


## Infection Control Manual

	Policy Name	<b>Exposure Control Plan for Bloodborne Pathogens</b>
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	Responsible for Content	<b>Hospital Epidemiology</b>

### I. Description

Describes the policies for reducing the risk of exposure to a bloodborne pathogen in the work place.

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### II. Rationale

The risk of exposure to a bloodborne pathogen can be greatly reduced through the strict adherence to the administrative, engineering, and work practice controls included in this plan.

### III. Policy

#### A. General Information

1. OSHA regulations require that the employer provide a written exposure control plan that covers the facility's policies and procedures to prevent transmission of a bloodborne pathogen in the workplace. Employees of the medical complex may have duties in more than one facility; therefore, this exposure control plan is designed for all employees of the

UNC Health Care (UNC Hospitals, the Ambulatory Care Center, and community based centers) and the UNC-Chapel Hill Campus Health Services and the School of Dentistry.

2. UNC Health Care and UNC-CH facilities each have an occupational health provider (OHP). UNC Healthcare employees receive services through the UNC Hospitals Occupational Health Service located in Room 1088, West Wing (NCMH). University employees receive services through the University Employee Occupational Health Clinic located on the 2<sup>nd</sup> floor of the AHEAC Building, 145 North Medical Drive. UNC dental, medical and other UNC health students receive services through Campus Health Services. Non-UNC students should contact their primary school.
3. Employees who have duties within other healthcare facilities must comply with the provisions of the exposure control plan for that facility. However these employees are to obtain routine occupational health services through their employer's occupational health service (i.e., UNC Hospitals Occupational Health Service or University Employee Occupational Health Clinic).
4. Contract personnel must comply with this Exposure Control Plan. It is their employer's responsibility to provide basic bloodborne pathogen training and occupational health services consistent with the requirements of this document. Contract employees with blood or body fluid exposures should contact their employer and be evaluated by the ED at UNC Health Care unless a prior agreement for service with OHS has been established.
5. UNC Health Care employees may obtain a copy of the Exposure Control Plan via the Infection Control website on the Intranet @ Work or by contacting Hospital Epidemiology at 966-1638. University employees may obtain a copy via the UNC-CH Environmental Health and Safety website (UNC Department of Environment, Health & Safety) or by contacting the UNC-CH Department of Environment, Health and Safety at 962-5507. The OSHA document, Occupational Exposure to Bloodborne Pathogens; Final Rule, is available on OSHA's website ([www.osha.gov](http://www.osha.gov)).

### **B. Responsibility**

1. Hospital Epidemiology/University Department of Environment, Health and Safety (EHS)
  - a. Review Exposure Control Plan and revise as needed.
  - b. Identify list of job classifications with occupational exposure.
  - c. Provide ongoing consultation regarding implementation of OSHA's final rule on Occupational Exposure to Bloodborne Pathogens.
  - d. Develop and coordinate educational programs.
  - e. Assist with compliance evaluation. (See Appendix 5-2.)
  - f. Assist with the selection and evaluation of current safety devices. (See Appendix 10.)
2. UNC Hospitals Occupational Health Service/University Employee Occupational Health Clinic
  - a. Review Exposure Control Plan.
  - b. Review and continue to implement Hepatitis B Immunization Program.
  - c. Maintain records regarding Hepatitis B Vaccination Program.
  - d. Review and continue post-exposure follow-up.
  - e. Maintain documentation of exposure and follow-up as required by the OSHA final rule.

- f. Sharps log for UNC Hospitals' employees is maintained in Environmental Health and Safety and OHS. For University employees, the sharps log is maintained in the University Employee Occupational Health Clinic.

### 3. Department Managers and Supervisors

- a. Annually review list of all job classifications and identify job classifications in which employees in those positions have reasonably anticipated occupational exposure.
- b. Ensure and document employee orientation and annual training.
- c. Ensure personal protective equipment and other necessary supplies are available in accessible locations.
- d. Evaluate compliance
  - i. Include compliance with OSHA's final rule into the employee's performance evaluation.
  - ii. Initiate and document disciplinary action for continued non-compliance.
- e. Ensure that suitable education/training programs are provided to employees by a knowledgeable trainer(s). Training will include the appropriate use of new devices on an ongoing basis, review where engineering controls are currently employed, where they can be updated, and participate in the selection and evaluation of safer medical devices. Ensure that appropriate safety devices are stocked in their departments and staff have been trained in their use (e.g., via unit-based sharp device trainers).
- f. Evaluate the circumstances surrounding exposure incidents including an evaluation of "failures of control" at the time of the exposure incident and submit this information to the Environmental Health and Safety Department/UNC-CH Department of Environment, Health and Safety.

### 4. Product Evaluation Committee/Materials Management

- a. Oversee the selection and evaluation of safety devices.

### 5. Oversight Committee

- a. Hospital Infection Control Committee
  - i. The Hospital Infection Control Committee will serve as the Oversight Committee for the review/revision of the Exposure Control Plan for Bloodborne Pathogens.

### 6. Occupationally-Exposed Employees

- a. Know what tasks they perform that cause occupational exposure.
- b. Participate in the bloodborne pathogens training sessions annually via the Learning Management System or UNC-CH Department of Environment, Health and Safety training.
- c. Plan and conduct all operations in accordance with the Hospitals' and University engineering controls, work practice controls, and the use of PPE.
- d. Employees who sustain an exposure incident must report the incident to their supervisor and follow up with the appropriate occupational health provider.
- e. Participate in the selection and evaluation of safer medical devices where applicable.

## C. **Methods of Compliance**

The use of administrative controls (e.g., Standard Precautions), engineering controls, work practice controls and personal protective equipment will protect employees who have

occupational exposure to blood or other potentially infectious materials (OPIM). Standard Precautions (SP) refers to practicing blood and body fluid precautions for all patients. SP shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials. Engineering and work practice controls are used to eliminate or minimize employee exposure to bloodborne pathogens or OPIM. Where occupational exposure remains after institution of these controls, personal protective equipment is also used.

### 1. Engineering and Work Practice Controls

One of the key aspects of the Exposure Control Plan is the required use of engineering controls as a primary means to eliminate or minimize employee exposure to bloodborne pathogens. As a result, the medical complex employs equipment such as sharps disposal containers, needleless IV systems, self-sheathing needles and ventilated laboratory hoods as appropriate. The Product Management Committee, the Infection Control Committee, the Health and Safety Committee, and the Safety Device Training Committee work with department managers and employees to review tasks and procedures performed in our facility where engineering controls can be implemented or updated. This is a dynamic and ongoing process that ensures the implementation of new engineering controls when identified as appropriate. Departmental managers are responsible for assessing their area's needs on a continuing basis. Once an engineering control has been institutionally introduced and employee training has occurred, the engineering control should be used unless there are medical reasons that would contraindicate its use. If nursing and/or medical staff believe an engineering control is contraindicated, staff will document the reason in writing and submit this to Hospital Epidemiology for review and possible exclusion. Engineering controls are assessed routinely to ensure that each control is maintained, and that the device reflects changes in technology that eliminate or reduce exposure to bloodborne pathogens. Also, there is documentation to ensure consideration and implementation of appropriate commercially available and effective safer medical devices has occurred. This documentation is managed and recorded in the Purchasing Department. In addition to engineering controls, work practice controls are followed to help eliminate or minimize employee exposure to bloodborne pathogens. The person who is responsible for overseeing the implementation of these work practice controls is the department manager or his/her designee. These persons work in conjunction with the Hospitals' infection control staff and safety personnel to affect this implementation.

- a. Hand hygiene products (e.g., antimicrobial soap, [waterless alcohol-based hand rub containers and pocket-sized waterless alcohol-based hand rub ] are readily accessible to all employees who have the potential for occupational exposure. Hand hygiene must be performed between all direct patient contacts and after handling soiled or contaminated equipment or after leaving the room of a patient on Contact Precautions. The alcohol-based waterless agent should be used on hands that are not visibly soiled or contaminated with blood or body fluids.
  - i. Hands and other skin surfaces must be washed with soap and water immediately or as soon as feasible if contaminated with blood or OPIM.
  - ii. Hand hygiene must be performed immediately or as soon as feasible after gloves or other personal protective equipment (PPE) is removed. Refer to Infection Control Policy ["Hand Hygiene and Use of Antiseptics for Skin Preparation"](#) located on the Infection Control website.

- iii. Personnel who have hand dermatitis or allergies associated with hand hygiene agents, gloves or other products are required to be evaluated by their Occupational Health Provider (OHP).
  - iv. Personnel having exudative lesions or weeping dermatitis will be excluded from all direct patient care and from handling contaminated patient-care equipment until the condition resolves. The OHP must be consulted to evaluate and advise in this matter.
  - v. Hand lotions/creams must be compatible with the antimicrobial hand hygiene agent (e.g., chlorhexidine gluconate). Some lotions and creams interfere with the effectiveness of the antimicrobial hand hygiene agent. Central Distribution stocks a compatible lotion for use by healthcare personnel. Healthcare personnel may use any hand lotion from the approved list of products that do not alter the persistent antimicrobial activity of the hand hygiene products. Approved hand lotions are listed on the Infection Control Website under the frequently requested information link.
- b. Following any contact of body areas with blood or OPIM, employees must wash their hands and any other exposed skin with an antimicrobial soap and water as soon as possible. If the exposure to blood or body fluids involves the eyes or other mucous membranes, they must flush the exposed mucous membranes with water. Shower facilities are available within the Hospitals for the employee who encounters exposure to blood or OPIM. Showers are located in the Hospitals in the Emergency Department, in Surgical Services (Main hospital as well as Women and Children's Hospital) and on the ground floor adjacent to the Central Processing Department (CPD). Eye wash stations are located in multiple clinical areas of UNC Health Care and the School of Dentistry. Employees should learn the location of the nearest eyewash station in their assigned work area. Additionally, UNC Hospitals' Occupational Health Clinic has an approved eye wash station and showers are located in the Ambulatory Surgery Center and in the Family Medicine Center.
- c. Plan safe handling and disposal of sharps before beginning any procedure using sharps (e.g., needles). Sharps disposal should occur as close to the point of use as possible by the person using the sharp. Sharp instruments will not be passed from hand to hand unless the specific procedure requires continuous focus. It is the responsibility of the surgeon(s) and scrub nurse/tech(s) to safely pass the instruments. Sharp instruments should either be passed using a neutral zone or in a suitable container to decrease the possibility of injury from sharp, contaminated objects.
- d. Contaminated needles and other contaminated sharps are not sheared, bent, recapped, or removed unless it can be demonstrated that there is no feasible alternative or the action is required for a specific medical procedure. In these situations the recapping or needle removing is accomplished through a mechanical device or a one-handed technique. This can be accomplished by placing the cover (cap) on a flat surface and sliding the needle into it, using a hemostat to hold the cap or obtaining a commercial needle recapping device. Two-handed recapping of needles is prohibited. Contaminated phlebotomy needles and tube holders are not to be separated and are discarded as a unit. The tube holders are not to be reused.

After use, sharps (needles, scalpel blades, phlebotomy needles and tube holder, and activated safety devices with needle/blade) are discarded immediately, or as soon as possible, by the user in containers that are closable, puncture resistant, and leak-proof on sides and bottom. Containers are labeled with a BIOHAZARD label. During use, containers for sharps will be easily accessible and located as close as possible to the immediate area where sharps are used or can be reasonably anticipated to be found.

To prevent needle-stick injuries, wall mounted sharps containers will be affixed no higher than 4.5 feet from the floor so the opening may be observed for protruding sharp objects. The sharps containers will be secured upright throughout use and be routinely replaced when  $\frac{3}{4}$  full and not be allowed to overfill. The replacement of full sharps containers is a joint responsibility between Nursing and Environmental Services. When removing containers of sharps from the area of use, the container will be closed and locked immediately prior to removal to prevent spillage or protrusion of contents during handling, storage, or transporting. Within the Hospitals, closed sharps containers are to be placed in the red bag waste located in the soiled utility room. In Ambulatory Care Clinics, Campus Health Services, Community Based Clinics and the School of Dentistry the sharps container top is closed and locked securely and the container placed in a Biohazard/Medical waste box which is lined with a red bag. ACC staff are responsible for securing and placing sharps containers in the biohazard waste boxes. Housekeeping staff will remove sealed boxes from the clinic areas.

