloves is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibits other signs of deterioration or when their ability to function as a barrier is compromised.

d) The School of Dental Medicine uses only non-latex gloves. However, it will provide hypoallergenic gloves for those who are allergic to the gloves normally used.

e) **Do not leave your cubicle or other treatment area with your gloves on, since this could lead to contamination of other areas.** In addition, do not handle charts while wearing gloves. Only after a procedure is completed and gloves are removed, and hands are washed should charts or other objects be touched. If, during a procedure, treatment is interrupted and you must touch another object, deglove and wash your hands.

f) Over-gloving is not permitted by Ohio State Dental Board Rules.

g) See Appendix A for more detailed hand washing technique.

3. **Masks**

Wear facemasks or full-length face shields with facemasks while treating patients or whenever splashes, spray, splatter or droplets of blood or OPIM could be generated. If your mask becomes damp during use, discard the mask as soon as possible, and put on a fresh mask.

4. **Eye Protection**

Wear eye protection whenever performing any dental procedure, whether it is patient treatment or laboratory work. Eye protection can be eyeglasses with solid side shields, goggles, full-face shields or loupes with side shields. Side shields are required by Ohio State Dental Board Rules. All patients **must** be provided with eye protection during treatment.

5. **Surgical Caps or Hoods and/or Shoe Covers or Boots**

These should be worn in instances where gross contamination could be generated. For example, this might be the case during surgery, when an aerosol-generating handpiece is causing a great deal of contamination.

D. **Housekeeping**

1. **General**

The School of Dental Medicine shall ensure that the work site is kept clean and in sanitary condition.

2. **Equipment and Services**

All equipment and environmental surfaces shall be cleaned and decontaminated after contact with blood or OPIM.

a) Contaminated work surfaces should be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as

feasible, when surfaces are overly contaminated or after any spill of blood or OPIM; and at the end of the work shift if the surface may have been contaminated since the last cleaning.

b) Protective coverings such as barrier film, will be used to cover equipment and environmental surfaces, and equipment that are difficult to disinfect, such as light handles, x-ray tube heads, amalgamators, etc. but shall be removed and replaced between every patient,

c) All bins, pails, cans other similar receptacles intended for re-use which have a reasonable likelihood of being contaminated with blood or OPIM will be decontaminated on a regularly basis.

d) Broken glassware, which may be contaminated, shall not be picked up directly with the hands. It shall be cleaned up using mechanical means such as a brush and dustpan, tongs or forceps. If such an incident should occur, report to the dispensary, where appropriate clean up equipment is available. Remember to wear utility gloves, mask, eye protection and a protective garment during the clean up. After the spill is cleaned up, decontaminate the area using the spray-wipe-spray technique; then decontaminate the equipment.

e) Do not place reusable contaminated sharps into a container that you have to reach into by hand in order to retrieve. The sink may be used since it is a large container and your risk of sustaining a puncture wound would be minimal. However, should it become necessary to wash instruments by hand, caution should be exercised.

3. **Regulated Waste**

Contaminated sharps that are disposable shall be discarded immediately or as soon as possible after their use. They shall be placed into containers that meet the standards for sharps as described in the Engineering Control section of Methods of Compliance. As stated earlier, these containers will be accessible and close to the area where they are used.

They will not be allowed to overfill. Other regulated waste will be placed in containers that are suitable. In instances where blood, vomitus, fecal matter, urine or other body fluids are involved, report to the facilities and a CWRU specially trained employee will safely clean up the material involved. Again, wear proper eye protection, mask, utility gloves and protective clothing. See the standard in the Appendix B & F, Addendum I & II for more details.

4. **Laundry**

Contaminated laundry shall be handled as little as possible. When you are finished with your protective clinic gowns at the end of the day, or when it becomes visibly soiled, turn it in to the contaminated laundry area near sterilization. Faculty will also turn in their laboratory coats when they become visibly soiled, or contaminated.

See Appendix B for schedule and type of protection or decontamination required for various pieces of equipment and environmental surfaces.

E. **Daily Protocol**

1. **General**

The daily routine consists of a combination of using what engineering means we have at our disposal as well as using work practices. The principles of Standard/Universal Precaution are followed while doing these daily routines. This protocol is aimed primarily at the Predoctoral and Postdoctoral students, but faculty and staff should follow these procedures when appropriate for them.

2. **At the Beginning of the Clinic Treatment Day**

a) When you first arrive at your treatment area, wash your hands thoroughly as described in the Hand Washing Technique section of the Appendix A.

b) Students and staff alike should make ready their equipment, draw whatever supplies are necessary (such as instruments, disposable items and unit doses of dental materials such as restorative materials) for the treatment to be rendered, secure the patient's chart, and be ready for smooth,

uninterrupted treatment. To achieve safe dental treatment, one must keep the area of contamination as small as possible. Thus, all equipment and supplies should be within easy reach of the dental student and assistants. It goes without saying that the cubicle or dental operating area should be in a sanitary condition. Countertops should be clean and clear of clutter.

c) Prepare the dental operatory for treatment:

i.) Flush the water lines in your cubicle for one to three minutes at the beginning of the day; then flush at least 25 seconds after each patient to remove any contaminants.

ii.) Place barrier film (4" x 6" piece) over the light handles and over the dental light switch.

iii.) Place a clean chair cover over the headrest and back of the chair (garment bags found at end of each aisle and other appropriate places).

iv.) Attach a sterilized metal tip or disposable tip to the air/water syringe and cover the rest of the syringe with barrier film.

v.) Put a clean disposable saliva ejector tip in the saliva ejector and disposable high volume evacuator tip in the high volume evacuator.

vi.) **Show your preceptor or instructor your unopened sterilized bags of handpieces and instruments (cassettes and pouches). Instructors must verify visually that all handpieces and instruments have been <u>sterilized</u> and are in <u>sealed</u> bags. You may not proceed with dental treatment until you instructor verifies that your handpieces and instruments are sterilized.**

vii.) Place a clean cover on the bracket table; attach your sterilized (autoclaved) handpieces to the unit and place your sterilized instrument on the bracket table cover or other nearby

countertop that has been covered with a barrier or cover.

viii.) Have mouthrinse, an antimicrobial or preferably Chlorohexidine, available for the patient to use immediately after he/she is seated.

ix.) Flush the water lines after each patient to remove any contaminants that may have been retracted into them.

x.) Cover any other piece of equipment, such as a Cavitron, with plastic.

3. **During Patient Treatment**

During patient treatment, the following procedures should be observed:

a) Seat the patient. Even if the patient has eyeglasses, give the patient a pair of protective eyewear to wear during dental treatment.

b) Put on protective equipment (protective clinical gown, mask and eye protection).

c) Have the patient rinse with a mouthrinse

d) Just before gloving, wash and dry your hands according to the technique described in the Appendix A, or use an alcohol hand rub.

e) Place rubber dam whenever possible.

f) Do not make entries in patient's record during treatment unless it is absolutely necessary; in that case, before touching the record remove gloves, wash your hands and handle records, wash your hands again and reglove.

g) Once gloved, do not touch anything but the patient, barrier and covered areas or areas that were already decontaminated at the end of the last patient visit.

h) If you leave your cubicle for any reason, deglove; no one is to walk around the clinics outside their cubicles or immediate treatment areas with gloves on.

i) When taking radiographs, set up the x-ray room before regloving. Place the new uncontaminated films to be exposed on a clean cover or paper cup just outside the x-ray room. Cover tube head, chair, controls and door handle with protective covers and barrier film. After patient is seated, place lead apron on patient. Glove. Expose radiograph(s). Place exposed films on piece of paper (usually a bracket table cover). Remove plastic covering and drop radiograph in a clean disposable cup.

j) Use high-speed evacuator to prevent spread of contamination when using high-speed handpieces, water spray, ultrasonic cleaners, or any other piece of equipment likely to produce aerosols, splatter or droplets.

k) If an instrument is dropped, do not pick it up and re-use it. Unless it is a hazard leave it where it has fallen until you are finished with your treatment, then pick it up with your utility gloves. If you must remove it immediately, pick it up with your gloves and then place it in the sink or any other appropriate place out of your immediate operating area. Deglove, wash your hands and reglove before proceeding.

l) Disposable items are what the name implies. Use them once and only once, and then discard. This includes gloves, masks, prophy angles, air/water tips, high volume evacuator tips, etc. For dental prophylaxis, always use the disposable prophy angles.

m) If, during treatment, prosthetic-related items need to be transported somewhere else in the clinic such as the laboratory, these items must be cleaned and disinfected before leaving the treatment area. These items include impressions, models, die, prostheses, bite registrations, wax-ups, etc. Clean, disinfect, remove gloves; then you can safely take the items to another area or ship them outside the School. See

Appendix B for instructions on how to disinfect these prosthetic items.

n) Do not visit offices, cashier, or dispensary wearing gloves or masks.

o) Do not allow patients to visit offices, cashier or restrooms wearing bibs.

4. **Upon Completion of Treatment**

After the patient's treatment is completed, the operatory or cubicle must be prepared for the next patient. Remove patient napkin and place in your trash container. Dismiss the patient, take off your gloves, wash your hands, and make your appropriate entries on the dental record.

Then:

a) Put on your utility gloves.

b) Take sharps to sharps container and regulated waste to regulated waste container (red containers at the end of each aisle).

c) Gather your instruments:

- Flush your handpiece(s) with water for 25 seconds to purge the line of any contaminants that may have been sucked back into the handpiece.
- Direct the spray into your high volume evacuator.
- Wash, rinse and dry your handpiece.
- Lubricate the handpiece according to the manufacturer's directions.
- Place the dry handpiece into a sterilization pouch for sterilization. Place aside on a non-contaminated surface (bracket table cover or countertop).
- The rest of your instruments should be placed back into a cassette The cassette, too, is to be placed aside on a non-contaminated surface (clean bracket tables cover on the countertop which you have placed just prior to start of clean up).

d) Return to your dental unit and dispose of all barriers (plastic wrap, chair covers, dental light cover, bracket table cover, etc.) Dispose of high volume evacuator tip, saliva ejector tip, paper cups, rubber dam and any other non-regulated waste. Remember that the patient napkin has already been placed into non-regulated waste container in your unit unless grossly contaminated with blood or saliva. Disinfect non-covered areas of your cubicle that may have become contaminated during your last treatment with hospital level disinfectant supplied by the School. Use the spray-wipe-spray technique. Be sure to use this disinfectant according to manufacturer's recommendations.

e) Remove barriers from and disinfect any equipment that needs to be returned to sterilization. All equipments and materials retrieved from the dispensary **must** be returned to sterilization for disinfection prior to restocking in the dispensary

f) Remove your utility gloves, wash your hands and return any equipment to the dispensary that needs to be returned. If you have another patient, start over again with step 2 by gathering your materials (instruments, etc.), make ready your unit with the appropriate barriers, etc.

g) Remove your eye protection touching only the earpiece, and your facemask touching only the ties – not the mask itself.

