

WEST VIRGINIA UNIVERSITY EXPOSURE CONTROL PLAN FOR NON-HOSPITAL PERSONNEL

POLICY

The **West Virginia University** (WVU) is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens (BBP) in accordance with **OSHA standard 29 CFR 1910.1030, “Occupational Exposure to Bloodborne Pathogens.”**

The ECP is a key document to assist our organization in implementing and ensuring compliance with the OSHA standard, thereby protecting our employees.

This ECP includes:

- Determination of employee exposure
- Implementation of various methods of exposure control, including:
 - Universal precautions
 - Engineering and work practice controls
 - Personal protective equipment
 - Housekeeping
 - Hepatitis B vaccination
 - Post-exposure evaluation and follow-up
 - Communication of hazards to employees and training
 - Recordkeeping
 - Procedures for evaluating circumstances surrounding exposure incidents

Implementation methods for these elements of the standard are discussed in the subsequent pages of this ECP.

PROGRAM ADMINISTRATION

■ The WVU Biosafety Officer, Dr. Vijayasmitha Rayadurg is responsible for implementation of the ECP. The WVU Biosafety Officer will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures. Contact location/phone number: **304-293-7157**.

■ The WVU Biosafety Officer will be responsible for the Bloodborne Pathogen training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives.

DEFINITIONS

Blood: Human blood, human blood components, and products made from human blood.

Bloodborne Pathogens: 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).

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

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

Engineering Controls: 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.

Other Potentially Infectious Materials (OPIM): 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.

■ **The Principal Investigator or the Laboratory Supervisor** will provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. The Laboratory Supervisor will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes.

- **Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.**

- The WVU Occupational Health department will be responsible for ensuring that all medical actions required by the standard are performed and that appropriate employee health and OSHA records are maintained.

Contact location:

Occupational Medicine
West Virginia University
Physician Office Center
Third Floor, Medical Specialties
One Medical Center Drive
Morgantown, WV 26506

Phone number: 304-293-3693.

EMPLOYEE EXPOSURE DETERMINATION

The Principal Investigator (PI) or the Laboratory Supervisor shall determine the risk of occupational exposure to the employees.

Laboratory PI's Name : _____

The following is a list of all job classifications in our laboratory in which employees have occupational exposure:

Job Title Department/Location:

Example: Lab Personnel involved in the research study, Housekeeper: Environmental Services: Handling Regulated Waste

(Use as many lines as necessary).

NOTE: Part-time, temporary, contract and per diem employees are covered by the Bloodborne pathogens standard. The ECP should describe how the standard will be met for these employees.

METHODS OF IMPLEMENTATION AND CONTROL

Universal Precautions:

All employees will utilize universal precautions.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and human body fluids are treated as if known to be infectious for HIV, HBV, Hepatitis C and other Bloodborne pathogens.

Exposure Control Plan (ECP):

Employees covered by the Bloodborne pathogens standard receive an explanation of this ECP during their initial Bloodborne pathogen training session. It will also be reviewed in their annual refresher training.

All employees can review this plan at any time during their work shifts by contacting the Laboratory Supervisor. If needed, the WVU Biosafety Officer will provide a copy of the ECP free of charge and within 15 days of the request.

The WVU Biosafety Officer is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Engineering Controls and Work Practices

- Engineering controls and work practice controls will be used to prevent or minimize exposure to Bloodborne pathogens. Where occupational exposure remains, after institution of engineering controls, personal protective equipment will be used.

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.

Sharps with engineered sharps injury protections means a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

- Sharps precautions will be practiced as per the WVU Sharps Policy:
<http://oric.research.wvu.edu/r/download/137884>
 - Sharps containers are closable, puncture resistant, leak proof & labeled.

- Used & contaminated sharps are immediately placed in the sharps container.
- Used & contaminated sharps are not bent & are not recapped.
- Sharps disposable containers are inspected & maintained or replaced by WVU EHS/BSO every (___ months) ..Or whenever necessary to prevent overfilling.

The PI or the Lab Supervisor makes sure that:

- Readily accessible hand washing facilities or an appropriate antiseptic hand cleanser in conjunction with paper towels or antiseptic towelettes will be provided to employees.

Work Practices:

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).