- e. UNC Health Care Personnel should not retrieve objects from biohazard waste containers. Supervisors should not instruct employees to retrieve objects from biohazard waste containers. Biohazard waste containers refer to not only sharps disposal containers but any trash bins lined with red biohazard labeled bags.
- f. In identified areas in the hospitals (e.g., Emergency Department, NCCC), reusable instruments (e.g., large bore needles, scalpels, saws) and sharps that are contaminated with blood or OPIM will be washed or rinsed to remove blood and proteinaceous material and then placed in the container designated for Central Processing Department (CPD). When washing reusable instruments, appropriate PPE must be worn and mechanical means used to handle the sharps. Reusable large bore needles must be flushed immediately after use and prior to washing. Washing will be done immediately or as soon as possible after use. The CPD containers are puncture resistant, labeled with a BIOHAZARD label, and are leak-proof on sides and bottom. Sharps will be removed using tongs or forceps. The employee should not reach by hand into the container to remove contaminated sharps. If the sharps are in a basin covered with water, the solution should be drained from the basin before removing items with tongs.
- g. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure to bloodborne pathogens, (e.g., laboratories, treatment room). Employees are permitted to eat and drink in an ambulance cab; however, this must be done in an area separate from patients and contaminated material.
- h. Food and drink are not kept in refrigerators, freezers, shelves, cabinets, or on countertops or work bench tops or in other storage areas where blood or other potentially infectious materials are present.
- i. All procedures involving blood or OPIM shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.
- j. Mouth pipetting/suctioning of blood or OPIM is prohibited.
- k. Specimens of blood or OPIM shall be placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping. If outside contamination of the primary container occurs, the primary container must be decontaminated with an approved disinfectant prior to delivering to the lab. Specimens shall be placed in a secondary container (e.g., green bath basin, specimen bag, robot, cooler) labeled with a BIOHAZARD label when being transported. Refer to the UNC Health Care Administrative Policy, "Usage of the Computerized Tube System," for sending

specimens to the lab in this manner. Specimens that leave the hospital must be labeled with a BIOHAZARD label.

- l. Equipment known or suspected to be contaminated with blood or OPIM is examined prior to servicing or shipping and decontaminated as necessary, unless it can be demonstrated that decontamination is not feasible. If the equipment cannot be decontaminated, a BIOHAZARD label must be attached to the equipment, stating which portions remain contaminated.
- m. A patient's medical record that has been stained with blood or body fluids must be handled according to Appendix 2 in the Central Processing Department Infection Control Policy ("Procedure for Handling Stained Medical Records").
- n. Standard Precautions must be maintained during the handling and transportation of deceased patients. According to the North Carolina State Law (15A NCAC 19A .0212) for the handling and transporting of deceased individuals, "Persons handling bodies of persons who died and were known to have HIV infection, hepatitis B infection, Creutzfeldt-Jakob disease or rabies shall be provided written notification to observe blood and body fluid precautions."

### 2. Personal Protective Equipment

In addition to administrative, engineering and work practice controls, personal protective equipment (PPE) is used by employees to provide for protection against a hazard such as blood or OPIM. It is the employer's responsibility not only to provide PPE, but also to clean, maintain, and/or dispose of it. PPE consists of specialized clothing or equipment worn by the employee such as gloves, fluid-resistant gowns, masks, and protective eyewear. All personnel must routinely use PPE when there is a potential for exposure to blood or other potentially infectious materials. Personal protective equipment in the appropriate size is readily available in the work area (e.g., Clean Utility Room, PPE carts or cabinets). Special arrangements can be made for unique needs (e.g., glove liners, hypoallergenic gloves) of staff members through their supervisors, after examination in OHS.

- a. To minimize the need for emergency mouth-to-mouth resuscitation, mouthpieces, resuscitation bags or other ventilation devices are strategically located throughout the Hospitals, clinics, University medical facilities and Community Practices.
- b. All PPE is removed prior to leaving the work area. When PPE is removed, it is placed in an appropriately designated area for storage, washing, decontamination or disposal. Disposable PPE should be discarded in the white trash bags displaying a BIOHAZARD label.
- c. All reusable PPE (e.g., utility gloves) must be decontaminated (use an EPA-registered disinfectant detergent) prior to re-use if the integrity of the PPE is not compromised. However, if the PPE is cracked, peeling, torn, punctured, or exhibits other signs of deterioration or when its ability to function as a barrier is compromised, the PPE must be discarded.
- d. Nitrile or latex gloves must be worn when it can be reasonably anticipated that the employee may have hand contact with blood, OPIM, mucous membranes, non-intact skin, when performing vascular access procedures, and when handling items or surfaces soiled with blood or OPIM. Employees with skin or systemic reactions to latex, nitrile, or hand hygiene agents must be evaluated by their Occupational Health Service.
  - i. Disposable single-use gloves must be changed as soon as practical when contaminated, torn, punctured, or when their ability to function as a barrier is compromised.

- ii. Disposable single-use gloves are not to be washed or disinfected for reuse.
  - iii. Gloves must be changed after contact with each patient. Change gloves when performing procedures from one body site to another on the same patient if working from a “dirty” site to a “clean” site is unavoidable. Perform hand hygiene immediately after removing gloves.
  - iv. When used, cotton glove liners should be replaced at the beginning of each shift with a clean pair. If they become contaminated with blood or OPIM or become generally soiled in appearance, they should be removed promptly and replaced.
  - v. Gloves should be removed and hand hygiene performed before touching clean environmental surfaces (e.g., computer keyboards, telephones, label imprinting devices).
  - vi. Double gloving has been shown to reduce blood exposures during operative procedures, and therefore is recommended for all surgeons, scrub nurses, scrub techs, and any other personnel performing high-risk procedures or prolonged surgeries.
- (Refer to Appendix 2: “Infection Control Capability of Gloves.”)
- e. Masks, eye protection or face shields will be worn whenever splash, spray, spatter, or droplets of blood or OPIM may be generated and eye, nose, or mouth contamination can be reasonably anticipated (e.g. emptying suction canisters, open suctioning of coughing patients).
    - i. Protective eyewear must be worn by all persons (including those wearing contact lenses) when there is a reasonably anticipated potential for eye contamination.
    - ii. Prescription eyeglasses must be equipped with solid side shields if used for eye protection. Glasses without solid side shields or small-framed glasses must be covered with a face shield or goggles to provide complete coverage and protection.
  - f. Gowns, aprons and other protective body clothing should be worn in occupational exposure situations. The type and characteristics will depend on the task and the degree of exposure anticipated. Appropriate protective clothing must prevent contamination of an employee’s skin or clothing by blood or other potentially infectious materials. For example, fluid-resistant PPE must be worn when it is reasonably anticipated that there would be sufficient blood exposure (e.g., spraying) that it would pass through to or reach the skin, eyes, mouth, or other mucous membranes under normal conditions of use. Waterproof gowns are available for use (e.g., Sage blue gown). A non-fluid resistant gown (i.e., isolation gown) may be worn in all other procedures.
    - i. If personal protective equipment (garment) is penetrated by blood or other potentially infectious materials, the garment must be removed immediately or as soon as possible and placed in the appropriate container for disposal, storage, washing, or decontamination. The employee must remove contaminated PPE in such a way as to avoid contact with the contaminated portions.
    - ii. Contaminated personal clothing must not be taken home for laundering. The same care shall be exercised in the handling of contaminated personal clothing as the PPE handling described above.
    - iii. If personal clothing is contaminated, notify the manager of Linen Services (pager 123-9712) or page the house supervisor if after hours (4:00 pm – 7:00 am). Clean scrubs will be provided and reimbursement offered for contaminated clothing.



University employees should follow the above recommendations for removal of PPE and notify their supervisor.

- g. Additional PPE (e.g., bonnets, hoods, shoe covers, boots) may be required in instances when gross contamination is reasonably anticipated (e.g., autopsies, trauma surgery, labor and delivery, and orthopedic surgery).

### 3. Sterilization, Disinfection, and Housekeeping

- a. Standard sterilization and disinfection procedures for patient care equipment are adequate to sterilize or disinfect instruments, devices, or other items contaminated with blood or other potentially infectious materials. (Refer to policy, "Cleaning, Disinfection and Sterilization of Patient Care Items.")
  - i. Instruments or reusable devices that enter normally sterile tissue or the vascular system must be decontaminated prior to sterilization between patient uses.
  - ii. Devices or items that contact intact mucous membranes should be cleaned and dried before being sterilized or receiving high-level disinfection (a procedure that kills vegetative organisms and viruses but not necessarily large numbers of bacterial spores). Chemical germicides that are registered with the U.S. Environmental Protection Agency (EPA) as "sterilants" may be used either for sterilization or for high-level disinfection depending on contact time.
  - iii. Medical devices or instruments that require sterilization or disinfection must be thoroughly cleaned before being exposed to the germicide, and the manufacturer's instructions for the use of the germicide should be followed. Further, it is important to follow the manufacturer's specifications for compatibility of the medical device with chemical germicides.
  - iv. An EPA-registered disinfectant detergent (e.g., MetriGuard, SaniCloths) or a 1:10 dilution of bleach and water (expires in 30 days) must be used to decontaminate non-critical devices or equipment (that has contact with intact skin) after blood or OPIM contamination.
    - Reusable personal care items which may be contaminated with blood or other potentially infectious materials must be decontaminated between patients.
    - For patients in semi-private rooms, personal patient items (e.g., combs, toothbrushes, tooth paste, electric shavers) are labeled with patient's name and unit number and stored separately.
    - All items known or suspected to be contaminated with blood or OPIM must be decontaminated prior to sending for maintenance.
    - Items must be appropriately cleaned after maintenance and prior to patient use.
- b. All equipment and environmental work surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious materials. Contaminated work surfaces will be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or OPIM; and at the end of the work shift if the surface may have become contaminated during the shift.
- c. Blood and body fluid spills should be cleaned using a 1:10 dilution of sodium hypochlorite (household bleach) or an EPA-registered germicidal detergent (e.g., MetriGuard). A quaternary ammonia product (e.g., A456II) may be used for decontaminating small (<10 ml) spills of blood or OPIM. Strategies for decontaminating spills of blood and other body fluids in a patient-care setting are different than for spills of

cultures or other materials in clinical, public health, or research laboratories. In both settings gloves are worn during the cleaning.

- i. In patient-care areas visible material should be removed with disposable towels or other appropriate means that will ensure against direct contact with blood and then the area should be decontaminated.
  - ii. With large spills of cultured or concentrated infectious agents in the laboratory, the contaminated area should be flooded with a liquid germicide before cleaning, then decontaminated again with the germicidal chemical.
- d. Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, will be removed and replaced as soon as feasible when they become overtly contaminated, between patients, and at the end of the work shift if they may have become contaminated during the shift.
- e. All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or OPIM will be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
- f. Broken glassware, razors or other sharp items that may be contaminated will not be picked up directly with the hands. It will be picked up using mechanical means, such as a brush and dust pan, tongs or forceps, and the broken glass will be placed in a rigid container (e.g., sharps container) for disposal.
- g. Regulated Medical Waste
- i. Regulated medical waste is handled in accordance with federal, state, and local laws and UNC Health Care's "Guidelines for Disposal of Regulated Medical Waste" and UNC-CH Medical Waste Disposal Procedures for Campus Health Services and the School of Dentistry.
  - ii. There is no epidemiological evidence to suggest that medical waste is any more infective than residential waste. Moreover, there is no epidemiological evidence that medical waste has caused disease in the community as a result of improper disposal.
  - iii. North Carolina regulates three types of medical waste:
    - Microbiology laboratory waste
    - Pathology waste
    - Blood specimens or blood products in quantities greater than 20 ml per unit container.
  - iv. While any item that has had contact with blood, exudates, or secretions may be potentially infective, it is not considered practical or necessary to treat all such waste as infective.
  - v. The regulated medical waste at UNC Hospitals is placed into a red bag and treated in compliance with State regulations (e.g., incinerated).
  - vi. In University medical facilities, regulated medical waste is placed in a Biohazard/Medical waste box that is lined with a red bag. When the box is filled to a reasonable level, the bag is tied and the box top is closed and secured. Clinic staff members are responsible for the closing and securing of medical waste boxes. Housekeeping staff will remove sealed boxes from the clinic areas. The boxes will

be transported to the loading dock area where they will be collected by the waste disposal contractor for transport to an incinerator.

