**BLOODBORNE PATHOGEN EXPOSURE CONTROL PROGRAM**

Effective: December 15, 2010  
Revised: January 17, 2014

**PURPOSE:**
The purpose of this program is to reduce or eliminate occupational exposure to Hepatitis B Virus, Human Immunodeficiency Virus (HIV), and other bloodborne pathogens that employees may encounter in their workplace. This plan covers all Facilities Management employees who may come in contact with bloodborne and all other potential pathogens via any route of transmission while completing their work assignments.

Additional exposure control information regarding pathogen exposure from research animal contact can be accessed through Research Animal Resources, http://www.ahc.umn.edu/rar/safety.html.

**DEFINITIONS**
- **Bloodborne Pathogens** are pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
- **Blood** is human blood, human blood components, and products made from human blood.
- **Parenteral** means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.
- **Occupational exposure** is 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 assigned duties.
- **Other potentially infectious materials** are:
  - Human body fluids including 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.
  - Unfixed tissue or organ (other than intact skin) from a human (living or dead).
  - 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.
- **Regulated Waste** includes 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 that 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.

**PROGRAM COMPONENTS:**
1. Roles and responsibilities
2. Exposure determination
3. Preventing a bloodborne pathogen exposure
4. Hepatitis B vaccination
5. Post-exposure evaluation and follow-up
6. Labels and signs for hazard communication
7. Training and recordkeeping

**ROLES AND RESPONSIBILITIES**

**Facilities Management Directors and Associate Directors**
- Ensure this Program is implemented by supervisors and employees with occupational exposure to bloodborne pathogens.

**Facilities Management Supervisors**
- Ensure compliance with the FM Bloodborne Pathogen Exposure Control Program in their work areas by working directly with employees to promote and ensure that proper exposure control procedures are followed.
- Inform all employees of potential hazards in the work place.
- Investigate and report exposure incidents and take the necessary action to prevent similar incidents from occurring.
- Provide work-specific safety training prior to initial work assignment and annually thereafter. Training to include:
  - personal protective equipment (PPE) requirements for specific tasks including the location, removal, and disposal of PPE
  - safe work practices/equipment to reduce risk of exposure
  - exposure response
  - occupational health
- Maintain appropriate training records and HBV vaccination/declination documentation.

**Facilities Management Employees with Potential Occupational Exposure**
- Employees are responsible for the day-to-day implementation of the Exposure Control Plan as part of their work procedures.
- Understand potential exposure from work tasks and route of exposure
- Conduct all tasks in accordance with the practices described in the Exposure Control Program, S.O.P.’s, and training.
- Wear and maintain the required Personal Protective Equipment
- Practice good personal hygiene habits
- Participate in initial and annual bloodborne pathogen training
- Complete a Hepatitis B Vaccination Consent/Declination form when requested.

**Facilities Management Safety**
- Revise and update the Facilities Management Bloodborne Pathogen Exposure Control
Program and associated safe operating procedures (SOP’s).
- Evaluate program effectiveness on an ongoing basis.
- Schedule annual training sessions for Facilities Management (FM) employees.
- Assist Supervisor/Foreman with incident investigations and follow-up.
- Assist the Workers Compensation Claims Administrator as necessary throughout the claim process.
- Coordinate the restocking of FM First Aid kits, to include gloves and CPR masks.

Record any incidents for entry onto the OSHA Form 300.

EXPOSURE DETERMINATION
- Supervisors need to identify those employees and job classifications that have occupational exposure to potentially infectious materials as defined above. For each new work assignment, the supervisor will make an individual employee exposure determination related to potential bloodborne pathogen exposure without regard to the use of personal protective equipment (PPE).
- Job classifications are identified in Appendix A:
  - In which all employees have occupational exposure to bloodborne pathogens
  - In which some employees have occupational exposure to bloodborne pathogens
  - Tasks and procedures in which occupational exposure to bloodborne pathogens occur (these tasks and procedures are performed by employees in the job classifications shown on the two previous lists)
- FM Safety along with Supervisors will update the Job Classifications lists as tasks, procedures, and classifications change.