5. **At the End of the Clinic Treatment Day**

While still wearing protective equipment, disinfect the high volume evacuator using an appropriate cleaner (caviwipes and or citrace). Empty the traps in your dental unit. Disinfect the countertop, dental unit, chair and light using the spray-wipe-spray technique. Be sure the base of the dental chair dental stool and the sink are clean. A neat appearance promotes a felling of confidence and good will in the patient the moment he or she walks into your cubicle.

Look at the drawers in your unit and roll around. There should be no loose instruments. All instruments should be in

pouches or cassettes that have been sealed and sterilized. Pouches and cassettes on which the expiration date has expired should be sterilized again. Put sterilized pouches in one drawer, non-sterile items in another. Be sure items such as torches and rubber bowls are cleaned and disinfected.

Never combine sterilized and non-sterilized instruments in the same drawer.

F. Special Protocols

1. General

Protocols for special tasks such as sterilization and disinfection as well as prosthodontic, orthodontic and radiographic procedures.

2. Sterilization

Sterilization is carried out most effectively and easily with the use of the steam autoclave. The sterilization of instruments for our pre-doctoral students is done in the dispensary although sterilization is also done in the some of the post doctoral clinics. At the School of Dental Medicine, both the ultrasonic and manual washing techniques are used. Both are good if used properly; however, use the ultrasonic method whenever possible since it is safer and probably more effective.

a) Ultrasonic Method

Dispensary and other authorized personnel using the ultrasonic method should ensure that:

i. The proper solution is used in the ultrasonic cleaner.

ii. The ultrasonic cleaner has been run for the recommended period of time.

iii. The ultrasonic cleaner is covered while in operation.

iv. Baskets with nearly solid sides are used to prevent needle sticks.

v. The solution is changed when recommended or if it becomes too soiled.

vi. The instruments or cassettes are placed in the cleaner correctly (not too near the bottom or sides) so that the cleaner will function properly.

vii. Instruments are rinsed thoroughly after the ultrasonic cycle is completed.

viii. Instruments are dried thoroughly, either with air-drying or clean paper.

b) Personnel Using Manual Scrubbing

When manually scrubbing, you should:

i. Wear protective gear (eye protection, mask, utility gloves and protective clothing).

ii. Use a detergent that allows you to see the instruments clearly.

iii. Cover the instruments with sufficient water so that both the instrument and brush are beneath the surface of the water in order to prevent splashing or splattering.

iv. Rinse the instruments thoroughly.

v. Dry the instruments completely.

Be certain that all visible debris has been removed. The instruments for the steam autoclave must be wrapped. The use of cassettes is an ideal way to safely contain the instruments. Sterilization pouches can be used for one or several instruments, but use caution since there is always a danger of puncture, which could result in a needle stick or a contaminated instrument. Do not overpack cassettes or pouches with instruments, for that might impede the circulation of steam throughout the cassette or pouch. Open hinged instruments of that he steam will reach all areas of the instrument.

Dispensary and other authorized personnel shall:

- Ensure that the cassettes are barcoded and pouches received for sterilization shall have a label with the student's name and number.
- Log the cassettes, pouches, and handpieces into the computer for tracking purposes.

- Put the cassettes into the ultrasonic cleaner, surgical milk, and dried before being placed in pouches for sterilization.

- After sterilization, the students' cassettes and pouches are kept on their respective bins in the dispensary until they are returned to the students.

Dispensary and other authorized personnel operating autoclaves in other locations will ensure the autoclaves are working properly by using process indicators such as sterilization tape and by performing biological monitoring using the appropriate spore tests. They will keep a log of the sterilization cycles. This log will contain the results of biological monitoring, and are to be turned into the Infection Control Officer or his assistant once a month. The spore tests will be performed at least weekly, or more often if circumstances dictate. To properly perform biological monitoring, place the biological monitors within the instrument pack according to direction and then run normal cycle of the autoclave. After processing the monitors, the results will be satisfactory if the test monitor is negative. If the biological monitor is positive, then these additional steps must be taken:

- Stop using the autoclave immediately.

- Inform the Infection Control Officer.

- Resterilize all packs that have been processed through the sterilizer since the last negative results.

- Notify repair personnel as soon as possible.

- After repairs are complete, retest the autoclave immediately. If test results are still positive, continue to seek the cause for the positive results.

- Do not begin routine use of the autoclave until negative results from the spore tests are obtained.

- Autoclave must not be put back in use until approved by Infection Control Officer or his designee.

3. Disinfection

a) General

Disinfection is the process by which most, but not all, microbial life is killed or inhibited; it is very effective for semi-critical items that come into contact with mucous membranes but do not penetrate body tissues. An example of a semi-critical item is the air/water syringe tip. Non-critical items are items that could come into contact with the patient's intact skin, not mucous membranes. Examples of non-critical items include countertops and the dental unit.

Therefore, all such surfaces that are touched by hands, contaminated by blood or OPIM need to be cleaned and disinfected before each patient. When using a disinfectant, be sure that the disinfectant is an intermediate level EPA registered, FDA approved solution that is anti-tuberculocidal. Currently, CWRU School of Dental Medicine uses caviwipes and citrace for disinfection. An alternative to using disinfectants is to cover these surfaces with barriers, which can be made of plastic, aluminum foil or impervious-backed paper. When using and changing barriers between patients, it is not necessary to clean and disinfect those surfaces until the end of the day unless the barrier is penetrated during the day or gross contamination occurs.

b) Cleaning

Before disinfecting a surface, it must be cleaned using the "spray-wipe-spray" technique. The spray-wipe-spray technique is accomplished as follows:

i. Wet the surface with the appropriate cleaner/disinfectant solution.

ii. Clean and dry the surface thoroughly with a paper towel.

iii. Wet the surface again.

iv. Allow the surface to remain wet for at least five minutes. (Citrace 5 minutes – Caviwipes 3 minutes)

v. At the end of ten minutes, wipe the surface dry with a paper towel or let it continue to air dry.

THE SPRAY-WIPE-SPRAY TECHNIQUE SHALL BE FOLLOWED AT THE SCHOOL OF DENTAL MEDICINE WHEN DECONTAMINATING EQUIPMENT AND SURFACES THAT REQUIRE DISINFECTION.

4. Prosthodontic Protocol

Impressions – Rinse the impression with water to remove all saliva and blood. Then, disinfect it using Citrace (see Appendix B for other recommended disinfectants for various impression materials). Obtain these disinfectants from the dispensary, and be sure to follow specific manufacturer's recommendations. While performing these tasks, be sure you are wearing protective clothing, mask, eye protection and gloves.

When impressions or interim prostheses are sent to the lab, they must be appropriately labeled to indicate whether they have been disinfected. Use a biohazard label if the case has not been disinfected. If they have been disinfected, the label should also clearly state that fact; otherwise, the lab will disinfect the impressions again. This is important and is required by law.

When performing prosthodontic procedures, many instruments and pieces of equipment will be used. See Appendix B to determine whether these items will require sterilization or disinfection.

Cover the work area with disposable barriers as much as possible and change these barriers between cases. Disinfect these areas at the end of the day. That are not covered should be disinfected between cases.

- Do minor adjustments of interim and completed prostheses in your cubicle using sterilized burrs, polishing wheels and disks, and autoclaved rag wheels.

- In the case of completed prostheses or prostheses that need adjustment in the laboratory, used sterilized burrs and rag wheels obtained from the dispensary.

- Be sure to obtain a new polishing kit form the dispensary for each case.

All health care workers who work in a dental laboratory or handle laboratory cases on a regular basis should be vaccinated against Hepatitis B.

5. Oral Radiology Protocol

The following should be observed while exposing and developing radiographs.

a) Exposing films

i. Place barriers over the tube head, chair, and door handles of the x-ray room.

ii. Cover the controls with plastic wrap.

iii. Place lead apron and thyroid collar over patient. Wash your hands, then glove and mask.

iv. Use film that has a barrier around it.

v. Use autoclaved or disposable position indicating devices. Rinn kits should be turned in to the dispensary for sterilization between patients.

vi. Use autoclaved or disposable panoramic bite block or cover it with a disposable cover

vii. After exposure of the film, the contaminated film should be placed into a paper cup for transport to a daylight loader.

b) **Developing Radiographs**

i. While keeping your gloves on, remove all barriers, open the film packet and drop the inner uncontaminated film onto a refuse container.

ii. Remove gloves and place the uncontaminated films into the developer.

c) **Using a daylight loader with an automatic loader**

To develop a film packet with a barrier:

i. Transport the films to the daylight loader.

ii. With your gloves on, remove and discard outer barriers into a refuse container. Lay the uncontaminated film packet down on a clean surface (paper towel).

iii. Remove your gloves and discard.

iv. Wash your hands using soap and water or an alcohol hand rub.

v. Raise the lid of the processing box and put the radiographs inside.

vi. Close the lid and proceed with developing.

III. AWARENESS

A. General

In order for health care workers to be knowledgeable of the latest infection control techniques and information, they must be continually trained. Through this training health care workers learn how to minimize or eliminate their exposure to bloodborne pathogens. OSHA has recognized this fact and requires that the employer provide training for their employees. In our case, as required by OSHA, the School of Dental Medicine provides the following training for faculty and staff. Students consistently receive this information throughout their four years of dental education, beginning with the freshman year.

1. Training for faculty and staff shall be provided as follows:

   a) At the time of initial assignment of tasks where occupational exposure may take place;

   b) At least annually thereafter. (D.O.E.S., faculty retreats, departmental seminars)

   For our faculty and staff who have received instruction on bloodborne pathogens in the year preceding the effective date of the Standard, only training with respect to the provisions of the Standard, which were not included in earlier training, will be provided.

2. Annual training for all faculty and staff shall be provided within one year of their previous training.

3. The School of Dental Medicine will provide additional training when changes, such as modification of tasks or procedures or institution of new tasks or procedures, affect the occupational exposure of health care workers. The additional training may be limited to addressing the new exposures created.

4. Material appropriate in content and vocabulary to the educational level, literacy, and language of our health care workers will be used.