- vii. Bulk blood, suctioned fluids, excretions, and secretions may be carefully poured down clinical sink or hopper connected to a sanitary sewer. Any fluid splashed onto surrounding surfaces (e.g., walls) will be removed immediately using MetriGuard, A456II-N, a 1:10 bleach solution, or Sani-Cloth.
- h. Non-regulated medical waste is placed in a white bag with biohazard label. There are two exceptions. The psychiatry units use a brown paper bag that is placed in a trash container with a biohazard label. The other exception is the community-based clinics use a plastic trash bag that is placed in a trash container with a biohazard label.
- i. Clinical waste containers are labeled with a biohazard symbol to warn employees of the potential hazard posed by the contents.
- j. Laundry
  - i. Although soiled linen has been identified as a source of large numbers of certain pathogenic microorganisms, the risk of actual disease transmission is negligible. Hygienic and common sense storage and processing of clean and soiled linen are recommended.
  - ii. Contaminated laundry is handled as little as possible and with minimal agitation to prevent gross microbial contamination of the air and of persons handling the linen. Refer to the policy "Laundry and Linen Service" for details.
    - All soiled linen must be bagged at the location where it was used.
    - Soiled linen must not be sorted or rinsed in patient-care areas.
    - All used linen is handled as contaminated laundry and all employees will recognize the laundry bags as requiring compliance with Standard Precautions.
    - The laundry is placed and transported in a fluid-resistant bag that prevents soak-through and/or leakage of fluids to the exterior. Wet laundry should be rolled so that the driest portions are on the outside before placing in the linen bag.
    - Clinics in the Ambulatory Care Center including Ambulatory Surgery Center have linen laundered through the Hospital Linen Room and Laundry. Clinics in the School of Dentistry have linen laundered through an off-campus laundry service.

### D. Occupational Health Service

#### 1. Exposure Reporting

##### a. Introduction

Any HCP who has an exposure to blood or body fluids should take immediate action. Exposed skin and any puncture sites should be thoroughly washed with soap and water. Eyes are to be rinsed thoroughly with water at an eyewash station or if a station is not available, using sterile saline, eye irritant, or clean water. The eyes should be flushed for a reasonable amount of time. If the mouth is exposed, rinse/flush with clean water. The application of caustic agents (e.g., bleach) or the injection of antiseptics or disinfectants into the wound is not recommended. Current protocols for HIV post-exposure prophylaxis necessitate immediate reporting of occupational exposures so that administration of antiretroviral prophylaxis can be promptly initiated when indicated. Current Centers for Disease Control (CDC) recommendations advise that antiretroviral prophylaxis be started within 24 hours of the exposure. Therefore, HCP should call ahead to their occupational health provider to initiate the post-exposure evaluation immediately after injury.

### b. Reporting an Exposure

- i. All UNC Health Care HCP, including those working off site, and Orange County Employees are to report exposures to the Occupational Health Service at 966-4480.

Employees of UNC Health Care facilities are to complete an Employee Incident Report and call the Needlestick Hotline at 6-4480. This service is provided 24 hours per day, 7 days per week by UNC Hospitals' Occupational Health Service during their operational hours of 7:30 a.m. to 4:30 p.m., Monday through Friday. After hours, on weekends and holidays, employees are to call the **Needlestick Hotline (6-4880)** where they will be provided with immediate evaluation and timely treatment of the potential exposure. HCP should refer to the HIV Post Exposure Protocol on the UNC Healthcare Intranet for additional information. This protocol is reviewed annually to comply with UNC Health Care Exposure Control Plan and OSHA Bloodborne Pathogen Standard.

- ii. University Employees

Employees of the University are to call University Employee Occupational Health Clinic at 6-9119 (7 days/week, 24 hours/day). HCP should refer to the HIV Post Exposure Protocol on the UNC Health Care Intranet for additional information.

- iii. Students (including Visiting Medical Students)

In the fall and spring semesters, when Campus Health Services is open, students should call (919) 966-6561. During the summer session, hours are from 8AM – 5 PM Monday-Friday (closed Saturday and Sunday) the student should call (919) 966-6561. When CHS is closed and during the weekends, the student should call the main CHS phone number at (919) 966-2281 and will be connected to the Healthlink nurse who will page the on-call CHS physician.

Please refer to Appendix 11. Information is also available on CHS website: <http://campushealth.unc.edu>.

- iv. Contract Personnel (e.g., Traveling Nurses)

Contract personnel must report the exposure to their employer and then contact the Emergency Department (ED) for evaluation and possible treatment for high-risk exposure. Refer to “Recommendations for Management of Bloodborne Pathogen Exposure of Occupationally Exposed Persons.” This policy contains detailed guidelines for personnel not covered by UNCHC/OHS, UEOHC, or CHS.

- v. Students Not Affiliated with UNC

Students not affiliated with UNC must report the exposure to their clinical instructor/school. They will be referred to the Emergency Department.

- vi. Following an exposure incident

Following an exposure incident, the occupational healthcare provider (OHP) will provide the HCP with an exposure evaluation report regarding the incident, and recommendations will be made to avoid further exposure incidents. HCP will also be provided with a Health Care Professional Written Opinion for Hepatitis B Vaccine within 15 days from the time of exposure. A sharps injury log is maintained by UNC Health Care Occupational Health Service and the OSHA 300 Log is maintained by the Environmental Health and Safety office. The Sharps Injury Log includes information on the injury, including the type and brand of device involved in the incident, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred. Medical records are kept confidential for

all HCP. For HCP of UNC Health Care, these records are kept in UNC Health Care Occupational Health Service. University HCP records are kept at University Employee Occupational Health Clinic. Records are not disclosed or reported without the HCP's expressed written consent to any person within or outside the workplace except as required by law. HCP medical records are kept for at least the duration of employment plus 30 years. The employer will bear the costs, including costs for HCPs who must travel away from the work site for medical procedures and evaluations. Medical procedures and evaluations must be convenient to the HCP and normally be offered during HCP's scheduled work hours. HCPs who work off site and who experience an exposure as defined in this document should refer to the HIV Post Exposure Protocol on the UNC Health Care Intranet.

### 2. Management of Hepatitis B Virus

(For the full Hepatitis B exposure policy, see "Management of Hepatitis B Exposures" on the OHS website under "OHS Protocols.")

#### a. Definition of Exposure

- i. Healthcare personnel will be defined as having been occupationally exposed to HBV under the following conditions: The source is HBsAg and/or HBeAg-positive AND one of following has occurred.
  - HCP has suffered a percutaneous injury with a contaminated sharp.
  - HCP has had contact on a mucosal surface or abraded skin with contaminated blood or OPIM.
  - HCP has had parenteral exposure to or mucosal membrane contact with a contaminated body fluid. Such fluids include only semen, vaginal secretions, amniotic fluid, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, or saliva during a dental procedure. In addition, contact with any unfixed tissue or organ (other than intact skin) from a human (living or dead).
  - Healthcare personnel has received a bite which breaks the skin. (Please refer to OHS Protocol: Management of Human Bites.)
- ii. Healthcare personnel will not be defined as having been occupationally exposed to HBV under the following conditions:
  - The source is HBsAg negative even if the source is a member of a group at high risk of HBV infection.
  - Inhalation or possible inhalation of microscopic blood or bloody fluids.
  - Contact of intact skin with contaminated blood or a bloody fluid.
  - Percutaneous injury with a non-contaminated sharp.
  - Parenteral exposure or mucus membrane contact with saliva (except during a dental procedure), urine, feces, or tears in which there is not visible blood.

#### b. Pre-Exposure Prophylaxis

Hepatitis B vaccine will be offered to all employees (unless contraindicated) who have potential exposure to blood, blood products, or body fluids that may contain blood. Immunity to hepatitis B virus is strongly encouraged for all at risk employees. However, employees may decline hepatitis B immunization by signing the Hepatitis B Vaccine Declination form (Appendix 7). Hepatitis B immunization will be provided to at risk employees at no charge. Hepatitis B vaccination must be made available after the

employee has received information and training regarding the vaccine and within ten working days of initial assignment.

The standard immunization schedule will be followed: 0, 1, 6 months. Acceptable deviations from this schedule are as follows: 0, 1 mo (minimum time 0.75 mo), 6 mo (minimum time 5 mo). The alternative immunization schedule will also be acceptable: 0, 1, 2, 12 months provided Engerix vaccine was used. Acceptable deviations from this schedule are as follows: 1, 1 mo (minimum time 0.75 mo), 2 mo (minimum time 1.5 mo), 12 mo (minimum time 6 months). Immunization provided less than at the minimal intervals will not be counted. Employees who have received 1 or 2 vaccine doses will be continued on the standard schedule regardless of time between immunizations or time since last immunization. Following the 3<sup>rd</sup> (or 4<sup>th</sup> immunization if 0, 1, 2, 12 month schedule used) immunization, anti-HBsAg titer will be assessed 1-2 months after the last immunization.

Following a primary immunization series, all employees will be tested for anti-HBsAg 1-2 months post-vaccination (1-6 acceptable). Persons who lack protective antibody levels will be provided with three additional doses of hepatitis B vaccine (response defined at  $\geq 10$  mIU/mL). Following the second primary series, employees will again be tested for anti-HBsAg and HBsAg 1-2 months following the last vaccine dose (dose 6). Employees who have not developed an adequate antibody titer will be labeled NONRESPONDERS. In the event of an exposure to HBsAg positive blood, the employees who are non-responders will be provided HBIG within 24 hours and 1 month later.

Routine determination of anti-HBsAg titer is not recommended.

HBV vaccine will be provided to employees during working hours (on the clock).

Employees traveling from remote work sites (not home) will be reimbursed for travel or allowed to use a State vehicle.

### c. Post-Exposure Prophylaxis

Post-exposure prophylaxis will be offered (unless contraindicated) to all employees with an exposure as defined in this document. Post-exposure prophylaxis and follow-up will be provided to unvaccinated UNCHC first-aid responders who render assistance in any situation involving the presence of blood or OPIM. Post-exposure prophylaxis will depend on the infective status of the source (i.e., HBsAg positive), the immune status of the exposed person (i.e., anti-HBs), and vaccination status of the exposed person. Post-exposure prophylaxis may include HBIG and/or additional doses of hepatitis B vaccine.

After a bloodborne pathogen exposure (e.g., needlestick), the HBsAg status of the source will be assessed. If the source is HBsAg positive and the employee is not known to be immune (previous lab evidence of anti-HBsAg  $< 10$  mIU/mL), then the employee's anti-HBsAg status will be assessed on a STAT basis. If low ( $< 10$  mIU/mL), then a single booster dose of hepatitis B vaccine will be provided and the titer assessed 1-6 months post-immunization. If the titer remains low, consult Medical Director. If the source is HBsAg positive and the employee is a known nonresponder then HBIG X 2 will be provided (doses 1 month apart).

The efficacy of two doses of HBIG, one given immediately after percutaneous exposure and one given 1 month later is about 75%. Immune globulin alone has no role in prophylaxis against hepatitis B.

Unvaccinated employees will receive PEP per CDC recommendations and other expert opinions (refer to the Hepatitis B policy on the OHS website).

### d. Evaluation of Employees with Acute Hepatitis B Infection

All employees with symptoms and/or signs of acute hepatitis will be tested for acute hepatitis B infection. The following serologies will be drawn: HBsAg, anti-HBsAg, and anti-HBc (HbeAg may also be ordered). Additional studies for hepatitis A, C, and/or D, may be performed. Persons with acute hepatitis B will also have blood drawn to test serum glucose, bilirubin, PT, and electrolytes. If the infection resulted from occupational exposure, primary care will be provided by the employee's OHP. If the infection did not result from occupational exposure, the employee will be referred to their primary care provider for medical care. Referral to a gastroenterologist may also be suggested. Employees with acute hepatitis B infection will be sent home on sick leave during the acute infection (jaundice). All such employees will be counseled regarding the need for precautions to prevent home or hospital transmission of infection. Every effort will be made to document whether infection resulted from nosocomial exposure. All cases will be reported to the NC State Health Department, as per NC State regulations. Prior to returning to work all employees who have had acute infection, must receive medical clearance. Employees will be followed for at least one year to determine if they have developed chronic hepatitis B infection. Serologic testing (HBsAg, anti-HBsAg, anti-HBc) will be performed at the following times until the individual is determined to be noninfectious: 0, 1 month, 3 months, and 6 months. All employees still infectious at 1 year, regardless of symptoms, will be referred to a gastroenterologist for evaluation.