PREVENTING A BLOODBORNE PATHOGEN EXPOSURE
The following methods are to be implemented independently or in combination to prevent a bloodborne pathogen exposure.
1. Universal Precautions
   - All human blood/body fluids and other human materials (i.e. feces, urine etc.) are to be treated as if they are infectious for bloodborne or other pathogens. All body fluids are assumed to be potentially infectious in circumstances where it is difficult or impossible to differentiate between body fluid types.
2. Engineering Controls and Other Safety Equipment that isolate or remove the bloodborne pathogens hazard from the workplace:
   - Are used whenever possible to eliminate or minimize employee exposure to bloodborne and other pathogens
   - Are reviewed annually for the availability of safer and more effective options
   - Containers for contaminated sharps must be puncture-resistant, color-coded or labeled with a biohazard warning label, leak-proof on the sides and bottom, and closable. Prior to Facilities Management personnel handling or transporting contaminated sharps containers, containers must be free of defects and sealed closed.
d. Red bags of potential contaminated bloodborne pathogen materials must be free of leaks and sealed closed before being handled or transported by Facilities Management personnel. For storage and transporting red bags that have been sealed closed for disposal, the red bags must be placed in red plastic puncture resistant containers appropriately labeled as Bio Hazard waste.

3. Work Practice Controls.
   a. It is the responsibility of supervisors to oversee the implementation of work practice controls to prevent bloodborne pathogen exposures.
   b. Facility Management’s “Standard Operating Procedure for Decontaminating and Cleaning Body Fluids or Blood Spills” outlines procedures for trained personnel to follow when responding to these incidents.
   c. Thoroughly wash hands, and any other skin, with soap and water immediately, or as soon as feasible, following contact with blood or other potentially infectious materials, and after removal of gloves or other personal protective equipment.
   d. Thoroughly flush mucous membranes with water immediately, or as soon as feasible, following contact with blood or other potentially infectious materials.
   e. When it is not feasible to provide a sink, such as for field work, antiseptic hand cleansers may be used as an appropriate hand washing practice. If antiseptic hand cleansers are used, hands shall be washed with soap and running water as soon as feasible.
   f. Contaminated sharps must be placed in appropriate puncture-resistant containers immediately, or as soon as possible, after use. Sharps are not to be disposed in regular trash.
   g. Because of the risk of accidental skin punctures from improperly disposed-of needles and other sharps, employees are not to sort through trash or compress trash by hand. Red bags and ordinary trash bags are to be grabbed by the neck only and held away from the body during handling and transport for disposal.
   h. Lab staff or other generators of potentially infectious materials will place the materials in a container labeled appropriately as a Biohazard. The container must prevent leakage during collection, handling, processing, storage, or transport. If outside contamination of a primary container occurs, the generator of the waste will place that container within a second leak-proof container appropriately labeled for handling and storage. If potentially-contaminated materials can puncture the primary container, the secondary container must also be puncture-resistant.
   i. FM Staff will not handle waste biohazard containers, such as red bags, that:
      1. Are more than 3/4 full
      2. Are not properly closed
      a. Do not completely contain biohazard waste
         Have spills or splatters on the outside of the bag
b. are leaking through holes or tears
c. contain pipettes or sharps that are not in an approved container

3. Are too heavy to carry by the neck of the red bag.

ii. FM Staff will not handle sharps containers that are not completely closed or that have spills or splatters on the outside of the container.

iii. FM staff is to leave the container where found and inform their Supervisor. The Supervisor is to investigate the unsafe red bag, take a photo(s) for documentation and note the lab number. ‘Red Bag Defective’ tags can be printed and attached to the unsafe red bag to communicate to the lab staff. Lab staff is responsible to properly repackage the waste.

iv. The Red Bag Defective Tag shown in the Appendix can be used to communicate to lab staff why their bag(s) were not moved.

i. Employees are to report sharps work related injuries and incidents to their supervisor immediately. The supervisor will investigate and report the injury using the FM Injury Reporting and Investigation Procedure.

j. 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 is not kept in refrigerators, freezers, on countertops or in other storage areas where blood or other potentially infectious materials are present.

k. When transporting biological material between buildings within the university, biological material will be stored in primary and secondary containers. Containers must be:
   i. Leak-proof & closable
   ii. Labeled with appropriate biohazard label
   iii. Puncture-resistant

l. Equipment that becomes contaminated will be decontaminated by the users of the equipment prior to servicing or shipping. If decontamination is not feasible, an appropriate biohazard warning label will be attached to identify the type of contamination and the contaminated areas. Before equipment is handled, serviced, or shipped, contamination information will be conveyed to all affected employees, the intended equipment receiver, and any equipment service representative.