5. The training program will contain at a minimum the following elements:

a) An accessible copy of the regulatory text of the Standard and an explanation of its contents;

b) A general explanation of the epidemiology and symptoms of bloodborne diseases;

c) An explanation of the modes of transmission of bloodborne pathogens;

d) An explanation of the School of Dental Medicine's exposure control plan and the means by which the health care worker can obtain a copy of the written plan;

e) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and OPIM;

f) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

g) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

h) An explanation of the basis for selection of personal protective equipment;

i) Information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

j) Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM;

k) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

l) Information on the post-exposure evaluation and follow-up that the School of Dental Medicine is required to provide for health care workers following an exposure incident;

m) An explanation of the signs and labels and/or color coding required by the Standard to warn health care workers of potentially infected items;

n) An opportunity for interactive questions and answers with the person conducting the training session.

IV. PREVENTION

A. General

Hepatitis B is a highly infectious disease with serious potential consequences including death, and is the main impetus of the passage of the Bloodborne Pathogen Standard. The following paragraphs, which govern our policies here at the School of Dental Medicine, reflect OSHA mandates as well as the School's concern for its employees' safety. Ohio State Law also is specific in this arena with its applicable statutes.

B. Hepatitis B Vaccination

1. Students and Residents

Students and residents who are enrolled in the School of Dental Medicine must have proof of immunity, either through previous exposure of previous vaccination (by demonstrating a titer level greater than ten international units of Anti-HBs), or by beginning the series of Hepatitis B vaccinations at the Student Health Service before they may start patient treatment. Students must have a Hepatitis B vaccination series unless such a vaccination will pose a threat to his/her health or well being as determined by their physician and approved by the Ohio State Dental Board. This provision applies to all students.

2. Faculty and Staff

a) The School of Dental Medicine will make available the Hepatitis B vaccination series to all faculty and staff who have occupational exposure, and post-exposure

evaluation and follow-up to all faculty and staff who have had an exposure incident.

b) The School of Dental Medicine will ensure that all medical evaluations and procedures, including the Hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up including prophylaxis are:

i. Made available to faculty and staff at no cost to them

ii. Made available to faculty and staff at a reasonable time and place

iii. Performed by or under the supervision of a physician or by or under the supervision of another licensed health care professional

iv. Provided according to recommendations of the U. S. Public Health Service current at the time these evaluations and procedures take place except as specified by the Standard.

The School of Dental Medicine shall ensure an accredited laboratory at no cost to a faculty or staff member conducts all laboratory tests.

c) Those faculty or staff members who refuse to have the vaccination must sign the Declination as found in the Appendix D. If a faculty or staff member who may have occupational exposure to bloodborne pathogens refuses vaccination, his or her employment will have to be terminated because Ohio State Law does not permit health care workers to work without the benefit of the vaccine unless his/her health and well-being would be compromised, or unless he/she can demonstrate immunity and must be approved by the Ohio State Dental Board. In any case, the OSDB rules supersede and no dental healthcare provider would be allowed patient contact until after the first dose of the vaccine has been administered.

d) Hepatitis B vaccination shall be made available after the health care worker has received the training required and within ten working days of initial

assignment to all health care workers who have occupational exposure unless the health care worker has previously received the complete Hepatitis B vaccination series, antibody testing has revealed that the health care worker is immune, or the vaccine is contraindicated for medical reasons.

e) The employer shall not make participation in a prescreening program a prerequisite for receiving Hepatitis B vaccination.

f) If the health care worker initially declines Hepatitis B vaccination but at a later date while still covered under the Standard decides to accept the vaccination, the School of Dental Medicine shall make available the Hepatitis B vaccination at that time.

g) The School of Dental Medicine shall assure that health care workers who decline to accept Hepatitis B vaccination offered by the School sign the Declination Statement in the Appendix D.

h) If the U. S. Public Health Service recommends a routine booster dose(s) of Hepatitis B vaccine at a future date, such booster dose(s) shall be made available in accordance with the Standard.

i) TB Testing is required annually of all Students, Faculty and staff who have patient contact. CWRU Health Services conduct this testing at CWRU School of Dental Medicine annually. Documentation of Faculty and Staff of this annual test and/or documentation, which exclude you from this testing must also, be submitted to CWRU School of Dental Medicine Facilities Office.

C. **Other Immunizations**

Although the Bloodborne Pathogens Standard focuses on HBV and HIV infection, there many other bloodborne pathogens that can cause the health care worker devastating or fatal illness. Childhood diseases, sexually transmitted diseases, and tuberculosis are but a few of these infectious diseases. Therefore, any health care worker who has patient contact or contact with infectious materials should

be sure they have had these diseases or have been vaccinated against them.

The Disease Immunization Checklist Table, located in the Appendix C, was adapted from the Center for Disease Control's publication, "Practical Infection Control in the Dental Office," 1989, and should serve as a reminder for you. Some of these diseases can have far-reaching consequences, especially for female heath care workers.

V. POST-EXPOSURE FOLLOW-UP

A. General

Before one can discuss what to do about an exposure incident, one must know what an exposure incident is. A exposure incident refers to specific eye, mouth or mucous membrane, non-intact skin or parental contact with blood or OPIM that results from the performance of one's duties or tasks – for example, in the case of the CWRU School of Dental Medicine, a student performing clinical duties as part of his/her education. Although contact with mucous membrane can happen, an exposure incident usually takes the form of a puncture wound of the health care worker's skin. This penetration is usually the result of a needle, scalpel blade or other sharp object such as a burr or scaler. There are separate protocols for students and for faculty or staff members.

1. Student and Resident Protocol

a) Immediately after the occurrence of the exposure, flush the area of contact or penetration with copious amounts of water.

b) Report the incident as soon as possible to the Infection Control Officer or his designee.

c) After filling out an initial report, report to the Student Health Service.

d) Have the Infection Control Officer or his designee talk to the source patient. They will ask the patient to have his/her blood drawn for testing for HBV, HIV or other infectious diseases unless the patient's serostatus is already known to be positive of HBV or

HIV. In that case, it will not be necessary to obtain a sample of the patient's blood. Information concerning the patient's serostatus will be provided to the student.

e) The student will have counseling, evaluation, and recommendation for treatment at Student Health Service at no charge or physician of choice at the individuals personal expense.

2. **Faculty or Staff Member Protocol**

a) Immediately after the occurrence of the exposure, flush the area of contact or penetration with copious amounts of water.

b) Report the incident as soon as possible to the Infection Control Officer, or his designee.

c) Employee and supervisor must file an Occupational Injury/Illness Report with the office of Risk Management. All injuries severe enough to require first aid or medical treatment shall be reported by telephone within one working day following the knowledge of accident. (216) 368-4394.

d) The Infection Control Officer, or his designee will ask the source patient to have his/her blood collected and tested for HIV, HBV and other bloodborne pathogens.

e) Following the report of the exposure incident, the School of Dental Medicine shall make immediately available to the exposed faculty or staff member a confidential medical evaluation and follow-up including at least the following elements:

i. Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

ii. Identification and documentation of the source individual, unless the School of Dental Medicine can establish that identification is infeasible or prohibited by state or local law;

1) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the School of Dental Medicine shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

2) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

3) Result of the source individual's testing shall be made available to the exposed faculty or staff member, and the faculty or staff member shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

iii. Collection and testing of blood for HBV and HIV serological status;

1) The exposed faculty or staff member's blood shall be collected as soon as feasible and tested after consent is obtained.

2) If the faculty or staff member consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the faculty or staff member elects to have the baseline sample tested, such testing shall be done as soon as feasible.

iv. Post-exposure prophylaxis, when medically indicated, as recommended by the U. S. Public Health Service;

v. Counseling;

vi. Evaluation of reported illnesses.

f) **Information provided to the Health Care Professional**

i. The School of Dental Medicine shall ensure that the health care professional responsible for the faculty or staff member's Hepatitis B vaccination is provided a copy of this regulation.

ii. The School of Dental Medicine shall ensure that the health care professional evaluating a faculty or staff member after an exposure incident is provided the following information:

1) A copy of this regulation;

2) A description of the exposed faculty or staff member's duties as they relate to the exposure incident;

3) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

4) Results of the source individual's blood testing, if available;

5) All medical record relevant to the appropriate treatment of the faculty or staff member including vaccination status, are the School of Dental Medicine's responsibility to maintain.

g) **Health Care Professional's Written Opinion**

The School of Dental Medicine shall obtain and provide the faculty or staff member with a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation.

i. The health care professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for a faculty or staff member, and if the faculty or staff member has received such a vaccination.

ii. The health care professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

1) That the faculty or staff member has been informed of the results of the evaluation;

2) That the faculty or staff member has been told about any medical conditions resulting from exposure to blood or OPIM, which require further evaluation or treatment.

iii. All other finding or diagnoses shall remain confidential and shall not be included in the written report.

h) **Medical Recordkeeping**

Medical records required by the Standard shall be maintained in accordance with the Standard.

VI. WARNING

A. General

Even though a health care worker may be well trained in infection control procedures and may have his/her vaccinations up to date, he/she may still be at risk. Infectious organisms are invisible to the naked eye. Therefore, at times, only warning a health care worker has that he/she is about to come into contact with contaminated materials or surfaces is by the use of labels and signs. OSHA has recognized this danger and mandated the use of labels and signs.

1) **Labels**

a) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or OPIM, and other containers used to store, transport or ship blood or OPIM.

b) Labels required by the Standard shall include the following legend:

BIOHAZARD

c) These labels shall be fluorescent orange or orange-red and predominantly so, with lettering or symbols in a contrasting color.

d) Labels required to be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

e) Red bags or red containers may be substituted for labels.

f) Containers of blood blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from labeling requirements.

g) Individual containers of blood or OPIM that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

h) Labels required for contaminated shipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

i) Regulated waste that has been decontaminated need not be labeled or color-coded.

1) **Signs**

a) The School of Dental Medicine will post signs at the entrance to work areas specified as HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

BIOHAZARD

(Name of the infectious agent)
(Special requirements for entering the area)
(Name, telephone number or the laboratory director or other responsible person)

b) These signs shall be fluorescent orange-red and predominantly so, with lettering or symbols in a contrasting color.

VII. DOCUMENTATION

A. General

OSHA has mandated that certain records be kept. These include medical records and training records. But the School of Dental Medicine will keep sterilization logs and cubicle inspection check list and any other record which it feels are necessary to ensure it is minimizing or eliminating the exposure to infectious diseases.