### 3. Management of Hepatitis C Virus

(For the full Hepatitis C exposure policy, see "Management of Hepatitis C Exposures" on the OHS website under "OHS Protocols.")

#### a. Definition of Exposure

- i. Healthcare personnel will be defined as having been occupationally exposed to HCV under the following conditions: The source is anti-HCV positive AND one of the following has occurred.
  - HCP has suffered a percutaneous injury with a contaminated sharp.
  - HCP has had contact on a mucosal surface or abraded skin with contaminated blood or a bloody body fluid.
  - HCP has had parenteral exposure to or mucosal membrane contact with a contaminated body fluid. Such fluids include only semen, vaginal secretions, amniotic fluid, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, or saliva during a dental procedure. In addition, contact with any unfixed tissue or organ (other than intact skin) from a human (living or dead).
  - HCP has received a bite that breaks the skin.
- ii. Healthcare personnel will not be defined as having been occupationally exposed to HCV under the following conditions:
  - The source is anti-HCV negative even if the source is a member of a group at high risk of HCV infection.
  - Inhalation or possible inhalation of microscopic blood or bloody fluids.
  - Contact of intact skin with contaminated blood or a bloody fluid.
  - Percutaneous injury with a noncontaminated sharp.

- Parenteral exposure or mucus membrane contact with saliva, urine, feces, or tears in which there is no visible blood.

b. Pre-Exposure Prophylaxis

None Available

c. Post-Exposure Prophylaxis

None. CDC guidelines state the following: "Recent studies indicate that immunoglobulin (IG) does not protect against infection with HCV. Thus, available data do not support the use of IG for prophylaxis of HCV. There are no data on the efficacy of IG for post-exposure prophylaxis of other (non-HCV) parenterally-transmitted, non-A, non-B hepatitis." Persons with HCV exposure will have a baseline anti-HCV (EIA) and ALT repeated in 6 months and a HCV RNA drawn at 4-6 weeks. If positive, they will be referred to a gastroenterologist or infectious disease specialist with expertise in HCV treatment.

d. Evaluation of Employees with Acute Hepatitis C Infection

All employees with symptoms and/or signs of acute hepatitis will be tested for acute hepatitis C infection. The following serologies will be drawn: Anti-HAV IgM, anti-HAV IgG, HBsAg, anti-HBs, anti-HBc and anti-HCV (EIA). Additional tests will include: ALT, AST, Bilirubin (direct and indirect), glucose and PT. Additional studies for hepatitis viruses may be performed. Persons with acute hepatitis C will also have blood drawn to test serum glucose, bilirubin, PT, and electrolytes. If the infection resulted from occupational exposure, primary care will be provided by the employee's Occupational Health Service. If the infection did not result from occupational exposure, the employee will be referred to their primary care provider for medical care. Referral to a gastroenterologist may also be suggested. Employees with acute hepatitis C infection will be sent home on sick leave during the acute infection (jaundice). All such employees will be counseled regarding the need for precautions to prevent home or hospital transmission of infection. Every effort will be made to document whether infection resulted from nosocomial exposure. All cases will be reported to the State, as per State regulations.

Prior to returning to work all employees who have had acute infection must receive medical clearance. Employees will be followed for at least one year to determine if they have developed chronic hepatitis C infection. All employees with HCV (acute or chronic), regardless of symptoms, will be referred to a gastroenterologist for evaluation.

4. Management of Bloodborne Exposures to HIV

(For the full HIV exposure policy, see "HIV Post Exposure Protocol" on the OHS website under "OHS Protocol/Needlestick.")

a. Definition of Exposure

- i. Healthcare personnel (HCP) will be defined as having been occupationally exposed to HIV under the following conditions: The source is HIV-positive (HIV Ag/Ab and Western blot antigen positive, or HIV Ag/Ab positive and Western blot pending) AND one of following has occurred.
  - The HCP has suffered a percutaneous injury with a contaminated sharp (contaminated is defined as previous contact with blood, bloody body fluid, or potentially infectious fluid {semen, vaginal secretions, cerebrospinal fluid, synovial, pleural, peritoneal, pericardial, and amniotic fluids}).



- The HCP has had contact on a mucosal surface with contaminated blood, bloody body fluid, or other potentially infectious fluids (semen, vaginal secretions, cerebrospinal fluid, synovial, pleural, peritoneal, pericardial, pericardial, and amniotic fluids).
  - The HCP has had parenteral exposure to or mucosal membrane contact with saliva during a dental procedure.
  - HCP has received a bite which breaks the skin.
  - HCP has had skin contact with blood, fluid containing visible blood, or other potentially infectious fluid or tissue AND the skin integrity in the area of contact was visibly compromised.
- ii. Healthcare personnel will NOT be defined as having been occupationally exposed to HIV under the following conditions:
- The source is HIV negative even if the source is a member of a group at high risk of HIV infection.
  - Inhalation or possible inhalation of microscopic blood or bloody fluids.
  - Contact of intact skin with contaminated blood or a bloody fluid unless such contact is prolonged or extensive.
  - Percutaneous injury with a non-contaminated sharp.
  - Parenteral exposure or mucous membrane contact with saliva, sputum, tears, human milk, urine, or feces, in which there is no visible blood.
- b. Prophylactic Therapy of Exposed Employees
- UNC Health Care will make anti-retroviral medication available at no cost to employees who meet CDC criteria for an exposure warranting PEP. Employees who desire anti-retrovirals for other indications will be referred to their local medical doctor or the Infectious Disease Clinic (treatment being at the employee's expense).
- c. HIV Testing – UNC Hospitals
- UNC Hospitals tests for HIV using a HIV antigen/antibody combination test that screens for HIV-1 p24 antigen and antibodies to HIV-1, HIV-2 plus group O. Initially-positive tests are repeated in duplicate. Repeat-positive tests are confirmed for HIV-1 or HIV-2 by MultiSpot HIV-1/HIV-2 rapid test before being reported as Positive. Repeat-positive tests that are Negative or Indeterminate by MultiSpot HIV-1/HIV-2 rapid test are reflexed to Quantitative HIV-1 RNA PCR testing.

### **E. Determination of Employees with Reasonably Anticipated Occupational Exposure**

Each manager will review their list of job classifications to identify which employees in those positions have reasonably anticipated occupational exposure. (See Appendix 3 for job classification listing.)

### **F. Training and Record Keeping**

#### **1. Purpose**

The purpose of this document is to provide an outline for the training of all occupationally exposed employees to ensure that all elements of training are addressed in educational programs.

### 2. Policy

Employees who have occupational exposure to blood and other potentially infectious materials will receive training at the time of initial assignment to an area where occupational exposure may take place and at least annually and more often if a need is indicated. If an employee is only proficient in a foreign language, the trainer or an interpreter must convey the information in that foreign language. Opportunities for interactive questions and answers are available 24 hours a day, 7 days a week, provided by the Infection Preventionist (IP) on call. Contracted services are responsible for providing OSHA education regarding Bloodborne Pathogens to contract employees.

### 3. General Information

The OSHA-required training is a condition of employment for all employees of the Health Care System and University. Each department manager must ensure that all employees identified as having potential occupational exposure participate in a training program. Material appropriate in content and vocabulary to educational level, literacy and language of employees shall be used.

Training shall be provided at the time of initial employment prior to participating in exposure-prone activities and within 364 days from last training thereafter. The hospital will provide additional training when changes such as modifications of tasks or procedures affect the employee's risk for occupational exposure.

Training can be accomplished via a variety of mechanisms. The majority of employees of the Hospitals utilize a self-instructional module located on the Learning Management System (LMS). Employees in designated departments (e.g. Environmental Services) receive training from the Departmental Safety Coordinators or Interpreters who use written material with post-test or videotapes. An IP is available 24/7 on pager 123-7427 to address questions regarding the training. For University employees, the UNC-CH Department of Environment, Health and Safety conducts training sessions at the request of departments that include all the required educational elements. Employees may also elect to use the self-study training for bloodborne pathogens located on the EHS website.

### 4. Training Elements

The training must contain the following elements:

- a. An accessible copy of the regulatory text of the OSHA bloodborne pathogen standard.
- b. A general explanation of the epidemiology and symptoms of bloodborne diseases.
- c. HIV and HBV must be described. Employer must convey that a number of other bloodborne diseases exist (e.g. hepatitis C and syphilis).
- d. An explanation of the modes of transmission of bloodborne pathogens. An explanation of the Exposure Control Plan.
- e. An explanation of the appropriate methods of recognizing procedures and other activities that may involve exposure to blood and other potentially infectious materials.
- f. An explanation of methods that will prevent or reduce exposure including engineering controls, work practices and personal protective equipment.
- g. Information on the types, proper uses location, removal, handling, decontamination and/or 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 the vaccine's efficacy, safety, and the benefits of being vaccinated.

- j. Information on the appropriate actions to take and persons to contact if an emergency involving blood occurs.
  - k. An explanation of the procedures to follow if an exposure incident occurs, including the methods of reporting the incident and the medical follow-up that will be made available.
  - l. An explanation of the signs and labels and color-coding used at UNC Hospitals.
5. Training Record Elements
- a. The dates of the training sessions.
  - b. The contents or a summary of the training sessions.
  - c. The names and qualifications of the persons conducting the training.
  - d. The names and job titles of all persons attending the training sessions.
  - e. Records must be maintained for three years from the date on which the training occurred. For employees of the Hospitals, records are kept by each individual department. For University employees, documentation is kept at the UNC-CH Department of Environment, Health and Safety.

### **G. Guidelines for the School of Dentistry**

#### 1. Introduction

This Bloodborne Pathogens Exposure Control Plan applies to all temporary, probationary, and permanent part- and full-time employees of the School of Dentistry and Clinical Research Center who are at risk for occupational exposure to bloodborne pathogens as defined in this document. Employees are expected to comply with all components of the plan including the following additional guidelines that are unique to dentistry.

#### 2. Plan Administration

Administration of the School's Exposure Control Plan rests with the Associate Dean for Administration, the Associate Dean for Clinical Affairs, the Director of the Dental Faculty Practice, and the Director of Patient Relations and Risk Management, who will manage and coordinate all aspects of the plan in cooperation with the University Department of Environment, Health and Safety. Employees covered under the provisions of this plan should contact one of these individuals with any questions, problems or concerns.

#### 3. Employee Access to Plan

The plan is also available on the School of Dentistry website.

#### 4. Exposure Determination

The School of Dentistry has determined that all employees within the following job classifications are at risk for occupational exposure to bloodborne pathogens by virtue of their primary job duties. This determination has been made without regard to the use of protective equipment or engineering and work practice controls.

- a. Clinical Faculty engaged in the practice of dentistry and/or engaged in the clinical instruction of students and supervision of patient care within the student dental clinics and supporting staff.
  - i. Dentist Exposures
    - Render treatments with sharp or rotary instruments
    - Give intraoral injections
    - Exposed to spatter and spray of oral fluids

- Handle contaminated equipment and surfaces
- ii. Dental Hygienist Exposures
  - Treat patients intraorally with sharp instruments
  - Exposed to spatter and spray of oral fluids
  - Handle contaminated equipment and surfaces
  - Clean instruments contaminated with saliva and blood
- iii. Dental Assistant Exposures
  - Contact mucosa and blood
  - Exposed to spatter and spray of oral fluids
  - Handle contaminated equipment and surfaces
  - Clean instruments contaminated with saliva and blood
- iv. Dental Technician Exposures
  - Receive and handle impressions contaminated with blood and saliva
  - Grind and polish prostheses worn intraorally
- v. Medical Support Technicians Assigned to the Central Sterilization Unit
  - Transport, receive, clean, and sterilize instruments contaminated with blood and saliva
- vi. Registered Nurses Engaged in Patient Care
  - Provide injections, start intravenous injections
  - Touch intraoral mucosa and blood
  - Handle, clean, and sterilize saliva/blood-contaminated instruments
  - Contact and clean contaminated equipment
- vii. Research Specialist/Technician Exposures
  - Exposed to spatter and spray or oral fluids
  - Handle contaminated equipment and surfaces
  - Exposure to other potentially infectious materials (OPIM)
- b. Additionally, some employees within the following job classifications also may be at risk for occupational exposures when performing the indicated task:
  - i. Clinic Administrative Support Associates
    - Receive and handle contaminated instruments and equipment that have been used in patient treatment
  - ii. Dental Specialty Trades Technicians
    - Performing equipment maintenance and repairs in patient care area/dental laboratories and research laboratories

### 5. Methods to Control Exposures (Methods of Compliance)

The School of Dentistry's Infection Control Manual defines Standard Precautions, Engineering Controls and Work Practice Controls that must be followed by all employees covered under this Exposure Control Plan to help eliminate and/or minimize exposure to bloodborne pathogens. These are summarized below.

