

Georgia State University

Bloodborne Pathogen Exposure and Clean-Up Control Plan (ECP)

Organism/ Agent – Blood or Other Potentially Infectious Materials possibly harboring bloodborne pathogens including but not limited to Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Human Immunodeficiency Virus (HIV).

Background Information – The Occupational Safety and Health Administration's (OSHA)'s bloodborne pathogens (BBP) standard protects employees who work in occupations where they are at risk of exposure to blood or other potentially infectious materials (OPIMs). It requires employers to develop a written exposure control plan to explain how they will implement the standard, provide training to employees, and protect the health and safety of their workers.

The full text of OSHA's bloodborne pathogens standards is found in 29 CFR 1910.1030.

Georgia State University (GSU) is committed to providing a safe and healthful work environment for all faculty, staff, students, and visitors. In pursuit of this goal, this ECP will assist the organization in reducing occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030. "Occupational Exposure to Bloodborne Pathogens."

This ECP includes but is not limited to:

- Determination of employee exposure
- Procedures for evaluating circumstances surrounding exposure incidents
- Training and communication of hazards to employees
- Recordkeeping
- Implementation of exposure control methods
- Clean up of a BBP
- Hepatitis B vaccination
- Post-exposure evaluation and follow-up

This ECP must be accessible to faculty, staff, students, and visitors to be reviewed annually.

Program Administration- Occupational Health and Safety Officer, Dining Director, and Facilities Director

- Assist the Department of Insurance and Risk Management (IRM) with oversight of the GSU Bloodborne Pathogen Program by drafting and annually evaluating unit /department-specific ECP.
- Maintain a current unit/department-specific ECP on file with the IRM.
- Define supervisor, employee, and other roles regarding the implementation of the elements described in the ECP.
- Monitor completion of annual training requirements.
- Refer employees who may have occupational exposure risks to resources for a health assessment (i.e., Concentra urgent care, Peachtree, GSU's Research Occupational Health Program, etc.).
- Ensure that employees are aware of methods for reporting exposures, accidents, and injuries.
- Provide the Hepatitis B vaccination series at no cost to employees.
- Facilitate prompt post-exposure evaluation and medical treatment.
- Maintain records of exposures, accidents, and injuries
- Ensure the written ECP is available to employees, students, OSHA representatives, and National Institute for Occupational Safety and Health (NIOSH) representatives.

Research Occupational Health Program and Student Health Clinic

- Ensure that all medical actions required by the standard are performed and that appropriate employee health and OSHA records are maintained.

Managers and Supervisors

- Ensure implementation of the ECP in their areas
- Provide and maintain all necessary personal protective equipment (PPE).

Employees

- Employees that are exposed to Bloodborne Pathogens must comply with the procedures and work practices outlined in this ECP.

Students

- Students should not be exposed to any Bloodborne pathogens. No matter what if employees by GSU students should not be cleaning or disposing of any BBP at any time.

Exposure Determination-Units/departments will need to determine personnel occupational exposure risk without regard to the use of personal protective equipment and regardless of employment status (i.e., full-time, part-time, temporary, per diem).

An occupational exposure risk is defined as reasonably anticipated skin, eye, mucous membrane, non-intact skin, or parenteral contact with human blood or other potentially infectious materials (OPIMs) that might result from the performance of an employee's duties. Materials that may be capable of transmitting bloodborne pathogens (as specifically addressed under the OSHA Bloodborne Pathogens Standard) include the following:

- Human body fluids including blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental settings, any bodily fluid that is visibly contaminated with blood, and all bodily fluids in situations where it is difficult or impossible to differentiate between bodily fluids.
- Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

Exposure Control Plan and Training- Employees covered by the bloodborne pathogen standard must have access to a copy of the ECP and an explanation of the ECP during their initial training and review during annual refresher training. The Bloodborne Pathogen ECP is available on the IRM, Dining, and Facilities web page. Individuals may also request an electronic copy by emailing ohs@gsu.edu or your supervisors/managers.

Training- All employees who have occupational exposure to bloodborne pathogens receive initial and annual training provided in combination with the University Systems of Georgia Board of Regents Bloodborne Pathogens Training module, and the BBP ECP. Training includes epidemiology, symptoms, and transmission of bloodborne pathogens diseases. In addition, the training program covers, at a minimum, the following elements:

- A copy and explanation of the OSHA bloodborne pathogens standard
- An explanation of our ECP and how to obtain a copy
- 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, locations, removal, handling, decontamination, and disposal of PPE
- An explanation of the basis for PPE selection
- Information on the Hepatitis B vaccine series, 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

Record Keeping:

Training records are completed for each employee upon completion of training. These documents will be kept by the department in which you work for at least three years. 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 emailed to your supervisor/manager.