B. Sterilization Logs

Each area operating autoclaves will keep an operating and spore testing log as found in the Appendix E for each autoclave they operate. The log should also reflect any repairs and retesting before resumption of normal use. The sterilization log must be turned into the Infection Control Officer or his designee once a month.

C. Medical Records

1. The School of Dental Medicine shall establish and maintain an accurate record for each health care worker with occupational exposure, in accordance with 29 CFR 1910.20.

2. This record shall include the following:

    a) The name and social security number of the health care worker;

    b) A copy of the health care worker's Hepatitis B vaccinations and any medical records relative to the health care worker's ability to receive vaccination as required by the section on Hepatitis B vaccination;

    c) A copy of all results of examinations, medical testing and follow-up procedures are required by the section on Post-Exposure Evaluation and Follow-up;

    d) The School of Dental Medicine's copy of the health care professional's written opinion as required;

e) A copy of the following information provided to the health care professional

i. A copy of the Standard;

ii. A description of the exposed health care worker's duties as they relate to the exposure incident;

iii. Documentation of the route(s) of exposure and circumstances under which the exposure occurred;

iv. Results of the source individual's blood testing, if available;

v. All medical records relevant to the appropriate treatment of the health care worker including vaccination status which are the School of Dental Medicine's responsibility to maintain.

3. **Confidentiality**

The School of Dental Medicine shall ensure that the following health care worker medical records required by the Standard are:

a) Kept confidential

b) Not disclosed or reported without the health care worker's express written consent to any person within or outside the workplace except as required by the Standard or as may be required by law.

The School of Dental Medicine shall maintain the records as specified by the section on Recordkeeping for as least the duration of employment plus 30 years in accordance with 29 CFR 1910.20.

D. **Training Records**

1) Training records shall include the following information:

a) The dates of the training sessions;

b) The contents or a summary of the training sessions;

c) The names and qualifications of persons conducting the training;

d) The names and job titles of all persons attending the training sessions.

2) Training records shall be maintained for three years from the date on which the training occurred.

E. **Availability**

1) The School of Dental Medicine shall ensure that all records required by the Standard shall be made available on request to the Assistant Secretary of Labor for Occupational Safety and Health or designated representative (hereafter referred to as "Assistant Secretary"), and the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative (hereafter referred to as ("Director"), for examination and copying.

2) Health care workers' training records shall be provided upon request for examination and copying to health care workers, to health care workers' representatives, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

3) Health care workers' medical records shall be provided upon request for examination and copying to the subject health care worker, to anyone having written consent of the subject health care worker, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.20.

F. **Transfer of Records**

1. The School of Dental Medicine shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.20.

2. If the School of Dental Medicine ceases to do business and there is no successor employer to receive and retain the

records for the prescribed period, the School of Dental Medicine shall notify the Director at least three months prior to their disposal, and transmit them to the Director, if required by the Director to do so, within that three month period.

APPENDIX A

Hand Washing Techniques and Hand Care

Hand washing is one of the most effective means to control the spread of organisms from health care worker to patient and from patient to health care worker. In addition, it helps protect the health care worker's skin because wearing gloves for extended periods of time promotes the growth of bacteria and skin irritation. The Center for Disease Control recommends the following:

A. General Suggestions

1. Keep fingernails short and well manicured, using a wood or plastic stick to clean under the fingernails.
2. Remove all jewelry or rings during the treatment day.
3. Do not wear fingernail polish or false fingernails.

B. At the Beginning of the Treatment Day

1. Remove all jewelry or rings.
2. Clean fingernails.
3. Wash hands with antimicrobial soap for approximately two minutes.
4. Rinse with cool to lukewarm water for ten seconds.
5. Dry hands, then forearms, with clean paper towel.
6. Use a clean paper towel to turn off faucet (unless automatic or foot controls are used). Do not touch faucet handles with your clean hands; if you do, you may contaminate your just cleaned hands.

C During Treatment

1. Alcohol based hand rubs
2. Apply to palm of one hand, rub hands together covering all surfaces until dry.

1. When hands are visibly soiled, wash with soap and water.

2. If hands are not visibly soiled, use an alcohol-based handrub for routinely decontaminating hands.

D. **Between Patients**

1. Wash your hands for ten seconds, then rinse for ten seconds.

2. Repeat lathering and rinsing two times.

3. Dry hands.

4. Use a clean paper towel to turn off faucets, unless automatically or foot controlled.

C. **Surgical Scrubs**

A surgical procedure requires a higher standard of hand washing, since invasive procedures would allow a greater transmission of bacteria. Therefore, before surgery:

1. Be sure all jewelry is removed. This would include rings, bracelets, watches, etc.

2. Clean fingernails.

3. Scrub hands, fingernails and forearms to the elbows with antimicrobial soap for two minutes.

4. Rinse thoroughly, first the hands, then forearms, allowing the water to run from your hands down the forearms.

5. Repeat this several times.

6. Dry with a sterile towel.

7. Use an alcohol based Handrub, apply to palm of one hand, rub hands together covering all surfaces until dry,

Hand lotion can be applied at lunchtime, after the treatment day, and before bedtime to help keep your skin from drying and chapping.

APPENDIX B

COMMON PROSTHODONTIC / ORTHODONTIC ITEMS

To Be Sterilized (Autoclaved)	**To Be Disinfected**
bristle brushes	articulator
orthodontic pliers	trial bases
all burrs including acrylic	casts
stock impression trays	torch
central bearing plates for articulator	compound heater
rag wheels	shade guides
compound heater tray	facebow (minus fork)
#7 wax spatula	rulers
metal handle mixing spatulas	knives
facebow fork	mold guides
	mixing bowl
	mixing spatulas

Adapted from: Cohen, J.A., Terezhalmy, G.T., and Molinari, J.A. (1991). Practical Infection Control in Dentistry (1st Ed) Philadelphia: Lea and Febiger.

DISINFECTION OF DENTAL IMPRESSIONS

Impression Material	Disinfection Procedure
Alginate	Rinse thoroughly with water; immerse in citrace for 5 minutes; then rinse again with water.
Vinyl polysiloxane (Reprosil)	Rinse thoroughly with water; immerse in citrace for 5 minutes; then rinse again with water.
Zinc Oxide	Rinse thoroughly with water, immerse in citrace for 5 minutes; and then rinse again thoroughly.

APPENDIX C

DISEASE IMMUNIZATION CHECKLIST TABLE
(Refer to "Other Immunizations" of Part IV: Prevention of this manual)

Disease	Recommendation
Hepatitis B	REQUIRED
Influenza	RECCOMMENDED
Measles	RECCOMMENDED
Mumps	RECCOMMENDED
Polio	RECCOMMENDED
Rubella	RECCOMMENDED
Tetanus	RECCOMMENDED
Pertussis	RECCOMMENDED
Diphtheria	RECCOMMENDED

APPENDIX D

Hepatitis B Vaccine Declination (Mandatory)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

_____

Employee signature

_____

Date

APPENDIX E

STERILIZATION AND TESTING LOG FOR AUTOCLAVES

SAMPLE

Location of Autoclave: Dispensary
Principal Operator: Joe Smart

Date	Load #	Time of Cycle	Temperature Reached?	Load Biologically Monitored?	Test Results	Action Taken/ Remarks
6/1/97	1 2 3 4 5	9:35 am 11:00 am 3:00 pm N/A N/A	Yes Yes Yes	No No No		
6/2/97	1 2 3 4 5	9:00 am 11:00 am 1:00 pm 4:00 pm N/A	Yes Yes Yes Yes	No No No Yes	NEG	
6/3/97	1 2 3 4 5	9:00 am 10:00 am 1:00 pm 3:00 pm 4:30 pm	Yes Yes Yes Yes Yes	No No No No No		
6/4/97	1 2 3 4 5	9:00 am 11:00 am 1:00 pm 3:20 pm N/A	Yes Yes Yes Yes	No No No Yes	POS	Repairman called; replaced faulty valve; declares autoclave should be OK; spore test to be run in morning.
6/5/97	1 2 3 4 5	8:30 am	Yes	Yes	NEG	Autoclave passed test; resume normal use.
6/6/97	1 2 3 4 5					

APPENDIX F

Infection Control Inspection Form

Date	
Cubicle #	
Student #	
Student name	

1st offense	Verbal warning
2nd offense	Written warning
3rd offense	- No credit for procedure - Verification of blood-borne pathogen training class before reinstatement in the clinic
4th offense	Referral to Student/Faculty relations committee
Note	**The infection control officer or his designee will suspend you immediately from clinical activities if any infection control offense poses an immediate threat to the safety of patients, faculty, staff, other students or yourself.**

Pre-clinical areas	Clinic areas	
Personal Protection Equipment		
		Gloves, Mask and Eye Protection MUST be worn whenever treating patients or working on typodonts
NA		All patients must wear eye protection during treatment
NA		Students/residents must wear protective gowns/barrier coats at all times during clinical procedures.
		Wash your hands with soap and water or alcohol hand rub before putting gloves on and after taking gloves off
		Hair must be constrained and kept out of the treatment field
Disinfection/Sterilization		
NA		All instruments/items used for patient treatments must be cleaned or sterilized where appropriate (including burs, lab burs, and denture polishing wheels)
NA		Sterilized instruments must not be open until patient is seated and preceptor gives approval
NA		Slow speed motors/ electric motors must be sprayed and wiped with Citrace.
NA		High speed and slow speed attachments must be cleaned, lubricated, bagged and sterilized
NA		All instruments must be taken to dispensary for sterilization after every patient
NA		All surfaces that can be disinfected must be sprayed and wiped using Citrace or Caviwipes between every patient.
		Impressions must be sprayed with Citrace immediately after being made (not applicable to typodont)
		Water lines must be flushed for 30 seconds before treatment and after completion of treatment
Barriers		
NA		Remove barrier tape from light, handles, etc. after each patient
NA		Chairs and X-ray heads must be covered with clean cover for each patient
NA		Surfaces that cannot be disinfected must be covered with blue barrier tape available in the clinics.
Sharps		
		All sharps must be disposed in the sharps containers only
NA		Safety needle plastic cap must cover needle when not in use
NA		Needles and anesthetic are to be out of site during the day and locked up at the night
Environment		
		No lab work to be done in the cubicle

		All counter tops, walls and ledges must be clean, free and clear
NA		Place models in boxes, keep models in plastic storage bins
		Remove all personal effects from cubicle
NA		Uncovered High Vac Tips and Saliva Ejectors must not be stored on suction hoses
		Clean chair, armrest, and bottom of the chair/manikin
		No food or drinks are allowed in the clinics or pre-clinical laboratories
		General cleaning of cubicle. Cover expendable materials i.e., bibs, cotton rolls, masks, etc.
		Never handle chart, write in chart, or handle radiographs with gloves on.
Other		
		Description:

Infection control officer or designee (last name and signature) _____

Faculty # _____

Compliance with this Infection Control Manual is mandatory by all personnel in the dental school. Violation will result in:

1st offense -	verbal warning
2nd offense -	written warning and no credit for procedure in process
Subsequent offenses -	immediate suspension from the clinic and students on emergency duty will see your patients and receive credit for the work they perform on your patients. The offender must take an infection control course and show proof of attendance at said course, or other remedial work at the discretion of the Infection Control Officer. If a suspension is imposed, student will be referred to the Committee on Faculty Student Relations and time must be made up during down time as directed by the Infection Control Officer or the Committee on Faculty Student Relations.

