Plan for: Bloodborne Pathogens Exposure Control

Effective Date: July 1, 2013
Reviewed Date: January 29, 2016
Revised Date: January 29, 2016
Scope: School-wide

Policy Expectation:

I. PURPOSE: This policy contains the minimum standards that must be met at Washington University (WU) in St. Louis with respect to occupational exposures to bloodborne pathogens. In cases where these hazards exist, it is the responsibility of each department to minimize or eliminate the potential for worker exposures. This Bloodborne Pathogen Exposure Control Plan is intended to meet the requirements of the Occupational Safety and Health Administration’s (OSHA) Occupational Exposure to Bloodborne Pathogens; Final Rule 29 CFR 1910.1030 (Appendix 1). The minimum requirements are set forth below.

II. APPLICABILITY: This policy applies to all WU employees who may anticipate risk of occupational exposure to blood or other potentially infectious materials. This plan addresses the methods of compliance with the OSHA Occupational Exposure to Bloodborne Pathogens; Final Rule 29 CFR 1910.1030 (Appendix 1) through the use of institutional policies and standards of practice. These specific policies and procedures are intended to strengthen standard precautions and are consistent with existing policies, as well as the intention of OSHA in publishing the final rule and subsequent directives. The focus of this plan is on reducing the risks of occupational bloodborne pathogen exposures throughout WU.

A. Department-Specific: Each department will address compliance with the OSHA standard. This policy provides a framework through which each department will comply. As a minimum, each department with employees at risk will complete the applicable attached Appendices 2 – 5 and retain them as the key component of a department Exposure Control Plan. Retain records for current year, plus one. Other forms may be substituted provided they include the same minimum content.

B. Review and Update: This policy is reviewed and updated not less than annually by the recommending committees:
   - Oversight Committee – Manager of Washington University School of Medicine (WUSM) Employee Health, Infection Prevention Specialist, Director of University Safety Office, Director of Biological & Chemical Safety Office, Environmental Health and Safety Health & Safety Professional, and Faculty Practice Plan (FPP) Senior Director of Clinical Operations
   - Executive Committee – Associate Vice Chancellor for Clinical Affairs, Assistant Vice Chancellor for Environmental Health & Safety, WUSM Infectious Disease Physician, and Medical Director of Employee Health

A copy of this policy will be accessible to all employees on the Environmental Health and Safety and Clinical Operations web sites, as well as in the Environmental Health and Safety Blue Book.
III. STATEMENT OF POLICY

A. Introduction

In order to minimize occupational exposure to diseases transmitted by the bloodborne route, WU works to provide a safe working environment through the practices of:

1. Exposure Determination
2. Standard Precautions
3. Engineering Controls
4. Hepatitis B Virus (HBV) Vaccination Program
5. Post-Exposure Follow-up
6. Housekeeping Practices
7. Employee Education
8. Use of Safer Sharps Devices
9. Recordkeeping

B. Program Review

This plan is reviewed and updated not less than annually by the recommending committees:

- Oversight Committee – Manager of WUSM Employee Health, Infection Prevention Specialist, Director of University Safety Office, Director of Biological & Chemical Safety Office, Environmental Health and Safety Health & Safety Professional, and FPP Senior Director of Clinical Operations
- Executive Committee – Associate Vice Chancellor for Clinical Affairs, Assistant Vice Chancellor for Environmental Health & Safety, WUSM Infectious Disease Physician, and Medical Director of Employee Health

A copy of this policy will be accessible to all employees on the Environmental Health and Safety and Clinical Operations web sites, as well as in the Environmental Health and Safety Blue Book.

IV. EXPOSURE DETERMINATION:

Directors and managers are responsible for classifying tasks performed in their areas of responsibility according to the following classifications and for developing and maintaining practices that eliminate or reduce task-associated risks. Supervisory staff must ensure that all employees have been assessed and classified according to risk.

A. Classification I – Jobs in which required tasks routinely involve potential for occupational exposure to blood or body fluids. (Complete Form – Appendix 3)

B. Classification II – Jobs in which required tasks normally do not involve the potential for occupational exposure to blood and body fluids, but may require performing unplanned Classification I tasks. (Complete Form – Appendix 4)

C. Personnel Not Covered by the Standard – Jobs in which required tasks involve no greater risk of exposure than would be encountered by a visitor and the worker can decline to perform tasks which involve a perceived risk without threat of retribution. (Complete Form – Appendix 5)
D. **Tasks and Procedures** – Tasks and procedures, or groups of closely related task and procedures, that involve the potential for occupational exposures to blood and body fluids that are performed by employees in job classifications I and II. (Complete Forms – Appendices 3 and 4)

V. **METHODS OF COMPLIANCE:**

A. **Standard Precautions:**
All employees will utilize standard precautions. Standard precautions are designed to reduce the risk of transmission of pathogens by workers assuming that all human blood and body fluids are infectious for Human Immunodeficiency Virus (HIV), HBV, Hepatitis C Virus (HCV), and other pathogens and must be handled accordingly. Protection can be achieved through adherence to work practices designed to minimize or eliminate exposure and through use of personal protective equipment (i.e., gloves, masks, and protective clothing) which provide a barrier between the worker and the exposure source.

B. **Engineering and Work Practice Controls**

1. **Hand Hygiene** – Handwashing facilities must be readily accessible. If they are not, appropriate alcohol hand rub will be provided. Hands shall be washed under the following conditions:
   
   a. Immediately, or as soon as feasible, after the removal of personal protective equipment.
   b. Following contact with blood or other potentially infectious materials. Any other skin or mucous membranes that have contact with these materials shall be washed as soon as feasible.

2. **Spill Clean-up** - Precautions should be taken when cleaning potentially infectious spills:
   
   a. Obtain necessary supplies (rags, paper towels, personal protective equipment, appropriate disinfectant, and wet floor sign if necessary).
   b. Never pick up contaminated glass or sharp objects with the hands. Use a dustpan and brush, clamps, or other device for this purpose. Dispose of sharp materials (i.e., broken vacutainer tube) in sharps container.
   c. Absorb liquid material with rags or paper towels and dispose of in the appropriate receptacle (linens - soiled linen bag; soiled paper towels - biohazard bag). Apply appropriate disinfectant to spill area. Let set for 10 minutes. Place wet floor sign in front of wet area if appropriate.
   d. Wipe over areas with cleaning solution or water to complete cleaning process.
   e. Dispose of personal protective equipment in appropriate receptacle.
   f. Perform proper hand hygiene.

3. **Sharps Injury Prevention**

   a. Review of safety devices: WU is responsible to conduct and document an annual evaluation of the safety sharps devices being used (Appendix 6).

The review process must include the following:

- Examples of persons to include in the annual review include but are not limited to: Infection Prevention Specialist, Occupational Health, Environmental Health
and Safety, Intravenous (IV) Best Practice Representative and non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps.