4. PERSONAL PROTECTIVE EQUIPMENT (PPE)
   a. The supervisor is responsible for ensuring that appropriate personal protective equipment (PPE) in the appropriate sizes is readily accessible at the worksite, issued to employees, and the use of PPE is enforced and made mandatory. Required PPE is provided at no cost to employees. This equipment may include, but is not limited to:
      i. Disposable nitrile or vinyl Gloves
      ii. Disposable gowns & lab coats
iii. Face shields/masks
iv. Safety glasses/goggles
v. Mouthpieces/resuscitation bags/pocket masks or other ventilation devices
vi. Hoods & shoe covers

b. Hypoallergenic gloves, glove liners, powderless gloves, or similar alternatives are to be made readily accessible to those employees who are allergic to the gloves normally provided.

c. Puncture resistant gloves may be layered with nitrile or vinyl gloves to provide added puncture resistance.

d. Prior to a work assignment with a potential bloodborne pathogen exposure, employees are to be trained regarding the use of appropriate personal protective equipment and safe work practices for the work tasks/procedures they are to perform. If necessary, additional training is provided when an employee takes a new position or is assigned new tasks/procedures. To determine whether additional training is needed, the supervisor is to compare the employee's previous job classification and functions to their new job classification or functions.

e. To ensure that personal protective equipment is not contaminated and is in good condition to protect employees from potential exposure, the following safe work practices are to be implemented:
   i. All personal protective equipment is to be inspected by the employee before each use and repaired or replaced as needed to maintain effectiveness.
   ii. Reusable personal protective equipment is to be cleaned, laundered and decontaminated as needed.
   iii. Single-use personal protective equipment (or equipment that cannot be decontaminated) is to be disposed of as biohazard waste.

f. To ensure that personal protective equipment is used as effectively as possible, employees will adhere to the following safe work practices:
   i. Any garments penetrated by blood or other infectious materials will be removed immediately, or as soon as feasible.
   ii. All personal protective equipment will be removed prior to leaving the work area. It shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.
   iii. Gloves will be worn:
      1. Whenever employees anticipate hand contact with potentially infectious materials
      2. When handling or touching potentially contaminated items or surfaces
   iv. Disposable gloves are replaced as soon as practical after contamination or if torn, punctured, or otherwise lose their ability to function as an "exposure barrier". Disposable (single use) gloves are not to be washed or decontaminated for re-use.
   v. Utility gloves may be decontaminated for reuse unless they are cracked, peeling, torn or exhibit other signs of deterioration, at which time they are disposed.
vi. Masks in combination with eye protection such as goggles or glasses with solid side shields, or chin-length face shields, are used whenever splashes, sprays, or droplet generation of infectious material, can be reasonably anticipated.

vii. Protective clothing is worn whenever potential exposure to the body is anticipated. Type and characteristics of protective clothing will depend on the task and the degree of exposure that is anticipated.

viii. Shoe covers/boots and surgical caps/hoods are used in any instances where "gross contamination" is anticipated.

5. HOUSEKEEPING AND WASTE DISPOSAL
   a. Worksites must be maintained in a clean and sanitary condition. All equipment and surfaces are cleaned and decontaminated immediately, or as soon as feasible, after spills or other contact with blood or other potentially infectious materials.
   b. Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush) and disposed of as Biohazard Waste.
   c. All infectious waste, including regulated waste (see Section VI Definitions), is disposed of as Biohazard Waste.

HEPATITIS B VACCINATION
The Hepatitis B vaccination is offered after initial bloodborne pathogen training and within 10 days of work assignment to all employees who have occupational exposure to bloodborne pathogens, unless the employee has previously received the complete hepatitis B series, antibody testing has revealed that the employee is immune, or the vaccine if contraindicated for medical reasons.

The vaccination consists of a series of three inoculations over a six-month period and are given at no cost to the employee. A HealthPartners Clinic will provide the vaccine after a departmental EFS number is presented. Visit Occupational Health Clinical Services for appointments and clinic locations, http://www.ohs.umn.edu/ohp/home.html. If the employee declines the vaccine a Declination Form (Appendix B) must be signed and kept in the employee’s file. The employee may accept the vaccination at a later date.

POST-EXPOSURE EVALUATION AND FOLLOW-UP
The following procedures are followed when exposure to bloodborne or other infectious pathogens may have occurred.

1. Incidents involving potential exposure to bloodborne pathogens or other infectious pathogens are to be reported to the employee’s supervisor immediately or as soon as possible. A First Report of Injury and a Supervisor Incident Investigation Report must be completed and submitted.

2. Following a report of an exposure incident, the employee is provided confidential medical treatment, evaluation, and follow-up under the supervision of a licensed physician or another licensed health care professional. Post-exposure evaluation and follow-up to bloodborne pathogens exposure must include:
a. Documentation of the routes(s) of exposure and the circumstances under which the
exposure incident occurred.

b. Identification and documentation of the source individual, unless it can be established
that identification is infeasible or prohibited by state or local law.

c. The source individual’s blood shall be tested as soon as feasible and after consent is
obtained in order to determine HBV and HIV infectivity. If consent is not obtained,
the University shall establish that legally required consent cannot be obtained. When
the source individual’s consent is not required by law, the source individual’s blood,
if available, shall be tested and the results documented.

d. If the source individual is already known to be infected with HBV or HIV, testing
need not be repeated.

e. Results of source individual’s testing shall be made available to the exposed
employee, and the employee shall be informed of applicable laws and regulations
concerning disclosure of the identity and infectious status of the source individual.

f. If the employee agrees to blood collection and testing following an exposure incident,
it will be done as soon as possible after consent is given.

g. If the employee consents to baseline blood collection at the time of the exposure, but
does not give consent at that time for HIV serologic testing, the sample shall be
preserved for at least 90 days. If, within 90 days of the exposure incident, the
employee elects to have the baseline sample tested, such testing shall be done as soon
as feasible.

h. An exposed employee will be offered post-exposure prophylaxis, when medically
indicated as recommended by the U.S. Public Health Service, counseling, and
evaluation of subsequent reported illnesses

3. The employee's supervisor will investigate the circumstances surrounding the incident to
determine what action (training, change in work practice, engineering controls, etc.) must be
taken in order to prevent similar incidents in the future.

4. All personal employee medical records are confidential; information will not be disclosed
without the employee's written consent. Medical records, with regards to an occupational
exposure, will be maintained for at least the duration of employment plus 30 years.

5. The healthcare professional evaluating an employee after an exposure incident will be
provided the following information:
   a. A copy of the Bloodborne Pathogen Standard
   b. A description of the exposed employee’s duties as they relate to the exposure
      incident.
   c. Documentation of the route(s) of exposure and circumstances under which the
      exposure occurred.
   d. Results of the source individual’s blood testing, if available.
   e. All medical records relevant to the appropriate treatment of the employee including
      vaccination status which are the employer’s responsibility to maintain.

6. The University shall obtain and provide the employee with a copy of the evaluating
healthcare professional’s written opinion within 15 days of the completion of the evaluation.
The written opinion shall be limited to the following information. All other findings or
diagnoses shall remain confidential and shall not be included in the written report
   a. Documentation that the employee has been informed of the results of the evaluation.
b. Documentation that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

LABELS AND SIGNS FOR HAZARD COMMUNICATION
1. Biohazard warning labels and signs are used to communicate hazards to employees. Labels and signs display the Biohazard symbol and are colored fluorescent orange or orange-red. Labels are affixed to:
   a. Biohazard waste containers, sharps disposal containers, laundry bags
   b. Other containers used to store, transport or ship blood and other infectious materials
   c. Refrigerators/freezers containing blood or other potentially infectious materials
   d. Contaminated equipment with indication of which portion of equipment is contaminated
2. Biohazard signs are posted at entrances to all Biosafety Level 2 research laboratories including HIV & HBV. The sign must indicate if any special requirements are needed for entry and the name and phone number(s) of the lab director or other responsible person.

TRAINING & RECORD KEEPING
It is the responsibility of individual work unit to identify employees needing training and ensure that training is completed. Bloodborne Pathogen training is required for all FM employees.

All employees are provided Bloodborne Pathogen/Infectious Material training at the time of initial assignment to tasks where occupational exposure may take place and at least annually thereafter. All new employees, as well as employees changing jobs or job functions, will be given additional job-specific training prior to beginning new work assignments.

