

Michigan Technological University Exposure Control Plan Bloodborne Infectious Diseases

CONTENTS

POLICY	3
PURPOSE	3
DEFINITIONS.....	3
PROGRAM ADMINISTRATION	5
Implementation	5
Compliance	5
Training	5
Records	5
EXPOSURE DETERMINATION	5
SCHEDULE AND METHOD OF IMPLEMENTATION.....	6
Universal Precautions	6
Work Practices	6
Laboratory Engineering Controls	7
Personal Protective Equipment (PPE).....	8
Housekeeping	9
Regulated Waste Disposal	10
Laundry	10
VACCINATIONS AND POST-EXPOSURE FOLLOW-UP	11
Hepatitis B vaccination	11
Post-Exposure Follow-up	11
COMMUNICATION OF HAZARDS	13

Entrance to Laboratories and work areas.....	13
Warning Labels.....	14
Record Keeping	14
Medical.....	14
Training	15
Sharps Injury Log.....	15
TRAINING	15
References:	16
APPENDIX A.....	17
STANDARD OPERATING PROCEDURES.....	17
APPENDIX B:.....	18
HEPATITIS B VACCINE DECLINATION	18
APPENDIX C.....	19
BIOHAZARD SIGNS AND LABELS.....	19

POLICY

Michigan Technological University is committed to providing a safe working environment for all faculty, staff and students. As part of that commitment and in compliance with MIOSHA rules 325.70001 – 70018 governing [Occupational Exposure to Bloodborne Infectious Diseases](#), the University has developed this Exposure Control Plan in an effort to minimize or eliminate occupational exposure to bloodborne pathogens.

PURPOSE

This plan provides general guidelines that are broadly applicable to situations where contact with blood and other potentially infectious materials are reasonably expected. Appendix A of this document is intended as template for developing standard operating procedure to provide laboratory and/or task specific details related to work involving blood and other potentially infectious materials. Appendix A must be completed by the Principal Investigator or other individuals that are responsible for work involving blood and other potentially infectious materials.

DEFINITIONS

“Blood” refers to human blood and components and products made or derived from human blood.

“Bloodborne pathogens” means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to:

1. **HBV** Hepatitis B Virus.
2. **HCV** Hepatitis C Virus
3. **HIV** Human Immunodeficiency Virus

“Contaminated” means the presence or the reasonably anticipated presence of blood or other potentially infectious material on any surface or item including soiled laundry.

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

“Engineering controls” controls used to prevent or minimize personal exposure. For example, sharps disposal containers, safer medical devices with engineered sharps injury protection such as self-sheathing needles and needleless systems that isolate or remove the bloodborne pathogens hazard from the workplace.

“Exposure incident” means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious material resulting from the performance of an employee’s duties.

“Occupational Exposure” means reasonably anticipated skin, eye, mucous membrane, or parenteral (piercing) contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties. “Exposure” does not include incidental exposures which may take place on the job, which are neither reasonably nor routinely expected, and which the worker is not required to incur in the normal course of employment.

“Other potentially infectious material” includes:

1. The following human body fluids: semen, vaginal secretions, amniotic fluid, cerebrospinal fluid, peritoneal fluid, pleural fluid, pericardial fluid, synovial fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, all body fluids in situations where it is difficult or impossible to differentiate between body fluids;
2. Any unfixed tissue or organ, other than intact skin, from a living or dead human;
3. Cell, tissue and organ cultures unless well characterized and certified as free of HIV and HBV; media or other solutions derived from these cultures that may contain HIV or HBV;
4. Blood, organs, or other tissues from experimental animals infected with HIV or HBV or other pathogens.
5. The following are **NOT** considered potentially infectious unless they contain blood: feces, nasal secretions, saliva, sputum, sweat, tears, urine, and vomitus. The risk for transmission of HBV, HCV, and HIV infection from these fluids and materials is extremely low.

