BLOODBORNE INFECTIOUS DISEASES EXPOSURE CONTROL PLAN

UNIVERSITY OF
DETROIT
MERCY
Build A Boundless Future

Last Revised: March 2022

Revisions

March 2022 revisions:

- Changed the term “employee(s)” to “worker(s)” where it applies to include students.
    - Students are not covered by HR’s policy for exposure procedures
- Added the definition of “worker”
- Changed policy to ensure a two handed method to cap needles is not used under any circumstances
- Corrected minor grammatical errors
- Added additional detail on what type of gloves would be considered personal protective equipment for bloodborne infectious diseases
- Added alternative text to appendix A pictures and replaced picture of appendix D with words for accessibility
- Updated Public Safety’s job classification under “exposure determination” section to include the Captain position

Table of Contents

Introduction

The purpose of this control plan is to limit or eliminate exposure to bloodborne infectious diseases by having written procedures that follow the MIOSHA Bloodborne Infectious Diseases Standard (R 325.70001-325.700016). Compliance with the Bloodborne Infectious Diseases Standard will reduce the risk of exposure to blood and other potentially infectious materials (OPIM) that may pose a risk of Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and other bloodborne diseases. The University's Bloodborne Infectious Disease Exposure Control Plan is located on the Environmental Health and Safety (EHS) website at the link below:

Click here to enter EHS website

All University employees who hold positions determined to have occupational exposure are entitled to the protection afforded by the standard. Departments and units identified as having workers with occupational exposure to bloodborne pathogens and OPIM include but are not necessarily limited to:

- Athletics Department
- Biology Department
- Chemistry Department
- Public Safety Department
- School of Dentistry
- Wellness Center

Definitions

Autoclave: An autoclave in this case, is a machine used to sterilize medical waste and equipment using elevated temperature and pressure.

Biologically Hazardous Conditions: Equipment, containers, rooms, materials, experimental animals, and animals infected with HBV or HIV virus, or combinations thereof that contain, or are contaminated with, blood or other potentially infectious material.

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

Bloodborne Pathogens (BBPs): Pathogenic microorganisms that are present in human blood or OPIM and can infect and cause disease in persons who are exposed to blood containing the pathogen. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

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

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

Contaminated Laundry: Laundry that has been soiled with blood or other potential infectious materials (OPIM) or that may contain sharps.

Contaminated Sharps: Any contaminated object that can penetrate the skin (i.e. needles, scalpels, broken glass, and exposed ends of dental wires)

Decontamination: 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.

Disinfect: To inactivate virtually all recognized pathogenic microorganisms, but not necessarily all microbial forms, on inanimate objects.

Workers in Category A: Occupations and job duties that require procedures or other occupation-related tasks that involve exposure or reasonably anticipated exposure to blood or other potentially infectious material or that involve a likelihood for spills or splashes of blood or other potentially infectious material. This includes procedures or tasks conducted in non-routine situations as a condition of employment.

Engineering Controls: Controls that isolate or remove the bloodborne pathogen hazard

from the workplace for example, sharps disposal containers, self-sheathing needles, or safer medical devices, such as sharps with engineered sharps injury protections and needleless systems.

Exposure Incident: A specific eye, mouth, other mucous membrane, non-intact skin (includes skin with dermatitis, hangnails, cuts, abrasions, chafing, acne, etc.), or parenteral contact with blood or other potentially infectious materials that results from the performance of a worker's duties.

Handwashing Facilities: Facilities that provide an adequate supply of running, potable water, soap, and single-use towels or an air-drying machine.

Mouth Pipetting: The practice of using one's mouth to suck a desired volume of a medical laboratory specimen–blood, urine, cell cultures and other microbial stews–into an open-ended tube. This was common practice before the 1970s.

Needleless Systems: A device that does not use needles for: (A) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (B) the administration of medication or fluids; or (C) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure: Reasonably anticipated skin, eye, mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that may result from the performance of a worker's duties.

Other Potentially Infectious Materials (OPIM): Materials in addition to human blood that may be capable of transmitting bloodborne pathogens. These include:

a. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental settings, 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.

b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

c. HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture media or other solutions as well as human cell cultures. Note: Human cell lines are considered to be potentially infectious and within the scope of the BBP Standard unless the specific cell line has been characterized to be free of hepatitis viruses, HIV, Epstein-Barr virus, human papilloma

viruses and other recognized bloodborne pathogens.

d) Blood, organs, or other tissues from experimental animals infected with HIV or HBV. Note: Human cell lines are considered to be potentially infectious and within the scope of the BBP Standard unless the specific cell line has been characterized to be free of hepatitis viruses, HIV, Epstein-Barr virus, human papilloma viruses and other recognized bloodborne pathogens.

Parenteral: Piercing mucous membrane or the skin barrier through such events as, needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment (PPE): Specialized clothing or equipment worn by a worker for protection against a hazard. General work clothes (e.g. uniforms, pants, shirts, blouses) not intended to function as protection against a hazard are not considered personal protective equipment.

Post-Exposure Follow-Up: In the case of an exposure incident, the mandatory course of action taken by the employer to provide medical services (i.e. medical assessment, vaccination, source testing, baseline testing, and counseling) to the exposed worker in order to reduce the risk of infection.

Production Facility: Facility engaged in industrial scale, large volume or high concentration production HIV or HBV.

Regulated Waste: Any of the following: 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 which are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory: A laboratory producing or using research-laboratory-scale amounts of HIV or HBV, but not in the volume found in production facilities.

Sharps Container: A FDA approved, puncture-resistant, leak-proof container with a one-way top used to dispose of regulated sharps.

Sharps: Needles, syringes, scalpels, and intravenous tubing with needles attached, as well as any contaminated object that can penetrate the skin such as Pasteur pipettes, razor blades, capillary tubes, etc.

Sharps with Engineered Sharps Injury Protections (Safer Sharps Devices): A non-needle sharp or a needle device with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual: Any individual, living or dead, whose blood or other potentially infectious material may be a source of occupational exposure to a worker.

Standard Operating Procedures (SOPs): Any of the following that address the performance of work activities to reduce the risk of exposure to blood and other potentially infectious material:

- Written policies
- Written procedures
- Written directives
- Written standards of practice
- Written protocols
- Written systems of practice
- Elements of an infection control program

Standard Precautions: A method of infection control that treats all human blood and other potentially infectious material as capable of transmitting HIV, HBV, HCV, and other bloodborne pathogens.

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

Work Practice Controls: Controls that reduce the likelihood of exposure to bloodborne pathogens by altering the manner in which a task is performed.

Workers: A term that includes both students and employees.

Responsibility

University of Detroit Mercy employs people in positions where they may be exposed to blood or other potentially infectious materials during the performance of their duties. Therefore, the University is required to comply with the MIOSHA (Michigan Occupational Safety and Health Administration) Occupational Exposure to Bloodborne Infectious Diseases Standard. The Environmental Coordinator is charged with the overall responsibility for the development and implementation of the University's Bloodborne Infectious Diseases Exposure Control Plan while individual departments and units of the University will be responsible for ensuring that the provisions of the University's Bloodborne Infectious Diseases Exposure Control Plan and the mandates of the MIOSHA standard are carried out.

The exposure plan will be reviewed and updated annually and whenever necessary to reflect new or modified tasks and procedures which may affect exposure, new or revised employee positions with occupational exposure, or changes in the regulatory requirements. The annual review and update of the exposure control plans shall comply with both of the following provisions: (a) Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; (b) Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure. The exposure plan shall be reviewed by the University's health and safety professionals from areas including but not limited to:

- Athletics Department
- Biology Department
- Chemistry Department
- College of Health Professions
- Public Safety Department
- School of Dentistry
- Wellness Center

Department chairpersons, directors, principal investigators, managers and supervisors are responsible for compliance with the exposure plan in their areas. Activities delegated to the supervisory personnel include:

1. Assuring that workers in their area who are at risk of exposure to bloodborne pathogens receive initial training and annual retraining (including site-specific training) in bloodborne pathogens.

2. Evaluating the bloodborne pathogen risk associated with an employee's job classification. This must be done when a new employee is hired, or when an employee changes jobs. This evaluation must include:

a. Checking the employee's job classification and the tasks and procedures that they will perform to determine if there is a reasonably anticipated risk of exposure to blood or other potentially infectious material (OPIM).

b. Identifying the new job classifications and/or tasks and procedures, which will potentially expose the employee to blood or other potentially infectious materials.
c. Informing the Environmental Coordinator of all changes so records can be updated.

3. Assuring that proper exposure control procedures are followed as outlined in the "SOP" (standard operating procedures) in Appendix A and creating contingency plans for foreseeable circumstances that prevent following the recommended SOPs.

4. Assuring that appropriate personal protective equipment is available and in good working condition for all workers at risk of exposure to bloodborne pathogens.

5. Assuring that any employee who experiences an occupational exposure incident to blood or other potentially infectious materials is provided with post-exposure medical services as outlined in the "Post-Exposure Evaluation and Follow-Up" section of this document.

University employees, employee representatives, Students and regulatory authorities have access to the Exposure Control Plan through the EHS website at the link below:

Click here to enter EHS website

Exposure Determination

The following worker job classifications at the University are Category A due to anticipated occupational exposure to blood or other potentially infectious material (OPIM), regardless of frequency. The exposure determination is made without regard to the use of personal protective equipment:

School of Dentistry

Job Title	Department / Location
Research Technician	Dentistry
Dental Assistant	In all departments: Perio, OMS, Endo, Pedo, Dispensary, Ortho, AEGD/Faculty Practice, Dental Van and Community Programs) Dental Hygienist (in AEGD/Faculty Practice, Dental Van and Community Programs)
Radiology Technician (at UHC)	DMC, University Health Center
Dispensary Supervisor	Corktown and UHC
Dispensary Staff	Corktown and UHC
Manager	Faculty Practice

Wellness Center

Job Title	Department
Physician Assistant (PA)	Wellness Center
Nurse Practitioner (NP)	Wellness Center
Registered Nurse (RN)	Wellness Center

Athletics

Job Title	Department
Assistant Athletic Director	Facilities (Athletics)
Assistant Facilities Director	Facilities (Athletics)
Graduate Assistant Athletic Trainer	Sports Medicine
Associate Athletic Director	Sports Medicine

Assistant Director	Sports Medicine

Public Safety

Job Title	**Department**
Chief	Public Safety
Captain	Public Safety
Lieutenant (LT.)	Public Safety
Sergeant (SGT.)	Public Safety
Corporal (CPL.)	Public Safety
Campus Safety Officer (CSO.)	Public Safety
Communications Officer (C.O.)	Public Safety
Police Officer (P.O.)	Public Safety

Chemistry

Job Title	**Department**
Professor (Principal Investigators)	Chemistry
Lab Manager	Chemistry
Research Student (volunteer or paid)	Chemistry

Biology

Job Title	**Department**
Professor (Principal Investigator)	Biology
Lab Manager	Biology
Research Student (volunteer or paid)	Biology

Compliance Methods

Standard Precautions

The underlying concept of standard precautions is that workers must treat all blood and OPIM as if they are infected with a pathogen. Exposure prevention can be accomplished through a combination of engineering and work practice controls, use of personal protective equipment, and good housekeeping.

The only exception to the use of standard precautions is in unexpected, extraordinary circumstances involving the provision of healthcare or public safety services. An example would be a medical emergency where an employee is unable to put on gloves, don a gown, or tie on a facemask immediately. This DOES NOT mean that an employee can decide not to use personal protective equipment because they consider it impractical. It is only an option in rare situations where the employee decides that such equipment will prevent the proper delivery of medical care or emergency services, or it will create a greater hazard to their safety if such equipment is used. Guidelines to categorize cases as "extraordinary" must be determined by each department and added to the exposure plan.

Engineering and Work Practice Controls

Engineering and work practice controls are the primary means of reducing employee exposure in the workplace by either removing the hazard or isolating the worker from exposure. These controls may include equipment redesign (e.g. use of self-sheathing needles), process or equipment enclosure (e.g. biosafety cabinets/ sharps containers), and redirecting hazards (e.g. exhaust fan/ HEPA filter/ AEMs).

Engineering and work practice controls should be used together to ensure the maximum protection for workers. Where the risk of occupational exposure remains after the implementation of engineering and work place controls, University departments must provide and assure that workers use personal protective equipment to further protect themselves. The following are engineering controls and work practices that should be in place throughout the University:

Handwashing Facilities

Hand washing facilities are readily accessible to all workers where it is reasonably anticipated to encounter blood or OPIM. When provision of hand-washing facilities are not feasible, departments will provide an appropriate hand sanitizer (at least 60% alcohol) or antiseptic towelettes. If these alternatives are used, then hands are to be washed with soap and running water as soon as feasible.

After removal of personal protective equipment, workers are required to wash their hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and water.

In the event of exposure to blood or OPIM, workers are required to wash their hands or any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible.

Needles and Sharps

Contaminated needles and other contaminated sharps must not be recapped, bent or broken. Under these circumstances, recapping or needle removal shall be accomplished by using a mechanical device or the one-handed technique. Immediately or as soon as feasible after use, contaminated sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

- Puncture resistant
- Appropriately labeled and color-coded
- Leak proof on the sides and bottom
- Not handled in a manner that requires workers to reach by hand into the sharps container

Workplace Practices

Supervisors, working in conjunction with deans, directors, chairpersons, or designees will oversee the implementation of work practice controls in cooperation with EHS protocols. The department manager or supervisor will ensure that workers are trained to use work practice controls for their job classification and the tasks/procedures they perform. This training will be documented through the completion of the Bloodborne Pathogens Site-specific Training Checklist.

The following work practice controls are to be implemented:

- Workers will wash their hands:
    - After removal of gloves or other personal protective equipment
    - When visible contamination with blood, body fluids, or other potentially infectious materials are present
    - When work is completed and before leaving the work area (i.e. laboratory, clinic)
    - Before eating, drinking, smoking, applying makeup, changing contact lenses, or using the bathroom
    - Before activities that entail hand contact with mucous membranes, eyes, or breaks in the skin

- When health care personnel's hands are visibly soiled, they should wash with soap and water. Note: Alcohol based hand rubs may be used by healthcare personnel for patient care.

- Contaminated needles and other contaminated sharps must not be bent, recapped or removed unless:

  - It can be demonstrated that there is no feasible alternative or the action is required by a specific medical procedure.
  - When recapping or removal of needles is required because there are no alternatives, a mechanical device or a one handed method must be used.

- Use mechanical means (i.e. tongs) when handling contaminated sharps when possible and eliminate hand-to-hand passing of sharp instruments.

- Contaminated sharps must be placed in appropriate containers immediately after use.

- Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses is prohibited in work areas where there is potential for exposure to bloodborne pathogens.

- Food and drink must not be kept in refrigerators, freezers, on countertops, or in other storage areas where blood or other potentially infectious materials are present.

- Mouth pipetting/suctioning of blood or other infectious materials is prohibited.

- Minimize splashing, spraying or other actions generating droplets of blood or other potentially infectious materials during all procedures. At a minimum, Biosafety Level 2 precautions are required for laboratories working with specimens of blood or body fluids. Contact the Environmental Coordinator for further information and assistance regarding these requirements.

- CPR barriers (i.e., mouth barrier, rescue masks, resuscitator) shall be used in place of direct mouth-to-mouth resuscitation when possible.

- Specimens of blood or other materials must be placed in designated leak-proof containers, appropriately labeled for handling and storage. If outside contamination of a primary specimen container is likely, that container must be placed within a second leak-proof container, appropriately labeled, for handling and storage. If the specimen can puncture the

primary container, the secondary container must be puncture-resistant.

- Primary containers of potentially infectious materials must be placed in puncture-resistant, leak-proof, closable secondary containers for transportation outside of the work area (i.e. from room to room where a common hallway is used, etc.).

- The Department of Transportation has strict guidelines when traveling with hazardous material/ waste. If departments plan to travel with biological materials, please contact the environmental coordinator to discuss guidelines.

- Perform disinfection and housekeeping procedures as outlined in "Housekeeping" section of this Exposure Control Plan.

- Departments shall ensure emergency eyewash stations are available in areas where workers can be exposed to bloodborne pathogens and OPIM. Eyewash stations shall be flushed and checked weekly, see procedures in Appendix B.

- Autoclaves are available in many departments to decontaminate solid biohazardous waste. These departments will monitor this equipment to assure that proper sterilization occurs.

- Any garments, including personal clothing, penetrated by blood or other infectious materials, must be removed as soon as possible and placed into a biohazard bag.

- All personal protective equipment must be inspected prior to use to verify that it is in good working condition.

- All personal protective equipment must be removed prior to leaving the work area.

- Disposable gloves must be replaced as soon as possible after contamination or immediately when torn, punctured, or are otherwise rendered unable to function as an exposure barrier.

- Non-latex gloves must be provided to workers who are allergic to the gloves normally provided.

- Utility gloves must be decontaminated for reuse; if utility gloves are cracked, peeling, torn or exhibit other signs of deterioration, they must be disposed.

Personal Protective Equipment

All personal protective equipment used to protect against blood or OPIM at the University will be provided without cost to workers. Personal protective equipment (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 does not permit blood or OPIM to pass through or reach the employee's clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time the protective equipment will be used.

The following PPE is used at the University of Detroit Mercy to protect against bloodborne pathogens and OPIM:

Face shields, Masks, and Eye Protection	Must be worn as appropriate whenever there is a chance that a splash or spray may generate droplets including aerosol of infectious materials.
Protective Clothing (gowns, fluid-proof aprons, laboratory coats, etc.)	Must be worn whenever potential exposure to the body is anticipated.
Head and Foot Covering	Must be worn when gross contamination is anticipated.
Gloves that are impervious to infections	Must be worn where it is reasonably anticipated that workers will have hand contact with blood, other potentially infectious materials, non-intact skin, and mucous membranes.
Respirator	Use a surgical N95 respirator when both respiratory protection and resistance to blood and body fluids is needed. Face shields may also be worn on top of a respirator to prevent bulk contamination of the respirator.

All personal protective equipment will be cleaned, laundered, repaired, replaced, or disposed of by the University at no cost to workers. Individual departments are responsible for distribution, maintenance, and management of PPE.

All personal protective equipment will be removed prior to leaving the work area. If visibly contaminated, the equipment shall be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.

If an employee were to have blood or OPIM splash or soak their clothing, they would

plan to remove the contaminated clothing as soon as possible. This clothing would be laundered at the University's expense. The clothing would be identified as contaminated and any employee, of any employer, exposed to it would be notified and protected from exposure.

Disposable gloves used at the University are not to be washed or decontaminated for re-use and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for re-use provided that the integrity of the glove is not compromised. Utility gloves will be discarded if they are cracked, peeling, torn, punctured, or exhibits other signs of deterioration or when their ability to function as a barrier is compromised.

Housekeeping

Management shall ensure that worksites are maintained in a clean and sanitary condition. Each applicable department will determine and implement an appropriate written schedule for cleaning and a method of decontamination based upon the type of surface to be cleaned, type of material present, and the tasks or procedures being performed there.

The following are instances where decontamination is required:

- When surfaces are overtly contaminated
- Immediately when blood or other potentially infectious material is spilled; the following considerations should be made when treating and removing a spill of infectious material:
    - Wear appropriate personal protective equipment when cleaning up spills.
    - Spills should be covered with an absorbent material, wiped up; and disposed of in a biohazard bag (keep a spill kit on hand if necessary).
- At the end of the work shift if the surface may have become contaminated since the last cleaning
- After contact with blood or other potentially infectious materials (gross contamination must be removed before decontaminating to ensure the disinfectant is completely effective)

Contaminated work surfaces will be decontaminated with an appropriate disinfectant, such as a 1:10 solution of household bleach[1] or an approved germicidal cleaner as detailed in the instances above.

Protective coverings (e.g. plastic wrap, aluminum foil, or imperviously backed absorbent paper) used to cover equipment and environmental surfaces will be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the work shift if they have become contaminated during the shift.

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

[1] Bleach and water solution between 1:100 and 1:10 lose its disinfectant quality when stored in water so it must be prepared on an as needed basis.

Broken glassware that may be contaminated will not be picked up directly by hand. A mechanical means, such as a brush and dustpan, tongs or forceps will be used. Reusable sharps containers that are contaminated with blood or OPIM shall not be stored or processed in a manner that requires workers to reach by hand into the containers.

Regulated Waste Disposal

All bins, pails, cans, and similar receptacles for regulated waste disposal shall be appropriately colored or labeled as containing biohazards[2] and shall be inspected[3], emptied and decontaminated on a regularly scheduled basis. Departments shall inform workers of the location of designated biohazard disposal containers and areas.

Autoclaves are available in various departments to decontaminate solid biohazardous waste. These departments will monitor this equipment to assure that proper sterilization occurs. Proper instrumentation will be used to verify that time, temperature, and steam are adequate. In addition, departments will provide an annual check of all autoclaves used for decontaminating biological wastes. Please contact the Environmental Coordinator for specifics regarding the annual autoclave check.

[2] Disposal of menstrual hygiene products and bandages or Kleenex used in self-administered first aid (bloody nose, small cut) are not considered regulated waste and will be disposed of in the normal waste stream.

[3] Inspection includes checking for contamination of waste bins/bags, overflow of bins/bags, and checking for any cracks and holes in regulated waste containment.

Contaminated Laundry

Contaminated laundry will be handled as little as possible with a minimum of agitation. It will be bagged or put into containers at the location where it was used. Contaminated laundry will not be sorted or rinsed at the location where it was used. It will be placed in bags or containers appropriately labeled or color-coded. When a department utilizes universal precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all workers to recognize the containers as requiring compliance with universal precautions.

Whenever contaminated laundry is wet and may be reasonably expected to soak or leak through a normal container, the laundry will be placed and transported in bags or containers that prevent soak-through and/or leakage of fluids to the exterior. The department will provide workers who may have contact with contaminated laundry with the appropriate personal protective equipment including gloves and protective clothing.

If workers are expected to launder their own contaminated laundry, detailed instructions and procedures must be given to those workers on how to properly handle and wash the contaminated linen. All soiled laundry should be placed in a plastic bag or container and clearly labeled with the employee's name and contents of the bag. The bag should prevent moisture from leaking through. Department must supply the bag or container for workers to put their soiled laundry into.

When a department ship contaminated laundry off-site to a second facility that does not utilize universal precautions in the handling of all laundry, the department generating the contaminated laundry will place such laundry in bags or containers that are appropriately labeled or color-coded.

HIV and HBV Research Facilities

Research laboratories engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV are required to comply with the special provisions outlined in this section in addition to the other requirements contained in this plan. They also must follow any additional guidelines established by the National Institutes of Health (NIH) and Centers for Disease Control and Prevention (CDC). These special provisions do not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissue, or organs. The requirements are as follows:

- All regulated waste will be incinerated or decontaminated by a method, such as autoclaving, known to effectively destroy bloodborne pathogens.

- Laboratory doors will be kept closed when work involving HIV or HBV is in progress.

- Contaminated materials that are to be decontaminated at a site away from the work area will be placed in a durable, leak proof, labeled or color-coded container that is closed before being removed from the work area.

- Access to the work area will be limited to authorized persons. Written policies and procedures will 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 will be allowed to enter the work areas and animal rooms.

- 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 will be posted on all access doors. Hazard warning sign will comply with the signs and labels requirements contained in this plan.

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

- Laboratory coats, gowns, smocks, uniforms, or other appropriate personal protective clothing will be used in the work areas and animal rooms.

- Personal protective clothing will not be worn outside of the work area and will be decontaminated before being laundered.

- Special care will be taken to avoid skin contact with potentially infectious

materials.

- Gloves will be worn when handling infected animals and when making hand contact with potentially infectious materials is unavoidable.

- Before disposal, all waste from work areas and animal rooms will either be incinerated or decontaminated by a method, such as autoclaving, known to effectively destroy bloodborne pathogens.

- Vacuum lines will 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.

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

- All spills will be immediately contained and cleaned up by appropriate professional staff or others trained and equipped to work with potentially infectious, concentrated materials.

- A spill or accident that results in an exposure incident will be immediately reported to the principle investigator, laboratory manager, and the Environmental Coordinator.

- A biosafety manual will be prepared or adopted and reviewed and updated if necessary, at least annually, or more often if necessary. Personnel will be advised of potential hazards and required to read and follow the standard operating procedures set forth in the lab's biosafety manual.

- Certified biological safety cabinets 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 will be used for all activities with potentially infectious materials that pose a threat of exposure to splashes, spills, or aerosols.

- Biological safety cabinets will be inspected when installed, relocated and at least annually.

- HIV and HBV research facilities will contain the following:

    - A facility for hand washing

    - An eye wash facility which is readily available within the work area

    - An autoclave which is readily available for decontamination of regulated waste

    - The work areas shall be separated from areas that are open to an 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 room for changing clothes, an airlock, or other access facility that requires passing through two sets of doors before entering the work area. Showers may be included as part of the changing room.

    - The interior surfaces of walls, floors, and ceilings 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 of the work area.

    - Each work area shall contain a sink for washing hands. The sink shall be foot-operated, elbow operated, or automatically operated and shall be located near the exit door of the work area.

    - Access doors to the work area or containment module shall be self-closing.

    - 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 into the work area shall be verified.

- Additional training requirements for workers in HIV and HBV research facilities are covered in the training section of this plan.

Hepatitis B Vaccine

The University will make the Hepatitis B vaccination series available to all employees who are determined to have occupational exposure. Vaccination will be:

- Made available at no cost to the employee within ten working days of initial assignment and after the employee has received training
- Made available at a reasonable time and place
- Performed by or under the supervision of a licensed health care professional
- Provided according to the recommendations of the U.S. Public Health Service current at the time of vaccination
- Recorded and filed in the employee's medical records HBV vaccinations will be provided at the Human Resources Department for employees at risk of occupational exposure.

HBV antibody testing will be provided if an employee desires such testing before deciding whether or not to receive the HBV vaccination. If the employee declines vaccination, they will sign a declination form (see Appendix C). A copy of this form will be retained by the employee, their department, and Human Resources for the duration of the employee's tenure. If the employee has declined but changes their mind at a later date, the vaccination will be made available at that time. If the employee has previously received the complete HBV vaccination series and/or antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons, the vaccination series will not be offered. (Detroit Mercy Dental Policy)

Post-Exposure Evaluation and Follow-Up

All occupational exposures to human blood or other potentially infectious materials will be reported promptly to Human Resources, evaluated by a licensed healthcare professional, and treated according to the U.S. Public Health Service guidelines. Follow-up treatment will be available at no cost to the employee.

A licensed physician at no cost will offer all employees who experience an exposure incident post-exposure evaluation and follow-up to the employee.

This follow-up will include the following:

- Documentation of the route of exposure and the circumstances related to the incident.

- If possible, the identification of the source individual[1] and, if possible, the status of the source individual. The blood of the source individual will be tested (after consent is obtained) for HIV/HBV infectivity.

- Results of testing of the source individual will be made available to the exposed employee with the exposed employee informed about the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual.

- The employee will be offered the option of having their own blood collected for testing of their HIV/HBV serological status. The blood sample will be preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV serological status.

- The employee will be offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service in consultation with a licensed healthcare professional.

- The employee will be given appropriate, confidential counseling concerning precautions to take during the period after the exposure incident. Counseling on risk reduction and the risks and benefits of HIV testing. The employee will also be given information on what potential illnesses to be alert for and to report any related experiences to appropriate

[1] The source individual's blood shall be tested as soon as feasible and after consent is obtained to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. If the source individual's consent is not required by law, his or her blood, if available, shall be tested and the results documented. If the source individual is already known to be infected with HBV or HIV, testing need not be repeated.

personnel.

- Human Resources will assure that the post exposure evaluation and follow-up outlined here is effectively carried out as well as to maintain records related to this policy.

- For the Corktown Campus and University Health Center location, please follow the Needlestick/Blood & Body Fluid Exposure Incident Protocol Flow Chart in Appendix D.

Interaction with Health Care Professionals

The University shall ensure that the health care professional who is responsible for the hepatitis B vaccination is provided with a copy of these rules and appendices. A written opinion shall be obtained from the health care professional who evaluates University employees. Written opinions will be obtained in the following instances:

- When the employee is sent to obtain the Hepatitis B vaccine

- Whenever the employee is sent to a health care professional following an exposure incident

- Health care professionals shall be instructed to limit their written opinions to:

- Whether the Hepatitis B vaccine is indicated and if the employee has received the vaccine, or for evaluation following an incident

- A statement that the employee has been informed of the results of the evaluation

- A statement that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials. (Note: The written opinion to the employer is not to reference any personal medical information.)

Hazard Communication (Signs and Labels)

Signs

An employer shall post signs[1] at the entrance to work areas. The signs shall bear the following legend:

> [Name of infectious agent]
> [Special requirements for entering the area]
> [Name and telephone number of the laboratory director or other responsible person]

Labels

Labels shall be in compliance with all of the following requirements:

- Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers that contain blood or other potentially infectious material, and other containers that are used to store or transport blood or other potentially infectious material.

- Labels shall be fluorescent orange or orange-red with lettering or symbols in a contrasting color.

- Labels shall either be an integral part of the container or shall be affixed as close as safely possible to the container by string, wire, or adhesive or by another method that prevents the loss of labels or the unintentional removal of labels.

- Red bags or red containers may be substituted for labels.

- Containers of blood, blood components, or blood products that are labeled as to their contents and that have been released for transfusion or other clinical use are exempted from the labeling requirements of this rule.

- 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 labeling requirements.

- Labels required for contaminated equipment shall be in accordance this sub rule and shall also describe which portions of the equipment remain

[1] These signs shall be fluorescent orange-red with lettering and symbols in a contrasting color.

contaminated.

- Regulated waste that has been decontaminated need not be labeled or color-coded.

Training

Information and training will be provided for all University workers at risk of occupational exposure, at the time of initial assignment, and at least annually thereafter. Training will be provided at a convenient time during the employee's regular working hours, at no cost to the employee. The employee's supervisor, manager, or principal investigator is responsible for ensuring that the employee is informed of and participates in the training program.

Training must be provided by individuals who are knowledgeable in the subject matter as it relates to the specific workplace being addressed. Training sessions shall provide workers ample opportunity for discussion and the answering of questions by a knowledgeable trainer.

Training for workers will include the following explanation of:

- The MIOSHA standard for Bloodborne Infectious Disease
- Epidemiology and symptomatology of bloodborne diseases
- Modes of transmission of bloodborne pathogens
- The University's Bloodborne Infectious Diseases Exposure Control Plan, (i.e. points of the plan, lines of responsibility, how the plan will be implemented, access to the plan, etc.)
- Procedures that might cause exposure to blood or other potentially infectious materials at this facility
- Engineering controls and workplace practices which will be used and followed at the facility to control exposure to blood or other potentially infectious materials
- PPE (personal protective equipment) available at this facility and trained on:
    - What type of PPE is necessary for the following protection:
        - Eye + Face Protection

        - Body Protection
        - Respiratory Protection
    - How to properly don, doff, adjust, and wear the required PPE
    - The limitations of the required PPE
    - The proper care, maintenance, useful life and disposal of the required PPE

- Post Exposure evaluation and follow-up

- Signs and labels used at the facility

- Hepatitis B vaccine program at the facility

HIV or HBV Research Facility Training

The principal investigator must provide specialized additional training for workers working in HIV or HBV research facilities before work with HIV or HBV begins. This training shall include:

- Employee's demonstration of proficiency in standard microbiological techniques and in the practices and procedures specific to the facility.

- Verification that employee has prior experience in the handling of human pathogens or tissue cultures

- Training for workers who have no prior experience in handling human pathogens. Initial work activities shall not include handling infectious agents, and the employee shall only be assigned work as techniques are learned and proficiency has been demonstrated.

Training Records

Each individual department management must maintain training records and procedures.

Training records will include the following information:

- Date(s) of training session

- Summary of contents of training program

- Names of persons conducting the training

- Names and job titles of all persons attending the training

Training records will be maintained for a minimum of three years from the date on which

the training occurred and will be provided upon request to the employee, employee's representative, director of NIOSH, Assistant Secretary of Labor, and/or the MIOSHA.

Medical Records

Human Resources will maintain an accurate record for each employee with occupational exposure. These records include:

- Name of employee
- Copy of employee's hepatitis B immunization status, including dates of vaccinations and any medical records relative to the employee's ability to receive vaccination.
- Copy of the results of examinations, medical testing, and any follow-up procedures
- Copy of the healthcare professional's written opinion concerning hepatitis B vaccination and post-exposure evaluation and follow-up
- These records must be kept for the duration of employment plus 30 years.

Appendix A- SOP (Standard Operating Procedures)

A Standard Operating Procedure (SOP) is a broad overview of safety procedures for hazardous processes. SOPs act as a training resource, in conjunction with a training program for workers, who may need a refresher or an introduction to handling hazards in a lab or healthcare setting. These documents may be specific to each department and some may be adopted to university standard for operating and handling hazardous tools, materials and processes.

This version of the SOP will be based off the requirements of the Bloodborne Pathogen Standard. Tasks like disinfecting work areas, handling of needles and other common procedures that may expose workers to blood and OPIM (other potentially infectious materials), should have an SOP created. When filling out this form, please be as clear and descriptive as possible and use full sentences. These forms should be approved by the supervisor of the department for final approval and to be filed electronically and physically, making it accessible to authorized personnel. If there are any questions or you need suggestions on what procedures to include, please contact the Environmental Coordinator at borderbl@udmercy.edu .

SOPs have 7 sections that include: approval/ training requirements, exposure potential, personal protective equipment, engineering controls, work practices, management of exposure incident and contingency plan. Below is the breakdown of what content should be in each section.

Approval and Training. In this section, you will list the trainings and supervision required to handle this tool/material/process. Is there a site specific bloodborne pathogen training? Is it required to have a supervisor present? Should workers be approved before using this tool?

Exposure Potential. In this section, you will explain the ways in which workers can be exposed to blood or other potentially infectious materials that results from the performance of an employee's duties. The risks will be determined without regard to personal protective equipment.

PPE (Personal Protective Equipment). What protective equipment is required to be safe while handling this tool/material or while completing this process? Be sure to include disposal and maintenance of the PPE required.

Engineering Controls. What tools have been given to minimize exposure? What hazards does it minimize? Most common examples are: Fume hoods, biological safety cabinet, vacuum devices, HEPA filters for a ventilation system, etc.

Work Practices. Explain workplace practices that are specific to the hazard or task, and general practices that minimize exposure. What are some rules to keep in mind before proceeding or working with this hazard? What are some general rules for cleanup and disposal once completed? Discuss general employee dos and don'ts in high exposure areas.

Management of Exposure Incidents. Explain immediate procedures in case of an exposure incident. Include immediate first aid recommendations, and any special instructions outside of

the Bloodborne Infectious Disease Control Plan.

Contingency Plan. If applicable, explain scenarios in which workers are not required to follow this SOP. How do we ensure workers are protected with these modifications?

UNIVERSITY OF DETROIT MERCY

Standard Operating Procedure

Completed By:	
Approved By:	
Department:	
Issue Date:	
Updated date:	

(Title)

Approval/Training(s) Required

Bloodborne Infectious Disease Control Training,

Exposure Potential

Personal Protective Equipment

Protective Equipment

Maintenance & Disposal

Engineering Controls

UNIVERSITY OF DETROIT MERCY

Standard Operating Procedure

Workplace Practices

Task/Equipment Specific

Clean up/ Disposal Rules

Exposure Incidents

Exposure After Care

Contingency Plan

If employees determine that this SOP cannot be followed, they should stop the procedure/work activity and consult with their supervisor on how to proceed (e.g. use hand sanitizer to cleanse hands during a utility outage). The supervisors will ensure that needed equipment/supplies, etc. are provided to employees and a revised SOP is developed to address the hazards identified.

Click here to fill out the form

Appendix B- Eyewash and Shower Inspection Procedures

Emergency Eyewash/Shower Flushing Procedure

Routine flushing of eyewashes and showers helps ensure proper function in the event of an emergency situation. Routine function tests also help ensure that OSHA requirements are being met.
Perform the following steps **Weekly:**

1. **Remove obstructions**
    a. Ensure that the eyewash and showers are easily accessible by removing any object that impedes access to them (obstructions in the sink, carts or chairs blocking the eye wash/shower station).

2. **Visually inspect the eyewash/shower component**
    a. Inspect the outer appearance of the eyewash/shower station (corroded metal, leaks etc.).

3. **Activate the eyewash/shower**
    a. Activate slowly to avoid spattering. Run full flush height and allow to run for 1-3 minutes.

4. **Observe water stream(s)**
    a. Streams should be symmetrical (arches of water meeting in the middle for eye wash; shower streams should be at a constant flow)
    b. Water should run clear / free of debris.

5. **Record information on the inspection tag**
    a. Record the date, all observed conditions and include your initials.

Submit a work request for any malfunctioning emergency equipment.

Appendix C- Declination of Hepatitis B Vaccine

UNIVERSITY OF DETROIT MERCY
Build A Boundless Future

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 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.

Print Name: _____

Job Title: _____

Department: _____

_____

Signature

Date: _____

Appendix D- Dental School's Needlestick/Blood & Body Fluid Exposure Incident Protocol Flow Chart

Dental School's Needlestick/Blood & Body Fluid Exposure Incident Protocol Flow Chart[1]

Percutaneous or Mucosal Exposure to Blood or Body Fluids

Step 1
Perform first aid
WASH THE WOUND with antimicrobial soap and water

Step 2
REPORT INCIDENT to Supervising Faculty/Director of Predoctoral Patient Care/Clinic Lead or Clinic Director Manager and OBTAIN THE APPROPRIATE FORMS from designated area of each clinic

Step 3
Review Source Individual's Medical History

Step 4
Employee Patient Student
Do not discharge source individual prior to treatment decision for exposed person as outlined below

***Corktown and UHC**
Complete 1) needlestick/blood and body fluid exposure incident (1 form) and 2) Referral Authorization forms: (2 forms: One for exposed and one for source patient)
Refer to DMC Occupational Health Service Clinic, University Health Center, 4th floor (after hours: occupational Health Service Fast Track Emergency Department) for blood test for HBV, HCV, and HIV serological status

Step 5
CDC recommended protocol implemented- Tetanus update if indicated

Step 6
If refused, verify with signature on needlestick/blood and body fluid exposure incident report form indicating "Declination of Post-Exposure Medical Evaluation"
Submit form to Office of Clinic Administration

[1] This applies to the School of Dentistry only