- Key elements to include in the review process are: Document annual consideration and implementation of appropriate commercially available and effective safer medical devices.
- Review of sharps injury data including device specific injuries.
- Identification, evaluation, and selection of effective engineering and work practice controls.

b. Any evaluation of safer sharp devices will include input in the selection, identification, and evaluation process of safety devices from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps.

c. To date, the following types of safety devices have been implemented:
   1) Storage containers
   2) IV accessory standardization, includes leur locks, stop cocks, ports, etc.
   3) IV safety catheters
   4) Needleless IV tubing and accessories
   5) Butterfly safety needles
   6) Phlebotomy safety needles
   7) IM/SQ safety products
   8) Huber needles to access implanted ports
   9) Needleless emergency medications

d. Sharps handling - Contaminated sharps shall not be:
   1) Bent
   2) Sheared
   3) Recapped
   4) Removed

When recapping or needle removal is required, it shall be performed using a mechanical device (e.g., forceps, recapping device, or the one-handed "scoop" technique). Recapping or removing contaminated needles should only be performed when it can be demonstrated that no alternative is feasible or when it is required by a specific medical or dental procedure. Instances of recapping or manipulation of needles may include blood gas analysis, injections performed by nuclear medicine, some aspects of anesthesia, or combative or uncooperative patients.

e. Sharps disposal - Contaminated sharps shall be discarded immediately, or as soon as possible, in a container that is:
   1) Labeled with a Biohazard Label
   2) Color Coded
   3) Puncture Resistant
4) Leak-proof
5) Placed as close as feasible to the area of use.

These containers must never be overfilled. They must be kept upright, stable and closed immediately prior to removal or replacement to prevent spillage. The ideal installation height for a fixed sharps container for a standing workstation is 52–56 inches above the standing surface of the user. The ideal container height for a seated workstation is 38–42 inches.

f. Reusable sharps handling – employees shall not place their hands into containers where the contents include reusable sharps contaminated with blood or other potentially infectious materials. The use of strainer type baskets to hold the instruments and/or forceps to remove items is preferred.

4. Work Area Restrictions - Eating, drinking, smoking, applying cosmetics or lip balm, and the handling of contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure. This includes laboratory work areas, patient and treatment rooms, nursing units, and other patient care areas. These areas will be called "potentially contaminated areas" and should be identified in clinic-specific training or in department-specific written procedures. Personnel are to eat or drink only in areas designated for these purposes (clean areas such as cafeteria, lounges, and break rooms). Smoking is prohibited anywhere on WU property. In addition, food and drink shall not be kept in refrigerators, freezers, shelves, or bench tops where blood or other potentially infectious materials are kept. Staff food and drinks shall be in a separate refrigerator/freezer from patient food and drinks. Staff drinks must remain in a covered container.

5. Procedures - All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances (e.g., cleaning contaminated instruments, irrigations). Specific measures taken should be identified on the exposure determination forms (Appendices 3 and 4) or in department-specific written procedures. Mouth pipetting or suctioning of blood or potentially infectious material is prohibited.

6. Specimen Handling - All containers used to contain specimens of blood or other potentially infectious materials shall prevent leakage during collection, handling, storage, transport, or shipping. Since standard precautions are utilized in this facility, there is no need to label each specimen with a biohazard symbol; however, the containers must be recognizable as specimen containers. Biohazard labels must be attached to carriers designed to transport multiple specimens. If the outsides of the specimen containers are soiled with blood or other potentially infectious materials, the primary containers must be placed in a secondary container that prevents leakage during all phases of handling. The secondary container shall also be puncture resistant. If the transport container becomes contaminated, the person identifying the leakage shall promptly clean up the spill according to protocol.

7. Contaminated Medical Equipment - All equipment which may become contaminated during use shall be examined prior to servicing or shipping and shall be decontaminated as necessary and when possible. After initiating service call, it shall be decontaminated with an approved disinfectant. When it is not possible or feasible to decontaminate the equipment, the parts that
are contaminated must be labeled with a biohazard symbol stating which portions may be contaminated. This equipment shall be listed on the form, Appendix 7 Potentially Contaminated Equipment, or in a department-specific procedure/form. Those who perform maintenance on potentially contaminated equipment must observe standard precautions and wear appropriate personal protective equipment when handling contaminated equipment. If it is necessary to ship equipment that has not been decontaminated to a manufacturer, the company representative or the manufacturer must be notified of the biohazard prior to shipping and appropriate labels must be affixed to the equipment.

8. Personal Protective Equipment

a. Provision. When there is a risk of occupational exposures, personal protective equipment such as, but not limited to, gloves, gowns, lab coats, safety glasses, face shields, masks, or respirators will be provided at no cost to employees. PPE will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The protective equipment will be considered appropriate only if it prevents blood or other infectious material from passing through or reaching worker’s clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used. It is the responsibility of the employee to inform the manager/supervisor of difficulty or inability to obtain/use specific personal protective equipment so that an alternative solution may be determined.

b. Use. All personnel who may have occupational exposure are required to use personal protective equipment when they have reasonable anticipation of exposure. The only exception is in rare circumstances when, in the employee’s professional judgment, a specific instance would have prevented the delivery of care or would have posed an increased hazard to the safety of the worker or co-worker.

c. Accessibility. Appropriate personal protective equipment in proper sizes shall be readily accessible at the worksite or issued to employees. Persons with allergies or other conditions limiting the ability to use certain personal protective equipment shall be evaluated by Occupational Health to determine the appropriate solution.

d. Cleaning, Laundering, and Disposal. Personal protective equipment shall be provided, replaced, cleaned, repaired, laundered, and/or disposed of at no cost to employees. Any time personal protective equipment is penetrated by blood or other potentially infectious materials, the garments shall be removed immediately, or as soon as feasible, in a manner which prevents contact with non-intact skin and mucous membranes and placed in the soiled linen hamper. (This does not include personal clothing items.) Soiled linen hampers are lined with bags marked “SOILED LINEN.” All used laundry is to be placed in the bags and be treated the same. Standard precautions will be used when handling all laundry. All personal protective equipment must be removed prior to leaving the work area. If personal protective equipment fails to protect against the soiling of employee personal clothing, the personal protective equipment is not appropriate for the tasks being performed. The employee should not take contaminated personal clothing home for laundering. Laundering of personal clothing items may be addressed on a case-by-case basis at each facility. The same care shall be
exercised in the handling of contaminated personal clothing as the personal protective equipment handling described above.

e. **Gloves.** Gloves shall be worn when contact with blood, mucous membranes, non-intact skin or other potentially infectious material is likely. *Disposable gloves* must be removed and replaced as soon as feasible when contaminated or if they are torn, punctured, or when the barrier properties are compromised. With the exception of reusable utility gloves, gloves should never be washed or decontaminated for reuse. *Utility (heavy-duty reusable)* gloves are to be decontaminated with approved solutions. However, they must be discarded if they are cracked, torn, punctured, or exhibit other signs of deterioration. Disposable gloves are for single use only. After removal of gloves, remember to perform hand hygiene. A variety of gloves, including powder free, latex free, and hypoallergenic gloves are available. Persons with known allergies to glove materials must notify Occupational Health of their condition to determine the appropriate solution.

f. **Masks, Eye Protection, Face Shields.** Masks, in combination with eye protection devices, such as goggles or glasses with solid side shields, shall be worn whenever splashes, sprays, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated. *Eyeglasses without side pieces are not considered personal protective equipment.* Reusable goggles are to be cleaned with approved and compatible decontamination solution or wipes as specified by manufacturer’s instructions for use and rinsed with water by the user of the goggles before reuse.

g. **Gowns, Aprons, Other Protective Body Covering.** Appropriate protective clothing shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated. In all circumstances the garment chosen will not allow blood or other potentially infectious materials to pass through to the clothing, skin, or mucous membranes of the employee. All used coverings shall be disposed of in appropriate receptacles after use.

h. **Surgical Caps or Hoods, Shoe Covers, or Boots.** Additional protective clothing shall be worn when gross contamination of the head or feet is reasonably anticipated (e.g., decontamination, urologic procedures, or certain neurosurgical procedures).

i. **Resuscitation Devices.** Barrier devices shall be used in place of mouth to mouth resuscitation. Following use, such items, if reusable, will be decontaminated. Those devices that are disposable will be discarded in the appropriate receptacle.