“Parenteral” means exposure occurring as a result of piercing mucous membrane or the skin barrier, such as exposure through subcutaneous, intramuscular, intravenous, or arterial routes resulting from needlesticks, bites, cuts, and abrasions.

“Regulated waste” includes any of the following:

1. liquid or semi-liquid blood or other potentially infectious material;
2. contaminated items that would release blood or other potentially infectious material in a liquid or semi-liquid state if compressed;
3. items which are caked with dried blood or other potentially infectious material and which are capable of releasing these materials during handling;
4. contaminated sharps;
5. pathological and microbiological waste that contains blood.

“Sharps” means any object contaminated with Blood or other potentially infectious material that can cut, penetrate or puncture the skin, including any of the following:

1. Needles and syringes with needles attached
2. Scalpels, razor blades, microtome blades and other cutting instruments.
3. Broken glass.
4. Capillary tubes, Pasteur pipettes.

“Universal precautions” means a method of infection control that treats all human blood and other potentially infectious material as capable of transmitting HIV, HBV, and other bloodborne pathogens.

“Work practices” means controls that reduce the likelihood of exposure to bloodborne pathogens by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

PROGRAM ADMINISTRATION

Implementation

The Research Integrity Office and the Environmental Health Safety office are responsible for the implementation of the Exposure Control Plan and will maintain, review and update the plan on an annual basis and whenever necessary to include new or modified procedures or work practices.

As an integral part of this plan, faculty, staff and students at risk for exposure to blood and otherwise potentially infectious materials and in particular, potential injuries from contaminated sharps are encouraged to identify, evaluate, select and recommend effective engineering and work practice controls to minimize those risks.

Compliance

Faculty, Staff and students who are determined to have occupational exposure to blood or otherwise potentially infectious materials must comply with the procedures and work practices outlined in the plan.

Training

The Office of Compliance, Integrity, and Safety and the University's Occupational Safety and Health Services are responsible for general Bloodborne Infectious Disease training and for making this plan and all supporting materials available to Employees and Students who work with or may be exposed to blood and other potentially infectious materials. If necessary, additional job or task specific training will be provided at the department or laboratory level.

Records

Training records as well as any personal medical information such as vaccination status, physical evaluations for the use of respirators, post-exposure evaluations following an occupational exposure incident, etc., will be maintained by Occupational Safety and Health Services

EXPOSURE DETERMINATION

The general job classifications, tasks and procedures listed in the table below are assigned to category A according to rule 3 of the MIOSHA Bloodborne Infectious Diseases Standard. Occupational exposure to blood and otherwise potentially infectious materials is reasonably anticipated for faculty, staff and students engaged in these activities. This determination is made without regard to the anticipated use of personal protective clothing and equipment.

Job/Task/Procedure	Rationale for determination
Facilities Employees: Building Mechanic Custodian Student Custodian Supervisor Facilities Help Licensed Trades (Plumbers)	Facilities employees as designated in their specific job description may be required to perform work in laboratories or other areas where blood and other potentially infectious materials are used. May be required to assist the clean-up of blood following an injury. Plumbers may have potential exposure during repair of sanitary sewer lines.
Public Safety Officers / First Responders	May have exposure to blood or other body fluids when responding to emergencies
Laboratory research involving the use of blood, tissues, cell lines and other potentially infectious materials derived from humans or non-human primates.	In addition to blood, tissues and cell lines may be contaminated with adventitious agents capable of infecting laboratory workers.
Student Development Center: Coaches, Athletic Trainers, Life Guards Equipment Supervisor and staff	May have exposure to blood or other body fluids as a consequence of injuries sustained during exercise, training or competition.
Summer Youth Coordinators	May have exposure to blood or other body fluids when responding to injuries

SCHEDULE AND METHOD OF IMPLEMENTATION

Universal Precautions

Universal precautions regard human blood and body fluids as potentially infectious materials capable of transmitting HIV or HBV and require the use of special work practices, controls and safety equipment to prevent personal exposure. These precautions shall be used by all faculty, staff and students to minimize the potential for accidental ingestion, exposures to skin or mucous membranes, or parenteral inoculation when working with blood and other potentially infectious materials.