#### a. Standard Precautions

- i. Wear a clean clinical over-garment in patient care units. Between patients change visibly soiled over-garments. Before leaving a work area, remove over-garments and place in the provided laundry hampers. Any worn, and therefore, contaminated over-garment must not be worn in a non-patient care area and must not be taken out of the School of Dentistry.
- ii. Wear disposable treatment gloves in performing and/or assisting in all intraoral procedures when opening exposed intraoral x-ray film packets, when handling contaminated equipment, instruments and other contaminated items, upon placement and cleaning of digital radiograph receptors, and in laboratory settings when there is a potential of exposure to blood and/or blood products. Sterile gloves must be worn in all surgical procedures.
- iii. Disposable face masks and protective eye covering with solid side shields must be worn in performing and/or assisting in any procedure involving the generation of aerosols or when there is the potential for spatter of blood or saliva.
- iv. Dental laboratory technicians are required to wear a clean uniform or laboratory jacket/coat. Technicians receiving incoming cases to the laboratory are required to wear disposable treatment gloves. Disposable face masks and protective eye covering with solid side shields are also required when there is a potential for exposure to dust or spatter.

#### b. Engineering Controls

- i. All needles shall be used with a protective shield. Re-sheathing of anesthetic needles is only permitted with the use of a protective shield and a one-handed scoop technique.
- ii. All used reusable sharps must be transported in covered, puncture-resistant, leak-proof containers.

#### c. Work Practice Controls

Employees covered under this Exposure Control Plan must follow the work practice controls outlined in the UNC School of Dentistry's Infection Control website. Work practice controls are specifically documented in the following sections of the manual:

- i. Section IV. Preparation and Disinfection of Operatories
- ii. Section V. Maintaining the Chain of Asepsis and Limiting Contamination
- iii. Section VII. Sterilization and Disinfection of Instruments
- iv. Section IX. Disinfection of Impression Materials and Dental Laboratory Procedures
- v. Section X. Radiology Service Procedures

#### d. Personal Protective Equipment

Employees covered under this plan shall be provided with personal protective equipment and specialized clothing they require to minimize occupational exposures, at no cost to them. These items include: treatment gloves, facial mask, protective eyewear, clinical

over-garments, clinic jackets, surgical scrubs, disposable footcovers and disposable headcovers. Laundry services for specialized clothing are also provided at no cost to employees.

Treatment gloves must be changed between each patient encounter, whenever the chain of asepsis is broken and/or whenever the integrity of the glove is compromised.

Used (contaminated) masks must be removed and discarded at the completion of treatment and when leaving the patient treatment area. Used masks must not be worn around the neck. Contaminated protective eyewear should be washed thoroughly with soap and water, rinsed well, and disinfected with an agent that does not damage eyeglasses.

Clinical over-garments and clinic/laboratory jackets must be changed when visibly soiled. After removing, they must be placed in a laundry hamper located in the work area and not taken home by employees for laundering.

e. Post-Exposure Evaluation and Follow-Up

All employees covered under this plan who experience an exposure incident in the performance of their duties shall promptly report the incident to the Office of Clinical Affairs. Exposure evaluation and follow-up should proceed as outlined in Section D of this policy.

f. Laundry Practices

- i. Contaminated laundry (soiled with blood or other potentially infectious materials, including saliva), including linen towels, surgical drapes, clinical over-garments, surgical scrubs, and laboratory coats are to be discarded in hampers located in the work area, and not further handled in the clinical areas. All linen deposited in these hampers is considered contaminated, and only handled with gloved hands.
- ii. Linen saturated with blood or other potentially infectious materials must first be placed in a red or labeled bag that indicates "BIOHAZARD" and prevents leakage before being deposited into the laundry hamper.
- iii. The University Housekeeping Department staff will prepare laundry for removal to an outside laundry service in accordance with the OSHA Bloodborne Pathogens Standard.

g. Housekeeping Practices

Employees engaged in patient care activities shall adhere to the policies and procedures documented in the School of Dentistry's Infection Control website regarding Preparation and Disinfection of Operatories (Section IV), Sterilization and Disinfection of Instruments (Section VII), Dental Laboratory Procedures (Section IX), and Radiology Service Procedures (Section X).

- i. All surfaces within the dental operatory that have not been draped with plastic or aluminum foil covers (or whenever the integrity of covers has been compromised) will be disinfected following each patient treatment encounter or, in the case of the dental laboratories, at the end of each work day, utilizing hospital-approved disinfection.
- ii. Within the dental laboratories, contaminated ragwheels will be cleaned thoroughly and then steam-autoclaved on a daily basis.
- iii. At the end of each workday, the University Housekeeping staff assigned to the School of Dentistry will meticulously clean all clinical areas including dental operatories, dental laboratories and instrument sterilization areas. Cleaning activities

will encompass disinfection of all surfaces that may come in contact with patients, dentists, dental hygienists, and dental assistants in the course of their duties, in accordance with UNC Housekeeping Policy.

### h. Record Keeping

- i. The Office of Clinical Affairs will track each reported exposure incident to assure that the referral for medical evaluation and follow-up has occurred with the University Occupational Health Clinic. Additionally, information relative to the route of exposure and circumstances under which exposure occurred will be maintained and reported in a summary format to the School's Infection Control Committee on an annual basis for the purpose of committee review and determination of changes in engineering controls and work practice controls that may be effective in reducing or eliminating the occurrence of exposure incidents.
- ii. The UNC Department of Environment, Health and Safety will maintain in the UNC Health and Safety Database the following information for Dental School employees whose jobs involve potential exposure to blood and other potentially infectious materials:
  - the employee's name, job classification, and PID number;
  - information sheet completed at the time of hire, including copy of the employee's hepatitis B vaccination status, dates of vaccination or statement from employee's physician indicating medical contraindication(s) to vaccination or declination statement signed by the employee.
  - The School of Dentistry Personnel Department will keep a copy of Form 19, "Employer's Report of Injury to Employee" for an employee involved in an exposure incident. The original Form 19 will be forwarded to the University Department of Environment, Health and Safety.
- iii. UNC Department of Environment, Health and Safety will maintain an accurate and current file of all employee training and education sessions that records the dates held, names and qualification of the trainers, program content, and the names and job titles of all employees who attend.
- iv. Training records will be maintained by the UNC Department of Environment, Health and Safety for a period of three years.

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### **V. Reviewed/Approved by**

Hospital Infection Control Committee

### **VI. Original Policy Date and Revisions**

Revised on Apr 2007, Apr 2008, Apr 2009, Apr 2010, Apr 2011, Apr 2012, Apr 2013



**Appendix 1: Definitions**

<b>Term</b>	<b>Definition</b>
Blood	Human blood, human blood components, and products made from human blood.
Bloodborne Pathogens	Pathogenic microorganisms that are present in human blood or other potentially infectious materials (OPIM) and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV) and syphilis.
Contaminated	The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
Contaminated Laundry	Laundry wet or soiled with blood or other potentially infectious materials and presents a reasonable likelihood of soak through or leakage from the bag or contain-laundry, which may contain sharps.
Contract Employees	Any employee that is not paid by the UNC Health Care and is not a University employee.
Decontamination	The use of physical or chemical decontamination means to remove, inactivate, or destroy bloodborne pathogens on a surface or item.
Engineering Controls	Controls (e.g. sharps disposal containers, self-sheathing needles, and safer medical devices, such as sharps with engineered sharps injury protectors and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.
Exposure Incident	A specific eye, mouth, 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.
Needleless System	A device that does not use needles for: 1) collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; 2) the administration of medication or fluids or 3) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.
Occupational Exposure	Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. This definition excludes incidental exposures that may take place on the job, and that are neither reasonably nor routinely expected and that healthcare personnel is not required to incur in the normal course of employment.
Other Potentially Infectious Materials (OPIM)	(1) The following body fluids: semen, vaginal secretions synovial fluid, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV, HBV or HCV containing cell or tissue cultures, organ cultures, and HIV, HBV, or HCV containing culture medium or other solutions; and blood, organs or other tissues from experimental animals infected with HIV, HBV, or HCV.
Parenteral	Piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.
Personal Protective Equipment (PPE)	Specialized clothing or equipment worn by an employee for protection against a hazard.

## Exposure Control Plan for Bloodborne Pathogens

Regulated Medical Waste	Infectious waste (microbiological, pathological, and blood products) that is to be disposed of according to rules established by the North Carolina Solid and Hazardous Waste Management Branch.
Sharp with Engineered Safety Device	A non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.
Source Individual	Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.
Standard Precautions	A method of infection control in which all human blood and other potentially infectious materials (OPIM) are treated as if known to be infectious. Standard Precautions apply to (1) blood; (2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; (3) non-intact skin; (4) mucous membranes; and 5) human milk. Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.
Sterilize	The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.
Students	All UNC students. Students should contact Campus Health Services.
UNC Health Care Employee	Any employee of UNC Hospitals, Ambulatory Care Clinics, and Community Based Centers who are paid by UNC Health Cares.
University Employee	Any employee of Campus Health Services, the School of Dentistry, Attending Physicians or Fellows paid by UNC, or any other University employee who works in health care facilities. This term and this exposure control plan do not apply to other employees of UNC-CH.
Work Practice Controls	Controls that reduce the likelihood of exposure by altering the manner in which a task is performed.

### Appendix 2: Infection Control Capability of Gloves

Barrier effectiveness of a glove is the measure of protection provided throughout the performance of a procedure. Although testing is routinely performed on gloves during their production to ensure the absence of holes or tears, it is the maintenance of this barrier integrity during use that determines the actual effectiveness of the glove.

#### Examination Gloves

- Natural rubber latex: excellent barrier; provides stretch and rebound
- Nitrile: molecular structure similar to latex; strength and elongation much closer to natural rubber latex
- Polyisoprene: similar properties to latex; has a molecular structure very similar to latex but without the protein which is responsible for latex allergies

#### In-Use Barrier Performance

Several studies have examined the failure rates of different kinds of medical gloves under simulated and clinical environments. These studies have found that nitrile and latex gloves have excellent barrier performance at manufacture and similar in-use barrier performance. The after-use testing failure rate for latex and nitrile gloves ranges from 0-5% and 1-3%, respectively. To optimize staff and patient protection, the following recommendations should be practiced.

#### Barrier Durability Needs

Healthcare personnel should select gloves with the barrier durability appropriate for the task:

- Latex gloves (powder-free with reduced protein content) in the operating room or during a sterile bedside surgical procedure (unless contraindicated)
- Polyisoprene gloves (powder-free) in the operating room or during a sterile bedside surgical procedure
- Nitrile gloves (powder-free) when handling infectious materials during routine patient care

Refer to “Latex Precautions” Nursing Policy for patients allergic to latex. Employees with a suspected latex allergy should be evaluated by their Occupational Health Services.