9. **Housekeeping** - All WU facilities are maintained in a clean and sanitary condition. Written cleaning and decontamination schedules for areas have been determined and are maintained in the Environmental Services/Housekeeping Departments or in department-specific written guidance. General housekeeping practices include cleaning and decontaminating equipment and work surfaces after completing procedures, when surfaces are overtly contaminated, immediately after any spill of blood or other potentially infectious materials, and at the end of the work shift. The department-specific cleaning schedule may be maintained on the form, Appendix8, *Department Cleaning and Sharps Container Changing Schedule*. All bins, pails, cans,
and similar receptacles intended for re-use that have a potential for becoming contaminated with blood and other potentially infectious materials are inspected and decontaminated as soon as possible upon visible contamination. Biohazard waste receptacles in patient rooms will be disinfected with hospital-approved solution upon patient discharge. Receptacles in all other areas will be disinfected as above on a scheduled monthly basis and documented per Environmental Services/ Housekeeping personnel.

Broken glassware that may be contaminated shall not be picked up directly with the hands. It is handled by using mechanical means, such as a brush and dustpan, tongs, or forceps and deposited into a sharps container for disposal.

An approved disinfectant or a 1:10 bleach to water solution is used to clean spills of blood or other potentially infectious materials. Bleach solutions must be prepared fresh every 24 hours.

Sharps containers shall be maintained in an upright stable position and replaced routinely. They should be changed or replaced when two-thirds (2/3) or three quarters (3/4) full. The Appendix 8, Department Cleaning and Sharps Container Changing Schedule or department-specific written guidelines shall be used to document each department’s routine changing schedule. When removing containers of sharps for disposal, they shall be closed tightly with no protruding of the contents. They shall also be placed in a leak-proof secondary container labeled with a biohazard label. Similar caution shall be taken when handling non-sharp, biohazard trash. This trash shall be in a sealed bag to prevent spillage or leakage and placed in an appropriate container labeled as a “Biohazard.”

Contaminated laundry will be handled as little as possible. It shall be bagged at the location where it was used and will not be sorted or rinsed at the location of use. If the laundry is being sent off site, the service accepting it is to be notified of the biohazard. Refer to local laundry contract procedures for your facility.

VI. HBV VACCINATION:

The purpose of the HBV Program is to provide the HBV vaccine series free of charge to all employees who have occupational exposures or risk of exposures to blood and other potentially infectious materials while performing their work duties. This vaccine is offered through Occupational Health within 10 working days of their initial employment/assignment. Post vaccination screening for antibodies to HBV shall be conducted on personnel within 30–60 days after completion of the vaccine series. If an employee chooses to decline the vaccination, they must sign the OSHA-required Declination Statement available through the Occupational Health Department (Appendix 9).

VII. POST-EXPOSURE EVALUATION AND FOLLOW-UP:

Occupational exposure is defined in Appendix 1. The purpose of post-exposure evaluation and follow-up is to immediately evaluate all occupational exposures to blood and body fluids, confidentially evaluate the source and circumstances of exposure, and offer prophylactic treatment when necessary.

The post-exposure follow-up procedures, documentation, and evaluation are outlined in the WU Core Policy: Body Substance Exposure Evaluation and Treatment Procedure 22 (Appendix 10).
VIII. COMMUNICATION OF HAZARDS TO EMPLOYEES:

A. Labels and Signs:

Labeling with the biohazard symbol or the use of red bags or containers is used to warn employees of potential hazards. The universal biohazard symbol must always be used in conjunction with the word “biohazard.” The warning labels must be fluorescent orange or red in color.

1. The following items must be labeled appropriately as biohazard:
   a. Contaminated equipment
   b. Containers of regulated waste
   c. Refrigerators and freezers to store blood or other potentially infectious materials
   d. Sharps disposal containers
   e. Containers used to store, transport, or ship blood or other potentially infectious materials (e.g., blood drawing trays)
   f. Containers used to transport items contaminated with blood or other potentially infectious materials (e.g., basins, specimen caddy)

2. Labeling is not required for:
   a. Containers of blood, blood components, and blood products labeled as to their contents and released for transfusion or other clinical use because they have been screened for HBV and HIV prior to their release.
   b. Individual containers of blood or other potentially infectious materials that are placed in secondary labeled containers during storage, transportation, shipment, or disposal.
   c. Specimen containers: standard precautions are utilized when handling all specimens.
   d. Laundry bags: Standard precautions are used when handling all laundry.

B. Information and Training:

Training regarding occupational hazards and required personal protective measures will be provided to all new employees at general orientation for employees with risk of occupational exposures. As part of department-specific orientation, employees with risk of occupational exposure will receive job-specific training prior to beginning activities that may place them at risk of occupational exposure. Retraining must occur on an annual basis within one year of the original training date. Department managers must ensure that each employee with risk of exposure receives and documents annual training. An individual knowledgeable on the subject matter must conduct the training. There must be an opportunity for interactive questions and answers.

Training content must include:
2. A general explanation of the epidemiology and symptoms of bloodborne pathogens.
3. An explanation of the modes of transmission of bloodborne pathogens.
4. An explanation of the exposure control plan and the means by which the employee can obtain a copy of the written plan.
5. An explanation of how tasks and other activities that may involve exposure to blood or other potentially infectious materials can be recognized.
6. An explanation of methods and their use to prevent or reduce occupational exposure, including appropriate engineering controls, work practices, and personal protective equipment, and the limitations of each.
7. Information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
8. An explanation of the basis for the selection of personal protective equipment.
9. Information on the HBV vaccine including efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccination will be offered free of charge through the Occupational Health Department.
10. Information on the appropriate actions to take and persons to contact in an emergency involving exposure to blood or other infectious materials.
11. An explanation of the procedure to follow if an exposure incident occurs, including 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 employer is required to provide for the employee following an exposure incident.
13. An explanation of the signs and labels and/or color-coding used to identify hazards.

IX. RECORDKEEPING:

A. Employee Records:

An employee record must be established and maintained for each employee with the potential for occupational exposures in the Occupational Health Department.

These records will include:

1. The employee’s name and employee number, which can be cross-referenced to obtain the employee’s social security number.
2. A copy of the employee’s HBV vaccination status, including the date of all the HBV vaccinations and any medical records relative to the employee’s ability to receive the vaccinations.
3. A copy of all results of examinations, medical testing, and follow-up procedures that have been compiled as the result of an occupational exposure.
4. Employee records will be maintained confidentially in a locked or password-protected file in the Occupational Health Department. Contents of the record will not be disclosed or reported without the employee’s written consent to any person within or outside the workplace except as required by law. Employees can access their records by requesting access through Occupational Health. Medical records may also be released to anyone having written consent of the employee. Medical records must be maintained for the duration of employment plus 30 years. Former employee records are kept off site in a secure area.