Work Practices

Minimum work practices applicable to all work involving blood or other potentially infectious materials include:

1. Use of appropriate controls and personal protective equipment (PPE) to minimize the chances for personal exposure.
2. Upon completion of work, all PPE shall be removed and placed in an appropriately designated place for storage, washing, decontamination or disposal.
3. Clothing penetrated by blood or other potentially infectious materials shall be removed immediately or as soon as possible.
4. If blood and other potentially infectious materials contact the skin, wash the contact area with soap and water as soon as possible. Exposed mucous membranes and eyes should be flushed with clean water.
5. Hands shall be washed after removing PPE, after contact with blood and other potentially infectious materials and before leaving the work area. If a sink for hand washing is not available a waterless antiseptic hand cleaner shall be used and then followed with soap and water when hand-washing facilities become available.
6. Eating, drinking, smoking, applying cosmetics or lip balm or handling contact lenses is prohibited in work areas where there is a reasonable possibility for exposure to blood and other potentially infectious materials.

Laboratory Specific work Practices

7. Food and Drink shall not be stored in the laboratory or in refrigerators, freezers, shelves, cabinets, or on countertops or benchtops where blood and other potentially infectious materials are stored.
8. Used needles and other contaminated sharps must be discarded immediately after use into a sharps disposal container. Needles and other sharps shall not be sheared, bent, broken, recapped or re-sheathed unless required by a specific procedure and it can be demonstrated that there is no other feasible alternative.
9. All procedures involving the use of blood and other potentially infectious materials shall be performed in a manner that minimizes splashing, spraying or aerosolization.
10. Mechanical devices are used for all pipetting and suctioning procedures (no mouth pipetting).
11. Additional work practices that are specific for laboratories working with blood and other potentially infectious materials are described in the Biosafety Level 2 Standard Microbiological Practices that are found in the MTU [Laboratory Biosafety Manual](#).

Laboratory Engineering Controls

The following engineering controls will be used in laboratories when appropriate to eliminate or minimize exposure when working with blood and otherwise potentially infectious materials,

Safety scalpels and **self-sheathing needles** that are engineered to reduce the risk of cuts and needle- sticks will be used as replacements for conventional scalpels and needles, whenever possible.

Sharps disposal containers will be available in laboratories using sharps and conveniently located to facilitate immediate disposal of sharps after use.

Splash Shields, Laboratory hoods, Biological safety cabinets (BSC), aerosol-tight lids on test tubes and centrifuge rotors / buckets and similar controls will be used to contain splashes, spatter, mists and aerosols created by procedures such as pipetting, sonicating, vortexing, homogenization, centrifugation, etc. These controls are recommended by MIOSHA and the Centers of Disease Control to reduce the risk of exposure resulting from splashes or aerosols of blood and other potentially infectious materials, even though bloodborne pathogens (HIV and HBV) are not known to be transmissible by the aerosol route.

Personal Protective Equipment (PPE)

Personal protective equipment (PPE) will be used to provide additional protection in situations where the risk of exposure cannot be eliminated through work practices and engineering controls. PPE will be provided without cost to the employee for use when working with blood and other potentially infectious materials. Only PPE that prevents the passage of blood and other potentially infectious materials to the individuals clothing, skin, eyes, mouth or other mucous membranes may be used. Selection of appropriate PPE is based upon a risk assessment of the work being done and may include any or all of the following:

1. **-Laboratory coat, Gown, apron or Coveralls** shall be worn to protect skin and clothing when there is a reasonably anticipated chance for contact with blood or other potentially infectious materials. Laboratory coats with knit or closed cuffs are preferred since they offer more protection for the wrist and lower arm and reduce the possibility of hanging cuffs coming into contact with hazardous materials. For critical work where it is essential to prevent exposures to the lower arm, gloves can be easily pulled over the sleeve of a lab coat with a closed cuff. Select a solid front gown or apron if there are specific concerns about a splash to the front of the body.
2. **Gloves** shall be worn if there is reasonable anticipation of direct skin contact with blood or other potentially infectious material. In particular, gloves are required if cuts, scratches or other breaks in the skin are present on the hands or wrists.
3. **Face shield, Safety glasses, Face mask** shall be worn if there is a possibility of eye, nose, mouth or facial contamination from splashes, sprays, spatters, droplets or aerosols of blood and other potentially infectious material.
4. **Shoe coverings** shall be worn to prevent contamination to shoes when cleaning spilled blood and other potentially infectious material from the floor.
5. Under rare and extraordinary circumstances an individual may decline to wear PPE, if in their judgment doing so would result in increased risk to the individual or their coworkers. In these situations, the circumstances for the decision must be investigated and documented by the

employee's supervisor as part of a process to determine the need for modification to standard operating procedures.

Refer to the University's [Biosafety Manual](#) for additional information on the selection and use of PPE in the laboratory.

Housekeeping

Laboratories and other areas where exposure to blood and other potentially infectious materials may occur will be maintained in a clean and sanitary condition. Principal Investigators using blood and other potentially infectious materials in their laboratories must provide a schedule for cleaning and decontamination of laboratory work areas and equipment (see Appendix A).

1. Work surfaces and equipment shall be cleaned and decontaminated with a freshly made solution of household bleach diluted between 1:10 to 1:100 or an [EPA approved disinfectant](#).
 - a. After completion of procedures involving blood and other potentially infectious materials,
 - b. Immediately after a spill of blood or other potentially infectious material and/or when surfaces or equipment become overtly contaminated.
 - c. After a work shift, if the surface may have become contaminated since the last cleaning.
2. Plastic-backed absorbent liners used to protect work areas and equipment shall be changed as soon as possible when they become overtly contaminated.
3. Equipment used for work with blood and other potentially infectious materials shall be decontaminated prior to repair, service or decommissioning.
4. Reusable containers used for work or storage of blood and other potentially infectious materials shall be decontaminated on a regularly scheduled basis and when overtly contaminated.
5. Contaminated broken glassware shall be cleaned up and deposited into sharps disposal containers using tongs, forceps or other mechanical devices that protect hands from cuts and lacerations.
6. Leak proof primary containers with appropriate labeling to identify contents are used for collection, processing, storing, and transporting /shipping of blood and other potentially infectious materials. If necessary to prevent exposure or injury, primary containers shall be placed in leak-proof, puncture-resistant secondary containers.
7. Immediately after use, reusable sharps shall be placed into a leak-proof, puncture-resistant container that is filled with an appropriate disinfectant. Before reuse, sharps shall be carefully washed, packaged and sterilized in a manner that limits the possibility for accidental cuts or lacerations. At no time will sharps be stored or processed in a manner that requires an individual to reach into a container with their hands to retrieve sharp instruments.

Regulated Waste Disposal

The disposal of regulated medical waste must comply with Michigan's Medical Waste regulatory Act. For specific details refer to the University's [Laboratory Biosafety Manual](#).

Solid waste is collected for disposal in closable, leak-proof containers or bags that are appropriately labeled with the biohazard symbol. Solid waste shall be processed by autoclaving to render it non-infectious before disposal.

Similarly, liquid waste is collected in closable leak proof containers with appropriate biohazard labels and shall be processed by autoclaving or chemical treatment to render it non-infectious before disposal.

Used, disposable sharps are immediately discarded into appropriately labeled containers that are both leak-proof and puncture-resistant. Containers for sharps disposal shall be readily accessible in laboratories and other areas where sharps are used.

Pathological waste shall be collected in leak-proof containers or bags, with labels to identify the contents as pathological waste and stored in a designated freezer or refrigerator until disposal.

Contaminated sharps, pathological waste and other regulated waste that cannot be processed in house are collected and picked up for disposal from campus on a quarterly basis.

