PREAMBLE

This protocol was developed following the guidelines of the American Dental Education Association (ADEA).

Purpose:

The purpose of infection control policies and procedures is to minimize the risk of transmission of bloodborne pathogens to patients and dental health care workers (DHCW) in the dental care environment.

This goal will be achieved by:

A. Current immunization against hepatitis B and other appropriate diseases for clinical personnel.

B. Educating and training in the principles and practice of infection control in dentistry.

C. Preventing parenteral, mucous membrane, and non-intact skin exposures of patients and DHCW to blood and other body fluids containing visible blood. Saliva in a dental setting is predictably bloody.

D. Controlling contamination of items and personnel in clinic environments by consistent use of aseptic techniques, including the use of barrier techniques.

E. Using to the fullest extent feasible intrinsically safe substances, procedures, or devices as primary methods to reduce worker exposures to harmful substances.

I. IMPORTANT DEFINITIONS

Engineering Controls: Controls (e.g., Sharps Disposal Containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident: A specific eye, mouth, and other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Occupational Exposure: Anticipated skin, eye, mucous membrane, or parenteral contact with infectious materials.

Other Potentially Infectious Materials (in addition to blood): Semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid that is visibly contaminated with blood.

Personal Protective Equipment: Specialized clothing or equipment worn for protection against a hazard (in dentistry, generally gloves, masks, eye protection and gowns). General work clothes (e.g., uniforms, pants, shirts or blouses) not protective against a hazard are not "appropriate".

Regulated Waste: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other infectious materials capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other infectious materials.

Work Practice Controls: Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting two-handed needle capping).

DHCW: DHCW is used throughout this protocol and refers to Dental Health Care Workers.

II. INFECTION CONTROL PLAN

A. Exposure Determination

1. Job classifications in which all employees and students have occupational exposure:

   . dental hygiene clinical faculty
   . all dental hygiene students

2. Job classifications in which some employees have occupational exposure:

   . janitorial staff

3. Tasks/procedures performed by employees in the above “2" category in which occupational exposure may occur:

   . cleaning the clinic
   . picking up garbage

B. Implementation

1. Dissemination of information

   a. Faculty

      1.) monthly department meetings
      2.) memos

   b. Students

      1.) Lecture - 4 hours - POHS I
      2.) Videotapes
      3.) memos

2. Observation of compliance successes and deficiencies in clinic.

3. Cooperation in compliance is evaluated during each clinic session.

4. Faculty and students can, at any time, comment and/or make suggestions on any aspect of the infection control protocol. Anonymity will be respected.

   At least yearly, the clinical coordinator will re-evaluate, review, and update the infection control protocol.

C. Procedures for Handling Exposure Incidents

1. Occupational exposures

   a. Contaminated needle stick

   b. Puncture wound from a contaminated sharp dental instrument.

   c. Contamination of any obviously open wound, non intact skin, or the mucous membrane by saliva, blood or a mixture of both saliva and blood.

2. Exposure to patient's blood or saliva on the unbroken skin is not considered significant.

3. Protocol for Post Exposure Evaluation and Treatment:

   a. Immediately cleanse wound with soap and water, allowing wound to bleed freely into sink to wash away contaminants. Stop bleeding and cover wound. For mucous membrane exposure, flush with water.

   b. Immediately report the injury to a clinical instructor and/or the clinical coordinator.

   c. If exposure occurs in a clinical setting off-campus, the exposure should be reported and evaluated at that site by the agency's employee health services emergency department. A copy of the agency's report should be brought back to the College.

   d. If the exposure occurs on-campus, exposed faculty or students will be referred to the campus Health Service (College Commons building, second floor, ext. 4870) for immediate attention. (**Exception**: Fridays, after 4 P.M., the exposed individual will be referred directly to the Orange Regional Medical Center emergency room for treatment).

   e. A confidential "Exposure Incident Report" form (Appendix D) must be completed by the exposed student in conjunction with the assigned clinical instructor. Exposed faculty will be responsible for completing their own form. The forms should be filed with the clinical coordinator and department chair within 24 hours of the incident. Documentation of the incident will also be done by Health Services.

   f. Post-Exposure Evaluation shall consist of:

      a. documentation of the incident

      b. documentation of the source individual (if obtained)

      c. evaluation by a Health Care Professional

      d. maintaining confidentiality regarding all medical information.