Appeals regarding the decision of the Infection Control Office can be made to the Office of the Associate Dean of Clinical Affairs.

NOTE: THIS MANUAL CAN BE UPDATED, MODIFIED, OR AMENDED AT ANY TIME AT THE DISCRETION OF THE INFECTION CONTROL OFFICER. ANY CHANGES WILL BE EFFECTIVE IMMEDIATELY UNLESS OTHERWISE INDICATED.

APPENDIX G

MANDATORY COMPLIANCE

The provisions contained in this infection control manual shall be adhered to by all faculty, staff and students. Failure to adhere to any of the provisions contained in this manual will be grounds for discipline up to and including termination from employment and dismissal from the University.

Acknowledgment

I acknowledge that I have read the Case Western Reserve University Basic Clinic and Infection Control Manual. I further acknowledge that I understand the contents of the manual and agree to abide by its contents. I also acknowledge that I was given ample opportunity to ask questions and seek clarifications for the contents of this manual.

_____
Name (please print clearly)

_____
Student Number

_____
Signature

_____
Date

Please sign and return this form to the Dispensary Manager's office.

Addendum I

Maintenance of Work Areas

1. All cubicles will be cleaned.

    a. Chairs
    b. Counter tops

2. Pictures, calendars, wallpaper, gloves, etc. will be moved from the walls.

3. Shelves (wall mounts or free standing), file cabinets, tables and boxes are to be removed from cubicles.

4. Book bags, coats and personal items are to be stored in your locker.

5. Radios, tape recorders and VCRs are not permitted in the cubicle.

6. Food and beverages are not permitted.

7. Patient files must remain at the front desk during the day. The only chart that is permitted in the cubicle is the chart that belongs to the patient you are working on. All charts must be returned to the front desk at the end of each day. No charts are to leave the school at any time for any reason.

8. Counter tops will be cleaned of everything with the exception of current patient file, glove box and your instruments.

9. All anesthetic needles plus carpules will be in your roll around at all times.

10. You are responsible for the maintenance and cleanliness of your work area.

NOTE: **Appendix F applies to this Addendum.**

Caring for Clinical Computers

Please remember the following tips to care for clinical computers:

- Monitors, including the screen, can be cleaned with Caviwipes.
- Avoid splashing liquids on the monitor. Clean off anything that gets on the monitor as soon as possible to prevent damage.
- Cover the mouse with blue barrier tape. **The mouse is NOT water resistant.**
- Keyboards are water resistant and fairly rugged. However, do not let liquids run down the cord to the computer.
- When not in use, keyboards can be rolled up and put out of the way **– but do not fold them.**
- Keyboards can be cleaned with Caviwipes, Citrace, etc. Avoid harsh chemicals such as acetone and monomers. Please remember to keep them clean, including cleaning them between patients.
- Make sure to leave adequate space around the computer for airflow. Otherwise systems may be damaged by overheating.

Use of the computer:

- The login process to this system is the same as in the student computer lab. Use your Case Network ID and password and log in to INS.CWRU.EDU.
- Should your system not function, first ensure that the network and power cables are plugged in, and the power strip, the system and the monitor are all turned on.
- Please let IT know immediately if your computer does not properly function. In most situations, a replacement will be available shortly.
- Turn your system off at the end of the day.

You can reach IT by clicking on the “Report a problem” form on the desktop.

Exposure Control Plan for
Bloodborne Pathogens

This document will to serve, as the Exposure Control Plan for Bloodborne Pathogens as required by CFR 29 part 1910.1030. for CWRU School of Dental Medicine, and is an integral part of the infection control manual.

This document contains the following sections:

Departmental Responsibilities

Appointment of Exposure Control Officer and Exposure Determination
Creation of Exposure Control Plan
Application of Universal Precautions
Methods of Compliance including:
- Work Practice Controls
- Engineering Controls
- Personal Protective Equipment (PPE)
- Housekeeping
- Use of HIV or HBV in Laboratories
- Retraining/Modifications of Exposure Control Plan

Shared University Responsibilities
Training
Record Keeping
Hepatitis B Prophylaxis
Exposure Incident Counseling
Labeling and Signage

Exposure Control Plan for Bloodborne Pathogens

Dental Clinic Responsibilities

1) Appointment of an Exposure Control Officer and Exposure Determination

Appointment of an Exposure Control Officer

This Exposure Control Plan is in effect for CWRU School of Dental Medicine. This school is located at 2123 Abington Road, Cleveland, Ohio, 441106. The Exposure Control Officer is Fady F. Faddoul, D.D.S., M.S.D. who can be reached at telephone number (216) 368-3994. The Assistant Exposure control Officer is Lucinda Kaye, who can be reached at (216) 368-6738.

This Exposure Control Plan was implemented on November 23, 1998. The Plan must be reviewed annually. The date it was last reviewed is listed below.

___7-1-09____

Listed below are important items that must be adhered to at the School of Dental Medicine. This will enable us to have a successful Exposure Control Plan.

Hand washing Facilities: are available and located in each treatment area. Soap & alcohol based hand rubs are provided in each treatment area.

SHARPS containers are available. X Yes No

Secondary containers are available and properly labeled. X Yes No.

Universal Precautions are used at the School of Dental Medicine. X Yes No.

In case of exposure to bloodborne pathogens:
The following protocol **MUST** be followed:

The Exposure Control Officer Fady Faddoul, D.D.S., M.S.D. who can be reached at (216) 368-2780 will be notified as soon as possible.
In case the Exposure Control Officer named above cannot be immediately reached, his assistant Lucinda Kaye will be notified and she will contact him.

Exposed individuals will go to University Health Services (x2450) as soon as possible (after hours, to University Hospitals Emergency Room).
If the exposed individual is not a student or an employee of the School of Dental Medicine, the exposure control officer or his assistant will direct that individual to the appropriate testing facility and any other action to be taken in connection with the incident.

NOTE: If the above protocol is not adhered to, the School of Dental Medicine will not be responsible for any charges incurred at a private physician or other facilities unless approved by the Exposure Control Officer.

Contaminated Laundry must be properly handled and contained. Cleaning is performed by University Hospitals of Cleveland (UHC) Laundry Department. The telephone number for that service is (216) 844-1894. Companies outside the University (including UHC) handling potentially contaminated clothing are notified in writing that laundry may be contaminated with bloodborne pathogens.

Exposure Determination:

Individuals Needing Training are identified based on their job category as described bellow:

CATEGORY I - Job Classifications where all employees will have potential for occupational exposure to Bloodborne Pathogens.
The following Job classifications at the School of Dental Medicine fall under this Category:
Accounting Clerk II
Adj/Clin Asst Professor
Adj/Clin Instructor
Administrative Manager
Analy/Programmer I
Analy/Programmer III
Assistant Professor
Assoc Professor & Chair
Associate Professor
Clerk II
Clerk III
Dent Clin Assoc Professor
Dent Clin Asst Professor
Dental Assistant I
Dental Assistant II
Dental Technician
Department Admin I
Department Admin II
Department Assistant II

Department Assistant III
Department Assistant IV
Director
Dispensary Tech.
Full Time Lecturer
Instructor
Post Doctoral Fellow
Professor
Professor & Chair
Professor & Dean
Secretary III
Secretary IV
Senior Research Associate
Supervisor
Telecommunications Op I
Visiting Faculty

CATEGORY II - Job Classifications where some employees will have potential for occupational exposure to Bloodborne Pathogens.

The following Job classifications at the School of Dental Medicine fall under this Category:

Analy/Programmer I
Analy/Programmer III
Department Assistant II
Director
Secretary IV
Telecommunications Op I

CATEGORY III (optional) - Job Classifications in which all employees will never work with bloodborne pathogens.

Department of alumni

CATEGORY IV - All other personnel not included in the above categories who will have potential for exposure to BBP

All dental students.

Tasks and procedures performed in which occupational exposure occurs.

The following tasks and procedures are performed in this clinic and may cause occupational exposure:

patient treatment procedures, radiographic procedures, cleaning, disinfection and sterilization of instruments, environmental surface and equipment disinfection, dental clinic procedures, handling contaminated laundry, handling infectious waste, repairing dental equipment, handling infectious tissues and body fluids in the research clinic, filing and handling dental patient records at the main and auxiliary reception areas, filing and handling dental patient records at the specialty clinic reception areas, handling patient records in the dental insurance area, handling patient records at the data processing areas, handling patient records at the Cashiers' Office, handling patient records at the Office of the Associate Dean for Clinical Affairs, and handling prosthetic cases for shipment to outside dental laboratories

2) Creation of an Exposure Control Plan

The heart of the exposure control plan consists of a written procedure document describing proper clinic conduct. It is broken down into five categories, which will be further discussed here: Application of Universal Precautions, Methods of Compliance including Engineering Controls, Work Practice Controls, Personal Protective Equipment (PPE) and Housekeeping. Additional requirements for laboratories using HIV or HBV or that modify clinic protocols are also given.

3) Application of Standard Precautions

The concept of Standard Precautions states that all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. CWRU has further adopted the following two concepts as "universal" for this campus: (1) any red/orange containers or bags contain bloodborne pathogens; (2) all SHARPS must be considered potentially infectious (except glass).

The Exposure Control Officer must ensure that all participating employees understand and employ Universal Precautions.

Standard Precautions
Blood and Saliva from all dental patients are considered potentially infectious materials.
Below are examples of Standard Precautions that should be followed:

- Gloves are of appropriate size, material and quality for the task.

- Hand washing and/or use of an alcohol based handrub will occur:
  Immediately, or as soon as feasible, after skin contact with blood or other potentially infectious materials occurs.
  At the completion of a procedure where PPE is removed.
  Whenever leaving the clinic.
  If PPE is discarded due to damage or exposure.