Laundry

Laundry handled at the Student Development Complex (SDC) that is soiled with blood or other potentially infectious material is handled separately from other laundry.

1. Laundry soiled with blood is gathered separately at the location where it is used without sorting or rinsing and placed into bags that are labeled or color-coded to distinguish the contents from regular laundry (leak proof bags are used for wet laundry).
2. Laundry soiled with blood is handled as if it is infectious. Laundry workers must wear gloves, and other protective clothing (apron, coveralls, etc.) to prevent personal exposure.
3. Laundry soiled with blood is washed in hot water (at least 160°F) with detergent and bleach as needed to destroy any bloodborne pathogens that may be present.

The University does not provide laundry facilities or services to laboratories as a component of this exposure control plan. Departments and/or individual laboratories are encouraged to develop plans for handling soiled or contaminated PPE as part of their standard operating procedures. These plans may include the use of disposable PPE that eliminates the need for laundering or procedures for decontaminating PPE by autoclaving or chemical disinfection prior to laundering at a commercial facility. To avoid the possibility of needle sticks or other sharps related injuries associated with disposal or laundering of PPE, needles, syringes with needles, scalpels or other sharps should never be placed into the pockets of laboratory coats.

VACCINATIONS AND POST-EXPOSURE FOLLOW-UP

Following bloodborne pathogen training that is appropriate to their assigned duties, individuals at risk for occupational exposure to blood and other potentially infectious materials, will be provided at no cost

1. Hepatitis B vaccination.
2. Appropriate counseling related to the medical risks and benefits of vaccinations and / or post-exposure prophylaxis and any associated evaluations or procedures.

Hepatitis B vaccination

1. A copy of the MIOSHA rules and regulations regarding Bloodborne Infectious Diseases shall be provided to the health care professional who is responsible for evaluating eligibility and administration of the hepatitis B vaccination. Any written opinion by the health care professional regarding vaccination shall be limited to whether hepatitis B vaccination is indicated and if the individual has received such vaccination.
2. MTU is not required to provided vaccination if
 - a. the individual has previously received the complete HBV vaccination series,
 - b. their antibody titer is found to provide adequate immunity to HBV or
 - c. the vaccination is contraindicated for medical reasons.
3. An individual may request HBV antibody testing before deciding to receive or decline the HBV vaccination.
4. If the vaccination is declined, a waiver (see [APPENDIX B](#)) must be signed by the individual indicating that they
 - a. Acknowledge the opportunity to receive the vaccination at no cost but decline to receive it.
 - b. Understand the risks associated with their decision.
 - c. Understand that that vaccination is available in the future at no cost if they change their mind and if they continue to be at risk for exposure.

Exposure and Post-Exposure Follow-up

An exposure that might place an employee at risk for infection is defined as a percutaneous injury (e.g., a needlestick or cut with a sharp object) or contact of mucous membrane or nonintact skin (e.g., exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other body fluids that are potentially infectious.

1. Treat exposures to blood and other potentially infectious materials immediately.
 - a) Remove and discard any contaminated clothing or PPE and thoroughly wash the exposed area with soap and water and flush the area with water for up to 15 minutes.
 - b) Allow minor wounds or punctures to bleed freely. No evidence exists to indicate that squeezing the wound to encourage additional bleeding further reduces the risk of bloodborne pathogen transmission. Application of antiseptics when caring for the wound is