      <u>NOTE</u>: Please refer to the current CDC Guidelines in the Student Handbook for information regarding specific post-exposure recommendations.

D. Post-Exposure Evaluation of Exposure Hazard

The "report of incidence" includes documentation of the route and circumstances of the exposure. Evaluation will determine if engineering and/or work practice controls need to be added or changed to eliminate an exposure hazard.

III. METHODS OF COMPLIANCE

A. "Standard Precautions," as defined by CDC, refer to a set of precautions designed to prevent transmission of HIV, HBV, HCV and other bloodborne pathogens in health care settings. Under standard precautions, blood and certain body fluids of **all** patients are considered potentially infectious for HIV, HBV, HCV and other bloodborne pathogens.

Although saliva and sputum has not been found to be a mode of transmission, special precautions, are recommended for dentistry. Standard precautions apply to managing saliva and sputum in dental settings because during dental procedures contamination of saliva and sputum with blood is predictable.

Rationale: Given the limitations of routine health history information, it is unlikely that dental personnel will know the infectious disease status of patients because:

1. Many infected patients are unaware that they are infected and that their blood may be capable of transmitting certain infectious disease.

2. Some patients will not reveal known infectious diseases to health care providers.

3. Health care providers cannot interpret negative findings from a comprehensive examination to mean that the patient is presently "infectious disease-free" or will remain so upon subsequent clinical visits.

Furthermore, it has been recommended that all dental health care providers use those infection control measures shown effective in minimizing hepatitis B transmission between patients and/or personnel because such measures are also effective for controlling other bloodborne infectious agents. This infection control plan has been developed to meet that standard.

B. This protocol is necessary and sufficient for routine patient treatment and for treatment of hepatitis B and C carriers, HIV antibody-positive patients, diagnosed AIDS patients, and patients with other known bloodborne infectious diseases.

C. Infection control procedures are not based on the patient's serologic status for any particular infection.

D. Engineering and Work Practice Controls

1. **Personal Hygiene:** The following guidelines apply to **all** clinical students and faculty.

   a. Hair must be cleared away from the face.
   b. Facial hair must be covered by a face mask or shield.
   c. Jewelry must not be worn during patient treatment. This includes body piercing ornamentation and tongue bars.
   d. Nails must be clean and short.

   Rationale: Hair and nails are known to harbor higher levels of bacteria than skin. Long nails are more difficult to clean and may potentially penetrate gloves. DHCW with injured or cracked skin, erosions, or eczema on hands or arms should exercise additional caution such as using mild soaps and lotion until the lesions are healed.

2. **Hand Hygiene:** Hand hygiene is mandatory (1) before treatment, (2) between patients, (3) after glove removal, (4) during treatment if an object is touched that might be contaminated by another patient's blood or saliva, and (5) before leaving the operatory.

The following is the recommended procedure for hand hygiene for routine dental procedures in the clinic and for routine laboratory work with contaminated items:

For Initial Handwash:

a. If necessary, remove visible debris from hands and arms with appropriate cleaner/solvent. Do not abrade skin by using a brush or sharp instrument.

b. Wet hands and wrists under cool running water.

c. Dispense sufficient soap to cover hands and wrists.

d. Rub the hand wash gently onto all areas, with particular emphasis on areas around nails and between fingers, for 15 seconds minimum before rinsing under cool water.

e. Repeat steps c and d twice; then dry thoroughly with paper towels.

Note: Dispensers for hand soap must be emptied and washed before refilling. Do not add soap to a partially empty dispenser (to top off). Studies have found that bacterial biofilms grow on the layer between the new and old product. (dentalcare.com, Guidelines for Infection Control in Dental Health Care Settings, revised 2013)

f. Alcohol hand rub may be used for subsequent cleansings provided your hands are not visibly soiled. Hand washing with medical grade soap must be done at the end of clinic.

