

BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN 2023-2024 Plan



Note: All policies/plans/procedures referenced in this plan can be found on the policy website: <http://www.utoledo.edu/policies/>

I. INTRODUCTION

The University of Toledo is committed to providing a safe and healthy 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 in accordance with Occupational Safety and Health Administration (OSHA) standard 29 *CFR* 1910.1030, “Occupational Exposure to Bloodborne Pathogens”. This plan will be referred to as ECP in this document.

The ECP will be reviewed and updated annually and whenever necessary to reflect new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee job classifications associated with occupational exposure.

The ECP is found on the UT policy website at <http://www.utoledo.edu/policies/> and a printed copy is located in the Infection Control Department.

The ECP is a key document meant to assist our organization in implementing and ensuring compliance with OSHA and Infection Prevention standards, thereby protecting our employees. This ECP includes:

- Implementation of various methods of exposure control, including:
 - Engineering and work practice controls
 - Environmental Services
 - Hepatitis B vaccination
- Communication of hazards to employees and training
- Determination of employee exposure
- Post-exposure evaluation and follow-up
- Record-keeping

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

II. PROGRAM ADMINISTRATION

- A. Infection Prevention and Environmental Health and Radiation Safety (EHRS) are responsible for implementation of the ECP.
- B. Department Managers are responsible for ensuring that all employees within their department with potential occupational exposure to bloodborne pathogens are trained on the concepts of preventing the risk of exposure to bloodborne pathogens on hire and at least annually. While global training occurs via the Safety Test Bank (electronic education system), department managers are responsible for providing unit-specific risks and education to all staff members.

Department managers must ensure compliance with the ECP through ongoing communication and training with their staff.

- C. Employees are responsible for complying with the plan, including use of proper work controls, completion of trainings, reporting of any exposures and completion of exposure follow-up.
- D. EHRS is responsible for working with Distribution Services to provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. EHRS is responsible for working with Supply Chain and any affected departments to assure new products meet safety requirements under the standard are provided on a trial basis for evaluation when a need is identified.
- E. EHRS is responsible for assuring that all training, education and documentation of training and education is completed and maintained.
- F. Distribution Services is responsible for assuring that adequate supplies of the aforementioned equipment are available in appropriate sizes.
- G. Occupational Health or the hospitals designee is responsible for ensuring that all medical actions required by the standard are performed and that appropriate Occupational Health and OSHA records are maintained.

III. EMPLOYEE EXPOSURE DETERMINATION

A. Risk Assessment

Department directors, with assistance from EHRS, will conduct exposure risk determinations specific for their department. These risk determinants will reflect specific job descriptions and related risk of occupational exposure to blood or other potentially infectious materials as part of the work duties performed. This Exposure Risk Determination is required to list all job classifications in which any employee may potentially be expected to incur such occupational exposure, regardless of frequency, PPE use or other factors.

IV. METHODS OF IMPLEMENTATION AND CONTROL

At this facility, the following job titles and/or departments have been determined to carry some risk of occupational exposure. This includes but is not limited to:

- | | |
|---|---|
| 1. Nurse (R.N. and L.P.N) | 11. Laboratory Worker (Clinical or Research)/Pathology or Autopsy employee who has contact with human blood or blood products |
| 2. Nurse Aide, Nursing/Medical Assistant | 12. Sterile Processing and Central Service employees who handle contaminated items |
| 3. Hospital Transport | 13. Laundry worker (Linen Department) who handle soiled linen |
| 4. Mobile I.C.U. Tech/E.M.T. | 14. Maintenance employees (plumbers, grounds) |
| 5. Respiratory Therapist | 15. BioMed Tech/Perfusionist |
| 6. Speech/Occupational/Physical Therapist | 16. Licensed Independent Practitioners |
| 7. EKG Tech | |
| 8. Surgical Tech | |
| 9. Custodial worker | |
| 10. Radiology Tech | |

- 17. Campus Police/Security Officer
- 18. Clerical Specialist in patient care areas
- 19. Athletic Trainers