- Flushing mucous membranes immediately or as soon as feasible if they are splashed with blood or other potentially infectious materials.

- All unlabeled items will be considered potentially infectious.

- Unlabeled red/orange containers or bag liners are considered to be biohazardous containers.
- Items inside of/on a properly labeled container or rack do not require separate biohazard labels.

- The contents must be identified/labeled.

- Refrigerators and incubators are to be labeled if they contain biohazardous materials. All items inside will be considered infectious.

- Other_____

4) Engineering Controls

Engineering controls are those devices and/or tools that increase employee safety by isolating or removing bloodborne pathogens hazards or limiting the potential for exposure at or as near as possible to the point of origin. All Personnel are expected to utilize these devices appropriately whenever working with or at risk of being exposed to blood borne pathogens. Training in the proper use of engineering controls is the responsibility of the Exposure Control Officer, Fady F. Faddoul, D.D.S., M.S.D. ***Please refer to CWRU School of Dental Medicine Infection Control Manual, section II, Methods of Compliance for more information.***

Should it be necessary to perform a procedure without the engineering controls normally used (because the engineering controls will increase the risk of exposure or otherwise endanger personnel), the Exposure Control Officer **MUST** be notified. He will investigate and document why it was necessary to dispense with the engineering controls. Only after his written approval can those engineering controls be waved or other ones installed that are more appropriate to the task being performed. This must be done each time and should only be considered in unusual circumstances.

The following Engineering Controls are in place in the CWRU School of Dental Medicine as they apply to the dental operatory, to isolate or remove the hazard from employees.

Containers

- Primary containers are properly labeled and sealed, leak proof

- Secondary containers are properly labeled and leak proof. These are to be used in case the primary containers fail and when transporting containers from lab to lab.

Waste containers:

- **SHARPS** containers (red, puncture-resistant, leak-proof, with lids in place)
- **BIOHAZARDOUS WASTE RECEPTICLES** (red, leak-proof and universally marked)

Other Engineering Controls

Self-sheathing needles, Needle Distancing Devices (Hemostats and Clamps), Rubber Dams, Highspeed Evacuators, Clamps/tongs

ENGINEERING CONTROLS

In addition to the general engineering controls described above, this clinic will institute the following controls when performing certain procedures unique to this clinic, designed to enhance worker safety.

Procedure(s) _____
Engineering control _____
_____

Procedure(s) _____
Engineering control _____
_____

Procedure(s) _____
Engineering control _____
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Engineering control _____
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Engineering control _____
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Procedure(s) _____
Engineering control _____
_____

Procedure(s) _____
Engineering control _____
_____

5) Work Practice Controls

Work Practices are methods and procedures that are incorporated into activities to minimize the potential for exposure***. Please refer to CWRU School of Dental Medicine Infection Control Manual, section II, Methods of Compliance for more information.*** The Exposure Control Officer, Fady F. Faddoul, D.D.S., M.S.D., is responsible for identifying appropriate work practices and ensuring that they are followed. Under certain circumstances these procedures need to be modified or discarded, if they would increase the possibility of employee exposure. It is the responsibility of the Exposure Control Officer to investigate these abnormal conditions and recommend alternate work practices that may be used. These deviations from normal clinic procedures must be documented.

The following work practices will be used at the CWRU School of Dental Medicine.

Hygiene

- Food and drink are not to be stored or consumed in the Clinics or laboratories.
- Cosmetics and medicines are not to be stored or used within the Clinics.
- Hand washing will occur:
    - At the beginning of the day
    - If your hands become visibly soiled.
    - Before each new patient.

- Use of an alcohol based hand rub will occur:
    - Whenever you take gloves off, whenever you change gloves.
    - In conjunction with a surgical hand washing.
    - Gloves must be removed at the completion of a procedure where PPE is removed.
    - Gloves must be removed whenever leaving the cubicles.
    - Whenever leaving the Clinic.
    - If PPE is discarded due to damage or exposure.

Needle/SHARPS Usage

- Self-sheathing needles are in use in this Clinic.

If any other type is used, needles MUST NOT be recapped.

- Needles/SHARPS are not to be left in the work areas. They are to be disposed of promptly in approved SHARPS containers with lids.
- Approved SHARPS containers are red, leak-proof, purchased from an approved manufacturer, and will have lids properly in place.
- Discarded or dropped needles/SHARPS are to be handled using engineering controls as much as possible.
- Needles may not be sheared or broken.
- Needles MUST NOT be recapped or bent. Contaminated needles MUST NOT be removed from syringes-unless required by the dental or medical procedure or no alternative is feasible-in which case it must be done by mechanical means, such as the use of forceps, or using a one-handed scoop up technique.
- Red containers are assumed to contain SHARPS or biohazardous materials regardless of any labeling.
- Non-red SHARPS containers must be labeled "SHARPS" and "Biohazard."
- Uncontaminated glass bottles are not to be thrown out unless placed inside of boxes and sealed with tape.
- Boxes of uncontaminated glass may not weigh more than 50 pounds and must be labeled "SHARPS" and "Broken Glass."
- Regular housekeeping personnel may dispose of properly packaged and labeled-uncontaminated glass.
- Storing, transporting or shipping blood or other potentially infectious materials-such as extracted teeth, tissue and impressions that have not been decontaminated-in containers that are closed, prevent leakage, colored red, or affixed with the biohazard label is prohibited.

Contaminated Equipment

- Equipment must be examined for contamination prior to its removal from the clinic for servicing or other uses.
- Contaminated equipment must be decontaminated if possible.
- Contaminated equipment that cannot be decontaminated must be labeled with a biohazard label indicating that it is contaminated. This label must describe the parts of the equipment contaminated and the type of contamination.
- Contaminated equipment that is to be sent out of the school must have a description of the contaminated parts given to all parties who will be in contact with the equipment.

PROCEDURAL WORK PRACTICES

In addition to the general work practices described above, this clinic will institute the following work practices when performing certain procedures unique to this clinic, designed to enhance worker safety.

Procedure(s) _____
Work Practice _____
_____

Procedure(s) _____
Work Practice _____
_____

Procedure(s) _____
Work Practice _____
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Procedure(s) _____
Work Practice _____
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Work Practice _____
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Procedure(s) _____
Work Practice _____
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Procedure(s) _____
Work Practice _____
_____

Procedure(s) _____
Work Practice _____
_____

6) Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) refers to protective hand, body, and facial garments. It is the employer's responsibility to supply PPE.

PPE can be selected with the following guidelines: the PPE will not leak or pass through infectious materials that can come in contact with the employee; PPE is to be available in sizes to fit all employees; PPE is easily located and accessible. Contact the Exposure Control Officer, Fady F. Faddoul, D.D.S., M.S.D., at 216-368-2780 for guidance.

The following PPE is in place at the Case Western Reserve University School of Dental Medicine. Please refer to CWRU School of Dental Medicine Infection Control Manual, section II, Methods of Compliance.

Respiratory Protection

In general, respiratory protection is not necessary if engineering controls (hoods or cabinets) can be demonstrated to be effective. **NOTE:** surgical masks and dust masks are **not** to be considered adequate respiratory protection from airborne infectious agents.

Respiratory Protection is not normally needed at the CWRU School of Dental Medicine.

Hand Protection

Synthetic, non-latex gloves are to be used.
Insulated gloves are to be used when dealing with frozen or hot agents.
In certain situations the need for gloves is abated by engineering controls and/or work practices. Those situations must be approved by the infection control officer.
Bandages will cover any known wounds or breaks in the skin.
Thick utility gloves are to used when cleaning instruments or work areas.

Body Protection

Clinic jackets may be used when not treating patients.
Clinic jackets or Protective clinical gown gowns **Must** be used when treating patients.
Aprons may be used in Radiology Development and Dispensary.
Surgical gowns may be used.
Head/hair covering may be required.
Protective shoe covering may be required.
Surgical Masks **Must** be worn as a physical barrier when treating patients or when there is potential of exposure to airborne particles.

Eye Protection

Safety Glasses (protects eyes from dusts/particulates) Face Shields (protects entire face from splashing liquids)

UNIQUE PPE

Listed below are unique PPE needed only for certain procedures or PPE that is to be used in this clinic for all procedures that have not been previously described.

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

PPE _____ Procedure _____

Description_____

7) Housekeeping Practices

Housekeeping, or keeping the clinic in a clean and sanitary condition, is also required by the standard. The clinic must establish a protocol describing the disinfectant, PPE, and work practices to be used when cleaning, as well as how often the area is to be cleaned. The minimum acceptable housekeeping should be performed at the conclusion of the procedure and either daily, weekly or monthly, depending on the frequency of the procedures (obvious spills must be cleaned up immediately or as soon as feasible). The Exposure Control Officer, Fady F. Faddoul, D.D.S., M.S.D., who can be reached at (216) 368-2780, can set up these schedules.

CWRU housekeeping staff is not trained in these techniques and are unfamiliar with the organisms, threats and hazards present not only by different laboratories but also by different sections of the same clinic. Housekeeping must be done by clinical personnel for these reasons.

Proper waste disposal is also a part of good housekeeping, and the major precepts of CWRU's biohazardous waste disposal requirements are given again in this section. Please read Chapter Four of the Chemical Safety Manual for complete information.

The following housekeeping protocols are in place in CWRU, School of Dental Medicine. When a choice is presented, check the appropriate protocol, which will be used.

Contamination Sources

Listed below are the bloodborne pathogens that will be encountered in this clinic:

Hepatitis B, Hepatitis C, HIV (AIDS), other bloodborne pathogens relating to human blood, tissues or body fluids.

PPE

The following PPE will be worn when cleaning:

Body Protection:	Lab coats or protective clinical gown gowns
Eye Protection:	Safety Glasses or Face Shield
Hand Protection:	Thick utility gloves
Respiratory Protection:	Patients with active Tuberculosis are usually not treated at the CWRU School of Dental Medicine. They are referred to University Hospitals of Cleveland or other appropriate

facility for treatment. Therefore, respiratory protection is not needed.

Cleaning Materials

The following cleaning solutions will be used:

Disinfectant:	15% diluted bleach solution or Caviwipes
Absorbents:	paper towels

Work Practices/Engineering Controls

- Universal precautions are observed.
- Leaking liquids are contained.
- Regulated waste containers are properly assembled and used.
- If a 15% bleach solution is used as the disinfectant, it is given 20 minutes to soak onto surfaces/equipment.
- Broken glassware which may be contaminated is picked up using appropriate engineering controls--tongs, forceps, or broom and dustpan.
- Instruments and other non-disposable dental practitioner's materials must be sterilized in autoclave or chemicalclave.