**Appendix 3: Job Classifications with Reasonably Anticipated Occupational Exposure**

**Ambulatory Care Clinics**

Clinical Nurse  
Clinical Nursing Supervisor/Manager  
Clinical Trials Clinician  
Dental Equipment Technician  
Dietitian  
EKG Technician  
Guest Services  
HBO Technician/HBO Safety Officer  
Medical Assistant  
Medical Office Assistant  
Medical Laboratory Technologist  
Nurse Clinician  
Nurse Practitioner  
Nursing Assistant I  
Nursing Assistant II  
Ophthalmology Technician  
Orthopedic Cast Technician  
Patient Business Associate  
Patient Business Associate Supervisor  
Patient Educator  
Pharmacist  
Phlebotomist  
Physical Therapist  
Physician  
Physician Extender  
Licensed Practical Nurse  
Program Manager  
Radiologist  
Research Assistant  
Research Nurse  
Resident  
Respiratory Therapist  
Security Guard  
Staff Clinic Nurse  
Surgeon's Assistant  
Surgery Technician  
Volunteers  
X-Ray Technician

**Audiology**

Audiology Director  
Audiology Intern  
Clinical Specialist  
Graduate Student Clinician  
Staff Clinician

**Bone Marrow/Apheresis Unit**

Clinical Nurse  
Clinical Support Technician  
Nursing Assistant I  
Nursing Assistant II  
Transplant Nurse Coordinator

## Exposure Control Plan for Bloodborne Pathogens

### **Campus Health Services**

Cast Technician  
Director of Nursing Services  
Housekeeper  
Medical Assistant  
Medical Laboratory Technician  
Medical Laboratory Technologist  
Nurse  
Nurse Practitioner  
Nursing Assistant  
Nursing Supervisor  
Pharmacist  
Phlebotomist  
Physical Therapist Athletic Trainer  
Physical Therapist Technician  
Physician  
Physician Assistant  
Radiology Technician  
Store Room Manager

### **Cardiac Catheterization**

Administrative Coordinator  
Cardiovascular Specialist-N  
Cardiovascular Specialist-S  
Clinical RN ANC  
Clinical Nurse II  
CST I  
Financial Assistant  
Invasive Cardiology Lab Manager  
MSA II  
Nurse Practitioner  
Physician Extender

### **Cardiac EKG Services**

Cardiology Technician  
Lab Manager

### **Cardiac Ultrasound**

Echocardiographer  
Nurse Clinician I

### **Central Distribution**

Administrative Coordinator  
OSA I  
Stock Clerk  
Storeroom Manager

### **Central Sterile Supply**

Central Processing Department Manager  
Central Processing Department Supervisor  
Central Sterile Technician  
Medical Support Assistant IV  
Staff Development Tech I

**Clinical Transitional Research Center**

Licensed Practical Nurse  
Medical Lab Technician  
Nursing Assistant  
Professional Nurse

**Cysto Suites**

Clinical Nurse  
Endotech  
Surgical Technologist

**Dental Clinic (Hospital)**

Dental Assistant  
Dental Hygienist II

**Dialysis In-House**

Clinical Nurse II  
Clinical Nurse III  
Clinical Nurse IV  
Dialysis Patient Support Associate  
Health Unit Coordinator  
Hemodialysis Technician  
Patient Services Manager III

**Emergency Department**

Clinical Nurse I  
Clinical Nurse II  
Clinical Nurse III  
Clinical Nurse IV  
Clinical Support Technician  
Division Director  
Health Unit Coordinator  
Nursing Assistant I  
Nursing Assistant II  
Patient Service Manager III  
Stock Clerk

**Environmental Health and Safety**

Assistant Director, EHS  
Director, EHS  
Director Emergency Preparedness and Continuity Planning  
Industrial Hygienist  
Infection Control/Safety Satellite Compliance Officer  
Medical Laser Safety Officer  
Safety Officer  
Senior Safety Officer

**Environmental Services**

Housekeeper  
Housekeeping Supervisor I  
Housekeeping Team Leader  
Maintenance Mechanic  
Stock Clerk

**GI Procedures**

Central Sterile Technician  
Clinical Nurse  
Endoscopy Technician

## Exposure Control Plan for Bloodborne Pathogens

Licensed Practical Nurse  
PSM III

### **Motility Unit**

Clinical Nurse

### **Ground and Air Transport Unit**

Clinical Nurse II, III, IV  
EMT  
Fleet Manager  
Paramedic  
Paramedic Supervisor  
Patient Service Manager III  
Respiratory Therapist

### **Guest Services, Patient Transportation, and Service Response Center**

Administrative Associate  
Administrative Representative  
Administrative Specialist  
Front Desk Coordinator  
Guest Services Supervisor  
Hospital Aide  
Patient Transportation Supervisor

### **Hospital Epidemiology**

Infection Control/Safety Compliance Officer  
Infection Preventionist  
Medical Laboratory Technologist II  
Patient Service Manager II  
Public Health Epidemiologist/Director of Surveillance Programs

### **Hospital Laboratories**

Administrative Director  
Assistant Administrative Directors Supervisor II  
Chair  
Clinical Nurse  
Clinical Pathology Assistant  
Cytogenetic Technologist I  
Cytogenetic Technologist SR  
Cytotechnologist I  
Directors  
Donor Recruiter  
Hemopheresis Tech  
Histotechnician  
Histotechnician – Trainee  
Histotechnologist  
Histotechnologist Sr  
LIS Specialist  
Medical Laboratory Specialist  
Medical Laboratory Technician  
Medical Technologist I  
Medical Technologist Senior  
Office Assistant IV (Univ)  
Office Support Assistant II  
Office Support Assistant III  
Pathologists

## Exposure Control Plan for Bloodborne Pathogens

Patient Services Manager  
Phlebotomist  
Supervisor I

### **Hospital Police**

Director, Hospital Police and Transportation  
Hospital Security Officer  
Police Chief  
Police Officer

### **House Staff – Graduate Medical Education**

Dental Ecology

Hospital Residents:

University Residents – Allergy and Immun  
University Residents – Anes/Pain Medicine  
University Residents – Anes/Pediatrics  
University Residents – Anesthesiology  
University Residents – Dermatology  
University Residents – Emergency Medicine  
University Residents – Emergency/Med/Peds  
University Residents – Family Medicine/Sports Medicine  
University Residents – Internal Medicine  
University Residents – Lab Med (McLendon Labs)  
University Residents – Medical Genetics/Medical Biochemical Genetics  
University Residents – Med/Cardio Dis  
University Residents – Med/Clinical Cardiac Electrophysiology  
University Residents – Med/Endo  
University Residents – Med/Gastro  
University Residents – Med/Geriatrics  
University Residents – Med/InterveCard  
University Residents – Med/Hem/Onc  
University Residents – Med/Infect Dis  
University Residents – Med/Nephrology  
University Residents – Med/Pediatrics  
University Residents – Med/Pulmonary  
University Residents – Med/Rheumatology  
University Residents – Med/Transplant Hepatology  
University Residents – Neurology and Neurology/Child  
University Residents – Nuclear Medicine  
University Residents – OB/GYN (Female Pelvic Medicine and Reconstructive Surgery, REI,  
Urogynecology, Gynecology/Oncology)  
University Residents – Ophthalmology  
University Residents – Orthopaedics  
University Residents – Otolaryngology  
University Residents – Pathology  
University Residents – Path/Blood Bank  
University Residents – Path/Cytopath  
University Residents – Path/Forensic  
University Residents – Path/Hematopath  
University Residents – Path/Mole Gen  
University Residents – Path/Neuropath  
University Residents – Pediatrics  
University Residents – Peds/Crit Care  
University Residents – Peds/Endo  
University Residents – Peds/Hem/Onc



## Exposure Control Plan for Bloodborne Pathogens

University Residents – Peds/Neonatology  
University Residents – Peds/Nephrology  
University Residents – Peds/Pulmonary  
University Residents – Physical Medicine and Rehabilitation  
University Residents – Preventive Medicine  
University Residents – Psychiatry  
University Residents – Psychiatry/Child  
University Residents – Psychiatry/Frns  
University Residents – Psychiatry/Psychosomatic Medicine  
University Residents – Radiation Oncology  
University Residents – Radiology  
University Residents – Rad/Neuroradiol  
University Residents – Rad/Vascular  
University Residents – Sleep Medicine  
University Residents – Surgery  
University Residents – Surgery/CT  
University Residents – Surgery/Complex General Surgical Oncology  
University Residents – Surgery/CritCar  
University Residents – Surgery/Neuro  
University Residents – Surgery/Plastics  
University Residents – Surgery/Urology  
University Residents – Surgery/Vascular  
University Residents – Vascular Neurology  
Oral & Maxillofacial Surgery  
Pediatric Dentistry

### **Interpreter Services**

Spanish Interpreters

### **Legal**

N/A

### **Linen Services**

Linen Services Assistant  
Linen Services Supervisor  
Vehicle Operator

### **Medical Engineering**

Biomedical Equipment Technician  
Imaging Service Engineer

### **Neurophysiology/Sleep Lab**

Clinical Neurophysiology Laboratory Supervisor  
Intraoperative Monitoring Technologist  
Neuro Diagnostic Technologist I  
Neuro Diagnostic Technologist II

### **Nursing Department**

Cardiology Tech  
Clinical Nurse Assistant Supervisor  
Clinical Diabetes Educator  
Clinical Director  
Clinical Nurse – ANC  
Clinical Nurse – ANC/I  
Clinical Nurse – ANC/II  
Clinical Nurse – ANC/III  
Clinical Nurse – ANC/IV  
Clinical Nurse – IP

## Exposure Control Plan for Bloodborne Pathogens

Clinical Nurse – IP/I  
Clinical Nurse – IP/II  
Clinical Nurse – IP/III  
Clinical Nurse – IP/IV  
Clinical Nurse – OP  
Clinical Nurse – OP/I  
Clinical Nurse – OP/II  
Clinical Nurse – OP/III  
Clinical Nurse – OP/IV  
Clinical Nurse - PD  
Clinical Nurse Specialist  
Clinical Nursing Education Specialist  
Clinical Support Technician  
Clinical Support Technician II  
CST Per Diem  
Dialysis Technician  
Emergency Medical Technician – CAC  
Emergency Medical Technician - Driver  
Flight Paramedic – CAC  
Hospital Aide (Dialysis)  
IV Therapy Tech  
Lactation Consultant  
Lactation Program Manager  
Licensed Practical Nurse  
Licensed Practical Nurse – PD  
Licensed Practical Nurse – PPV  
Nurse Educator  
Nurse Practitioner  
Nursing Assistant  
Nursing Assistant II  
Nursing Assistant PD  
Nursing Education Clinician I  
Patient Education Coordinator  
Patient Services Manager I - ANC  
Patient Services Manager II – ANC  
Patient Services Manager III – ANC  
Patient Services Manager I – IP  
Patient Services Manager II – IP  
Patient Services Manager III – IP  
Patient Services Manager I – OP  
Patient Services Manager II – OP  
Rehabilitation Counselor I  
Resident Support Assistant  
Scrub Techs  
Stock Clerk  
Stroke Coordinator  
TPN Nurse  
WOCN

### **Occupational Health Services**

Administrative Associate  
CNII  
Medical Director  
Patient Services Manager I  
Physician Extender II

### **Occupational/Physical Therapy**

Occupational Therapist I  
Occupational Therapist II  
Occupational Therapist Assistant  
Occupational Therapy Manager U  
Physical Therapy I  
Physical Therapy II  
Physical Therapy Assistant  
Physical Therapy Manager U

### **Pastoral Care**

Clinical Pastoral Education Specialists  
Clinical Chaplain  
Intern Chaplains  
Resident Chaplains

### **Patient Equipment Service**

Patient Equipment Technician I  
Patient Equipment Technician II  
Supply Chain Services Supervisor

### **Pediatric Endoscopy**

Clinical Nurse  
Clinical Instructor  
Respiratory Therapist

### **Peripheral Vascular Lab**

Radiology Imaging Manager  
Ultrasound Technologist I  
Ultrasound Supervisor  
Vascular Extern (classified as temporary medical)

### **Pharmacy**

Accounting Specialist  
Administrative Associate  
Assistant Director of Pharmacy  
Associate Director of Pharmacy  
Cashier  
Clinical Applications Specialist  
Department HR Rep  
Director of Pharmacy  
Patient Financial Services Representative  
Pharmacist, Clinical Specialist  
Pharmacist, Clinical OP  
Pharmacist, Clinical Central  
Pharmacist, Clinical Nights  
Pharmacy Clinical Manager  
Pharmacy Inventory Specialist  
Pharmacy Operations Specialist  
Pharmacy Reimbursement Manager  
Pharmacy Resident  
Pharmacy Technician  
Purchasing Agent  
Quality Org Exc Analyst  
Quality Org Exc Specialist  
Store Manager