- 20. Dietician, Social Worker,
Psychologist, Mental Health
Technician

A. PREVENTION

Effective prevention includes the use of Universal Precautions, also known as Standard Precautions. Standard precautions is an approach to infection prevention to treat all human blood and certain human body fluids as if they were known to be infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV) and other bloodborne pathogens, ([Bloodborne Pathogens Standard](#) definitions under OSHA standards).

a. Personal Protective Equipment (PPE)

All employees will utilize Standard precautions. The information can be found in the [3364-109-ISO-404 Infection Control Precautions Policy](#). PPE is provided to our employees at no cost. Training in the use of the appropriate PPE for specific tasks or procedures is provided by Environmental Health and Radiation Safety (EHRS), Occupational Health, Staff Development, Infection Prevention and Control and/or department managers.

Examples of the types of PPE available to employees are as follows:

Disposable gloves, utility gloves, hypoallergenic gloves, sterile gloves, facemasks, face shields, eye protection, resuscitation devices, isolation gowns, fluid resistant gowns, lab coats, aprons, surgical caps, shoe covers, goggles, NIOSH-Approved N95 disposable masks a Controlled Air Purifying Respiratory (CAPR).

PPE is located in designated areas within the departments and may also be obtained through Central Distribution.

1. All employees using PPE must observe the following precautions:
 - a. Wash hands before putting on PPE
 - b. Wash hands immediately or as soon as feasible after removing gloves or other PPE
 - c. Remove PPE after it becomes contaminated and before leaving the work area
 - d. Used PPE may be disposed of in regular garbage, unless contaminated to the point of saturation
 - e. Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or other potentially infectious material, 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
 - f. Utility gloves, in according to manufacture recommendations, 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
 - g. Never wash or decontaminate disposable gloves for reuse
 - h. Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or other potentially infectious material pose a hazard to the eye, nose, or mouth
 - i. Remove immediately or as soon as feasible, any garment contaminated with blood or other potentially infectious material, in such a way as to avoid contact with the outer surface
 - j. Follow guidelines for PPE removal in order to avoid contamination of personal clothing
2. The procedure for handling used PPE is as follows:

PPE grossly soiled or contaminated with blood or other potentially infectious material is disposed of in red biohazard bag (regulated) waste receptacles. Reusable isolation gowns are placed in designated containers for transport to the contracted laundry facility. Disposable isolation gowns are disposed of in waste receptacles near the point of use. See “Donning and

Doffing PPE” located on the UToledo Infection Control web page:
<https://www.cdc.gov/hai/pdfs/ppe/PPE-Sequence.pdf>

b. Engineering Controls and Work Practices

1. Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. Examples of engineering controls and work practice controls used are:
 - a. Non-glass capillary tubes, needleless systems
 - b. Handwashing sinks, splash guards
 - c. Face shields, Neptune blood collection systems in the Operating Rooms
 - d. Needles are not to be recapped by hand, bent, broken or cut (see [HM-08-020](#), "Disposal of Sharps")
 - e. Shoes must be worn by employees at all times

c. Sharps Disposal

The procedures for handling sharps disposal containers are located on the Environmental Health and Radiation Safety (EHRS) website or by clicking on this link for policy [HM-08-020 Disposal of Sharps procedure](#).

Non-contaminated sharps shall be disposed of in the hospital-approved sharps disposal containers. ONLY NON-CONTAMINATED UNBROKEN GLASS shall be placed in glass disposal containers. The glass disposal containers may be requisitioned from Distribution Services or by calling extension 383.3884.

Sharps disposal containers are inspected, maintained and replaced by the contracted waste removal specialist. For emergent replacement after-hours or on weekends, full sharps containers can be removed and replaced by Environmental Services. In areas not serviced by a contracted waste removal specialist, personnel should close and lock containers when the contents are at the full line marker on the container and place them in a designated infectious waste container.

This facility identifies the need for changes in engineering controls and work practices through reports and records, employee interviews, and responsible committees. (Safety Committee).