- appropriate. However, the application caustic agents such as bleach or the injection chemical disinfectants into the wound is not recommended.
- c) Exposures to the eye(s) or mucous membranes are treated by flushing with clean water or saline for up to 15 minutes.
 - d) If necessary call 911 for assistance and transportation to portage health.
2. Report the incident to your supervisor who will follow the procedures for reporting the incident as outlined on the Environmental Health and Safety [Incident and Injury Reporting](#) web page.
- a. The report shall include
 - i. a description of the individual's duties as they relate to the exposure incident,
 - ii. documentation of the route of exposure and the circumstance under which the exposure occurred and
 - iii. a description of control and personal protection equipment being used at the time of exposure
 - b. Early reporting is crucial to address possible infection and initiate intervention procedures.
 - c. Reporting the incident is necessary to evaluate the efficacy of current controls and work practices and if necessary begin corrective actions to prevent recurrence of a similar incident.
3. Following the report of an exposure incident, the University will provide the opportunity for an immediate and confidential medical evaluation and post-exposure follow-up by licensed health care professionals. The health care professional responsible for evaluating an exposure incident shall be provided with the following information.
- a. A copy of the MIOSHA rules and regulations regarding Bloodborne Infectious Diseases
 - b. A copy of the supervisor's incident report including a description of the individual's duties as they relate to the exposure incident, the route of exposure, and description of PPE used.
 - c. Results of the source individuals blood testing, if available
 - d. All medical records relevant to the treatment of the exposed individual including vaccination/immune status.
4. The evaluation and follow-up of an exposure incident shall be done in accordance with the current recommendations of the [US Public Health Service](#) and shall be provided at no cost to the individual. At a minimum, the evaluation and follow-up will include:
- a. Documentation of the exposure route and the circumstances related to the exposure incident.
 - b. Identification and testing of the source individual (unless it is can be established that identification is not possible or is prohibited by state or local law)
 - i. If the HBV, HCV, and/or HIV infection status of the source is unknown, the source person should be informed of the incident and tested for serologic evidence of bloodborne virus infection. Informed consent is required for testing unless the

- exposure occurred during an emergency response and the patient is subsequently transported to a health care facility.
- ii. If the source individual is unknown or cannot be tested, information about where and under what circumstances the exposure occurred should be assessed epidemiologically for the likelihood of transmission of bloodborne viruses.
 - iii. Results of the tests shall be made available to the exposed individual and they shall be informed of applicable laws and regulations protecting the source individual's identity and their infectious status.
- c. An assessment of the potential for transmission of HBV, HCV and HIV based upon the type of body fluid involved, and the route and severity of the exposure.
 - d. Determination of the baseline infection status of the exposed individual.
 - i. The exposed individual must give consent to have their blood drawn for testing and has the option to withhold consent for HIV testing.
 - ii. If consent for HIV testing is not given, the blood sample shall be preserved for at least 90 days, to allow time for the individual to reconsider the decision for HIV testing.
 - e. Post exposure prophylaxis shall be provided when medically indicated and in accordance with the [US Public Health Service](#) recommendations.
 - f. Counseling about the possible implications of the exposure and their infection status, including the results and interpretation of all tests and how to protect personal contacts.
 - g. Evaluation of any reported illnesses that may be related to the exposure incident.
5. The University shall make a copy of the evaluating health care professional's written opinion available to the employee within 15 days of completion of the evaluation. The written opinion shall be limited to:
- a. A statement that the individual has been informed of the results of the evaluation and
 - b. A statement that the individual has received information concerning any medical conditions that have resulted from the exposure incident and require further evaluation or treatment.
 - c. The written report shall not contain specific findings or diagnoses unrelated to the exposure incident.

COMMUNICATION OF HAZARDS

Entrance to Laboratories and work areas

Signs shall be posted at the entrance to laboratories and work areas where blood and other potentially infectious materials are used or stored. These signs shall be based on the template in [Appendix C](#) and shall

1. Display the biohazard symbol;

2. Identify the infectious agent(s) present in the laboratory;
3. List any special requirements for entrance into the laboratory and
4. Provide the name and contact information for the principal investigator or other responsible individual(s).

Warning Labels

1. Biohazard warning labels shall be affixed to refrigerators, freezers and other containers used to store or transport regulated waste, blood or other potentially infectious materials.
2. All biologically hazardous conditions shall be identified with biohazard warning labels, including but not limited to potentially contaminated equipment used to process or analyze blood and other potentially infectious materials.
3. Labels shall be orange or orange/red with lettering and symbols in a contrasting color as illustrated in the following examples.