Rationale: Hand washing is an extremely effective procedure for the prevention of many infections that are acquired from the transmission of organisms on the hands. "Residual" antiseptic handwash has a long-lasting antimicrobial effect on the skin that improves with more frequent use throughout the day.

3. Needle Recapping and Use of Cannulas.

To prevent needle-stick injuries, needles and cannulas are not to be recapped by hand. Needles can be safely covered in two ways:

a. Use a Needle Cap Safety Holder when using a syringe for local infiltration anesthesia.
b. Use the one-handed scoop technique for an Irrigating Syringe or similar cannula device.

4. Sharps Disposal

   a. Approved Sharps Containers are used and are centrally located in the dispensary area.
   b. Dispose of used needles, cannulas, and cartridges in the Sharps containers.
   c. Do not bend or break needle or stylus before disposing.
   d. Take used armamentarium to the Sharps container on a tray (not by hand).

5. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in the clinic and lab.

6. Food and drink may not be kept in the clinic.

   Food and drink may not be kept in the lab while lab procedures are being performed.

7. Splashing, spraying, spattering and generation of droplets of exposure material is to be minimized. Specific detail is given in the section titled "Patient Treatment".

8. Equipment which may become contaminated shall be decontaminated.

   Specific detail is given in the section entitled "Preparing for the Patient" and "Clean-Up After Patient Treatment"

9. A centrally located eyewash station is available for use in the Clinic when needed (across from Unit 8). Never place items in front of the eyewash station. There is also an eyewash unit mounted on the sink faucet in the Lab.

10. All clinic faculty and students wear radiation monitoring badges (dosimetry badges) to measure radiation exposure during clinics and labs in which radiographs are taken.

11. Medical Emergency Protocol for 0_2 Administration

    a. Oxygen is to be administered with the use of sterile mask and ambu bag.
    b. Pocket masks are available, if needed, in the medical emergency crash cart.
    c. These devices minimize the risk for exchange of body fluids during resuscitation procedures.

12. Mercury hygiene

    a. Students will immediately notify faculty and will not attempt to clean up spilled Mercury.
    b. Faculty will immediately evacuate the area.
    c. Faculty will immediately call the Office of Safety and Security (ext. 4710) and/or Facility Services (ext. 4600).
    d. Faculty may contain the spill with cat litter or by using the Mercury Spill Kit.

IV. PERSONAL PROTECTIVE EQUIPMENT

Personal Protection: Routine use of barrier devices such as gloves, masks, and protective eyewear significantly reduces the possibilities for blood and salivary exposure between patients and dental health care workers. **Blood, saliva, and gingival fluids from all dental patients must be considered infectious.**

A. Nitrile Examination Gloves.

All individuals will wear disposable gloves whenever there is contact with blood, saliva, or mucous membranes. Gloves must NOT be washed or otherwise reused. Gloves must be changed between patients. Gloves must be removed and hands washed before leaving the clinical area. Alcohol hand rub must be used between glove changes.

B. Masks and Eyewear.

Disposable masks and protective eyewear with side shields will be worn during all clinic procedures. A new disposable mask is to be worn for each patient treatment session. When not in use, the **mask** should not be placed on the forehead or around the neck.

Protective eyewear should be given to the patient for use during the clinic session. Both sets of eyewear should be cleaned between uses, being certain not to handle them with unprotected hands until they have been decontaminated. Eyewear cannot be heat sterilized.

C. Clinic Attire.

All DHCW will routinely wear appropriate attire to prevent skin exposure and soiling of street clothes when contact with blood or saliva is anticipated. **FLUID-IMPERVIOUS JACKETS MUST NOT BE WORN OUTSIDE THE CLINIC.** Attire must be changed daily, or more often if visibly soiled.

D. Utility Gloves.

Nitrile utility gloves should be worn for all cleaning and disinfection of contaminated instruments, dental units, and environmental surfaces. Nitrile gloves have an increased resistance to instrument punctures. Wash with soap and spray disinfectant after use and place under the sink.

1. See Sterilizing Assistant Duties

V. INFORMATION AND TRAINING

A. Initial Training

1. Students:

The first 2 weekly lectures (2 hours each) of the first year course entitled "Preventive Oral Health Services I" is devoted to disease transmission and control. Principles and practice of exposure control are immediately implemented in the first clinic session, and are observed and evaluated in every clinic session of the 2 year program.