New products and/or procedures are evaluated regularly by referral, research literature, and new product availability. Sharps injuries and any new safety product availability is reviewed during HSC Safety Committee led by EHRS. The HSC Safety Committee is held at least quarterly. This committee reviews injury reports related to sharps equipment and requests for exemption for non-safety needle use and evaluates new safety products. The Infection Prevention and Control Department, Environmental Health and Radiation Safety Department, Nursing Services and Distribution Services are responsible for ensuring that standards and recommendations are implemented.

d. Housekeeping/Environmental Practices

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 the patient bedside and close to areas where regulated waste is generated.

Reusable bins and pails are cleaned and decontaminated as soon as feasible after visible contamination.

Broken glassware that may be contaminated is only picked up using mechanical means, such as a brush and dustpan. Large spills are cleaned using the spill kits found on each floor of the hospital and in other departments where blood or body fluids are present.

e. Regulated Waste

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 procedure for handling other regulated waste is located in the Policy [HM-08-019](#) on the EHRS Department website.

f. Laundry

1. The following articles will be laundered by the contracted linen service:

- a. Surgical scrub uniforms
- b. Laboratory cover coats
- c. Personal clothing contaminated with blood or body fluids or other potentially infectious material
- d. All Patient gowns and linens
- e. Reusable isolation gowns (as applicable)

2. The following laundering requirements must be met:

- a. Handle contaminated laundry as little as possible, with minimal agitation
- b. Place wet contaminated laundry in leak-proof, bag before transport
- c. Use designated plastic linen bags, as all laundry sent to the contracted linen service is treated as contaminated
- d. Wear the following PPE when handling and/or sorting solid or contaminated laundry: Gloves and gown. Also use eye protection as needed.

g. Hazard Communication

1. All specimens of blood or other potentially infectious material will be placed in a container that prevents leakage during collection, handling, and transport. Lab specimens will be bagged prior to transport to the lab.

- a. Lab requisition or extra labels will be attached to the outside of the specimen bag
- b. If the bag becomes contaminated on the outside, a new bag will be placed over it and sealed
- c. UTMC utilizes Standard Precautions in the handling of all specimens so labeling/color coding of specimens is not necessary except when specimens leave the facility
- d. Specimens transported outside this facility must be sealed in a plastic bag with the transport trays/containers labeled "BIOHAZARD"
- e. Labeling of blood tubes with patient name and number during collection of blood specimens is mandatory

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
- b. Laundry bags or containers (this facility uses Standard Precautions for handling all laundry)
- c. Regulated waste that has been decontaminated

3. For use of the tube system, see Safety Policy #[S-08-011](#). Specimen Transport in Computerized Tube System located on the EHRS website.
4. Employees are to notify the Environmental Health and Radiation Safety department at 419-530-3600 if they discover regulated waste containers, refrigerators containing blood or other potentially infectious material, contaminated equipment, etc., without proper labels.
5. Service Employees from mortuaries, coroner's office and vendors that service, install and maintain equipment in the laboratory:
 - a. Will be provided PPE as required per Exposure Control Plan (ECP) while in UTMC's facility
 - b. Bloodborne Pathogen training is expected to be provided to the Service Employee by their company or business organization

B. Hepatitis B Vaccination

The Infection Prevention, Environmental Health and Radiation Safety Department and/or Occupational Health or the hospital's designee will provide training to employees regarding Hepatitis B vaccinations, addressing safety, benefits, efficacy, methods of administration, and availability at the time of hire.

The hepatitis B vaccination series is encouraged. The vaccine 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.

Following a medical evaluation, the employer must obtain and provide the worker with a copy of the evaluating healthcare professional's written opinion within 15 days of completion of the evaluation. It will be limited to whether the employee requires the Hepatitis B vaccine and whether the vaccine was administered.