Record Keeping

Both medical and training records shall be maintained and made available for examination and copying upon request by the MIOSHA director, the individual or with written approval the individual's representative.

Medical

The following information will be maintained for individuals at risk for exposure to blood and other potentially infectious materials. All medical records are kept confidential and shall be maintained for the duration of employment plus 30 years in accordance MIOSHA standard part 470 R325.3451

1. The individual's identity including name and social security number.
2. A record of their hepatitis B vaccination status including dates of administered or signed waiver.
3. Results of examinations, testing and follow-up procedures as they relate to the individual's ability to receive the HBV vaccination and/or wear protective clothing and equipment such as respirators.
4. Records related to any exposure incidents including copies of all information provided to the evaluating physician as well as copies of their post-exposure evaluation and written opinion.

Training

Training records shall be maintained for individuals with potential for exposure to blood and other potentially infectious materials as well as records of bloodborne infectious disease training sessions. Records will include

1. The names of the individuals trained and their job title
2. The date of the training sessions and a summary of the material covered during the session.
3. The names and qualifications of the person(s) conducting the training.

Sharps Injury Log

A sharps injury log for documenting percutaneous injuries from contaminated sharps is maintained in a manner that protects the confidentiality of the injured individual. The log is intended to track the devices causing the injuries, not the individual who is injured. Records are retained for 5 years beyond the end of the calendar year covered by the log. At a minimum, the log will include,

1. the type and brand of the device that caused the injury;
2. the laboratory or work area where the injury occurred;
3. an explanation of how the injury occurred.

TRAINING

Individuals at risk for exposure to blood and other potentially infectious materials shall be provided with appropriate training at the time of their initial work assignment and at least annually thereafter. This training is provided at no cost and during regular working hours. Training sessions shall be designed to allow for discussion, questions and answers as well as opportunities for supervised practice with personal protective equipment and other controls designed to limit exposure. The training program shall include the following elements:

1. Access to a copy of the MIOSHA bloodborne infectious diseases rules with an explanation of the rules
2. A general explanation of the epidemiology of bloodborne infectious diseases and their symptoms.
3. Access to a copy of the exposure control plan with an explanation of the plan and standard operating procedures.
4. Methods for recognizing and evaluating tasks that may involve exposure to blood and other potentially infectious diseases
5. The use and limitations of engineering and work practice controls.
6. The proper use and limitations of personal protective equipment including information on types, selection, location, removal, decontamination and disposal.
7. Information related to hepatitis B vaccination, including availability, efficacy, safety, benefits and methods of administration.
8. Responding to exposure incidents: first aid, emergency contact information, reporting, and post-exposure follow-up (medical evaluation and counseling).

9. An explanation of signs and labels.

REFERENCES

MIOSHA- STD 1209 Part 554. Bloodborne Infectious Diseases.

www.michigan.gov/documents/CIS_WSH_part554_35632_7.pdf

Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. CDC Morbidity and Mortality Weekly Report (MMWR); June 29, 2001 / 50 (RR11); 1-42;

www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm

APPENDIX A: STANDARD OPERATING PROCEDURES

See Standard Operating Procedures - Bloodborne Pathogens in resources box on our Biosafety webpage.

www.mtu.edu/research/administration/integrity-compliance/review-boards/recombinant-DNA/

APPENDIX B: HEPATITIS B VACCINE 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.

Employee Name (Print): _____

Signature: _____ Date: _____

APPENDIX C: BIOHAZARD SIGNS AND LABELS



BIOHAZARD
AUTHORIZED PERSONNEL ONLY
BIO SAFETY LEVEL 2

Biological Organisms/Materials Present:

Required Personal Protective Equipment (PPE)

Laboratory Coat, gloves and safety glasses required for work in this laboratory

Entry/Exit Requirements

All persons working in this laboratory must wear PPE. PPE is removed and hands are washed before exiting

Principal Investigator / Responsible Individual

Contact Information: