

# UNIVERSITY OF MICHIGAN

## **Exposure Control Plan for Non-Medical, Non-Lab Workers**

Required for compliance with OSHA Standard 29 CFR 1910.1030 “Occupational Exposure to Bloodborne Pathogens” and MIOSHA Standard Part 554 “Bloodborne Infectious Diseases”.

2001 revisions to OSHA's Bloodborne Pathogens Standard mandated by The Needlestick Safety and Prevention Act (Pub. L. 106-430)

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## **SECTION 1. GENERAL POLICY**

### **SCOPE:**

This policy applies to all non-hospital, non-lab University of Michigan departments whose employees may reasonably anticipate contact with blood or other potentially infectious materials<sup>1</sup> (OPIM) during the performance of their duties. In general, staff covered by this policy and regulation are public safety officers, safety and health professionals responding to emergencies, designated first aid and CPR rescuers and campus custodians. Other staff who may occasionally encounter blood or other potentially hazardous materials, such as maintenance workers and child care staffers are not covered by this policy and regulation, since exposure is not reasonably anticipated. Awareness training and procedures regarding bloodborne pathogens for staff in this category is available in the Addendum to this policy.

### **POLICY:**

In compliance with the Bloodborne Pathogens Standard, the University requires all departments that fall within the scope of this policy to minimize employee risk from exposure and infection by implementing Exposure Control Plans (ECP) in the form of departmental policy. See Appendix A for a model department bloodborne pathogen exposure control plan (“Dept. Plan”).

### **PROCEDURE:**

**EXPOSURE DETERMINATION** – OSEH staff in consultation with department staff, will determine which tasks or job assignments pose a risk of exposure according to procedures *described in Section 2* of this Exposure Control Plan. The determination results will be recorded in the Dept Plan, along with job titles or names of employees covered by the plan. Employees classified as occupationally exposed will qualify for various provisions of this policy addressing exposure control.

**METHODS OF COMPLIANCE** - Exposure control methods concerning administrative controls, engineering controls, personal protective equipment, and housekeeping will be implemented as part of the Dept. Plan. Details of the standard procedures are *described in Section 3* of this Exposure Control Plan.

**HEPATITIS B IMMUNIZATION PROGRAM** - The hepatitis immunization series will be provided, free-of-charge, to all employees covered in the Dept Plan. The immunization program will be conducted through an approved occupational medical provider, as *described in Section 5* of this Exposure Control Plan.

**POST-EXPOSURE EVALUATION AND FOLLOW-UP** – In the event an employee sustains an occupational exposure to human blood or body substances, evaluation, follow-up, and counseling will be provided free-of-charge. The evaluation and follow-up program will be conducted as *described in Section 6* of this Exposure Control Plan.

**COMMUNICATION OF HAZARDS TO EMPLOYEES** – The workplace risks associated with human body substances will be effectively communicated to at-risk employees. Prudent practices and mandatory

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<sup>1</sup> Blood or other potentially infectious materials include human blood and blood products or components. And saliva in dental procedures, semen, vaginal secretions, cerebrospinal, synovial, pleural, pericardial, peritoneal, amniotic fluids, and other body fluids visibly contaminated with blood. Urine and feces is NOT infectious unless visible blood is present. If it is not possible to determine if a body fluid is one of the above, then treat it as though it is infectious.

safety procedures in the ECP and Dept Plan will be described in detail. The information will be communicated to the employees in a manner *described in Section 7* of this Exposure Control Plan.

RECORDKEEPING - Employee records concerning training, exposures, medical surveillance, etc. will be maintained according to specific methods *described in Section 8* of this Exposure Control Plan. Sharps injury and exposures are reported to Work Connections and the logs are maintained by UM Risk Management.

ANNUAL REVIEW AND UPDATE - This Exposure Control Plan will be carefully reviewed and updated annually by OSEH. Dept Plans will be reviewed and updated annually by the individual responsible for the plan. Engineering controls will be evaluated for effectiveness and new technology will be considered.

SCHEDULE AND METHOD OF IMPLEMENTATION – Compliance with the Bloodborne Pathogens Standard became mandatory in 1992

## **SECTION 2. EXPOSURE DETERMINATION**

### **POLICY:**

The individual responsible for this program, in consultation with OSEH, shall determine the exposure risk of employees, both in terms of position descriptions and specific task categories, and classify the employees as “Occupationally-exposed” or “Non-exposed” for the purposes of training, recordkeeping, protective equipment, and Hepatitis B immunization. **Occupational Exposure** means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duty. **Other Potentially Infectious Materials (OPIM)** are defined by the regulation as (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

### **PROCEDURE:**

- Exposure determination will be made without regard to the use of personal protective equipment.
- The following information will be recorded in the Dept Plan:
  - - List all job/position descriptions/categories/titles in which ALL employees are potentially exposed.
  - - List all job/position descriptions/categories/titles in which SOME employees are potentially exposed.
  - - List all tasks and procedures (or groups of closely related tasks and procedures) in which potential exposure occurs.

Employees whose job/position descriptions/categories/titles are listed in the Dept Plan are entitled to the protection of the Bloodborne Pathogens Standard and this Policy. (Haz Comm and Lab Safety would not apply to BBP since there is a more specific standard)

### **SECTION 3. METHODS OF COMPLIANCE**

#### **POLICY:**

Tasks or operations with potential occupational exposure will minimize employee risk from bloodborne pathogens by selecting appropriate control measures from the list below, and implementing them in their Dept Plan.

#### **PROCEDURE:**

##### **General Administrative Controls**

- Universal precautions will be observed to prevent contact with blood or OPIM. Universal precautions are an approach by which all human blood and OPIM are treated as if they are potentially infectious for bloodborne pathogens.

##### **Engineering and Work Practice Controls**

- Engineering and work practice controls will be used to reduce or eliminate potential employee exposures to human blood and body fluids. Where occupational exposure remains, after institution of these controls, personal protective equipment will also be used.
- Engineering controls will be reviewed and updated on a yearly schedule to ensure their effectiveness.
- Readily accessible hand washing facilities will be provided to employees. When provision of hand washing facilities is not feasible in a work area, employees will be provided with either an appropriate antiseptic hand cleanser in conjunction with paper towels or antiseptic towelettes. Supervisors will ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.
- Supervisors will ensure that employees wash any exposed skin with soap and water and flush mucous membranes with water immediately following contact of such body areas with blood or other potentially infectious materials.
- Contaminated needles and other contaminated sharps will not be bent or recapped. Shearing or breaking of contaminated needles is prohibited. Under conditions where equipment does not allow single-handed needle disposal into a sharps container, such as dental syringe assemblies, contaminated needles may be recapped or removed through the use of a mechanical device or a one-handed technique.
- Immediately or as soon as possible after use, contaminated reusable sharps will be placed in appropriate containers until properly reprocessed. These containers will be:
  - Closable
  - Puncture resistant
  - Labeled or color-coded
  - Leak-proof on the sides and bottom
  - Stored or processed in a manner that does not require employees to reach by hand into the containers
- Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure. All procedures involving blood or other potentially infectious materials will be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

- Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping. When such specimens and containers are destined to leave the facility, they will be labeled with the internationally recognized biohazard logo and the word “biohazard”.
- If outside contamination of the primary container occurs, the primary container will be placed within a second container that prevents leakage and is properly labeled as containing biohazardous materials. If the specimen could puncture the primary container, the container will be placed within a second container that is puncture-resistant in addition to the above characteristics.
- Equipment that may become contaminated with blood or other potentially infectious materials will be examined prior to servicing or shipping and will be decontaminated as necessary, unless it can be demonstrated that the decontamination of such equipment or portions of such equipment is not feasible. A readily observable label containing the internationally recognized biohazard logo and the word “biohazard” will be attached to the equipment stating which portion remains contaminated. The departmental management will ensure that information pertaining to the contamination status of a piece of equipment is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping, so that appropriate precautions will be taken.

### **Personal Protective Equipment**

- When there is potential occupational exposure, employees will be provided, at no cost to the employee, with appropriate personal protective equipment such as, but not limited to gloves, face shields or masks and eye protection. Personal protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee’s work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use.
- The department will ensure that employees use appropriate personal protective equipment and that the equipment, in the appropriate sizes, is readily accessible at the worksite or is issued to employees. Employees who demonstrate sensitivity to certain personal protective items, such as latex gloves, will be supplied with hypoallergenic versions of the equipment or protective liners or alternative equipment that allows the same level of performance of duties.
- Cleaning and disposal of personal protective equipment will be provided by the department at no cost to the employees. The department will repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employees. If blood or other potentially infectious materials penetrate a garment, the garment will be removed immediately or as soon as feasible.
- All personal protective equipment will be removed prior to leaving the work area. When personal protective equipment is removed it will be placed in an appropriately designated area or container for decontamination or disposal. Gloves will be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, or non-intact skin; and when handling or touching contaminated items or surfaces. Disposable (single use) gloves, such as surgical or examination gloves, will be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.
- Disposable gloves will not be washed or decontaminated for re-use. Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured.
- Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, will be worn whenever splashes, spray, spatter, or droplets of blood or OPIM are generated.
- Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments will be worn in occupational exposure situations. Surgical caps or hoods

and/or shoe covers or boots will be worn in instances when gross contamination can reasonably be anticipated .

### **Cleaning Up Blood Spills**

- Departments with staff assigned to clean up small blood spills should have an SOP for such tasks. A template SOP is included in the Dept Plan, Appendix A.

### **Housekeeping and Waste Disposal**

- The department will ensure that the worksite is maintained in a clean and sanitary condition.
- Contaminated work surfaces will be decontaminated with an appropriate disinfectant after any spill of blood or other potentially infectious materials.
- All bins, pails, cans, and similar receptacles intended for reuse that have a reasonable likelihood for becoming contaminated with blood or OPIM will be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.
- Broken glassware that may be contaminated will not be picked up directly with the hands. It will be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps. Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach into the containers with their hands.
- Biohazard waste will be transferred to OSEH HazMat (3-4568) for proper handling.
  - Contaminated sharps waste will be immediately or as soon as feasible placed in containers that are:
    - closable
    - puncture-resistant
    - leak-proof on sides and bottom
    - labeled with the international biohazard logo and the word “biohazard”
  - When moving containers of contaminated sharps waste from the area of use, the containers will be:
    - closed prior to removal
    - placed in a secondary container if leakage is possible
  - The secondary container will be:
    - closable
    - constructed to contain all contents and prevent leakage during handling
    - labeled as biohazardous
    - Reusable containers will not be opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of needle sticks or cuts.
  - Non-sharps contaminated waste will be placed in containers that are:
    - closable
    - constructed to contain all contents and prevent leakage of fluids during handling
    - labeled as biohazardous
    - closed prior to removal.

**If outside contamination of the waste container occurs, it will be placed in a second container that meets the criteria listed in above.**

## **SECTION 4            HEPATITIS B IMMUNIZATION PROGRAM**

### **POLICY:**

One major bloodborne infectious disease, Hepatitis B, is entirely preventable through immunization. Employees covered by the Dept Plan must be offered immunization at the time they are assigned tasks with potential exposure. The department must cover the cost of the elective vaccination series, administered through an approved occupational medical provider.

### **PROCEDURE:**

- Immunization against Hepatitis B virus (HBV) by means of a vaccination series will be made available, by the supervisor, or by the OSEH Rep on behalf of Supervisors to all employees who are covered in the Dept Plan
- Employee participation in the Immunization Program will be on a completely voluntary basis and the Program will be provided at no cost to them.
- The Immunization Program consists of a series of three intramuscular vaccinations administered at times zero, one month and six months.
  - Vaccination will be made available by the supervisor within 10 working days of initial employee assignment; and after the employees have been given information on the HBV vaccine efficacy, safety, method of administration, the benefits of immunization, and that the vaccination series will be offered free of charge.
  - No post-vaccination testing of protective titer is indicated for this program
  - No follow-up serology testing is necessary after immunization – lifetime immunity has been documented.
- If the employee consents to participate in the Immunization Program, the vaccinations will be offered at a time and place convenient to the employee. The supervisor will complete the Form in Appendix B and the employee can take this to UM Occupational Health Services during work time. No appointment is necessary.
- 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.
- If an employee chooses not to participate in the immunization program, he/she may go to UM Occupational Health Services for a consultation before making a final decision. If declining vaccination a declination form (Appendix C) must be signed and kept on file either at UM Occupational Health Services or at the employee's department.
- If the employee initially declines to participate in the HBV immunization program, but at a later time decides to become immunized, the vaccination series will be made available at that time.

## **SECTION 5.            POST-EXPOSURE EVALUATION AND FOLLOW UP**

### **POLICY:**

All exposure incidents<sup>2</sup> to human blood and OPIM will be regarded as serious, reported promptly, evaluated by a trained healthcare professional, and treated according to Public Health Service (PHS) Guidelines (Management of Health-Care Worker Exposure to HIV and Recommendations for Post-exposure Prophylaxis, MMWR No. RR-07, May 15, 1998).

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<sup>2</sup> An "exposure incident" takes place when there is an incident of direct contact of the eye, mouth, mucous membrane or *non-intact* skin with blood or OPIM, while performing an assigned task. Examples are a splash to the face with no PPE worn or a puncture wound from potentially contaminated sharps.

## PROCEDURE:

- Upon injury from a suspected exposure source, the employee will attempt to determine the nature of the exposure and any biohazardous material associated with it.
- The employee will also attempt to carefully retain the exposure source and any biohazardous materials that may have constituted an exposure.
- If necessary, first-aid should be administered immediately for any cuts or punctures and any exposed skin should be washed with soap and water. The employee should report the injury to their supervisor within one hour.
- The supervisor will assess the situation and determine if the incident constitutes an occupational exposure to blood or OPIM. The supervisor will then locate and complete any necessary accident forms and refer the employee to **UM Occupational Health Services (ph. 998-8788)**.
- If the injury is received during normal work hours, the employee will present at UM Occupational Health Services (ph. 998-8788) as soon as possible and report that they have received an occupational injury of a potentially infectious nature. The supervisor will complete an Illness and Injury Report Form (<http://www.umich.edu/~connect/pdf/iirf.pdf>) and send to Work Connections. It should be sent with the employee or faxed to Occupational Health Services when completed.
- Persons with exposure injuries after the Occupational Health Services clinic closes at 4:30 pm, on weekends or holidays must report immediately to UMHS Emergency for medical evaluation and treatment. Employees will report that they are UM staff and have received an occupational injury of a potentially infectious nature.
- The employee will provide details of their injury to the occupational medical physician:
  - the type of injury the employee received
  - the type and samples of any biohazardous material the employee was exposed to
  - circumstances under which the exposure occurred
  - the hepatitis immunization status of the employee
- The physician will provide the employee with a confidential medical evaluation and follow-up of the incident:
  - evaluation of the exposure risk of the incident based on the exposure source
  - provide the employee with a written list of recommended options for testing and preventative treatment
  - explain to the employee the rationale and benefits of these tests and treatments.
- **Testing options** include Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Human immunodeficiency virus (HIV) antibody testing of any samples of biohazardous material to which the employee was exposed, and base-line testing of an employee blood sample for Hepatitis B & C and HIV Ab for determination of pre-exposure status.
- **Preventative treatment options** include Hepatitis B immunoglobulin (H-BIG) - protective antibody product) for short-term protection and HBV immunization for long-term protection against HBV. For the preventative treatments to be most effective the H-BIG must be given within 72 hours of exposure and HBV immunization must begin within seven days of exposure. Depending on the circumstances of exposure, oral anti-viral medication may be given per CDC guidelines.
- Employee acceptance of these tests/treatments will be on a completely voluntary basis and services will be provided at no cost to them.
- The medical provider will provide the University with a written opinion (physician's determination), within 7 days of the exposure incident. The report will summarize:
  - that the employee has been informed of the results of the evaluation and has been told about any medical conditions resulting from exposure to blood or other biohazardous materials that require further evaluation and treatment
  - whether HBIG or HBV vaccine was indicated for the employee, and if the employee has received such treatment

- all other findings or diagnoses will remain confidential and will not be included in the report.
- The University will provide the employee a copy of the physician's determination within 15 days of the exposure incident. A copy of the report will be included in the employee's permanent medical records at UM Occupational Health Services.
- If the employee eventually becomes ill or seroconverts (develops antibodies to the virus) as a direct result of occupational exposure to a bloodborne pathogen, the medical provider will update Work Connections which handles MIOSHA Recordkeeping and Worker's Compensation.
- The report will be confidential and will be sent to no other organization within the University.
- If the exposure source sample is positive or not available and the employee is negative for HBV, HCV, and HIV, follow up testing will be made available to them at 3 months and 6 months.
- If occupational exposure of the employee to a bloodborne pathogen is confirmed, the University shall provide, through the healthcare service, confidential counseling and evaluation of any consequent illness that the employee reports for a period of up to 6 months.

## **SECTION 6. COMMUNICATION OF HAZARDS TO EMPLOYEES**

### **POLICY:**

Employees must be informed of the risks associated with the human blood and body substances they use, and required precautions they must follow to protect themselves and fellow workers. Labels, signs, and other written information assure that employees are aware of the hazardous materials in their workplace. Use of this information and precautions will reduce the risk of employee exposure to bloodborne pathogens.

### **PROCEDURE:**

#### **Labels and Signs**

- Warning labels must be affixed to or printed on containers and bags of biohazardous waste and other containers used to contain, store, or transport blood or other potentially infectious materials (OPIM).
- Labels must include the internationally recognized biohazard logo and the word "biohazard."
- The labels must be printed on stickers as **black-on-orange** and on bags as **red-on-clear**.
- Labels must be affixed at a conspicuous location on the container by direct print or adhesive.
- Contaminated equipment must be labeled as biohazardous and indicate which parts are contaminated.

#### **Information and Training**

- The department will ensure that all employees with occupational exposure participate in a training program that must be provided during working hours.
- The training will be provided at the time of initial assignment and at least annually thereafter.
- The bloodborne pathogens training program is provided by UM-OSEH and/or the department and covers basic risks and prudent practices to avoid occupational exposure:
  - **Bloodborne Pathogens Standard** purpose, policy and responsibilities
  - **Modes of transmission, epidemiology, and symptomatology** of bloodborne diseases
  - **Exposure Control Plan** - means by which the employee may obtain a copy of the document
  - **tasks and other activities** that may involve exposure to blood and other potentially infectious materials
  - **methods that will prevent or reduce exposure** - including appropriate engineering controls, work practices, and personal protective equipment

- **personal protective equipment** - types, selection, proper use, storage location, removal, handling, decontamination and disposal.
- **hepatitis B immunization program** - including information on the efficacy, safety, administration, and benefits of the vaccine and that the vaccine will be offered at no cost to the employees
- **appropriate actions to take and persons to contact in an emergency**
- **procedure to follow if an exposure incident occurs** - including the method of reporting the incident and the medical follow-up that will be made available
- **post-exposure evaluation and follow-up** that the department is required to provide for the employee following an exposure incident
- **labels, signs and color-coding pertaining to biohazards** required by departmental policy
- **opportunity for interactive questions and answers**
- The department must also instruct employees on any site-specific risks and safety procedures for their assigned tasks outlined in the Dept. Plan.

## **SECTION 7. RECORDKEEPING**

### **POLICY:**

Accurate records of required safety services must be carefully maintained for the Bloodborne Pathogens Standard to be effective.

### **PROCEDURE:**

#### **Medical Records**

- UM Occupational Health Services maintains accurate records for each employee with an exposure incident. These records include:
  - the name and employee number
  - a copy of the employee's hepatitis B immunization status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination or their declination form if applicable
  - a copy of all results of examinations, medical testing, and exposure incident follow-up procedures
  - a copy of the physician's written opinion concerning hepatitis B vaccination and post-exposure evaluation and follow-up
- The University will ensure that the employee medical records are kept confidential and are not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by availability provisions the Michigan Occupational Safety and Health Act (MIOSHA).
- The University, through UM Occupational Health Services, will maintain the employee medical records for at least the duration of employment plus 30 years.

#### **Training Records**

- Training records will be maintained at OSEH (or the dept conducting training) and must include:
  - the dates of the training
  - the contents or a summary of the training
  - the names of persons conducting the training
  - the names and job titles of all persons attending the training sessions
- The University will maintain all training records for a period of 3 years after the training occurred.

### **Vaccination/Declination Records**

- Vaccination and declination records will be maintained by the University department offering vaccines or by UM Occupational Health Services and will be accessible for review by OSEH and to Michigan Dept of Labor and Economic Growth (MDLEG) inspectors.

### **Availability**

- The University will ensure that all medical records are made available upon request to the MDLEG for examination and copying.
- The University will ensure that all medical records will be provided upon request for examination and copying to the subject employee and to anyone having written consent of the subject employee.
- The department will ensure that all training records are provided upon request for examination and copying to employees and to employee representatives.

### **Sharps Injury Log**

- A sharps injury log is required for percutaneous injuries from contaminated sharps. It must be confidential to protect the privacy of the injured person by using alternative identifiers other than name. Work Connections will maintain this log.

The information to be maintained in the log is the type and brand of the device, location of the incident, and a description of how the injury happened.