Work Surfaces

The following surface areas are to be decontaminated:

Cubicle counters, backsplash, sink, tray, light, chairs

Decontamination Schedule

Decontamination will be performed:

- Immediately after any spill of biohazardous materials in the work area
- At the completion of any procedures involving biohazardous materials
- At the end of each work shift if any procedures involving biohazardous materials have been performed.
-

Decontamination will also be performed at the following intervals:

- At the end of treatment of each patient and at the end of each workday.

Regulated Biohazardous Waste

Biohazardous wastes in the CWRU School of Dental Medicine Clinics are classified either as SHARPS or infectious wastes:

SHARPS are any item capable of causing puncture wounds or cuts.

Examples include: discarded hypodermic needles, syringes, and scalpel blades. Cannulas, cover slips, microscope slides, all pipettes (glass or plastic) and pipette tips, test tubes, or glass Petri dishes. Also, broken glass or any other item capable of causing puncture wounds or cuts.

All SHARPS, whether contaminated or not, must be contained in puncture-proof containers:

- All contaminated SHARPS; needles, syringes and scalpel blades; and all materials designed for use in biological, etiological, bacteriological or tissue culture work must be placed in red rigid SHARPS containers.

- All other SHARPS (such as broken glassware) which are not contaminated may be discarded in red SHARPS containers OR in a cardboard box labeled "SHARPS." The box should be lined with a plastic bag to prevent leaking and sealed with tape. The box must be clearly labeled "SHARPS" so that anyone inspecting the box will be aware of the nature of the hazard.

- Empty glass chemical bottles must be marked "MT," have their label defaced, and be placed in cardboard boxes marked "SHARPS, Broken Glass" and sealed with tape. All bottle caps must be removed.

Hypodermic needles must not be recapped, clipped, broken or disassembled prior to disposal.

Infectious waste is defined as any non-sharp materials contaminated with blood borne pathogens or other pathogens.

Examples include: all infectious plastic Petri plates and plastic tissue culture vessels containing media, cultures and stocks of infectious agents, devices used to transfer, inoculate or mix such agents, and paper or cloth material contaminated with these agents.
Infectious wastes are to be placed in approved biohazardous waste containers: red, sealed, leak-proof. The biohazard symbol may also be on the container or bag liner.
If other containers are designated as containing biohazardous materials, provisions must be made to notify non-clinic personnel of this prior to their entering the clinic. This must also be noted in the Exposure Control Plan.

Infectious wastes must be treated prior to disposal. Steam sterilization is the simplest, most effective method and should be conducted as close to the point and time of waste generation as possible. All waste must be sterilized in red or orange biohazardous bags. All bags must be autoclavable and conspicuously labeled with the international biohazard symbol.

After sterilization and cooling, these bags are to be denoted "sterilized" and tagged with the Primary Investigator's name and date of sterilization. All biohazardous bags must remain in the room/clinic for evening pick up. Biohazardous waste must be disposed of expeditiously.

Note that under State law, autoclaved infectious waste is still regulated. Do not throw it away in the regular trash as uncontaminated or general clinic waste.

NO SHARPS (which includes glass and plastic pipettes) are permitted to be placed in these autoclaved bags or any other bag. Such SHARPS are a hazard when handling these bags and cause contaminants to leak from bags in transit. These must be disposed of in the red rigid SHARPS container as biohazardous SHARPS.

Contaminated Laundry

- Contaminated laundry will be handled as little as possible.
- It will not be sorted or rinsed in the clinic.
- It will be placed in properly labeled, sealed and leakproof containers.
- It will be collected in the clinic and washed. If the clinic does not have the means to clean the laundry, a private laundry service must be used.
- Employees are prohibited from taking contaminated laundry home to be cleaned.

Companies outside the University (including University Hospitals) handling potentially contaminated clothing must be notified in writing that laundry may be contaminated with bloodborne pathogens.

8) HIV & HBV Research Laboratories

This section does not apply to CWRU School of Dental Medicine Clinics.

Laboratories that culture, experiment on, or manipulate either HIV (AIDS) or HBV (Hepatitis B) have stricter requirements. Some of the items listed below pertain to all laboratories working with bloodborne pathogens but since the standard deliberately repeats them under this section, this document does the same.

Check one of the following:

__**X**___ This clinic does not use either HIV or HBV. Requirements under this section of the blood borne pathogens standard do not apply.

_____(Signature) Exposure Control Officer for _____
(PI's clinic) located in _____ Building, Room _____

_____ This clinic does use either HIV or HBV. The following requirements under this section of the blood borne pathogens standard apply.

_____(Signature) Exposure Control Officer for _____
(PI's clinic) located in _____ Building, Room _____

Warning Signs and Labels

Posted at entrances of all laboratories using biohazardous materials are red/orange biohazard signs and the name and telephone number of the PI and an alternate contact.

In addition, entrance signs for laboratories using HIV or HBV must include:

- Identity of the infectious agent
- Special requirements needed for entering the area
- All waste materials will be placed in containers either red or orange in color or marked with the biohazard symbol.
- All specimens will be kept in containers either red or orange in color or in containers marked with the biohazard symbol.
- All storage devices (refrigerators, freezers, etc.) will be marked with a biohazard symbol.
- Specimens do not have to be marked individually if stored, transported or shipped in a secondary container that is properly marked.

PPE

- Proper PPE is to be defined for the work area and animal rooms.
- Gloves must be worn at all times in the work area to avoid unnecessary skin contact with infected items.
- PPE must be discarded when leaving the work area or animal rooms.
- Contaminated PPE must be decontaminated before laundering.
- Appropriate PPE used: _____

Engineering controls

The following will be used along with appropriate PPE when working with other infectious materials, which may create droplets, aerosols, splashes or spills or other exposure hazards.

_____ Certified biological safety cabinet class I
_____ Certified biological safety cabinet class II
_____ Certified biological safety cabinet class III

Biological safety cabinets shall be certified upon installation, when moved and at least annually.

_____ Glove boxes
_____ Centrifuge safety cups
_____ Sealed centrifuge rotors
_____ Containment caging for animals
_____ Other _____
_____ Other _____

Work Areas

- An autoclave shall be readily available for decontamination.
- Sinks for hand washing must be readily available.
- Eyewash stations must be readily available.

Training Requirements

In addition to the training requirements for all labs, given in Section 1 under University Responsibilities, laboratories using HBV or HIV must receive the following initial training:

- The employee must demonstrate proficiency in standard microbiological practices and techniques as well as practices and operations specific to the facility.
- Employees must have previous experience in handling human pathogens and tissue cultures before they may work with HBV or HIV.
- The employer must provide a training program for employees without experience working with human pathogens.
- Initially human pathogens are not to be handled.

- Demonstration of proficiency in techniques with non-infected specimens will qualify the employee to handle pathogenic material, then HBV- and HIV- containing materials.
- Employees are not to work with HBV- or HIV-containing specimens until proficiency is developed.

Work Practices

- All regulated waste will be disposed of by incineration and/or be decontaminated by autoclaving prior to leaving the building.
- Clinic doors will be kept closed while work with HIV or HBV or infected specimens are in progress.
- Access will be limited to authorized clinic personnel.
- Written policies and procedures will be put into effect establishing that only personnel who are aware of the biohazard involved, entry and exit procedures are to enter the work area.
    - Biosafety Manual:
    - Will be prepared or adopted.
    - Will be reviewed at least annually.
    - Personnel will be required to read and follow the manual.
- Hypodermic Syringe or Needle Use
- Hypodermic syringe or needles shall be used only for parental injection and aspiration from clinic animals or diaphragm bottles.
- Needle-locking syringes or onepiece syringe/needles shall be used for aspiration/injection of other infectious materials.
- Needles shall not be bent, sheared, or removed from the syringe following use.
- Hypodermic syringe or needles shall be placed in an approved puncture-resistant SHARPS container.
- Activities involving HIV or HBV will be performed in Biosafety cabinets, glove boxes or other physical containment devices only.
- Work involving HIV or HBV is never to be done on open clinic benches.
- Spills will be cleaned up immediately by trained clinic personnel.
- Exposure incidents will be reported promptly to the supervisor or PI.

9) Retraining/Modification of Exposure Control Plan

Retraining is to consist of any modifications of the clinic protocols since the last time training was offered. This will be determined by the Exposure Control Officer who **must** review the clinic's Exposure Control Plan at least once a year or when a major change in operations or procedures occurs. The date when the Exposure Control Plan was reviewed should be noted on the space provided in this document. A review of the Exposure Control Plan as part of retraining is not required but should be conducted.

Shared University Responsibilities

Certain portions of the Exposure Control Plan are best handled by the University in cooperation with laboratories: initial training, record keeping, Hepatitis B vaccinations, exposure counseling, and labeling and signage. Laboratories must cooperate and contribute to the successful application of these aspects.

1) Training

Safety Services offers training programs to all employees who may be exposed to blood or other body fluids potentially contaminated with HIV, HBV or other bloodborne pathogens. **All appropriate personnel must attend the training sessions.** To this end, job classification is required by the Exposure Control Officer as a means of identifying those employees who must receive such training (see "Clinic Responsibilities" above). Additionally, each clinic will have training requirements pertinent to clinic-specific procedures and policies.

Training must be accomplished within 10 working days. The Exposure Control Officer must ensure that each new employee:

- Receives orientation to the clinic
- Is informed of and has read the clinic's Exposure Control Plan
- Has an opportunity to ask questions about the clinic's Exposure Control Plan
- Is informed of the location and proper use of PPE (gloves, gowns, etc.).
- Attends CWRU's Bloodborne Pathogens Training, usually given at new employee orientation, during working hours and at no cost to the employee.

Safety Services also provides annual retraining classes on the Bloodborne Pathogen Standard, which all employees working with bloodborne pathogens are required to attend. See Section 2 below, "Recordkeeping," for the clinic's responsibilities.

2) Recordkeeping

The University is responsible for the keeping of all records--Safety Services maintains all training records, and University Health Services maintains all medical records.

To make sure that each employee's training record is up-to-date, the Exposure Control Officer must ensure that:

- Each employee attends annual refresher training when notified by Safety Services.
- A refresher on the clinic's Exposure Control Plan is conducted on an annual basis. The clinic can determine the need for site-specific

retraining by offering the retraining when Safety Services notifies personnel that they are to attend University retraining.

- Documentation is sent to Safety Services indicating that annual site specific retraining has been accomplished, to be included in the employees' safety training file.

3) Hepatitis B Prophylaxis

OSHA regulations require that:

- There be an HBV vaccination and post-exposure follow-up program.
- Pre-exposure vaccines be offered free of charge to all employees in Exposure Categories I and II (see above). Personnel in the CWRU School of Dental Medicine must be vaccinated as per state law.
- Complete and detailed documentation of exposure incidents be maintained. The University Health Service will maintain these records.
- Pre-exposure vaccine be offered within 10 days of initial work assignment.
- Employees refusing vaccination sign a declination statement.

It is the Exposure Control Officer's responsibility to ensure that:

- Appropriate personnel under his/her supervision are offered the vaccine within the required time period.
- Employees who do not begin the vaccination series or sign a declination form within 10 days do not work with bloodborne pathogens until either the vaccination series is begun or a declination form is signed.

4) Exposure Incident Counseling

"Exposure incidents" are specific eye, mouth, other mucous membrane, skin, or peritoneal contact with blood or other potentially infectious materials that result from the performance of an employee's duties.

Notification of the incident must be accomplished as soon as possible after the incident occurs. University Health Services (x2450) must be notified so that treatment of injuries and the exposure may begin. Other departments of the University that need to be notified so that they may assist are Security (x3333) and Safety Services (x2907).

Though the actual counseling will be done by University Health Services, the clinic must provide certain information to University Health Services so it can properly perform exposure counseling:

- The clinic's own Exposure Control Plan
- The type of injury/exposure
- The nature of the exposure and type of organism (if known)

- The source of the exposure (if the original source of the exposure was another person, a sample of blood must be taken and held for 90 days)
- A written release authorizing CWRU to conduct HIV & HBV testing on the source individual's blood (HIV & HBV testing is unnecessary if it can be shown that the source is known to be HIV and/or HBV positive)
- The route of the exposure

University Health Services will explain to the affected employee what has occurred and recommend appropriate medical follow-up.

5) Labeling and Signage

Signage will be provided to clinic by Safety Services as needed and required. The signs will provide a university-wide format to standardize warning information. The signs will also allow the university to comply with radiation safety, chemical OSHA Clinic Standard, Bloodborne Pathogens Standard and Right-to-Know requirements.

Laboratories are responsible for posting signs and labels in appropriate places:

- Entrances to labs
- Doors to refrigerators and freezers
- Samples containers (primary)
- Transporting devices (secondary)
- Waste containers

Best Management Practices ("BMPs")
for Minimization of Mercury Discharges from Dental Offices
to the Sewerage System

Prepared by the Northeast Ohio Regional Sewer District
in Cooperation with Representatives of
the Ohio Dental Association and the Greater Cleveland Dental Society

Page 1 of 7

❑ If the practice at this office does not handle dental amalgam, you may make a check mark in this box and proceed directly to page 7 of this document. (*If the practice at this office handles dental amalgam in any form, such as extractions of amalgam or extractions of teeth that contain amalgam, do not make a check mark in this box*.)

Mandatory BMPs

✓ Eliminate all use of bulk elemental mercury (also referred to as liquid or raw mercury). Use only precapsulated dental amalgam. Any bulk elemental mercury must be recycled or hauled away as hazardous waste. *It must never be poured into the regular trash, in with infectious waste (red bag), or down the drain.* (You may contact NEORSD Mercury Program staff at 216-641-6000 or the Ohio Dental Association at 614-486-2700 for information on recycling bulk elemental mercury or dental amalgam.)

✓ Limit the amount of amalgam used to the smallest appropriate size for each restoration. Keep a variety of amalgam capsule sizes on hand to more closely match the amount triturated to the amount needed in the restoration.

✓ Change or clean chairside amalgam traps frequently. Flush the vacuum system before changing the chairside trap.

✓ Change vacuum pump filters and screens at least once per month or as directed by the manufacturer.

✓ All amalgam waste must be either recycled (preferred method) or hauled away as hazardous waste (acceptable alternative). Included are:

- Non-contact amalgam (scrap);
- Contact amalgam (e.g., extracted teeth containing amalgam);
- Amalgam/sludge captured by chairside traps, vacuum pump filters, screens, and other devices;
- Used amalgam capsules that visibly contain any mercury;
- Leaking or unusable amalgam capsules.

Amalgam waste must never be put in the regular trash, put in with infectious waste (red bag), or flushed down the drain. Amalgam-containing traps, filters, or screens must never be rinsed over drains or sinks.

✓ Store amalgam waste in covered, segregated, and clearly labeled airtight plastic containers or as directed by your recycler.

✓ Maintain a log of amalgam waste generation and recycling/disposal. Documentation of all amalgam waste recycling and disposal must be obtained from your recycler or hazardous waste hauler, kept on file, and made available to the NEORSD upon request.

✓ Train all staff that handles or may handle mercury-containing material in its proper use and disposal.

Recommended BMPs

☑ Use, when appropriate, mercury-free alternatives to amalgam (e.g., gold, ceramic, porcelain, composites, polymers, glass ionomers, cold silver, gallium).

❑ Clean or replace under-sink traps and sumps, taking care to avoid spillage of the contents from plumbing parts. Remove sludge that may contain mercury, and have it recycled or hauled away as hazardous waste.

❑ Install clear plastic, easily removable under-sink P-traps, and have the contents recycled or hauled away as hazardous waste if they may contain inadvertently spilled mercury-containing material.

☑ Use disposable chairside amalgam traps instead of reusable traps in your cuspidor and vacuum system, and have the disposable traps recycled or hauled away as hazardous waste.

☑ Maximize the use of the high-speed suction (vacuum) system, because it captures more of the amalgam waste than does the coarse screen in a cuspidor.

☑ During amalgam restoration/extraction procedures, remove wet cuspidors from service and rely solely upon the high-speed suction (vacuum) system to remove debris and saliva.

CWRU School of Dental Medicine does not use cuspidors only High Vac Suction.

☑ Avoid using sodium hypochlorite (bleach) to disinfect vacuum lines, because it dissolves mercury out of amalgam.

❑ Be knowledgeable about amalgam separators employing enhanced sedimentation, fine particle filtration, and/or other technologies. Install and properly maintain such technologies that are determined to be feasible and effective.

☑ Obtain mercury spill kits, place them in appropriate easy-to-access location and immediately use them as directed by the manufacturer for any spill of mercury-containing material. All spilled mercury-containing material must be recycled or hauled away as hazardous waste.

CWRU Safety Services handles all mercury spills at CWRU School of Dentistry.

❑ Implement a program to have mercury-containing thermostats, switches, and fluorescent light bulbs recycled when they are replaced. Thermostats and switches should be replaced with mercury-free alternatives.

❑ Describe below any additional BMPs for mercury discharge minimization that you may have identified and plan to implement.

Please provide the following information to the best of your ability.

1. List the individuals, including all the dental care practitioners at your office, who are responsible for developing, implementing, and practicing under this BMP plan, and designate one individual who has the primary responsibility for it:

D. To determine precisely which of these individuals are at risk, a list of tasks and procedures must be identified which could result in possible occupational exposure at our School. This exposure determination is made without regard to the use of personal protective equipment. These tasks include the following:

- Patient treatment procedures
- Radiographic procedures
- Cleaning, disinfection and sterilization of instruments
- Environmental surface and equipment disinfection
- Dental laboratory procedures
- Handling contaminated laundry
- Handling infectious waste
- Repairing dental equipment
- Handling infectious tissues and body fluids in the research laboratory

Reflecting the tasks listed above, the job classifications that have occupational exposure include the following:

- Research laboratory technicians

NOTE: Janitorial personnel are not employees of the Dental School and, as such, are not part of our Exposure Determination Plan.

E. Tasks that could result in possible occupational exposure are the following:

- Filing and handling dental patient records at the main and auxiliary reception areas
- Filing and handling dental patient records at the specialty clinic reception areas
- Handling patient records in the dental insurance area
- Handling patient records at the data processing areas
- Handling patient records at the Cashiers' Office
- Handling patient records at the Office of the Associate Dean for Clinical Affairs
- Handling prosthetic cases for shipment to outside dental laboratories

Reflecting the tasks listed above, the job classifications that have possible occupational exposure include the following:

- Receptionists
- Records clerks
- Data processing personnel
- Insurance clerks
- Cashiers
- Secretaries in the Office of the Associate Dean of Clinical Affairs

F. Tasks at our School that have no occupational exposure include the following:

- Routine secretarial work in non-treatment areas
- Dental School student admissions
- Dental School finances and accounting
- Dental School student affairs
- Dental School Student record keeping

- Dental School fund raising and development
- Handling and maintaining audio-visual equipment

Reflecting the tasks listed above, the job classifications that have no occupational exposure include the following:

- Secretaries in non-treatment areas
- Dental School finance personnel
- Dental School admissions personnel
- Director of Student Affairs
- Dental School development personnel
- Dental School Registrar

2. List and describe all identified potential sources of mercury or mercury-containing materials that could enter the sewerage system from this office:

Amalgam from Dental Procedures.

3. Describe any BMPs that you may have implemented in the past and/or may be currently implementing for mercury discharge minimization. (See previous pages of this document for examples.) Also, please provide any information that you may have obtained regarding the effectiveness of the BMPs:

Use of one or two spill encapsulated amalgam,
Based on the amount of amalgam needed to fill the cavity preparation.
Therefore reducing amalgam waste.

Monthly replacement or cleaning of chairside traps.

Use of High Vac Suction

Collection and discharge of Amalgam waste.

4. Provide information from any technical/economical evaluation that you may have performed on BMPs for mercury discharge minimization:

5. Provide a schedule for implementation of the BMPs that you have indicated will be implemented for mercury discharge minimization at this office.

BMP's are in effect as of October 14, 2002.

6. Describe any methods that you may have identified for measuring progress toward the BMP Plan goal and updating this BMP Plan (e.g., documenting increased utilization of mercury-free alternatives, researching new BMPs, etc.):

Your Name:
Case Western Reserve University
School of Dental Medicine

Mailing Address:
Case Western Reserve University
Department of Occupational and Environmental Safety
10900 Euclid Avenue
Cleveland, Ohio 41106-7227

Office Address (if different from Mailing Address):

Telephone Number:

(216) 368-2907

_____On File_____ _____
Your Signature Date

If this document is to serve as your required BMP Plan for mercury discharge minimization, send one completed copy of it for each office at which you practice no later than December 31, 2002 to the address below:

Northeast Ohio Regional Sewer District
4747 East 49th Street
Cuyahoga Heights, OH 44125-1011
Attention: Mercury Program