Medical Records:

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records." The Research Occupational Health Program and Student Health Clinic are responsible for the 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 submitted to mmpvae.gsu.edu or GSU's Student Health Clinic.

OSHA Recordkeeping:

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). If required, this determination and the recording activities are done by the Research Occupational Health Program or Student Health.

Sharps Injury Log:

In addition to the 1904 Recordkeeping Requirements, all percutaneous injuries from contaminated sharps are also recorded. All incidents 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.

Exposure Control Methods- Standard Precautions

All employees/students will utilize universal precautions, which are intended to prevent exposure to bloodborne pathogens. Under universal precautions, human blood, and other potentially infectious materials (OPIM) are

considered potentially infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV), and other bloodborne pathogens.

Engineering Controls and Work Practices:

Engineering controls and work practice controls are used to prevent or minimize exposure to bloodborne pathogens. Below are departments' general controls, specific engineering controls, and work practice controls.

- Eating, drinking, smoking, handling contact lenses, or applying cosmetics are not permitted in the area of possible contamination.
- Food and beverages should be stored outside of the areas of possible contamination
- Mechanical pipetting devices should be used (e.g., mouth pipetting is not permitted).
- Contaminated solid waste (i.e., gloves, tissue culture flasks, etc.) should be placed in biohazard waste containers that are closable, constructed to contain all contents and prevent leakage, appropriately labeled, or color-coded (see the following section "Signage/Labels").
- A sink and handwashing supplies (i.e., soap, and paper towels) must be available in or around work areas
 - Custodial and Grounds employees must wash their hands after handling viable materials, removing gloves, and leaving the area of possible contamination.
 - All Equipment must be cleaned at the end of each day, after a spill or when contaminated.
 - Equipment should be made available for handling broken glassware (forceps, broom, dustpan, tongs, etc.).
 - Sharp safety devices are discussed during initial training and laboratory assistance visits, the use of sharps safety devices is determined at the individual research group level.
 - Avoid touching a sharp if possible. Report sharps to your supervisors/managers.

Personal Protection Equipment (PPE)- PPE is provided to employees at no cost to the employee. Training in the use of the appropriate PPE for specific tasks or procedures is provided by the unit/department or safety office.

The types of PPE available to employees are as follows:

- Gloves, and protective eyewear (i.e., safety glasses, and goggles) should be worn when working.
- Additional protection (i.e. face shield) is required when splashes, sprays, spatters, or droplets of blood or other potentially infectious materials pose a hazard to the eye, nose, or mouth.
- Establishing a location for PPE.
- Ensuring that adequate PPE is available for all employees
- Familiarize new employees with the procedures for obtaining PPE.

All employees using PPE must observe the following precautions:

- Wash hands immediately or as soon as feasible after removing gloves or other PPE.
- PPE should be changed frequently when contaminated or damaged before leaving the work area.

The procedures for handling used PPE are as follows:

- Used gloves should be placed in a waste container after use; gloves should not be reused.
- Protective clothing should be decontaminated on site and laundered onsite or with a commercial laundering facility; specific laundering arrangements are made on a departmental basis.
- Protective clothing should not be taken home.

Signage/Labels:

- Areas, where human materials are processed or stored, will be placarded (i.e. laboratories, soiled laundry, cryostorage areas).
- Contaminated solid waste will be placed in a red bag or a container labeled with a biohazard sticker.

- Soiled laundry will be placed in a red bag. Managers/supervisors are responsible for ensuring that warning labels are affixed, or red bags are used as required. Employees are to notify their managers/supervisors if they discover regulated waste containers, refrigerators containing blood or other potentially infectious material, contaminated equipment, etc., without proper labels.

Housekeeping Procedure:

Biohazard waste containers should be disposed of periodically and not allowed to overfill (not more than approximately 2/3 full). Biohazard waste containers must be closed before removal to prevent spillage or protrusion of contents during handling. Sharps containers should be disposed of periodically and not allowed to overfill (not more than approximately 2/3 full).

Hard Surface areas:

1. Isolate the area: block off the area of the body fluid spill to prevent further spreading and others from exposure
2. PPE: consider wearing appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM (ex. emesis, feces, urine) in such a way as to avoid contact with the outer surface.
3. Cover the spill with absorbent paper towels to avoid stepping in it. Alternatively, a solid absorbent material can be spread over the surface. Carefully wipe up the spill with paper towels and carefully place the mess in a plastic bag. Spray the surface with an appropriate cleaner -disinfectant, and the wipe up area with paper towels. Multi-Clean Disinfectants that are Bloodborne Pathogen Compliant. If a wet/dry vacuum is used, start with an empty vacuum, and please note the vacuum should be disinfected.
4. To dispose of double bag materials in the garbage and wash your hands thoroughly with soap and water.
5. Any Re-usable Equipment used in the process should be disinfected with one of the properly diluted disinfectants.

Carpet:

1. Isolate the area: block off the area of the body fluid spill to prevent further spreading and others from exposure

2. PPE: consider wearing appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM (ex. emesis, feces, urine) in such a way as to avoid contact with the outer surface.
3. Cover the spill with absorbent paper towels to avoid stepping in it. Alternatively, a solid absorbent material can be spread over the surface. Carefully wipe up the spill with paper towels and carefully place the mess in a plastic bag. Spray the surface with an appropriate cleaner -disinfectant, and the wipe up area with paper towels. Multi-Clean Disinfectants that are Bloodborne Pathogen Compliant. If a wet/dry vacuum is used, start with an empty vacuum, and please note the vacuum should be disinfected.
4. Apply a carpet spotter/cleaner to the surface to cover the exposed area. If you choose to use a disinfectant, be certain that it will not stain the carpet. A hot water extractor should be used to remove the cleaner and the residue from the carpet.
5. To dispose of double bag materials in the garbage and wash your hands thoroughly with soap and water.
6. Any Re-usable Equipment used in the process should be disinfected with one of the properly diluted disinfectants.

Pre-exposure Actions- Hepatitis B Vaccination:

The Hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section of this plan. 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 sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost.

Symptoms- Symptoms of common bloodborne pathogens are:

Hepatitis B (HBV) & Hepatitis C (HCV):

- Fever
- Fatigue

- Loss of appetite
 - Nausea
 - Vomiting
 - Abdominal pain
 - Dark urine
 - Clay-colored bowel movements
 - Joint pain
 - Jaundice (yellow color of the skin and/or eyes)
- Human Immunodeficiency Virus (HIV): Symptoms vary as the disease progresses from initial infection to full-blown AIDS

Two to four weeks post-infection:

- Fever
- Headache
- Sore throat
- Swollen lymph nodes
- Rash

Years post-infection:

- Swollen lymph nodes
- Diarrhea
- Weight loss
- Fever
- Cough and shortness of breath

Infectious Dose/ Incubation Period-

HBV

Infectious dose: Unknown

Incubation Period: 24 to 180 days; depends on the amount of virus in the inoculum and mode of transmission

HCV

Infectious dose: Unknown

Incubation Period: 2 to 12 weeks

HIV

Infectious dose: Unknown

Incubation Period: 1 to 3 months for detectable antibodies; less than 1 year to 15 years or longer for the development of AIDS

Transmission-

HBV

Transmitted by percutaneous or mucosal exposure to infected blood or other body fluid

HCV

Transmitted by infected needles, blood transfusion, organ transplantation, contaminated medical equipment, and from tattoo and body piercing equipment

HIV

Transmitted either by exposure of the virus to oral, rectal, or vaginal mucosa during sexual activity, intravascular inoculation through transfusion of contaminated blood products, using contaminated equipment during injection drug use, or from mother to infant during pregnancy, delivery, or breastfeeding

Post-Exposure Actions-

First Aid:

1. Initiate first aid and follow posted emergency protocols in your area. Contact your supervisor/manager immediately
2. Report exposure to the Supervisor/Manager and they will contact workers' compensation and the Occupational Health and Safety Officer.

Post-Exposure Evaluation and Follow-up- Obtaining Medical Attention:

Staff and Employees:

1. For emergencies, dial 911.
2. Non-life-threatening injuries and immediate medical treatment can be obtained from Concentra Midtown (688 Spring Street NW, Atlanta, GA 30308, 404-881-1155) Monday through Friday from 8:00 am to 5:00 pm. Peachtree Occupational Medicine (1000 Northside Drive, Suite 1400 Atlanta GA, 404-350-4717)
3. After-hours care should be sought in the nearest hospital's emergency department.

References- Occupational Safety and Health Administration. Bloodborne pathogens and needlestick prevention. <https://www.osha.gov/bloodborne-pathogens>