- Supervisors will ensure that employees wash their hands immediately after removal of gloves or other personal protective equipment.
- Supervisors will ensure that employees will wash any exposed skin with soap & water & flush mucus membranes with water immediately after contact of such areas with blood or other OPIM.
- All procedures involving blood or other OPIM will be performed in a manner as to minimize splashing, spraying & generation of aerosols.
- Mouth pipetting of blood & other OPIM are prohibited.
- Specimens of blood or other OPIM will be placed in a leak proof container for storage and transportation.
- A Secondary container should be used for storage & transportation if necessary.
- The labeling or color coding the specimen containers as Biohazard is necessary.
- The labeling of the centrifuges & other equipment where the blood & other OPIM are processed is necessary.

- Equipment that may become contaminated with blood & other OPIM must be decontaminated prior to servicing or shipping. **Please call the WVU Biosafety Officer at 304-293-7157 & the WVU EHS at 304 – 293-3792 if your lab is located on the downtown campus or call the Health Sciences (HSC) EHS at 304-293-I 0952 if your lab is located in the HSC building (To ensure that the equipment is properly decontaminated & the ‘Decontaminated’ sticker is attached to the equipment prior to servicing, shipping or if you are giving the equipment away to another department on campus as a surplus).**

Personal Protective Equipment (PPE)

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.

The PI or the Lab Supervisor makes sure that the PPE is provided at no cost to the employees. Training in the use of the appropriate PPE for specific tasks or procedures is provided by (Name of responsible person in the lab or the department).

For all procedures & research studies that involve handling of blood & other OPIM, The PPE is used as per the recommendation by the WVU Institutional Biosafety Committee (IBC) based on the risk assessment conducted by the WVU IBC.

The PI or the Laboratory Supervisor will make sure that employees use appropriate PPE in the appropriate sizes. The PPE must not admit the blood or other OPIM to pass through the employees work clothes.

PPE is located (List location) and may be obtained through (Name of responsible person in the lab or the department). (Specify how employees will obtain PPE and who is responsible for ensuring that PPE is available.)

All employees using PPE must observe the following precautions:

- Wash hands immediately or as soon as feasible after removing gloves or other PPE.
- Remove PPE after it becomes contaminated and before leaving the work area.
- Used PPE may be disposed of in (List appropriate containers for storage, laundering, decontamination, or disposal.)
- Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces;

replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.

- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Never wash or decontaminate disposable gloves for reuse.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.
- Cleaning, laundering & disposal of PPE will be provided by the laboratory at no cost to the employees.

The procedure for handling used PPE is as follows:

(State the procedure for PPE maintenance & PPE decontamination, PPE Laundry)

Housekeeping

Regulated Waste means liquid or semi-liquid blood or OPIM; 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 OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM.

- The PI or the Laboratory Supervisor will make sure that the regulated waste is placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color-coded (see the following section “Labels”), and closed prior to removal to prevent spillage or protrusion of contents during handling.
- The PI or the Laboratory Supervisor will make sure that the lab is maintained in a clean and sanitary condition. The Lab must have written Standard operating procedures. For example;

The procedure for handling sharps disposal containers is:
(may refer to specific procedure by title or number and last date of review)

The procedure for handling other regulated waste is: *(may refer to specific procedure by title or number and last date of review)*

All equipment & environmental & work surfaces will be cleaned & decontaminated with a suitable disinfectant after contact with blood or other OPIM.

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.

- Contaminated sharps are discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled or color coded.
- Sharps disposal containers are available at (must be easily accessible and as close as feasible to the immediate area where sharps are used).
- Bins and pails (e.g., wash basins) are cleaned and decontaminated as soon as feasible after visible contamination with blood and body fluid or any OPIM.
- Broken glassware that may be **contaminated** is only picked up using mechanical means, such as a brush and dustpan & disposed off in the sharps container.
- Standard operating procedure for the disposal of the research biohazardous waste can be found at:
<http://www.hsc.wvu.edu/safety/Biological-Safety>
 - For Biohazardous waste pick up from the Health Sciences, Biomed & the BRNI Building Please contact HSC Facilities at: 304-293-4394.
 - For Biohazardous waste pick up from all other locations on campus, Please contact the WVU Biosafety Officer at 304-293-7157.

Laundry

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

- Handle contaminated laundry as little as possible, with minimal agitation.
- Place wet contaminated laundry in leak-proof, labeled or color coded containers before transport. Use (specify either red bags or bags marked with the biohazard symbol) for this purpose.
- Wear PPE when handling and/or sorting contaminated laundry.

Labels

The Laboratory Supervisor or the Lab manager is responsible for ensuring that warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify (**Name of responsible person in the lab or in the or department**) if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

- To obtain Biohazrd labels, please contact the WVU Biosafety Officer at 304-293-7157.