## Exposure Control Plan for Bloodborne Pathogens

Temp  
Temp Med  
Temp Select

### **Plant Engineering**

Carpenter  
Carpenter Supervisor  
Design/Construction Engineer  
Director, Plant Engineering  
Electrician  
Electrician Supervisor  
Electronic Shop Supervisor  
Electronic Technician I  
Electronic Technician II  
Engineering Manager  
Facilities Design Technician  
HVAC Mechanic  
HVAC Supervisor II  
HVAC Technician  
Locksmith  
Maintenance Mechanic II  
Maintenance Mechanic III  
Painter  
Plant Maintenance Supervisor  
Plumber  
Plumber Supervisor  
Safety Officer

### **Pulmonary Function**

Clinical Nurse II  
Pulmonary Function Technologist  
Respiratory Therapist  
Respiratory Therapy Supervisor

### **Purchasing**

Clinical Materials Analyst

### **Radiation Oncology**

Clinical Engineer  
Clinical Nurse I  
Clinical Nurse II  
Clinical Radiation Physicist  
Hospital Transportation Aide  
Radiation Dosimetrist  
Radiation Oncologist  
Radiation Therapist  
Radiation Therapy Supervisor I  
Radiation Therapy Supervisor II

### **Radiology**

Clinical Nurse  
Hospital Aide  
Mammography Technologist  
Medical Support Assistant I  
Medical Support Assistant II  
Nuclear Medicine Supervisor I  
Nuclear Medicine Supervisor: Program Director  
Nuclear Medicine Technologist

## Exposure Control Plan for Bloodborne Pathogens

Office Support Assistant I  
Office Support Assistant II  
Office Support Assistant III  
Radiology Imaging Specialist  
Radiology Imaging Specialist CT/MRI and VIR/OR  
Radiology Imaging Supervisor I  
Radiology Transporter  
Ultrasound Supervisor  
Ultrasound Technologist

### **Recreational Therapy and Child Life**

Activities Therapist PD  
Assistant Director of Therapy Services  
Child Life Specialist  
Children's Aftercare Program Coordinator  
Music Therapist  
Occupational Therapist  
Occupational Therapy Assistant  
Occupational Therapy Student  
Recreational Therapist  
Recreational Therapy Assistant  
Recreational Therapy Clinical Fellow  
Recreational Therapy Intern

### **Respiratory Care**

Director of Respiratory Care  
ECMO Coordinator  
ECMO Specialist  
Medical Support Technician  
Pulmonary Function Specialist  
Registered Nurse  
Respiratory Care Technician  
Respiratory Therapist  
Respiratory Therapy Supervisor

### **Speech Pathology**

Asst Director, Rehabilitation Therapies  
Graduate Student Clinicians, Speech Pathology  
Staff Clinician  
Clinical Fellow  
Clinical Specialist  
Speech Pathologist (Per Diem)

### **Surgical Service**

Anesthesia Technician  
Chief Anesthesia Tech  
Chief Perfusionist  
Clinical Nurse  
Central Sterile Tech  
CPD Manager  
CPD Supervisor  
Director  
Educator  
Endo Technologist  
MSA  
NA  
ORA

## Exposure Control Plan for Bloodborne Pathogens

PBA  
Perfusionist  
PSM  
Surgical Technologist  
Vice President

### **Transplant: Solid Organ Transplant and Ventricular Assist Devices**

Clinical Nurse II  
Nursing Assistant  
Temp Nurse - OP  
Transplant Coordinator  
VAD Nurse Coordinator

### **UNC Home Health, UNC Hospice, and UNC Homecare Specialists**

Administrative Coordinator (Volunteer Group)  
Chaplin/Bereavement Coordinator  
Clinical Dietician  
Clinical Nurse  
Customer Service Specialist  
Delivery Technician  
Hospice Patient Care Volunteer  
Medical Director  
Nurse Practitioner (Hospice)  
Nursing Assistant  
Occupational Therapist  
Patient Services Manager II and III  
Physical Therapist  
Registered Dietician  
Rehabilitation Manager  
Respiratory Therapist  
Social Worker, MSW  
Speech Therapist

### **UNC School of Dentistry (if patient clinical activities)**

Adjunct Assistant Professor  
Adjunct Associate Professor  
Adjunct Instructor  
Administrative Assistant  
Administrative Officer  
Administrative Support Associate  
Associate Professor  
Business Officer  
Clinical Assistant Professor  
Clinical Associate Professor  
Clinical Nurse  
Clinical Professor  
Clinical Services Manager  
Dental Assistant  
Dental Assistant Supervisor  
Dental Equipment Technician  
Dental Hygienist  
Dental Laboratory Technician  
Dentist  
Financial Counselor  
Interpreter  
Laboratory Assistant

## Exposure Control Plan for Bloodborne Pathogens

Laboratory Technician  
Medical Support Technician  
Nurse  
Nurse Education Clinician  
OCIS Support Technician  
OCIS Systems Analyst  
Patient Relations Representative  
Postdoctoral Research Associate  
Processing Assistant  
Professor  
Radiology Technician  
Research Assistant  
Research Assistant Professor  
Research Scholar  
Research Technician  
Sterilization Processor  
Student Assistant – Linen Distribution  
Support Services Associate  
Surgical Technician

### **UNC Wellness Center / UNC Hospitals Cardiac Rehab**

Cardiac Rehab Clinical Exercise Specialist  
Cardiac Rehab Care Coordinator  
Cardiac Rehab Fitness Instructor  
Cardiac Rehab Nurse  
Cardiac Rehab Program Director  
Clinical Dietician  
Fitness Director  
Fitness Instructor  
Health Education Director  
Health Educator  
Lifestyle Enhancement Director  
Performance Center Coordinator  
Personal Trainer

### **University Environment Health and Safety**

Biological Safety Officer  
Campus Fire Marshall  
EHS Professional  
EHS Technician  
EHS Program Manager  
EHS Program Consultant  
Hazardous Materials Manager  
Health Physicist  
Industrial Hygiene and Biological Safety Manager  
Industrial Hygiene Supervisor  
Medical Director  
Nurse Clinician  
Nurse Practitioner  
Radiation Safety Officer  
University Industrial Hygienist

### **Urophysiology Laboratory**

Clinical Nurse II  
Clinical Nurse III

**Volunteer Services**

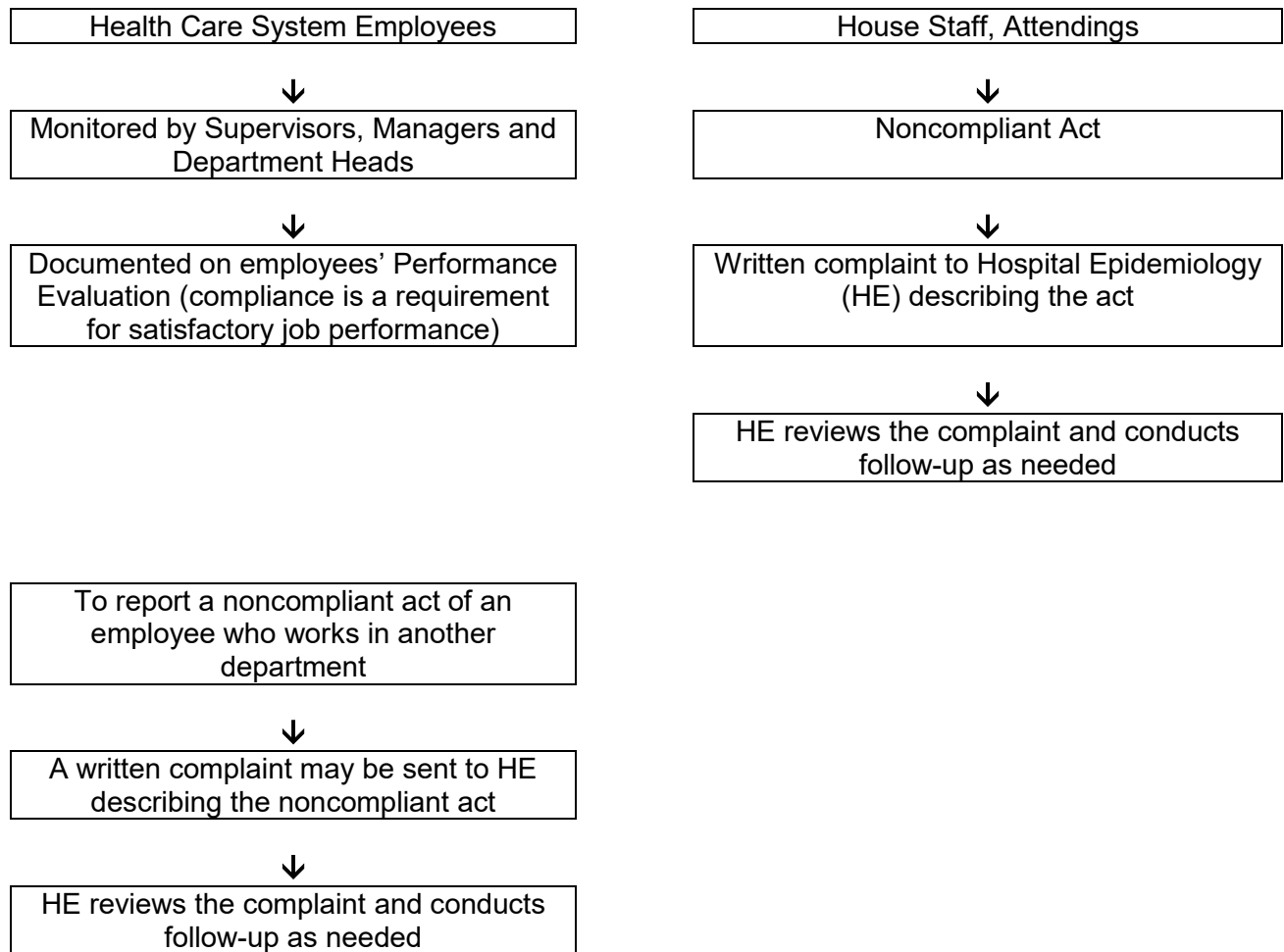
Atrium Playroom Volunteer  
Burn Center Volunteer  
CF Patient Volunteer  
Cuddler Program Volunteer  
DULAS  
Emergency Department Aide  
Emergency Department Liaison  
Geriatric Nutrition Aide  
Interpreter  
Med World Volunteer  
Oncology Infusion Center Volunteer  
Pediatric Oncology Clinic Volunteer  
Special Requested Patient Visitation Volunteer



**Appendix 4: Serologic Testing for Health Care Personnel (HCP) Following Occupational Exposure to HIV, HBV, HCV**

<b>Infection Status of Source Patient</b>	<b>Baseline</b>	<b>4 Weeks</b>	<b>6 Weeks</b>	<b>12 Weeks</b>	<b>6 Months</b>
HIV-positive	HIV antibody test		HIV antibody testing	HIV antibody testing	HIV antibody testing
HBsAg – positive	Anti-HBs if previously vaccinated to HBV and response unknown				
Anti-HCV – positive	HCV antibody testing; ALT	HCV RNA			HCV antibody testing; ALT
Unknown	HIV antibody testing; anti-HBs if previously vaccinated to HBV and response of vaccination unknown; HCV antibody testing; ALT		HIV antibody testing	HIV antibody testing	HIV antibody testing; HCV antibody testing; ALT

**Appendix 5: Mechanism for Compliance with OSHA Bloodborne Pathogens Regulations**



**Appendix 6: Informed Refusal for Hepatitis B Vaccination for UNC Health Care Employees**

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.

\_\_\_\_\_ I have chosen to decline the Hepatitis B Vaccine at this time. I have read (or it has been explained to me) the HEPATITIS B INFORMATION SHEET.

\_\_\_\_\_ I have received the complete series of Hepatitis B Vaccine. I do not have original documentation.