1. Training content will include but not be limited to:
   a. An accessible copy of the Bloodborne Pathogens Standard
   b. The epidemiology and symptoms of bloodborne and other diseases
   c. The modes of transmission of bloodborne and other pathogens
   d. Facility Management’s Exposure Control Program
   e. Appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials
   f. A review of the use and limitations of methods that will prevent or reduce exposure, including: engineering controls; work practice controls; and personal protective equipment.
   g. Selection and use of personal protective equipment including: types available & location; proper use; removal and handling; and decontamination and disposal.
   h. An explanation of biohazard labels, signs and "color-coded" containers
   i. Information on the Hepatitis B Vaccine, including: efficacy & safety; method of administration; benefits of vaccination; no cost to employee.
   j. Post exposure evaluation procedures as outlined above.

2. Training Methods
a. Training is conducted annually for all FM employees. Training opportunities make use of several training techniques including, but not limited to the following:
   i. Group presentations
   ii. Videotape programs
   iii. Fact Sheets and handouts

3. Training Records
   a. Each work unit is responsible for maintaining training documentation for all employees who have potential exposure to bloodborne or other pathogens. Records will include:
      i. Dates of all training sessions
      ii. Contents/summary of the training sessions
      iii. Names of the instructor(s)
      iv. Names and job titles of employees attending the training sessions
   b. Training records will be kept for a minimum of three years.

APPENDICES:
   A - Exposure Determination By Job Classification
   B – Hepatitis B Vaccination Consent/Declination

Resources:
- “Standard Operating Procedure for Decontaminating and Cleaning Body Fluids or Blood Spills”, located at: K:\FM\Safety\SOPs & Guidance

## APPENDIX A

### EXPOSURE DETERMINATION BY JOB CLASSIFICATION

Job classifications in which employees may have occupational exposure to tasks that involve exposure, or the potential for exposure, to blood or other potentially infectious material, or tasks that involve a potential for spill or splashes of blood or other potentially infectious material:

<table>
<thead>
<tr>
<th>Title</th>
<th>Occupational Exposure Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Driver</td>
<td>• Handling red bags, barrels and needle boxes containing infectious waste</td>
</tr>
<tr>
<td>B&amp;G</td>
<td>• Handling red bags, barrels and needle boxes containing infectious waste</td>
</tr>
<tr>
<td></td>
<td>• Cleaning medical and lab areas</td>
</tr>
<tr>
<td></td>
<td>• Cleaning spills involving potential bloodborne pathogens</td>
</tr>
<tr>
<td>Plumber/Pipefitter</td>
<td>• Drain pipe maintenance</td>
</tr>
<tr>
<td></td>
<td>• Maintenance of animal disposal units</td>
</tr>
</tbody>
</table>
Please read the information below and sign one of the two sections:

INFORMED REFUSAL:
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.

Print Name: __________________________________________________________
Signature: __________________________________________________________
Date: ____________________________

INFORMED CONSENT:
I want to participate in the Hepatitis B vaccination program. I have been informed of the possibility of adverse reactions to the vaccination and my questions have all been answered to my satisfaction. I understand that there is no guarantee the vaccine will be fully effective and I have been instructed on how to prevent blood and body fluid exposures in the course of my work responsibilities.

Print Name: __________________________________________________________
Signature: __________________________________________________________
Date: ____________________________

Date of 1st Shot: ____________________________
Date of 2’nd Shot: ____________________________
Date of 3’rd Shot: ____________________________
APPENDIX C

RED BAG DEFECTIVE TAG

ATTENTION Lab Staff

Unsafe Biohazard Bag Condition found on ________________ (date).

Before this bag can be removed for disposal, Lab Staff must correct the following unsafe condition(s):

___ More than ¾ full
___ Not properly closed
___ Spills or splatter on outside of bag
___ Leaking through holes or tears
___ Pipettes or sharps loose in bag
   (not in approved container)
___ Too heavy
___ Other, specify: __________________

If you have questions about this notice, please contact:

Name _______________________

Contact Info ___________________

For info on safely handling biohazardous waste call UMN’s DEHS at 612-626-6002. For waste disposal info contact FM Call Center at 612-624-2900 or fmcc@umn.edu.