HEPATITIS B (Hep B) VACCINATION

During the BBP training, the WVU Biosafety Officer will provide information to employees on Hepatitis B vaccinations. The Biosafety Officer shall provide the PI or the Lab Manager, **a copy of the Hepatitis B Acceptance/Declination form. Employee participation in the Hep B vaccination program is completely voluntary. The PI or the Lab Manager keeps the record of the the Hepatitis B Acceptance/Declination form signed by his/her employees. A copy of the Hep B acceptance/declination form signed by the employee must be maintained by the PI or the Laboratory Supervisor for the duration of the employee's tenure.**

The hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all employees working (**or come in contact with**) with human blood & body fluids, human cell lines & human tissues or other OPIM.

Vaccination is encouraged unless: 1) documentation exists that the employee has previously received the series; 2) antibody testing reveals that the employee is immune; or 3) medical evaluation shows that vaccination is contraindicated.

However, if an employee declines the vaccination, the employee must state the declination on the form.. Employees who decline may request and obtain the vaccination at a later date at no cost. The laboratory maintains the documentation of refusal of the vaccination. Vaccination must be administered through an approved Occupational medical provider.

The vaccination program consists of a series of three intramuscular vaccinations administered on days zero, 1 month & 6 months. Hep B vaccinations are provided at the **WVU Occupational Health Services at:**

**Occupational Medicine
West Virginia University
Physician Office Center
Third Floor, Medical Specialties
One Medical Center Drive
Morgantown, WV 26506**

Phone number: 304-293-3693.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

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

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

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.

- **Should an exposure incident to human blood &/or other OPIM occur, contact the WVU Occupational Health Services at the following phone number 304-293-3693.**
- An immediately available confidential medical evaluation and follow-up will be conducted. Following initial first aid (clean the wound, flush eyes or other mucous membrane, etc.), the following activities will be performed by the Occupational Health Services:

- Document the routes of exposure and how the exposure occurred.
- Identify and document the source individual of the blood/OPIM samples (unless the employer can establish that identification is infeasible or prohibited by state or local law).
- Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, and HBV infectivity; document that the source individual's test results were conveyed to the employee's health care provider.
- If the source individual is already known to be HIV, HCV and/or HBV positive, new testing need not be performed.
- Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g., laws protecting confidentiality).
- After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status.
- If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days; if the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

DOCUMENTS RELATED TO THE POST-EXPOSURE EVALUATION AND FOLLOW-UP

The PI or the Lab Manager ensures that the health care professional evaluating an employee after an exposure incident receives the following:

- A description of the employee's job duties relevant to the exposure incident ■ route(s) of exposure
- Circumstances of exposure

- If possible, results of the source individual's blood test
- The employee will be issued, a copy of the evaluating health care professional's written opinion within 15 days after completion of the post exposure evaluation.

PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

The WVU Biosafety Officer along with the the PI or the Lab Supervisor will review the circumstances of all exposure incidents to determine:

- Engineering controls in use at the time
- Work practices followed
- A description of the device being used (including type and brand)
- Personal Protective Equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
- Location of the incident
- Procedure being performed when the incident occurred
- Employee's training
- Employee's Hep B Vaccination status

The WVU Biosafety Officer & the WVU EHS will record all percutaneous injuries from contaminated sharps in the **Sharps Injury Log**.

EMPLOYEE TRAINING

All employees who have occupational exposure to Bloodborne pathogens receive initial in-person and annual refresher online training conducted by WVU Biosafety Officer. For information regarding the BBP training please contact WVU ORIC at 304-293-7157.

All employees who have occupational exposure to Bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases. In addition, the training program covers, at a minimum, the following elements:

- A copy and explanation of the OSHA bloodborne pathogen Standard
- An explanation of our ECP and how to obtain a copy from the WVU Biosafety Officer
- An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident.
- An explanation of the use and limitations of engineering controls, work practices, and PPE
- An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE.
- An explanation of the basis for PPE selection.
- Information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM.
- 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.
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding required by the standard and used at this facility.
- An opportunity for interactive questions and answers with the person conducting the training session.

Training Information

Bloodborne Pathogen Training in-person

The WVU employees handling human blood & body fluids requiring to complete the *bloodborne pathogens (BBP) training for the first time, should attend the in-person BBP training by selecting an available BBP training date and registering on the [WVU ORIC Calendar](#).*

The yearly refresher BBP training can be completed as the online BBP training posted on CITI at;

http://oric.research.wvu.edu/biosafety/ibc_training

The trainees must make sure to receive the BBP training completion certificates & maintain the records of completing the BBP training.