1. Vaccination and serological testing for healthcare workers that are at risk for exposure:
 - a. If documentation exists that the employee has recently been vaccinated, he/she does not need to have serological testing performed
 - b. If no documentation exists to show that the employee has been vaccinated, serological testing for Hepatitis B surface antibody (anti-HBs) must be performed to show immune status. If serological testing for anti-HBs is negative (<10MIU/mL), vaccination series must be completed and post vaccination serological testing completed 1-2 months after the completion of the vaccination series.
 - c. If medical evaluation shows that the vaccine is contraindicated vaccination is not given
2. If an employee declines the vaccination, the employee must sign a declination form. The declination is recorded in Occupational Health system.
 - i. Employees who decline may request and obtain the vaccination at a later date at no cost.
3. Vaccination is provided by Occupational Health or the hospital's designee or if the employee signs a declination these documents are kept in the employee's health record. (See Appendix A).

V. EMPLOYEE TRAINING

- A. All employees who are at risk of occupational exposure to bloodborne pathogens receive initial and annual training. Employees will also receive training whenever there are changes that affect the employee's occupational exposure. This training is conducted by EHRS during new employee orientation.

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:

1. The OSHA bloodborne pathogen standard
2. An explanation of our Exposure Control Plan and how to obtain a copy
3. An explanation of methods to recognize tasks and other activities that may involve exposure to blood and other potentially infectious material, including what constitutes an exposure incident
4. An explanation of the use and limitations of engineering controls, work practices, and PPE
5. An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
6. An explanation of the basis for PPE selection
7. 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
8. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious material
9. 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
10. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
11. An explanation of the signs and labels and/or color coding required by the standard and used at this facility
12. An opportunity for interactive questions and answers with the person conducting the training session

Training materials for this facility are available at one of the following locations: Human Resources, Occupational Health, Safety Test Bank and/or EHRS.

VI. EXPOSURE EVALUATION AND FOLLOW-UP

Occupational exposure is defined by OSHA as: "reasonably un-anticipated skin, eye, mucous membrane, non-intact skin, or parenteral contact with blood and other potentially infectious materials that may result from the performance of an employee's duties."

1. Determine Exposure:

An exposure to infected blood, tissue, or other potentially infectious body fluids can occur by:

- a. Percutaneous injury (e.g., needle stick or cut with a sharp object); or
- b. Contact of mucous membrane or non-intact skin (e.g., exposed skin that is chapped, abraded, or with dermatitis).

Potentially Infectious Body Fluids	Potentially Infectious if Visibly Contaminated with Blood	Types of Exposure (portal of entry)
<ul style="list-style-type: none"> • Blood • Pericardial Fluid • Amniotic Fluid • Pleural Fluid • Cerebrospinal Fluid • Synovial Fluid • Semen • Vaginal Secretions 	<ul style="list-style-type: none"> • Urine • Feces • Vomitus • Sputum / Saliva • Sweat • Tears • Nasal Secretions • Bile • Breast Milk 	<ul style="list-style-type: none"> • Eyes • Ears • Nose • Mouth • Broken Skin • Large volume exposure to intact skin • Wounds from biting (handled on a case-by-case basis)

2. Complete immediate basic first aid:
 - a. Wounds and skin should be washed with soap and water, avoid “milking” or squeezing needlestick injuries or wounds
 - b. Flush exposed mucous membranes with water
 - c. Flush exposed eyes with water or saline solution
 - d. Do NOT apply caustic agents, or inject antiseptics or disinfectants into the wound
3. Immediately report incident to your immediate Supervisor.
4. Report to the Emergency Department (ED) immediately, if possible, or within 2 hours of the exposure. The ED will provide the employee with a packet of Instructions for Exposure and assist the employee in completing the packet. The ED is responsible for delivering completed documentation to Occupational Health (or the hospital’s designee). Occupational Health is responsible for delivering a copy of the INJURY/ILLNESS report to EHRS (**Appendix B**).
5. The employee should be prepared to report the following to the ED:
 - a. Date and time of exposure
 - b. Details of the incident:
 - i. Date of injury
 - ii. Where and how the incident occurred
 - iii. Exposure site(s) on the healthcare worker’s body
 - iv. If related to a sharp device, the type and brand of device (syringe, suture needle)
 - c. Details of the exposure source
 - i. Whether the source material was known to contain infectious material
 - ii. If the source patient is known, is there any history of HIV, Hepatitis B, or Hepatitis C
 - d. Details about the exposed healthcare worker
 - i. Hepatitis B vaccination / response status
 - ii. Other medical conditions
 - iii. Current medications and allergies
 - iv. Pregnancy or breast-feeding status
6. Occupational Health or the hospital’s designee are responsible for contacting the exposed employee for any necessary follow-up.
7. Treatment and follow-up will be based on the agent and type of exposure. Post exposure prophylaxis will be determined by the ED attending physician and may include consultation with the Infectious Disease Physician on call. Refer to the Center for Disease Control Bloodborne Infectious Diseases page for Post exposure prophylaxis treatment which can be found at:

<https://www.cdc.gov/hiv/risk/pep/index.html> or call the Post-Exposure Prophylaxis (PEP) Consultation Service for Clinicians 1-888-448-4911.

VII. RECORDKEEPING

A. Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years at Human Resources for new hire orientation; annual education is accessible in the Safety Test Bank.

The training records include:

- Dates of the training sessions
- Contents or a summary of the training sessions
- Names and qualifications of persons conducting the training
- 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 Human Resources Department.

B. Medical Records

Medical records are maintained for each employee with occupational exposure for employee's length of employment, plus thirty years in accordance with 29 *CFR* 1910.1020, "Access to Employee Exposure and Medical Records." Occupational Health or the hospital's designee is responsible for maintenance of the required medical records. These confidential records are kept in Employee Medical record files and maintained following hospital policy.

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 Occupational Health.

C. 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 the Environmental Health and Radiation Safety Department following Public Employment Risk Reduction Program (PERRP).

D. Sharps Injury Log

In addition to the 1904 Recordkeeping Requirements, all percutaneous injuries from contaminated sharps are also recorded in a Sharps Injury Log. All incidences must include at least:

- Date of injury
- Type and brand of the device involved (if known)
- Department or work area where the incident occurred
- Explanation of how the incident occurred

HEPATITIS B VACCINATION DECLINATION

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.

****To be signed within 10 days of first assignment****

Print name: _____ Date: _____

Signature: _____ Witness: _____

OTHER VACCINATION DECLINATION

NAME OF VACCINE BEING DECLINED _____

I understand that part of my education/employment involves exposure to potentially infectious materials. I may be at risk of acquiring infections. I have been given the opportunity to be vaccinated with the above stated vaccine. However, I decline this vaccine at this time. If in the future I decide to have this vaccine, I may receive it without penalty. The vaccine is free of charge.

Print name: _____ Date: _____

Signature: _____ Witness: _____



Post Exposure Process and Follow-up Algorithms

1. **Occupational Exposure Process (Flowchart Hospital and Clinics):**
<https://www.utoledo.edu/depts/safety/docs/Misc/Updated%202019%20Flow%20Chart.pdf>

References:

CDC Guidance for Evaluating Health-Care Personnel for Hepatitis B Virus Protection and for Administering Post exposure Management. MMWR, 2013.

<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6210a1.htm>

CDC Immunization of Health-Care Personnel: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR, 2011. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6007a1.htm>

CDC Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the ACIP. MMWR, 2018. <https://www.cdc.gov/mmwr/volumes/67/rr/rr6701a1.htm>

Immunization Action Coalition: Healthcare Personnel Vaccination Recommendations. (2022, July).

<http://www.immunize.org/catg.d/p2017.pdf>

Immunization Action Coalition: Hepatitis B and Healthcare Personnel, 2020

<https://www.immunize.org/catg.d/p2109.pdf>

Occupational Safety and Health Standards 29 CFR 1910. Bloodborne Pathogens 1910.1030.

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030>

Approval:

/s/

Michael Ellis, M.D.
Infection Control Committee, Chair

05/31/2023

Date

/s/

Heather Lorenz
Director Environmental Health and Radiation Safety Department

05/31/2023

Date

/s/

Andrew Casabianca, M.D.
Chief of Staff

06/02/2023

Date

/s/

Michael Ellis, M.D.
Chief Medical Officer

05/31/2023

Date