\_\_\_\_\_  
Signature Date \_\_\_\_\_

\_\_\_\_\_  
Signature of MD/FNP/Occupational Health Nurse Date \_\_\_\_\_  
3/18/2008

**Appendix 7: Hepatitis B Vaccine Declination for UNC Employees**

Name: \_\_\_\_\_ Social Security Number: \_\_\_\_\_

Department: \_\_\_\_\_ Campus Phone: \_\_\_\_\_

**Hepatitis B Vaccine Declination**

I understand that due to my occupational exposure to blood and 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 the hepatitis B vaccine, I can receive the vaccination series at no charge to me.

## **Appendix 8: UNC Occupational Health Service Guidelines for Discussion with Source Patient**

### Discussion with the Source Patient

Hello, my name is \_\_\_\_\_. I am here to notify you that a UNC employee or student has suffered an exposure to your blood. Since blood can transmit many infections including HIV (the virus that causes AIDS), hepatitis B and hepatitis C, the Health Department in North Carolina requires all persons who are the source of blood exposures be tested for HIV, hepatitis B, and hepatitis C. We will perform these tests without any charge to you. If blood is already available in the lab then no additional blood will need to be obtained. If blood is not available, then we will need to draw a small amount of additional blood from you. We will notify your physician of all test results. In addition, if any tests are positive we will aid your physician in providing you a referral to a clinic specializing in this type of infection.

If your HIV test is negative but you are at risk for HIV infection by reasons of life style such as injecting drug use, multiple sexual partners, or practicing unsafe sex, then this test may not indicate whether you are infected with HIV. If you truly want to know your HIV status you should be retested in 6 months and discuss with your physician behaviors that place you at risk for HIV.

Do you have any questions?

In the event the source is a child under age 6 months, test the mother.

In the event the source is already known to be positive for HIV notify the ordering physician and do not order the HIV test. However, the tests must still be ordered for hepatitis B and hepatitis C.

### **COUNSELLING SOURCE PATIENT (SPANISH)**

Hola me llamo \_\_\_\_\_. Estoy aqui para informarles que un empleado o estudiante de la Universidad de Carolina del Norte ha tenido contacto con su sangre. Como se pueden transmitir muchas infecciones a traves de la sangre como el virus VIH (este es el virus que transmite la enfermedad del SIDA) hepatitis tipo B y C, el departamento de salubridad de Carolina del Norte requiere que cada persona de donde proviene esta sangre se la haga un examen para VIH, Hepatitis B y Hepatitis C. Nos hacemos responsables en hacer estos exámenes gratuitamente. Si ya tenemos muestras de su sangre, no necesitaremos extraerle mas. En caso de que no la tengamos, obtendremos una muestra adicional. Su medico sera notificado del resultado de todos los exámenes. Ademas si cualquiera de estos resultaran positivos le ayudaremos a su medico recomendandole una clinica especializada en este tipo de infecciones.

Si por el estilo de vida en que Ud. Vive, como el uso de drogas por via intravenosa, tener relaciones sexuales con varias y diferentes personas, o tener relaciones sexuales sin protegerse, lo pone en riesgo de contraer este virus, puede ser que se la recomiende hacer el examen, y podria ser que los resultados no indiquen si esta infectado o no. Si Ud. realmente quiere saber si lo tiene o no, debe regresar de nuevo, y hacer el examen 6 meses despues, asi como platicar con su medico la conducta que lo esta poniendo en riesgo.

Tiene preguntas?

O:USERS/OHS/SPANSRCE

Occupational Health, UNC Hospitals

## Exposure Control Plan for Bloodborne Pathogens

This patient has served as the source of a blood exposure. As per Health Department Regulations the following tests have been ordered: HIV, anti-HBsAg (hepatitis B), and HCV (hepatitis C). These tests will be done without charge to the patient. The results will be placed in the chart. A letter with these results will be sent to the attending physician.

Testing has been discussed with this patient

The medical condition of this patient has precluded discussion of the above tests

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Signature

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Time and Date

### **Appendix 9: UNC-CH Committee Review of Engineering and Work Practice Controls/Sharps Safety Devices in Use and Under Evaluation for the UNC School of Dentistry and Campus Health Services**

Health and safety committees have been established at UNC-CH to review injury and illness records, review engineering and work practice controls including safer medical devices that help prevent needlestick injuries, and make advisory recommendations to the administration in order to achieve a safer workplace. Five committees have been established according to the type of hazard or work environment: Occupational Health and Clinical Safety Committee, Hazards Management Safety Committee, Laboratory and Chemical Safety Committee, Radiation Safety Committee, and Institutional Biosafety Committee. Bloodborne pathogen exposures that occur are reviewed by the respective work environment safety committee for employees in that work environment.

#### **Committee Organization**

Each committee is composed of twelve University employees, at least six of whom are non-supervisory employees. The Director of the Department of Environment, Health and Safety, or designee, serves as an ex-officio member with voting rights on each committee.

#### **Appointments**

The Chancellor appoints members of the work environment committees. Terms of the initial appointees are staggered to provide for one-third of the committee members being replaced each year. Terms are for three years and members will normally not serve consecutive terms although members initially appointed to less than a three-year term may be reappointed to a full term.

#### **Committee Responsibilities**

Basic committee responsibilities include:

- Review sharps injury log, other bloodborne exposure incidents, and other incidents involving work-related fatalities, injuries, and illnesses.
- Review employee complaints regarding hazards in the workplace.
- Review engineering controls and commercially available and effective medical devices designed to eliminate or minimize occupational exposures.
- Document identification, evaluation, and selection of engineering and work practice controls.
- Make recommendations to appropriate infection control committees for the selection and implementation of safer medical devices.
- Make recommendations for safety improvements and policies to the administration and the University Safety and Security Committee.

#### **University Safety and Security Committee**

The University Safety and Security Committee is composed of: Vice Chancellor Finance and Administration, Senior University Counsel, Associate VC for Campus Services, Associate VC for Human Resources, Associate VC for Facilities Planning and Construction, VC for Student Affairs, VC for Research and Graduate Studies, Chair of the IACUC Committee, Director of Public Safety, Director of Department of Environment, Health, and Safety, Chair of the Hazard Management Committee, Chair of Laboratory/Chemical Committee, Chair of Occupational Health/Clinical Committee, Chair of Radiation Safety Committee, and Chair of Institutional Biosafety Committee.

#### **Distribution of Committee Minutes**

Minutes for the committee meetings are sent to each supervisor in the work environment and are also posted on the website.

### Internal Procedures for Sharps Safety Devices in Use and Under Evaluation for UNC School of Dentistry

The UNC School of Dentistry utilizes the Infection Control Committee, which meets once a month to make recommendations regarding sharps safety devices. The Infection Control Committee is comprised of Dental Faculty, Dental Hygiene Faculty, Dental Students and School of Dentistry Staff all of who have direct patient contact and are at the highest risk of incidents or exposure. The committee makes recommendations and evaluations on procedures and protocols and the safety devices that are used for proper prevention. These recommendations are based upon evaluation of new safety devices and incident that have occurred. The Risk Manager also presents reports to the committee. The minutes from these meetings are posted on-line for faculty, staff and students.

### Internal Procedures for Sharps Safety Devices in Use and Under Evaluation for UNC Campus Health Services

Campus Health Services utilizes the Infection Control Committee and the Nursing Department to evaluate sharps safety devices and organizational procedures to help ensure the safety of both patients and employees. The people who make up these committees are mainly composed of front-line individuals who have direct contact with patients and have the highest risk of exposure. A standardized product evaluation form is used by personnel to provide feedback on the efficacy and safety of devices.

The Infection Control Committee works closely with the Environment of Care Committee. These committee members represent every department in Campus Health and they help evaluate current policies and procedures. The committees make recommendations for improvement to optimize the safety of the organization, its staff and patients. The committee members-assess any incident that may have occurred, the reason why it occurred, and how the risk of future incidents could be eliminated or minimized. Compliance is tracked through random yearly inspections to assure that the proper procedures and protocols are being followed. Results from these actions are documented in the committee minutes which are posted for staff members on the Campus Health Services Intranet. A copy of the minutes is placed in the CHS organizational notebook.

### Sharps Safety Devices in Use and Under Evaluation for UNC

#### UNC School of Dentistry

Device	Manufacturer
IV Catheter-22, 20 Gauge	Braun-Introcan
IV Catheter-22, 20, 18	MedX-Protective
Lancet-21 Gauge, 3.0 mm	MediChoice
Lancet-Unilet 6.P.	Owen Munsford
Needleless IV System	Abbott
Safety Syringes	Abbott-Vanishpoint
Scalpel-Protected Disposable	Bard-Parker
Sharps Containers	Kendall
Sheath Prop/Needle-Puncture Guard for one-handed recapping	Tik-Shield, Inc.
Vacutainer Safety-Lok	BD
Winged Infusion Set	Terumo Surflo
Winged Steel Needle Set (Butterfly)	BD



**UNC Campus Health Service**

Devices Currently in Use

IV Catheter – Braun / Introcan Safety  
IV System – Abbott/Clave Needleless System  
Vacutainer – Becton Dickinson Eclipse  
Scalpel – Becton Dickinson / Safety Scalpel  
Safety Syringes – Becton Dickinson

No Devices Currently Under Evaluation or Candidates for Adoption

**Appendix 10: Bloodborne Pathogen Exposure – Mode of Operation for Campus Health Services**



Campus Health Services  
Division of Student Affairs  
The University of North Carolina at Chapel Hill

Name of Policy	Bloodborne Pathogen Exposure- Mode of Operation
Policy Number	CHS-PC-25; INF-N-02
Date Effective	May 2001
Date Last Reviewed	May 2011
Responsible for Review	Infection Control Committee

**POLICY**

Campus Health Services (CHS) evaluates bloodborne pathogen exposure as outlined in Policy INF-N-03 for all health affairs students (including visiting students). It is necessary to provide this service on a 24-hour basis since these students need to be evaluated and possibly treated immediately. The following outlines the evaluation protocol at different hours of service.

**PROTOCOL**

1. The CHS medical providers will continue to manage bloodborne pathogen exposures that occur when the student presents to CHS.
2. When CHS is open, a medical provider for CHS will evaluate the student per usual protocol. These evaluations are typically done through appointments; however they can be expedited in emergent or urgent situations. During normal business hours (Monday – Friday, 8AM-5PM), the student should call 966-6561 to make the appointment and if necessary have an initial, brief telephone discussion with the CHS physician on duty.
3. If the exposure occurs during the time CHS is closed, the student should call 966-6561 or the main CHS phone number, 966-2281, and he/she will be connected to the HealthLink nurse who will contact the CHS physician on-call. The physician will handle the initial evaluation and then notify the student of test results.
  - a. If the student is doing an away rotation or is in a situation where they cannot be evaluated in the proper time frame and needs immediate evaluation and possible treatment, the physician on-call will instruct the student to go to the nearest emergency room, urgent care facility or the closest medical facility that has a provider comfortable assessing bloodborne pathogen exposures.
  - b. As soon as feasible, the CHS physician on-call will notify the student of the source's HIV status.
  - c. If the source is HIV positive and the student is not on prophylaxis, the on-call CHS physician will recommend and prescribe post-exposure prophylaxis (PEP). If the student starts PEP, the student will be asked to see a provider as soon as feasible for baseline labs. The CHS provider may consult the UNC ID physician on call for assistance regarding the PEP regimen especially if the source patient is a known HIV patient of UNCH.

## Exposure Control Plan for Bloodborne Pathogens

- d. If the student is on rotation outside of Chapel Hill, and the patient is HIV positive, the student should be seen as a patient by a provider in that community as soon as possible. In some cases, this may mean the student is seen by the medical facility's occupational health provider.
  - e. If the student is initially seen at UNC's Emergency Room and seen by the Infectious Disease Fellow, the student will be referred back to CHS for follow-up.
4. Note: visiting students will be evaluated by CHS providers. However, their private health insurance (which is a requirement for them to have before they are able to do a rotation at UNC) will be billed for labs that are ordered on their behalf.

Reviewed by:  
Infection Control Committee

Date:  
May 2011

Approved by:  
Director of Clinical Services

Date:  
May 2011

Revised: 11/01, 3/04, 7/06, 4/07, 11/07, 4/10, 6/10, 3/11, 5/11  
Reviewed: 7/02, 11/03, 9/05