

Exposure Control Plan for Bloodborne Pathogens

This document has been revised to better meet the needs of the University at the site of the University of Illinois College of Medicine at Peoria.

UNIVERSITY OF ILLINOIS AT CHICAGO EXPOSURE CONTROL PLAN FOR BLOODBORNE PATHOGENS

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1.0 Scope and Responsibility

Through its standard, Occupational Exposure to Bloodborne Pathogens (29CFR 1910.1030), the Occupational Safety and Health Administration (OSHA) requires a written Exposure Control Plan. The purpose of this plan is to insure that all University personnel are provided with a safe workplace and are made aware of potential workplace hazards resulting from exposure to blood and other potentially infectious materials.

This plan applies to all faculty, staff, and student employees who are occupationally exposed to blood or other potentially infectious materials.

The University is committed to providing a safe workplace for its students as well as its staff. Student-employees will be treated as university staff members with respect to the following policies.

Students who are not employees are also required to comply with these policies. The University will not assume any financial responsibility for expenses incurred by students who are not employees of the University, as a result of their compliance efforts, (e.g., purchase and maintenance of personal protective equipment, cost of Hepatitis B vaccination etc.).

Each department or unit head who has one or more employee subject to this exposure control plan is responsible for insuring that each employee receives proper training and that all other requirements of this exposure control plan are followed.

Each department will be responsible for filling in Appendix A-1 with a list of all tasks and procedures or groups of closely related tasks and procedures in which occupational exposure occurs and that are performed by employees.

This plan is to be updated and reviewed annually and is available to all employees at their department office.

2.0 Definitions

For the purpose of this plan the following definitions shall apply:

Blood – human blood, human blood components, and products made from human blood.

Bloodborne Pathogens – pathogenic microorganisms that are present in the human blood and that can cause disease in humans. These pathogens include but are not limited to hepatitis B (HBV) and human immunodeficiency virus (HIV).

CFR – means Code of Federal Regulations

Clinical Laboratory – a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious material.

Contaminated Laundry – which has been soiled with blood or other potentially infected material or which may contain sharps.

Contaminated Sharps – any contaminated objects that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wire.

Decontamination – the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens (on a surface or item) to the point where they are no longer capable of transmitting infectious particles; and the surface or item is rendered safe for handling, use or disposal.

Engineering Controls – (e.g., sharps disposal containers, self sheathing needles) controls that isolate or remove the bloodborne pathogen hazards 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.

Handwashing Facilities – a facility providing an adequate supply of running potable water, soap, and single use towels.

HBV – hepatitis B virus.

HIV – human immunodeficiency virus.

Occupational Exposure – reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or any other potentially infectious material that may result from the performance of an employee's duties.

Other Potentially Infectious Materials – includes the following: (1) human body fluids: cerebrospinal, synovial, pleural, pericardial, peritoneal, amniotic, semen, vaginal secretions, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations when it is difficult to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human living or dead; (3) HIV-containing cell or tissue culture, organ culture, and HIV or HBV-containing culture medium or other solutions; and (4) blood, organs or other tissues from experimental animals infected with HIV or HBV.

Parenteral – piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts and abrasions.

Personal Protective Equipment – is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

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

Research Laboratory – a laboratory producing or using research laboratory scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sterilize – the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions – is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain other human body fluids are treated as if known to be infected with HIV, HBV, or other bloodborne pathogens.

Work Place Controls – that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting the recapping of needles by a two handed technique).

3.0 Methods of Compliance

The University will comply with the standard by observing a number of practices.

3.1 Universal Precautions

The University will continue the practice of Universal Precautions, as adopted August 1989 and as amended, to prevent contact with blood or other potentially infectious materials.

3.2 Engineering and Workplace Controls

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Personal protective equipment shall be worn in situations where the potential for exposure remains after the implementation of engineering controls.

3.2.1 Certified Biological Safety Cabinets

Biological safety cabinets (Class I, II, III), or other combinations of personal protection or other physical containment devices, must be used for all activities with potentially infectious materials that pose a threat of exposure to droplets, splashes, spills or aerosols.

Biological Safety Cabinets must be certified when installed, whenever they are moved, and at least annually.

3.3 Safe Work Practices

3.3.1 Bodywashing

Employees will wash their hands or any other skin surface with soap and water; or flush the mucous membranes with water immediately or as soon as possible following contact with blood or potentially infectious materials.

Employees will wash hands immediately or as soon as possible following removal of gloves or other personal protection equipment. Antiseptic hand cleaners or towelettes, in conjunction with clean cloth or paper towel, must be used if hand washing facilities are not available.

HIV and HBV research laboratories must have an eye wash facility readily available for eye washing in each laboratory.

3.3.2 Eating, Drinking, Smoking

Eating, drinking, smoking, applying cosmetics or lip balm, handling contact lenses and gum chewing are prohibited in areas where there is a reasonable risk of occupational exposure.

Food or beverages will be consumed only in safe designated areas.

Food and drink must not be kept in refrigerators, freezers, or cabinets or on countertops, shelves and benchtops where blood or other potentially infectious materials are present. These refrigerators must have biohazard stickers and “No Food/No Beverages” signs.

Smoking is not permitted.

The mucous membranes (eyes, nose, and mouth) will be protected by mask and safety glasses or face masks when there is a likelihood of splatters or splashes from blood or body fluids.

All procedures involving blood or other potentially-infectious material will be performed in a manner which minimizes splashing, spraying and spattering and generation of these substances.

Mechanical pipetting devices are used for all liquid transfers. Mouth pipetting or mouth suctioning of blood or other potentially infectious material by mouth is prohibited. Pipette tips are disposed of in biohazard sharps containers.

Contaminated needles or other contaminated sharps shall not be bent, recapped, sheared, broken or removed manually. A mechanical device such as a self-sheathing needle or a one-handed technique may be used to recap or remove needles. Immediately, or as soon as possible after use, sharps will be placed in containers which are puncture resistant, leakproof on the sides and bottom, and properly labeled or color coded.

3.3.3 Contaminated Equipment

Equipment which has been contaminated with blood or other potentially-infectious materials will be decontaminated before being serviced or shipped unless it can be shown that decontamination of the equipment is not feasible.

Equipment, or portions thereof, which have not been decontaminated require a warning label be affixed by appropriate personnel.

The University will convey all information to all affected employees, the servicing representative and or manufacturer's representative as appropriate prior to handling, servicing or shipping so that appropriate precautions are taken.

3.3.4 Contaminated Containers

If outside contamination of the primary container occurs, the generator will place the primary container within a secondary container which prevents leakage during handling, processing, storage, transport or shipping and which is labeled or color coded according to the same requirements as the primary container.

3.3.5 Authorized Personnel

Only personnel authorized by the laboratory supervisor are allowed in the laboratory. Casual visitors (e.g., family members, tour groups) are discouraged. Non-laboratory personnel are closely supervised, and appropriate protective measures and/or equipment (e.g., clothing) are used to ensure that they do not cause a hazard to themselves or the laboratory staff. Service and maintenance personnel are not permitted to enter a biohazard area until (1) the laboratory's safety requirements are reviewed (2) the instrument is decontaminated and (3) appropriate personnel protective equipment is used and worn.

Laboratory doors will remain closed when work is in progress. Access to animal houses must be kept closed when work is in progress. Access to animal houses will be restricted to authorized persons.

3.3.6 Spills

All spills of blood and other potentially infectious materials must be immediately contained and cleaned up by the appropriate professional staff or others properly trained or equipped to work with potentially infectious materials.

A spill or accident that results in an exposure incident must be immediately reported to the employees supervisor and Human Resources Office and health evaluation sought from OSF Occupational Health Services or Emergency Department after hours.

3.3.7 Infectious Waste Disposal

The University will continue to follow the practices and procedures for disposing of infectious waste by outside vendors.

4.0 HIV and HBV Research Laboratories and Production Facilities

The following requirements apply to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. They do not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissue or organs. These requirements apply in addition to the other requirements of this exposure control plan

4.1 Vacuum Lines

Vacuum lines in HIV and HBV research laboratories and production facilities must be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters, or filters of equivalent or superior efficiency. These filters must be checked as soon as necessary by appropriate personnel.

4.2 Autoclave

HIV and HBV research laboratories and production facilities must have an autoclave readily available for decontaminating waste.

4.3 Sink and Eyewash Stations

HIV and HBV research laboratories and production facilities must have a sink for washing hands and a readily available eyewash facility. The sink will be foot, elbow or automatically operated and will be near the exit door of the work area.

4.4 Hypodermic Needles

The use of hypodermic needles and syringes in HIV and HBV laboratories is permitted only for (1) parenteral injections and (2) aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes are permitted for the injection and aspiration of potentially infectious materials.

4.5 Hazard Warning Signs

When potentially infectious material or infected materials are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol will be posted on all access doors. The hazard sign will comply with section 6.3 of this plan.

4.6 Physical-Containment Devices

All activities involving potentially infectious materials will be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these potentially infectious materials will be conducted on an open bench.

4.7 Transfer of HIV and HBV

For the purposes of this plan both HIV and HBV will be considered etiological agents as defined by the Department of Health and Human Services. Transfer of HIV or HBV from a University research laboratory or production facility to another researcher, university or other facility will comply with the regulations pertaining to the packaging and shipment of etiological agents as described in 42 CFR 72.3.

4.8 Additional Requirements

For additional equipment and safe work practices that are specifically required in HIV and HBV research laboratories and production facilities refer to 29 CFR 1910.1030(e).

5.0 Personal Protective Equipment

All University personnel will use barrier precautions (i.e., gloves, masks, lab coats) to prevent exposure to the skin and mucous membranes (eyes, nose, mouth) when contact with blood or other potentially infectious material could be anticipated.

Personal protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time during which the protective equipment will be used.

Personal protective equipment will be utilized when working with patients and potentially infectious materials. Disposable protective care gloves will be used during handling of contaminated disposable waste items.

5.1 Employer's Responsibilities

Personal protective equipment will be provided at no cost to the employee. Personal protective equipment will include the following: Gloves, laboratory coats, face shields or masks and eye protection, mouth pieces, resuscitation bags, pocket masks or other ventilation equipment.

Appropriate personal protective equipment in appropriate sizes will be readily accessible in each work area.

Cleaning, laundering, repair, replacement or disposal of personal protective equipment will be provided at no cost to the employee.

Hypoallergenic gloves, glove liners, powderless gloves and other similar alternatives will be readily accessible to employees who are allergic to gloves normally provided.

Employees are forbidden to take contaminated protective equipment or garments home for cleaning.

5.2 Employee Declination

Personal protective equipment will be used for all occupational exposure situations; however, the employee may temporarily or briefly decline the use of the equipment in the following scenario, "Under rare and extraordinary circumstances, the employee uses his/her professional judgment that, in a specific instance, its use would have prevented delivery of health care or public safety services or would have posed an increased hazard to the safety of the employee."

Situations in which personal protective equipment was temporarily or briefly declined will be investigated and documented to determine if changes can be instituted to prevent future occurrences.

5.3 Gloves

Gloves will be worn when it can be reasonably anticipated that the employee may have contact with blood, other potentially infectious material, mucous membranes, and non-intact skin; when performing vascular access procedures; and when handling or touching contaminated items or surfaces.

Disposable gloves (single use) will always be removed inside out aseptically and replaced as soon as practical when: (1) visibly contaminated, (2) torn, (3) punctured or when the ability to function as a barrier has been compromised. Disposable gloves will not be washed or decontaminated for reuse.

Utility gloves may be decontaminated for reuse (if the integrity of the gloves is not compromised). They must be discarded if they are cracked, torn, punctured or exhibit any other signs of deterioration.

Gloves are to be worn for all phlebotomy procedures.

5.4 Masks, Eye Protection, Face Shields

Masks or protective eyewear combinations (goggles or glasses with solid side shields), or face shields which protect all mucous membranes will be worn when performing procedures that are likely to generate splashes, spray, splatter or droplets of blood or other potentially infectious materials.

5.5 Gowns, Aprons and Other Protective Clothing

Gowns, aprons or other protective body covering will be worn in all occupational exposure situations.

5.6 Headware, Shoes

Surgical caps or hoods and/or shoe covers will be worn in instances where gross contamination can be anticipated (e.g., autopsies, orthopedic surgery). Open-toed or perforated shoes are prohibited.

5.7 Garment Removal

If a garment(s) is penetrated by blood or other potentially infectious materials, the garment must be removed immediately or as soon as feasible. If disposable, the garment shall be disposed of appropriately. If the garment is reusable, it will be treated with an appropriate, approved disinfectant as soon as feasible, or laundered.

Personal protective equipment will be removed prior to leaving the work area.

6.0 Communication of Hazards to Employees

6.1 Labels

Warning labels will be affixed to containers of regulated waste and to refrigerators and freezers containing blood or other potentially infectious materials.

Labels will be fluorescent orange or orange-red or predominantly so, with lettering or symbols in a contrasting color.

Labels must include the biohazard legend.

Required labels will be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

Labeling requirements for contaminated equipment will be in accordance with labeling requirements and will also state which portions of the equipment remain contaminated.

6.2 Color-Coding

Red bags or red containers may be substituted for labels.

The labeling or coloring-coded system is required when the specimens leave the facility.

6.3 Signs

The employer will post signs at the entrance to clinical and research laboratories as well as HBV and HIV Research Laboratories. The signs shall be fluorescent orange-red or predominantly so, with lettering or symbols in a contrasting color.

Signs must bear the biohazard legend with the name of the infectious Agent, if known, special requirements for the area, and the name and telephone number of laboratory director or other responsible persons.

7.0 Contaminated Sharps-Discarding and Containment

The University will continue the practices used for discarding and containment of contaminated sharps as outlined in the Environmental Health and Safety Standards (EHSS 2-6-3 and EHSS 2-6-4) as adopted on Jan 7 1988. This document is located in all department offices.

8.0 Other Regulated Waste: Discarding and Containment

8.1 Containment

Other regulated waste (nonsharps) will be placed in closable containers which are constructed to contain all contents and prevent leakage of fluids during handling, storage, transport and shipping.

Regulated waste will be placed in containers which are labeled with the international biological hazard symbol and/or the wording "biohazard" or color coded.

The containers will be closed prior to removal to prevent spillage or protrusion of the contents during handling, storage or shipping.

If outside contamination of the primary container occurs it will be placed in a secondary container which meets the same requirements as the primary container.

8.2 Disposal

Disposal of all regulated waste will be in accordance with applicable regulations of the United States, Territories and Political subdivisions of States and Territories.

9.0 Housekeeping Practices

The University will insure that the worksite is maintained in clean and sanitary condition.

All equipment, environmental and working surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious material.

Contaminated work surfaces must be decontaminated with an appropriate disinfectant (e.g., a 1:10 solution of bleach): (1) after completion of procedures (2) immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials and (3) at the end of the workshift if the surface may have become contaminated since the last cleaning.

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 or at the end of the workshift if they may have become contaminated during the shift.

All bins, pails, cans and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be: (1) inspected and decontaminated on a regularly scheduled basis and cleaned and (2) decontaminated immediately or as soon as feasible upon visible contamination.

Broken glassware which may be contaminated will not be picked up directly with the hands. It will be cleaned up using a mechanical means such as a brush and dust pan, tongs or forceps.

10.0 Laundry Practices

The University will continue to follow the policies and practices for laundry that are in place.

11.0 Hepatitis B Vaccine

All employees subject to this exposure control plan are entitled to receive Hepatitis B inoculations at the University Health Service. All Hepatitis B inoculation must be given at the University Health Service. There is no charge to the employee. The employee's department Head will pay for the inoculations.

11.1 Declination of Hepatitis Vaccine

Employees who decline the vaccinations must do so in writing, and have the right to change their mind and receive them free of charge at a later date. The original copy of the Declination form shall be forwarded to the University Health Services for inclusion in the employees medical records. It is recommended that the department keep a copy on file with the employee's records.

12.0 Procedure for Staff Occupationally Exposed to Blood or Body Fluids

First, determine whether or not the exposure is an "Exposure Incident" as defined on page four of this Plan. Some events may require only appropriate sanitary measures. For example, blood or saliva splashed onto intact skin should be washed off as soon as possible however; such an event is not an "Exposure Incident." "Exposure" to saliva that is not visibly contaminated with blood, except in dental procedures, would not be an "Exposure Incident" even if the saliva contacted mucous membranes as in the eyes, nose, etc.

Following an exposure incident, the exposed employee will immediately report the incident to his/her supervisor. The Supervisor is to complete "Supervisor's First Report of Accidental Injury or Illness." After an exposure incident, the University will make available to the employee a confidential medical evaluation and follow up of the incident.

13.0 Collection & Testing of Employee's Blood for HBV and HIV Serological Status

The exposed individual's blood will be collected as soon as feasible and tested after consent is obtained. If the employee consents to baseline blood collection but does not give consent at that time for HIV serologic testing, the sample will be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing will be done as soon as feasible at no charge to the employee.

13.1 Collection & Testing of Employee's Blood for HBV and HIV Serological Status

Following the AZT Protocol, the source individual whose blood or body fluids are involved in the employee exposure incident shall have his/her blood collected and tested. This testing will be done whether or not the source individual's consent has been obtained. For further information, please refer to the AZT Protocol.

14.0 Training

Each potentially occupationally exposed employee must be given free information and training during working hours at the time of initial assignment and at least once a year thereafter. Additional training is needed when existing tasks are modified or new tasks are required which affect the employees; occupational exposure.

Training sessions must be comprehensive, including information on bloodborne pathogens as well as on OSHA regulations relating to this standard and the employer's exposure control plan. The person conducting the training must be knowledgeable in the subject matter, especially as it relates to emergency response personnel. An opportunity for a question and answer period must be part of the training session. Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

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

1. An accessible copy of the regulatory text of this standard and an explanation of its contents;
2. A general explanation of the epidemiology and symptoms of bloodborne diseases;
3. An explanation of the modes of transmission of bloodborne pathogens;
4. An explanation of the University's exposure control plan and the means by which the employee can obtain a copy of the written plan;
5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
6. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices and personal protective equipment;
7. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;
8. An explanation of the basis for selection of personal protection equipment;
9. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;
12. Information on the post-exposure evaluation and follow-up that the University is required to provide for the employee following an exposure incident;
13. An explanation of the signs and labels and /or color coding required by section 6; and
14. An opportunity for interactive questions and answers with the person conducting the training session.
15. A list of training materials can be found in Appendix B-1.

14.1 Additional Initial Training for Employees in HIV and HBV Research Laboratories and Production Facilities

Employees in HIV and HBV research laboratories and production facilities will receive the following initial training in addition to the above training requirements.

- (A) The University will assure that employees demonstrate proficiency in standard microbiological practices and operations specific to the facility before being allowed to work with HIV and HBV.
- (B) The University will assure that the employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.
- (C) The University will provide a training program for those employees who have no prior experience in handling human pathogens. Initial work activities will not include the handling of infectious agents. A progression of work activities will be assigned as techniques are learned and proficiency is developed. The University will assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

15.0 Information

15.1 Personal Protective Equipment

University will provide the employee with information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment, including the basis for selection.

15.2 Hepatitis B Vaccine

The University will provide information on the Hepatitis B vaccine that will include: efficacy of the vaccine, it's safety, method of administration, benefit of administration, benefits associated with vaccination, and acknowledgement of free vaccine and vaccination.

The University will provide the employee with information concerning:

Emergency procedures and notifications involving blood and other potentially infectious materials, incident reporting documentation, and follow-up procedures, post-exposure follow-up evaluations following an exposure incident and explanation of signs and color-coding system required.

The University will provide the healthcare professional responsible for the employee's hepatitis vaccine with a copy of the Occupational Exposure to Bloodborne Pathogen standard.

The University will not make participation in a prescreening program a prerequisite for receiving the HBV vaccination.

16.0 Recordkeeping

16.1 Medical Records

An accurate medical record will be maintained on each employee and kept in University Health Service. The record will include: name and social security number, Hepatitis B vaccine status and dates or Hepatitis B vaccine declination, patient antibody testing consent, employee's decision follow-up to occupational exposure, evaluation of employee after occupational exposure and healthcare professional's written opinion concerning an occupational exposure.

All medical record information and pertinent information documentation will be kept confidential. This information must comply with 29CFR 1910.1020 and be kept for length of employment plus 30 years.

16.2 Training Records

Training records shall include the following information:

- (A) The dates of the training sessions;
- (B) The contents or a summary of the training sessions;
- (C) The names and qualifications of persons conducting the training; and
- (D) The names and job titles of all persons attending the training sessions.

Training records will be maintained for three years from the date on which the training occurred.

Attendance records of training programs meeting the requirements of the regulations will be maintained in employee's personnel file in their department office for review.

16.3 Manifests

Copies of waste manifests will be forwarded to and maintained by the Environmental Health and Safety Department, Health and Safety Section. Manifests will be retained and made

available to the Illinois Environmental Protection Agency for inspection and copying for a period of three years.

APPENDICES

Appendix A-1

Department List of Specific Tasks and Procedures That Potentially May Lead to Occupational Exposure

Job Classification	Tasks/Procedures
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Appendix A-2

Department Schedule for Cleaning and Decontamination

Appendix B-1

**OSHA Bloodborne Pathogen Update Fact Sheet
Hepatitis B Vaccine Declination Form**

Appendix B-2

**Tuberculosis Exposure Plan
Prevention of Transmission of Tuberculosis Fact Sheet**

OSHA BLOODBORNE PATHOGEN UPDATE

Bloodborne pathogens are viruses, bacteria and other microorganisms. They are found in blood and other body fluids such as blood products, semen, vaginal secretions, other body cavity fluids and any fluid containing visible blood. UNIVERSAL PRECAUTIONS means treating everyone as if their blood and body fluids are infectious at all times.

The two pathogens we are most concerned with are HBV-Hepatitis B Virus and HIV-Human Immunodeficiency Virus. HBV attacks the liver and can be the cause of chronic hepatitis B disease, cirrhosis, liver cancer and death. There is a vaccine available for the prevention of HBV.

HIV causes AIDS and attacks the immune system, making the body less able to fight off infection. Many times it is these opportunistic infections that actually cause death. There is no vaccine available for the prevention of HIV.

Both HBV and HIV can be spread to health care workers through needlestick injuries and contamination from infected body fluids through a break in the skin or splashes into the mouth, nose or eyes.

To protect yourself, follow these easy precautions:

1. Wear gloves any time there may be contact with blood or other body fluids, when touching the mucous membranes or broken skin. Also when handling soiled linens or other items that have been contaminated. **ALWAYS WEAR GLOVES WHEN DRAWING BLOOD**. If a glove tears, if you can stop, do so and replace the glove. If not, stop as soon as possible and change the glove. Change gloves between patients and never wash and reuse gloves.
2. If there is the potential for a splash, wear masks and eye protection. Remember if you are wearing one you should be wearing the other. Personal eyeglasses are not protective eyewear. A splash could go over, under or around the side of regular eyeglasses.
3. Be sure to remove your lab coat and wear the disposable gowns supplied if there is the potential for a splash. If you do not know where the goggles, gowns or other protective equipment are, ask.
4. The best protection anytime is the one that has been around the longest. Wash your hands before contact with patients, after contact with patients, between patients, before putting on gloves, after taking off gloves and whenever there is a question in your mind that you may have touched something even remotely possibly contaminated.
5. If you have any obviously open wounds or broken skin, cover the area. Be especially careful about the small nicks and hangnails you don't even think about.
6. Should there be an emergency and you have to give mouth-to-mouth breathing, use disposable mouthpieces or other devices.

7. If you have not had Hepatitis B vaccine, get it!
8. Never reach into a waste container of any kind. If you have to search for something, protect the floor or counter and dump the contents out. Use tongs to search for what you need. Handle large bundles of linens carefully, a sharp could have been dropped by accident.

These eight items will protect you but how about the environment you work in?

1. Use sharps safely. Dispose of in puncture proof, red biohazard containers. Stay alert – Gloves do not prevent needlesticks. **DO NOT BREAK OR BEND NEEDLES – DO NOT RESHEATH NEEDLES.**
2. Whenever possible use disposable equipment and dispose of items in biohazard containers.
3. Clean up spills promptly using the Mess Kit provided for small spills or Tor Cleanser and paper towels for larger ones.
4. Follow the procedure for your facility for soiled linens.

If in spite of all this there is an exposure follow these steps:

1. Wash the area immediately with warm water and disinfectant soap. Save the item if possible.
2. Report the incident immediately to your supervisor and Personnel.
3. Follow the protocol that is given to you for testing and treatment. This may include testing for HBV and HIV, prophylactic immune globulin, counseling and AZT.

Oshatb
9/94

Hepatitis B Vaccine Declination (Mandatory)

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

Signature

Date

TB EXPOSURE PLAN

The purpose of this plan is to achieve early detection, isolation and treatment of persons with suspected or confirmed active Tb and thereby minimize risk of transmission to other patients and staff. In order accomplish this purpose, procedures will be developed for implementation and enforcement of tuberculosis policies, engineering and work practice controls will be identified that reduce atmospheric contamination, and personnel will receive training regarding the use of personal protective equipment when their work requires exposure to individuals with suspected or known Tb.

This Tuberculosis Exposure Plan applies to all departments having occupational exposure to Mycobacterium tuberculosis. It is intended to prevent transmission of Mycobacterium tuberculosis from infectious individuals to employees and visitors of this facility. The University of Illinois College of Medicine at Peoria is responsible for providing respirators, evaluations, fit-testing, education and training at no cost to the employee.

Responsibility for implementation of the plan is assigned to the following:

Employee Health is responsible for monitoring the health of the employees, employee mantoux testing and maintaining accurate employee health records. It is also the responsibility of Employee Health to arrange fit testing for personnel with possible contact with patients at risk.

Safety Committee is responsible for review of Tb Exposure Plan and implementation of a program for prevention of Tuberculosis including Tb testing for applicable employees and training for all employees.

Administration is responsible for providing engineering controls and ensuring compliance with the plan.

Department management is responsible for ensuring employee compliance with the plan.

Employees and physicians are responsible for compliance with the information in the plan and are required to wear protective equipment provided to them with all suspected or confirmed Tb patients. They are also required to evaluate and immediately isolate suspected or confirmed Tb patients. Suspected or confirmed Tb patients must be instructed about their disease and masked when in an area where other employees, patients and visitors are unmasked.

I. PATIENT MANAGEMENT

The most important factors in preventing the transmission of *M. tuberculosis* are the early identification of patients who may have infectious tuberculosis, prompt implementation of Tb precautions and prompt initiation of effective treatment.

A. Patient Assessment-Triage is of vital importance. Patients with signs or symptoms suggestive of Tb should be seen promptly. Precautions should be used during the evaluation period, including placement in a separate area, served with a HEPA filtration system, providing the patient with a surgical mask and tissues and instructing the patient in use and disposal of the tissues.

Patients exhibiting several of the following signs and symptoms should be assessed for the possibility of Tb:

- Persistent cough >3 weeks
- Hemoptysis
- Significant unexplained weight loss
- Loss of appetite
- Lethargy and weakness
- Night sweats
- Fever
- Compatible chest x-ray findings

B. Patient Education-Patients should be educated about the mechanism for transmission of Tb. Patients should be taught to cover their nose and mouth with a tissue when coughing and/or sneezing to contain droplets before they are expelled into the air. Patients should be given a surgical mask on entrance to the site and be placed in a room equipped with a HEPA filter unit. The door to the room should remain closed and as much as possible all procedures should be done in that room.

II. PERSONAL PROTECTIVE EQUIPMENT

All health care workers who may have contact with a patient who is suspected or known to have Tb, must wear a HEPA respirator. The employees should have undergone fit-training prior to using the mask. Since proper fit is essential for the proper use of the respirator, each employee should have their own respirator.

Current policy set by OSHA enforces the use of a HEPA respirator during occupational exposure to Tb. This type of respirator has the ability to filter out particles at the diameter size of 0.3 microns at a 99.97% efficiency. These respirators also allow for a snug fit unlike surgical masks. Respirators can be used for a cumulative 8 hours, unless soiled or damaged. The respirator should be discarded if a strap is missing or if soiled or damaged.

Employees wearing the HEPA respirator may experience some limitations including restricted air flow and interference with vision.

III. HOUSEKEEPING

Because Tb is almost always acquired by inhaling droplet nuclei, no special cleaning procedures are necessary. Routine cleaning of rooms is sufficient, however, personnel should follow isolation procedures while cleaning the room. No precautions need to be taken in laundering the linens that have been used.

PREVENTION OF TRANSMISSION OF TUBERCULOSIS

Tuberculosis is a communicable disease that was quite common prior to 1940, but with better methods of diagnosis and treatment, the number of cases and death from Tb was drastically reduced. Since the 1980's, however, the number of cases has been increasing and in many cases the strain of bacteria is more drug resistant. There is also a definite correlation between Tb and HI infection.

Tuberculosis is caused by an acid-fast bacilli and is spread by droplets released when infected persons cough, sneeze and even talk. It is not spread by touching linens, clothing or other objects. Although usually a disease of the respiratory system, it can spread to other organs.

It is important to distinguish between Tb infection and Tb disease. With a Tb infection the individual is not ill and cannot spread the disease to others. These are the people who show a positive result on skin testing but they are not sick and they have never been diagnosed with Tb. The theory is that they have had contact with someone with active Tb disease and were able to develop antibodies without getting the disease. People with Tb disease are sick. The symptoms are persistent cough, weakness, loss of appetite with loss of weight, fever, night sweats, coughing up blood and chest pain when coughing. Individuals with Tb disease can transmit the disease.

Prevention begins with identification of potentially infected patients. This is done by careful screening when patients call for an appointment and complain of a cough--ask about duration of the cough and other symptoms present. When patients come to the office, they should use the back door, if possible, be given a mask and some facial tissues and be escorted to an exam room with a HEPA unit, immediately. They should also be instructed to use the tissues to cover their nose and mouth when coughing and/or sneezing, and where to dispose of the tissues.

Employees with patient contact should have Mantoux testing yearly and results recorded. Staff with history of positive reaction to testing should not have a skin test. Instead arrangements should be made for a base-line chest x-ray. Any staff member who reacts positively to the skin test will also have a chest x-ray. After the base-line x-ray, no further x-rays will be done unless it is determined, after interview by employee health personnel, that another x-ray is indicated. Records will be maintained with other employee health records.

Sites at risk for exposure should have at least one examination room equipped with a HEPA Filtration unit and staff should be fitted with respirator masks. If you think you have been exposed, contact Human Resources and they will arrange for screening and evaluation.

Other actions to take are those that would be usual and customary when in contact with all patients:

- Be sure to wash hands thoroughly between patients.
- Keep your hands away from your face while handling patients.
- Use Universal Precautions.