2. Dental Hygiene faculty:

Incoming new department faculty are trained prior to working in clinic.

B. Changes in the infection control protocol are communicated to the faculty and students immediately.

1. **Written**: a memo is sent to all faculty and students explaining any change.

2. **Verbal:** the memo is discussed and questions addressed

a. monthly faculty department meetings
b. weekly student classes

C. Annual training takes place each September, and involves

1. Review and discussion of the protocols.
2. Written exams.
3. Viewing of the Training CD.

D. Training Materials

1. Copy of the "Guidelines For Management of Occupational Exposures to HIV - Recommendations for PEP" (2013).

2. Copy of the O.C.C.C. Infection Control Plan, and the departmental protocol which is specific to the dental field.

3. Lecture

a. epidemiology and symptoms of bloodborne diseases
b. modes of transmission of bloodborne pathogens
c. recognizing exposure activities
d. uses and limitations of personal protective equipment, barrier techniques and work practices.

ORANGE COUNTY COMMUNITY COLLEGE
Department of Dental Hygiene

Protocol for Post-Exposure Prophylaxis (PEP)

Following is the protocol for PEP as set forth by the Orange County Community College's Wellness Center regarding faculty or student exposure to Blood-borne Pathogens in the Dental Hygiene Clinic.

Immediately following the incident (after having cleaned the wound), the student must inform a faculty member. If the student decides to follow-through with the process, both the student and the faculty member should approach the patient (the "source" individual) and inform them of the incident. Explain the PEP procedure to them. If they agree to be tested, both the patient and the student will go to the Wellness Center (call first! x4870). If they do not agree, then the student will go alone. After 4 P.M. on a Friday, they will have to go to Orange Regional *Medical Center's* Emergency Room. Remember to file an incident report within 24 hours of the incident.

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US PUBLIC HEALTH SERVICE GUIDELINE

Updated US Public Health Service Guidelines for the Management of Occupational Exposures to Human Immunodeficiency Virus and Recommendations for Postexposure Prophylaxis

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This report updates US Public Health Service recommendations for the management of healthcare personnel (HCP) who experience occupational exposure to blood and/or other body fluids that might contain human immunodeficiency virus (HIV). Although the principles of exposure management remain unchanged, recommended HIV postexposure prophylaxis (PEP) regimens and the duration of HIV follow-up testing for exposed personnel have been updated. This report emphasizes the importance of primary prevention strategies, the prompt reporting and management of occupational exposures, adherence to recommended HIV PEP regimens when indicated for an exposure, expert consultation in management of exposures, follow-up of exposed HCP to improve adherence to PEP, and careful monitoring for adverse events related to treatment, as well as for virologic, immunologic, and serologic signs of infection. To ensure timely postexposure management and administration of HIV PEP, clinicians should consider occupational exposures as urgent medical concerns, and institutions should take steps to ensure that staff are aware of both the importance of and the institutional mechanisms available for reporting and seeking care for such exposures. The following is a summary of recommendations: (1) PEP is recommended when occupational exposures to HIV occur; (2) the HIV status of the exposure source patient should be determined, if possible, to guide need for HIV PEP; (3) PEP medication regimens should be started as soon as possible after occupational exposure to HIV, and they should be continued for a 4-week duration; (4) new recommendation—PEP medication regimens should contain 3 (or more) antiretroviral drugs (listed in Appendix A) for all occupational exposures to HIV; (5) expert consultation is recommended for any occupational exposures to HIV and at a minimum for situations described in Box 1; (6) close follow-up for exposed personnel (Box 2) should be provided that includes counseling, baseline and follow-up HIV testing, and monitoring for drug toxicity; follow-up appointments should begin within 72 hours of an HIV exposure; and (7) new recommendation—if a newer fourth-generation combination HIV p24 antigen–HIV antibody test is utilized for follow-up HIV testing of exposed HCP, HIV testing may be concluded 4 months after exposure (Box 2); if a newer testing platform is not available, follow-up HIV testing is typically concluded 6 months after an HIV exposure.

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