Also, the personnel completing the BBP training must sign the Hepatitis B Vaccination acceptance or declination form & submit the form to the WVU Biosafety Officer.

The Laboratory Manager must also train employees on protocol specific risks & safety procedures for their assigned research tasks

RECORDKEEPING

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years.

- Training Records for the personnel in this lab/facility are available at (**location in the lab**).

The training records include:

- The dates of the training sessions
- The contents or a summary of the training sessions
- The names and qualifications of persons conducting the training
- The names and job titles of all persons attending the training sessions

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to (The WVU Biosafety Officer & the PI or the Lab Supervisor).

Medical Records:

Medical records are maintained for each employee with occupational exposure to BBP in accordance with 29 *CFR* 1910.1020, "Access to Employee Exposure and Medical Records."

WVU Occupational Health Department is responsible for maintenance of the required medical records. These confidential records are kept for at least the duration of employment plus 30 years.

Employee medical records are provided upon request of the employee or to anyone having written consent of the employee within 15 working days. Such requests should be sent to **WVU Occupational Health Department**.

OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by (**WVU Biosafety Officer & The WVU EHS**).

Sharps Injury Log

All percutaneous injuries from all sharps are recorded in a Sharps Injury Log maintained by the WVU EHS. All incidences must include at least:

- Date of the injury
- Type and brand of the device involved (syringe, suture needle)
- Department or work area where the incident occurred
- Explanation of how the incident occurred.

This log is reviewed as part of the annual program evaluation and maintained for at least five years following the end of the calendar year covered. If a copy is requested by anyone, it must have any personal identifiers removed from the report.

Part 2 Hazard Communication Standard

The following model Hazard Communication Program is based on the requirements of the OSHA Hazard Communications Standard, 29 CFR 1910.1200.

1. University Policy

To ensure that information about the risks associated with handling human blood, body fluids & other OPIM of human origin is known by all affected employees, the following hazardous information program has been established at WVU. Under this program, you will be informed of the contents of the OSHA Hazard Communications standard, the hazardous properties of samples with which you work, safe handling procedures and measures to take to protect yourself. Using this information will reduce the risk of employee exposure to BBP.

2. Container Labeling

Potential presence of a biohazardous agent, including bloodborne pathogens is communicated to employees by the use of signs and labels. The biohazard symbol is shown below. It is generally colored orange or red, but is sometimes shown in black:



Warning labels must be affixed to containers of regulated waste; containers of contaminated reusable sharps; refrigerators and freezers containing blood or OPIM; other containers used to store, transport, or ship blood or OPIM; contaminated equipment that is being shipped or serviced; and bags or containers of contaminated laundry, except as provided in the standard. In HIV and HBV research laboratories and production facilities, signs must be posted at all access doors.

- Labels must include the internationally recognized biohazard logo and the word “biohazard.”
- Labels must be affixed at a conspicuous location on the container by direct print or adhesive.
- Contaminated equipment must be labeled as biohazardous and indicate which parts are contaminated.
- Signs that include the internationally recognized biohazard logo and the word “biohazard” will be posted at the entrance of HIV and HBV research laboratories and production facilities.

The PI or the Lab Supervisor will verify that all containers received for use will be clearly labeled as to the contents, note the appropriate hazard warning.

The PI or the Lab Supervisor will ensure that all secondary containers are labeled with either an extra copy of the labels marked with the appropriate hazard warning. **To obtain the Biohazard label, please contact the WVU Biosafety Officer at 304-293-7157.**

HEPATITIS B VACCINE DECLINATION (MANDATORY)

DO NOT USE THIS FORM. THIS FORM IS AN EXAMPLE. THE ACTUAL FORM IS AT <http://oric.research.wvu.edu/r/download/137907>

The form can also be obtained by contacting the WVU Biosafety Officer at 304-293-7157.

The Hepatitis B Vaccine Acceptance or Declination form is signed along with completing the BBP Training. The contents of the form are as follows:

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.

Signed: (Employee Name) _____ Date: _____

The hazard communication standard requires the employer to develop a written hazard communication program. The following is a sample hazard communication program that you may use as a guide in developing your program.

Exposure Control Plan Template Availability

A copy of this Exposure Control Plan Template will be made available, upon request, to employees and their representatives. Please contact the WVU Biosafety Officer at 304-293-7157.