B. Sharps Injury Log

1. WU Workers’ Compensation and EH&S shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information on the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee.
2. The sharps injury log shall contain, at a minimum:
   a. The type and brand of device involved in the incident,
   b. The department or work area where the exposure incident occurred, and
   c. An explanation of how the incident occurred

3. The requirement to establish and maintain a sharps injury log shall apply to any employer whom is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

4. The sharps injury log shall be maintained by EH&S for the period required by 29 CFR 1904.

C. Training Records:

1. Training records may be maintained indefinitely but minimally for three years from date of training.

2. Training records will include, at a minimum, the following information:
   a. The date of training sessions
   b. A contents or summary of the training sessions
   c. The name and qualifications of persons conducting the training
   d. The names and job titles of all persons attending training sessions

3. Training records shall be provided to the employee or employee representative upon request for examination or copying.

Disposal of Records:

If WU ceases to do business and there is no successive employer to receive and retain the records for the prescribed period of time, the facility’s administration must notify the Director of the National Institute for Occupational Safety and Health (NIOSH) at least three months before the records are scheduled for disposal. NIOSH may request that the records be forwarded to them to be maintained for the duration of the prescribed period of time.

X. POLICY ENFORCEMENT

To ensure employee adherence with the above plan, supervisors and managers will monitor compliance. Personnel who violate these regulations will be subject to disciplinary action.

XI. NONAPPOINTEES

WU is responsible for providing all aspects of compliance associated with the Bloodborne Pathogen Standard, with respect to employees. Nonappointees will be expected to comply with the policies and practices of the facility in which they are working. Training pertaining to this policy must have been completed prior to the nonappointee performing occupational exposure-prone tasks.

All nonappointees assigned to areas where occupational exposure may occur must present proof of training and HBV vaccination before being permitted to work in the area. These items will be photocopied and Human
Resources and the Occupational Health Department will maintain an employee personnel file and medical record. Department managers will assume responsibility for contract employee activities.

Exposure incidents may be handled in accordance with the WU Core Policy: Body Substance Exposure Evaluation and Treatment Procedure (Appendix 10). Charges incurred will be the responsibility of the sponsoring department.
Standard Number: 1910.1030
Standard Title: Bloodborne pathogens.
SubPart Number: Z
SubPart Title: Toxic and Hazardous Substances

(a) **Scope and Application.** This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

(b) **Definitions. For purposes of this section, the following shall apply:**

**Assistant Secretary** means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

**Blood** means human blood, human blood components, and products made from human blood.

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

**Clinical Laboratory** means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

**Contaminated** means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

**Contaminated Laundry** means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

**Contaminated Sharps** means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

**Decontamination** means 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.

**Director** means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

**Engineering Controls** means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

**Exposure Incident** means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee’s duties.
Handwashing Facilities means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up. HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

Needleless systems mean a device that does not use needles for:

(1) The 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 means 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.

Other Potentially Infectious Materials means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial 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-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, 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.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state 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 means 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.

Sharps with engineered sharps injury protections means a nonneedle 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 means 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.

Sterilize means 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 human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

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

(c) Exposure Control --

(c)(1) Exposure Control Plan.
(c)(1)(i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.
(c)(1)(ii) The Exposure Control Plan shall contain at least the following elements:
(c)(1)(ii)(A) The exposure determination required by paragraph (c)(2),
(c)(1)(ii)(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and
(c)(1)(ii)(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.
(c)(1)(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).
(c)(1)(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:
(c)(1)(iv)(A) Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and
(c)(1)(iv)(B) Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.
(c)(1)(v) An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

(c)(2) Exposure Determination.
(c)(2)(i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:
(c)(2)(i)(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;
(c)(2)(i)(B) A list of job classifications in which some employees have occupational exposure, and
(c)(2)(i)(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.
(c)(2)(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

(d) Methods of Compliance --

(d)(1) General.
Universal precautions 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.
(d)(2) Engineering and Work Practice Controls.
(d)(2)(i) Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.
(d)(2)(ii) Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
(d)(2)(iii) Employers shall provide handwashing facilities which are readily accessible to employees.
(d)(2)(iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleaner in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.
(d)(2)(v) Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.
(d)(2)(vi) Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.
(d)(2)(vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.
(d)(2)(vii)(A) Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.
(d)(2)(vii)(B) Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.
(d)(2)(viii) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:
(d)(2)(viii)(A) Puncture resistant;
(d)(2)(viii)(B) Labeled or color-coded in accordance with this standard;
(d)(2)(viii)(C) Leakproof on the sides and bottom; and
(d)(2)(viii)(D) In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.
(d)(2)(ix) 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.
(d)(2)(x) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benches where blood or other potentially infectious materials are present.
(d)(2)(xi) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.
(d)(2)(xii) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.
(d)(2)(xiii) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.
(d)(2)(xiii)(A) The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.
(d)(2)(xiii)(B) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.
(d)(2)(xiii)(C) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.
(d)(2)(xiv) Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.
(d)(2)(xiv)(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.
(d)(2)(xiv)(B) The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.
(d)(3) Personal Protective Equipment

(d)(3)(i) Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. 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 which the protective equipment will be used.

(d)(3)(ii) Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

(d)(3)(iii) Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

(d)(3)(iv) Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(d)(3)(v) Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

(d)(3)(vi) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(d)(3)(vii) All personal protective equipment shall be removed prior to leaving the work area.

(d)(3)(viii) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

(d)(3)(ix) Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

(d)(3)(ix)(A) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(d)(3)(ix)(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(d)(3)(ix)(C) Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

(d)(3)(ix)(D) If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

(d)(3)(ix)(D)(1) Periodically reevaluate this policy;

(d)(3)(ix)(D)(2) Make gloves available to all employees who wish to use them for phlebotomy;

(d)(3)(ix)(D)(3) Not discourage the use of gloves for phlebotomy; and

(d)(3)(ix)(D)(4) Require that gloves be used for phlebotomy in the following circumstances:

(d)(3)(ix)(D)(4)(i) When the employee has cuts, scratches, or other breaks in his or her skin;

(d)(3)(ix)(D)(4)(ii) When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

(d)(3)(ix)(D)(4)(iii) When the employee is receiving training in phlebotomy.

(d)(3)(x) Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

(d)(3)(xi) Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

(d)(3)(xii) Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).
(d)(4) Housekeeping
(d)(4)(i) General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.
(d)(4)(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.
(d)(4)(iii)(A) Contaminated work surfaces shall 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 other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.
(d)(4)(iii)(B) Protective coverings, such as plastic wrap, aluminum foil, or imprimisively-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the work shift if they may have become contaminated during the shift.
(d)(4)(iii)(C) 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 shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
(d)(4)(iii)(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.
(d)(4)(iii)(E) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.
(d)(4)(iii)(E) Regulated Waste --
(d)(4)(iii)(A)(1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:
(d)(4)(iii)(A)(1)(i) Closable;
(d)(4)(iii)(A)(1)(ii) Puncture resistant;
(d)(4)(iii)(A)(1)(iii) Leakproof on sides and bottom; and
(d)(4)(iii)(A)(1)(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.
(d)(4)(iii)(A)(2) During use, containers for contaminated sharps shall be:
(d)(4)(iii)(A)(2)(i) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);
(d)(4)(iii)(A)(2)(ii) Maintained upright throughout use; and
(d)(4)(iii)(A)(2)(iii) Replaced routinely and not be allowed to overfill.
(d)(4)(iii)(A)(3) When moving containers of contaminated sharps from the area of use, the containers shall be:
(d)(4)(iii)(A)(3)(i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;
(d)(4)(iii)(A)(3)(ii) Placed in a secondary container if leakage is possible. The second container shall be:
(d)(4)(iii)(A)(3)(ii)(B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and
(d)(4)(iii)(A)(3)(ii)(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.
(d)(4)(iii)(A)(4) Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.
(d)(4)(iii)(B) Other Regulated Waste Containment --
(d)(4)(iii)(B)(1) Regulated waste shall be placed in containers which are:
(d)(4)(iii)(B)(1)(i) Closable;
(d)(4)(iii)(B)(1)(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
(d)(4)(iii)(B)(1)(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and
(d)(4)(iii)(B)(1)(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.
(d)(4)(iii)(B)(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:
(d)(4)(iii)(B)(2)(i) Closable;
(d)(4)(iii)(B)(2)(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;
(d)(4)(iii)(B)(2)(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and
(d)(4)(iii)(B)(2)(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(d)(4)(iii)(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(d)(4)(iv) Laundry.

(d)(4)(iv)(A) Contaminated laundry shall be handled as little as possible with a minimum of agitation.

(d)(4)(iv)(A)(1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(d)(4)(iv)(A)(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(d)(4)(iv)(A)(3) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

(d)(4)(iv)(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(d)(4)(iv)(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

(e) HIV and HBV Research Laboratories and Production Facilities.--

(e)(1) This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

(e)(2) Research laboratories and production facilities shall meet the following criteria:

(e)(2)(i) Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(e)(2)(ii) Special Practices.

(e)(2)(ii)(A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(e)(2)(ii)(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(e)(2)(ii)(C) Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

(e)(2)(ii)(D) When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(i) of this standard.

(e)(2)(ii)(E) All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

(e)(2)(ii)(F) Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

(e)(2)(ii)(G) Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

(e)(2)(ii)(H) Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(e)(2)(ii)(I) Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

(e)(2)(ii)(J) Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when
handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

(e)(2)(ii)(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

(e)(2)(ii)(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(e)(2)(ii)(M) A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

(e)(2)(iii) Containment Equipment.

(e)(2)(iii)(A) Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

(e)(2)(iii)(B) Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

(e)(3) HIV and HBV research laboratories shall meet the following criteria:

(e)(3)(i) Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

(e)(3)(ii) An autoclave for decontamination of regulated waste shall be available.

(e)(4) HIV and HBV production facilities shall meet the following criteria:

(e)(4)(i) The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

(e)(4)(ii) The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

(e)(4)(iii) Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

(e)(4)(iv) Access doors to the work area or containment module shall be self-closing.

(e)(4)(v) An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

(e)(4)(vi) A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

(e)(5) Training Requirements.

Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

(f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up --

(f)(1) General.

(f)(1)(i) The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(f)(1)(ii) The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(f)(1)(ii)(A) Made available at no cost to the employee;

(f)(1)(ii)(B) Made available to the employee at a reasonable time and place;
(f)(1)(ii)(C) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and
(f)(1)(ii)(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).
(f)(1)(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

(f)(2) Hepatitis B Vaccination.
(f)(2)(i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.
(f)(2)(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.
(f)(2)(iii) If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.
(f)(2)(iv) The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.
(f)(2)(v) If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

(f)(3) Post-exposure Evaluation and Follow-up.
Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

(f)(3)(i) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;
(f)(3)(ii) Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;
(f)(3)(iii)(A) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.
(f)(3)(iii)(B) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.
(f)(3)(iii)(C) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
(f)(3)(iii)(D) Collection and testing of blood for HBV and HIV serological status;
(f)(3)(iii)(A) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.
(f)(3)(iii)(B) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.
(f)(3)(iv) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;
(f)(3)(v) Counseling; and

(f)(4) Information Provided to the Healthcare Professional.
(f)(4)(i) The employer shall ensure that the healthcare professional responsible for the employee’s Hepatitis B vaccination is provided a copy of this regulation.
(f)(4)(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:
(f)(4)(ii)(A) A copy of this regulation;
(f)(4)(ii)(B) A description of the exposed employee's duties as they relate to the exposure incident;
(f)(4)(ii)(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;
(f)(4)(ii)(D) Results of the source individual's blood testing, if available; and
(f)(4)(ii)(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(f)(5)(i) The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

(f)(5)(ii) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

(f)(5)(iii)(A) That the employee has been informed of the results of the evaluation; and

(f)(5)(ii)(B) That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

(f)(5)(iii) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(f)(6) Medical Recordkeeping.
Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

(g) Communication of Hazards to Employees --

(g)(1) Labels and Signs
(g)(1)(i) Labels.

(g)(1)(i)(A) Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(g)(1)(i)(B) Labels required by this section shall include the following legend:

![BIOHAZARD]

(g)(1)(i)(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

(g)(1)(i)(D) Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(g)(1)(i)(E) Red bags or red containers may be substituted for labels.

(g)(1)(i)(F) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

(g)(1)(i)(G) 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.

(g)(1)(i)(H) Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(g)(1)(i)(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

(g)(1)(i)(J) Signs.

(g)(1)(i)(J) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:
(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)
(g)(1)(ii)(B) These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

(g)(2) Information and Training.
(g)(2)(i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.
(g)(2)(ii) Training shall be provided as follows:
(g)(2)(ii)(A) At the time of initial assignment to tasks where occupational exposure may take place;
(g)(2)(ii)(B) Within 90 days after the effective date of the standard; and
(g)(2)(ii)(C) At least annually thereafter.
(g)(2)(iii) For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.
(g)(2)(iv) Annual training for all employees shall be provided within one year of their previous training.
(g)(2)(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.
(g)(2)(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.
(g)(2)(vii) The training program shall contain at a minimum the following elements:
(g)(2)(vii)(A) An accessible copy of the regulatory text of this standard and an explanation of its contents;
(g)(2)(vii)(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;
(g)(2)(vii)(C) An explanation of the modes of transmission of bloodborne pathogens;
(g)(2)(vii)(D) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;
(g)(2)(vii)(E) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;
(g)(2)(vii)(F) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;
(g)(2)(vii)(G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;
(g)(2)(vii)(H) An explanation of the basis for selection of personal protective equipment;
(g)(2)(vii)(I) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;
(g)(2)(vii)(J) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
(g)(2)(vii)(K) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;
(g)(2)(vii)(L) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;
(g)(2)(vii)(M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and
(g)(2)(vii)(N) An opportunity for interactive questions and answers with the person conducting the training session.
(g)(2)(viii) The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.
(g)(2)(ix) Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

(g)(2)(ix)(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

(g)(2)(ix)(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(g)(2)(ix)(C) The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) Recordkeeping --

(h)(1) Medical Records.

(h)(1)(i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

(h)(1)(ii) This record shall include:

(h)(1)(ii)(A) The name and social security number of the employee;

(h)(1)(ii)(B) A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

(h)(1)(ii)(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(h)(1)(ii)(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

..1910.1030(h)(1)(ii)(E)

(h)(1)(ii)(E) A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

(h)(1)(iii) Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:

(h)(1)(iii)(A) Kept confidential; and

(h)(1)(iii)(B) Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

(h)(1)(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

(h)(2) Training Records.

(h)(2)(i) Training records shall include the following information:

(h)(2)(i)(A) The dates of the training sessions;

(h)(2)(i)(B) The contents or a summary of the training sessions;

(h)(2)(i)(C) The names and qualifications of persons conducting the training; and

(h)(2)(i)(D) The names and job titles of all persons attending the training sessions.

(h)(2)(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

(h)(3) Availability.

(h)(3)(i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(h)(3)(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

(h)(3)(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

(h)(4) Transfer of Records.

(h)(4)(i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).
(h)(4)(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(h)(5) Sharps injury log.
(h)(5)(i) The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:
(h)(5)(i)(A) The type and brand of device involved in the incident,
(h)(5)(i)(B) The department or work area where the exposure incident occurred, and
(h)(5)(i)(C) An explanation of how the incident occurred.
(h)(5)(ii) The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.
(h)(5)(iii) The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

(i) Dates --

(i)(1) Effective Date. The standard shall become effective on March 6, 1992.

(i)(2) The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

(i)(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.


APPENDIX A

Hepatitis B Vaccine Declination (Mandatory) - 1910.1030AppA
- **Standard Number:** 1910.1030AppA
- **Standard Title:** Hepatitis B Vaccine Declination (Mandatory)
- **SubPart Number:** Z
- **SubPart Title:** Toxic and Hazardous Substances

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.

Work Area: ______________________

Compliance Checklist
OSHA BLOODBORNE PATHOGENS STANDARD (29 CFR 1910.1030)

Exposure Control Plan

☐ Is a copy of the Health Service Organization (HSO) Exposure Control Plan accessible to all employees?

☐ Have you supplemented the Exposure Control Plan by listing the classifications of the employees at risk of exposure and the tasks they do that might involve exposure?

☐ Have you used the forms provided as appendices to this plan or in department-specific written procedures that are at least as detailed?

☐ Have you supplemented the Exposure Control Plan with additional information specific to your area where necessary?

Handling and Disposing of Sharps

☐ Are sharps containers closable, leak-proof and puncture-resistant on the sides and bottom?

☐ Are sharps containers red and/or labeled with the universal biohazard symbol?

☐ Are sharps containers located as close as possible to the area of use?

☐ Are there a schedule and a method for determining when sharps containers need replacement?

☐ Are fixed sharps containers installed at the proper height (52-56 inches above the standing surface of the user)?

☐ Are employees prohibited from recapping, shearing, bending or breaking needles?

☐ Are reusable sharps used? If yes, do you have a written policy specifying situations in which recapping is allowed and safe practices required for doing so?

☐ Is there a mechanical means (broom, dust pan, tongs, etc.) available to clean up contaminated glass or other sharp materials?

Safe Equipment Practices

☐ Are hand washing facilities with soap and running water reasonably accessible to employees? If not, are appropriate alternatives (waterless hand cleaners, antiseptic toilettes, etc.) provided?

☐ Are employees prohibited from drinking, eating, smoking, applying cosmetics, etc. in potentially contaminated work areas?
Safe Equipment Practices (cont.)

- Is there a separate refrigerator for storage of food, drinks, etc.?
- Are employees who perform procedures that may produce splashes or aerosols of blood or OPIM (Other Potentially Infectious Materials) trained to perform these procedures in a manner that eliminates or reduces exposure risks?
- Is contaminated equipment decontaminated prior to servicing? If it can’t be decontaminated, is it labeled to specify which portions remain contaminated?
- Are these equipment items documented in department-specific procedures?

Personal Protective Equipment (PPE)

- Is personal protective clothing and equipment, that is appropriate for the tasks to be performed, provided for all employees, and is it accessible and conveniently located?
- Are employees trained in the proper selection and mandated use of PPE? Are they trained in the proper procedures, for disposing of or reprocessing PPE?
- Is face and eye protection provided when there is a possibility for splashing, spraying or splattering of blood or OPIM? Does protective eyewear have side shields?
- Are emergency one-way resuscitation devices available, if necessary?
- Is a mechanism in place for cleaning, laundering and/or disposing of employees’ protective clothing?
- Are employees trained to remove PPE before leaving the work area and as soon as it becomes contaminated with blood or OPIM?
- Are gloves readily accessible and suitable for the tasks being performed?
- Are gloves required when there is a reasonable likelihood of contact with blood or OPIM?
- Are hypoallergenic gloves provided for employees who are allergic to gloves used?
- Are employees instructed in how to properly remove and dispose of contaminated gloves?

Housekeeping

- Is there a written schedule and procedure for decontamination of environmental surfaces such as counter tops, work surfaces and floors?
- Are work surfaces cleaned and decontaminated upon completion of a procedure? After overt contamination during a procedure? At the end of each work shift?
- Is there a written procedure for inspecting and decontaminating biohazard trash receptacles?
Is an EPA-approved cleaner or a 1:10 bleach solution used for disinfecting contaminated work surfaces, trash receptacles and other equipment?

**Laundry**

- Are employees instructed on how to bag, handle and transport contaminated laundry? Is contaminated laundry transported in a biohazard bag or appropriately labeled?
- Are employees instructed to never take contaminated clothing or PPE home with them for cleaning?
- Are laundry workers provided with appropriate PPE and trained in its proper use?

**Regulated Waste**

- Is waste contaminated with blood or Other Potentially Infectious Materials (OPIM) disposed of in red biohazard waste bags or in sharps containers (if it could possibly puncture a bag)?
- Are biohazard waste containers closable, leak-proof and labeled with the biohazard symbol?
- Are secondary containers provided when the outside of the primary container becomes contaminated, and do they meet the same specifications?
- Are employees instructed to tightly close and double bag all biohazard bags or containers prior to removal to prevent spillage and leaking during handling, especially after autoclaving?

**Employee Training**

*Are employees, at risk of exposure, trained in the following areas?*

- An explanation of the transmission, symptoms and prophylactic treatment for bloodborne diseases such as HIV, HBV and HCV.
- An explanation of how to recognize whether the job involves exposure to blood or OPIM.
- An explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, including safer sharp devices, work practices and personal protective equipment.
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- An explanation of the basis for selection of personal protective equipment.
- Information on the Hepatitis B vaccine, including its efficacy, safety, availability and benefits.
- Information on the appropriate actions to take and persons to contact in an emergency involving exposure to blood or OPIM. This includes decontamination and waste disposal protocols for blood or OPIM.
- An explanation of the procedure to be followed in the event of an exposure, including the reporting procedure and medical follow-up.
- An explanation of the signs and labels and/or color-coding required by the standard.
Hepatitis B Vaccination

- Have you determined which employees are at risk of exposure and eligible for HBV vaccination?
- Is the vaccine provided to these employees for free and at a reasonable time and place?
- Do employees who decline vaccination sign the declination form and, is a copy of this kept by Occupational Health?

Post-Exposure Follow-Up

- Are employees instructed in procedures to follow in the event of an exposure incident (parenteral, mucous membrane or broken/non-intact skin contact with blood or OPIM)?
- Are employees aware of the reporting procedures and their rights to medical evaluation and follow-up following an exposure incident?

Signs and Labels

- Are all refrigerators, freezers and other areas used to store blood or OPIM labeled with the universal biohazard symbol and the word “biohazard”?
- Are containers used to ship, store or transport blood or OPIM labeled and color-coded?
- Are all containers used to hold regulated biohazard waste labeled and/or color-coded?
- Are sharps containers labeled and/or color-coded?

Recordkeeping

- Do you have a Sharps Injury Log?
- Have you completed an annual assessment of safe needle devices?
Work Area: __________________________

Classification I – Job Title Listing

*Annual Review is required*

Job titles in which required tasks routinely involve a potential for percutaneous injury, mucous membranes or skin contact with blood, body fluids, tissues or potential spills or splashes. Uses of appropriate measures are required for every healthcare provider in these jobs.

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<thead>
<tr>
<th>Job Titles</th>
<th>Tasks/Procedures/Precautions</th>
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Date Reviewed______________  Dept. Manager ________________________________
Work Area: __________________________

Classification II – Job Listing

*Annual Review is required*

Jobs in which required tasks normally do not involve exposure to blood, body fluids or tissues, but may require performing unplanned Classification I Tasks. In these jobs the normal work routine involves no exposure to blood, body fluids or tissues, but exposure or potential exposure may be required as a condition of employment.

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<th>Job Titles</th>
<th>Tasks/Procedures/Precautions</th>
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Date Reviewed ____________  Dept. Manager ______________________________
Jobs in which required tasks involve no greater exposure to blood, body fluids or tissues than would be encountered by a visitor, and even rare performance of Category I Tasks is not a condition of employment. The normal work routine involves no exposure to blood, body fluids or tissues. The worker is not covered by the OSHA Final Rule, and can decline to perform tasks that involve a perceived risk without hesitation.

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<th>Job Titles</th>
<th>Tasks/Procedures/Precautions</th>
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Date Reviewed________________ Dept. Manager_________________________________
Safety Sharps Device Evaluation Process Overview

Department or Entity Name: ______________________________________________________________

Name of device: _________________________________________________________________

Manufacturer: __________________________ Order #: ______________________________

Date(s) trialed: __________________________ Number of devices trialed: ______________

Did non-managerial employees responsible for direct patient care trial the device?  □ Yes  □ No

If yes, was feedback obtained from the employees? □ Yes  □ No

If yes, please attach formal documentation of feedback.

Has the device been approved for use?  □ Yes  □ No

Date approved: _______________

Committee(s) involved: _______________________________________________________________

Have employees been trained on how to use the device? □ Yes  □ No

If yes, please enter where training records are kept and dates of training:

Location: _______________ Training date(s): _______________

Date device was introduced for regular use: __________________________

Signature of person completing this form: ___________________________ Date: __________
Safety Sharps Device Evaluation Form

Evaluator’s Name: ___________________________  Job Title: ___________________________
Department: ___________________________  Date: ___________________________
Supervisor’s Name: ___________________________

Name of Device: ___________________________  Name of Manufacturer: ___________________________
Applications of device: ___________________________
Number of times used: ___________________________

This form must be kept for one year, until the next evaluation is completed, in your department records.

Please check the most appropriate answer for each question. A rating of five (5) indicates the highest level of agreement with the statement, one (1) the lowest. Not applicable (N/A) may be used if the question does not apply to this product.

<table>
<thead>
<tr>
<th>Please explain all problems with the device in the comments section.</th>
<th>Agree</th>
<th>Disagree</th>
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<tbody>
<tr>
<td>1. The safety feature can be activated using a one-handed technique.</td>
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<td>2. The user’s hands remain behind the needle/sharp until activation of the safety mechanism is complete.</td>
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<td>3. The safety feature does not interfere with normal use of this product.</td>
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<td>4. Use of this product requires you to use the safety feature.</td>
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<td>5. A clear and unmistakable change (either audible or visible) occurs when the safety feature is activated.</td>
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<td>6. The device is easy to handle while wearing gloves.</td>
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<td>7. The device is easy to handle when wet.</td>
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<td>8. This device does not require more time to use than a non-safety device.</td>
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<td>10. The exposed sharp is blunted or covered after use and prior to disposal.</td>
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<td>11. The safety feature works well with a wide variety of hand sizes and with a left-handed person as easily as with a right-handed person.</td>
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<td>12. Use of this product does not increase the number of sticks to the patient.</td>
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<td>13. Sterilization, if applicable, of this device is as easy as a standard device.</td>
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<tr>
<td>14. The product stops the flow of blood after the needle is removed from the catheter, or after the butterfly is inserted, and just prior to line connections or hep-lock capping.</td>
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<td>15. The product does not require extensive training to be operated correctly.</td>
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<td>16. The device can be used without causing more patient discomfort than a conventional device.</td>
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<tr>
<td>Additional questions for IV Connectors:</td>
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<tr>
<td>17. Use of this connector eliminates the need for exposed needles in connections.</td>
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<tr>
<td>18. Safety feature allows blood collection directly into tube, eliminating need for needles.</td>
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</table>
Please explain all problems with the device in the comments section.

<table>
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<tr>
<th>Agree</th>
<th>Disagree</th>
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**Additional questions for Vacuum Tube Blood Collection Systems:**

19. The connector can be secured (locked) to Y-sites, hep-locks, and central lines.

20. The safety feature works with a butterfly.

21. The inner vacuum tube needle (rubber sleeved needle) does not present a danger of exposure.

Please rate the quality of the in‐service training:

- Excellent
- Very Good
- Good
- Fair
- Poor

Would you recommend using this device?

- Yes
- No

Comments:
Work Area: __________________________
Potentially Contaminated Equipment

*Annual Review is required*

Potentially contaminated department equipment should be decontaminated after each use. If decontamination is not feasible, the equipment should be labeled with the specific hazard information.

### POTENTIALLY CONTAMINATED EQUIPMENT

<table>
<thead>
<tr>
<th>EQUIPMENT/ITEM</th>
<th>EQUIPMENT SERVICE PROVIDER</th>
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Date Reviewed_________________  Dept. Manager________________________________
**Work Area: __________________________**

**Cleaning and Sharps Container Changing Schedule**

*Annual Review is required*

<table>
<thead>
<tr>
<th>Item</th>
<th>Type of Cleaning (circle any applicable)</th>
<th>Cleaning Agent</th>
<th>Task Frequency (circle frequency)</th>
<th>Job Title (of person cleaning)</th>
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<tbody>
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Date Reviewed ________________  Dept. Manager ______________________________
Hepatitis B Virus (HBV) Vaccine Declination Statement

(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 me; 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.

Signed: ____________________________________________

Printed Name: ______________________________________

Date: _______________________________________________
I. **TITLE:** Body Substance Exposure Evaluation and Treatment Procedure

II. **APPLICABILITY:** This policy applies to WU member entities (see EH&S Appendix 15 for Research Labs and Appendix 16 for Danforth Campus included at the end of this document).

III. **PURPOSE:**

This core policy sets forth the minimum standards that must be met at WU with respect to Body Substance Exposures.


V. **DEFINITIONS:**

- **Body Substance Exposure.** A percutaneous injury (e.g., a needlestick or cut with a sharp object) or contact of mucous membrane or nonintact skin (e.g., exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other body fluids that are potentially infectious.

- **Exposure Incident.** A term used by OSHA to identify those body substance exposures regulated in OSHA’s Bloodborne Pathogen Rule. An Exposure Incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral/percutaneous contact with blood or other potentially infectious materials that results from the performance of an employee’s duties.

- **High Risk HIV (human immunodeficiency virus) Source Individual.** A known HIV positive (+), AIDS patient or one at high risk of being HIV+ including hemophiliacs, those with a history of blood transfusions before 1985, men who have sex with men, injection drug users, methamphetamine users, people who exchange sex for drugs or money, prostitutes, people with multiple sexual partners, victims of gunshot or knife wounds, or children whose mothers are in these high risk groups.

- **High Risk HBV (hepatitis B virus) Source Individual.** A known Hepatitis B positive patient (hepatitis B surface antigen [HBsAg] positive) or one at risk of being HBsAg+ including injection drug users, people of south east Asian, Sub-Saharan Africa, Asian Pacific islanders, (i.e. Alaskan, or Hawaiian) descent, or multiple sexual partners.

- **High Risk HCV (hepatitis C virus) Source Individual.** A known Hepatitis C positive patient (Hepatitis C Antibody +) or those with a history of injection drug use, received blood transfusions or solid organ transplant before 1992, or has evidence of liver disease.
VI. PROCEDURE

A. Initial Response and Reporting

1. The exposed employee should immediately wash the affected area with soap and water or flush eyes or mucous membranes with water or normal saline.

2. The employee should report the exposure to his/her supervisor immediately.

3. During normal business hours, employees should be referred to WU Occupational/Student Health Services at 362-3528. After hours, call 871-2966 and listen to the instructions or please contact the hotline at 314-747-3535.

B. Initial Assessment and Treatment

1. The WU Occupational/Student Health Nurse (OHN) or designee administers first aid or assures that adequate rinsing and washing of the affected area (with soap and water) or flushing of the eyes or mucous membranes (with normal saline or water) has occurred.

2. The OHN or designee determines if post-exposure prophylaxis (PEP) is indicated based upon the type of exposure, the type and amount of fluid or tissue involved, the infectious status of the source patient, and the susceptibility of the exposed employee.

3. For body substance exposures where PEP is recommended, the OHN or designee shall provide an assessment and care for potential HBV, HCV, and/or HIV transmission.

4. The OHN shall document the route(s) of exposure and circumstances under which exposure occurred, a description of the exposed employee’s duties as they relate to the exposure incident, identification of the source individual, results of the source individual’s blood testing, if available, and how the exposure occurred.

5. The OHN reviews the employee’s occupational health record and related immunization records.

6. The OHN shall offer the employee the opportunity to begin or complete the hepatitis B immunization series (if not previously completed).
C. Source Individual Consultation

1. The OHN, licensed health care provider or designee shall provide counseling for the source individual, or his/her legal guardian or custodian prior to (pre-test) conducting HIV testing.

2. Post-test counseling shall be completed at the time the test results or diagnosis is given to the source individual or his/her legal guardian or custodian.

3. The scope of the consultation shall be governed by the OHN, licensed health care provider or designee’s professional judgement based on the clinical situation, including the purpose of and need for HIV testing and shall be at least as comprehensive as the type of consultation provided for other diagnostic tests or procedures.

4. All newly identified persons with HIV must be reported to the appropriate department of health, as required by law.

D. The OHN, licensed health care provider or designee assures that arrangements are made to have the source individual tested as soon as possible for HIV antibody (Rapid testing or ELISA), Hepatitis B surface antigen (HbsAg), and Hepatitis C Antibody (ELISA).

1. The OHN, licensed health care provider (HCP) or designee will implement the source individual standing order for obtaining laboratory testing.

2. If the source individual is already known to be HIV, HBsAg, or Hepatitis C positive, new testing need not be performed.

E. Employee Information and Consultation:

1. For body substance exposures that do not warrant PEP and are not an Exposure Incident, the Occupational Health Nurse will conduct the counseling with the employee and document appropriately. A copy of the documentation is placed in the employee’s occupational health record and the original is given to the employee at the time they receive counseling.

2. For body substance exposures where PEP is warranted and considered to be an Exposure Incident, the OHN shall complete the BSE Employee Information/Instruction Sheet. The provider and the employee sign the Information/Instruction sheet. A copy is placed in the employee’s occupational health record and the original is given to the employee at the time they receive counseling.

F. The OHN’s role in the management of body substance exposures where PEP is warranted:

1. The OHN or designee will provide the employee with counseling as soon as possible after the exposure and ongoing as needed.

2. The OHN or designee will refer body substance exposures that warrant treatment with PEP to an Infectious Disease Specialist for possible chemoprophylaxis. If the assessment indicates, PEP should be initiated as soon as possible, (preferably within 2 hours) after the exposure until the HIV source test comes back negative.
3. The OHN or designee will obtain the employee’s appropriate baseline blood sample as soon as feasible after exposure incident if the source patient is confirmed to be HBV, HCV, and/or HIV positive.

4. For Exposure Incidents involving a positive HIV/HBV/HCV source individual or from an unknown source in a high risk environment, the employee must have baseline blood testing.

   a. The employee should be tested for the specific BBP they were exposed to or HIV, HBV, and HCV.

      1) If exposed to HBV, HBV testing is only needed for an employee who has not completed the HBV vaccine series or if the employee was vaccinated but post-vaccine HBsAb titer is unknown.

      2) In a high risk environment when the source is unknown, employee baseline testing for HIV and HCV should be performed. HBV testing is only needed for an employee who has not completed the HBV vaccine series or if the employee was vaccinated but post-vaccine HBsAb titer is unknown.

      3) **The Occupational Health Nurse must obtain written consent for HIV testing before the employee’s blood is tested.**

      4) If the employee does not consent to baseline HIV testing, the blood sample will be frozen/stored/preserved for at least 90 days.

      5) If the employee refuses to have their blood sample drawn and frozen, the Occupational Health Nurse will document their refusal on the “Employee Waiver for HIV Testing/Serum Save.”

      6) For exposures to HBV: If the employee has documentation of receiving the Hepatitis B series, but no titer has been documented, a Hepatitis B quantitative surface antibody titer will be drawn. If the titer is >10 mIU/mL anti-HBs, no further follow-up is necessary. If the titer is <10 mIU/mL anti-HBs, administer HBV PEP.

   b. Post-test counseling shall be completed by the OHN, health care provider, or designee at the time the test results or diagnosis is given to the employee.

5. The employee will be provided with all lab test results and copies of such tests will be kept confidential in the occupational health files.

6. The OHN will provide the employee with the source individual’s test results ensuring the confidentiality of the information and will instruct the employee that the information is confidential and not to be shared with anyone.

7. The OHN documents data in the employee’s occupational health medical record, as appropriate and ensures the employee is provided a written opinion within 15 days of the evaluation. (BSE Employee Information/Instruction Sheet and/or BSE Lab Documentation Sheet)

8. The OHN ensures incident is recorded on the OSHA 300 log if it is recordable. 

   *If the Hepatitis B series is initiated as a result of the Exposure Incident and/or PEP is given, the Incident will be recorded on the OSHA 300 Log.*
G. Evaluation of circumstances surrounding exposure incidents will be the responsibility of the entity-specific responsible department. Evaluation of the exposure incident will include ascertaining if engineering controls and work practices were in place, if personal protective equipment (PPE) was used at the time of incident, and an evaluation of the policies and "failure of control" at the time of the incident.