



Bloodborne Pathogen Exposure Control Plan

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UAHuntsville

Office of Environmental Health and Safety

Revised on April 2013

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I. Introduction

In accordance with the OSHA Bloodborne Pathogens Standard, 29 CFR 1910.1030, http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051 the Exposure Control Plan (ECP) is developed to eliminate or minimize the occupational exposure to bloodborne pathogens (BBP), which are defined, as: Pathogenic microorganisms that are present in human blood, human body fluids, human tissues or other potentially infectious material.

In addition to blood, other potentially infectious materials are:

- 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;
- Any unfixed tissue or organ other than intact skin from a human (living or dead);
- Human cell lines or cultures, human tissue cultures, human organ cultures;
- Blood, body fluids or other tissues from non-human primates
- Blood, body fluids or other tissues from experimental animals infected with BBP
- Liquid or solid culture medium or other materials containing biological agents capable of causing disease in healthy adults (i.e. equivalent to agents handled at Biosafety Level 2 or above, visit <http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm> for more information).

II. Scope

This Standard applies to all University of Alabama in Huntsville (UAH) faculty, staff and student employees that may reasonably anticipate skin, eye, mucous membrane, or parenteral (under the skin) contact with blood or other potentially infectious materials during the performance of their job duties at the UAH.

III. Responsibilities

A. Office of Environmental Health & Safety

The Office of Environmental Health & Safety (OEHS) is responsible for the administration of UAH EHS policies. The OEHS is responsible for the development and administration of the UAHuntsville Hazard Communication Program. OEHS will:

- Serve as the university authority and source of information for the UAHuntsville Bloodborne Pathogen Plan
- Develop and revise the written UAHuntsville Bloodborne Pathogen Plan as necessary and or every third year

- Assists the colleges, schools, and departments in the development and implementation of programs, including training, emergency response, and analysis of specific problems so that compliance is practical at the unit level.
- Evaluate the effectiveness of departmental Bloodborne Pathogen Exposure Control Plans
- Responsible for all official UAH contacts with external governmental regulatory agencies concerned with workplace environmental health and occupational safety compliance. In consultation with the UAH Office of Council, OEHS shall coordinate all UAH responses to regulatory agencies' inquiries, complaints, lawsuits, and other formal proceedings.
- Maintains a contract for the disposal of biohazard waste

B. Colleges, Schools, and Other University Departments

It is the responsibility of each college, school, and administrative department to conduct its operations in accordance with all applicable laws and regulations, and to implement UAH's environmental health and safety policies.

With the professional guidance and assistance of OEHS, these responsibilities include, but are not limited to:

- Training
- Informing employees about workplace hazards and safety procedures
- Conducting inspections and correcting violations
- Investigating incidents and employee complaints
- Enforcing policies
- Appropriate documentation of activities and processes

Each dean and major operating unit director shall designate an Environmental Health & Safety Compliance Officer to be responsible for the coordination of operations within the colleges, schools, or major operating unit departments.

The EHS compliance officer shall have delegated authority from the dean, chair, or director for managing environmental health and safety activities in the college, school, or department, including authority to establish procedures, investigate complaints and incidents, and audit performance.

The EHS compliance officer will have the responsibility to report activities to the delegating authority as well as the director of OEHS. The departmental EHS compliance officers serve as associates and adjuncts to OEHS professional staff within the scope of this policy.

C. Department Environmental Health & Safety Compliance Officer

Department EHS Compliance Officers receive their authority directly from the Deans or Directors and, at their discretion, are limited to specific assigned duties. Restrictions due to

limited department and university resources for maximum implementation of all desired EHS Programs make it imperative that Department EHS Safety Compliance Officers act at all times in full cooperation with their Deans or Directors.

The OEHS will provide periodic training sessions. Meetings with the OEHS will ensure timely assistance and / or advice for compliance with required laws, standards and procedures;

Department EHS Compliance Officers responsibilities will typically include:

- Liaison with the EHS Department;
- Assist the Dean or Director in the development and implementation of EHS Programs;
- Primary department resource person for coordinating EHS activities;
- Insure periodic inventory and self- audits are conducted;
- Conduct EHS inspections and document the inspections
- Assist and expedite correction of identified deficiencies.

D. UAH Environmental Health & Safety Committee

The UAH EHS Committee serves as the primary source of policy guidance on all matters pertaining to environmental health and safety compliance and related regulatory developments. The UAH EHS Committee is responsible for recommending policies that will ensure compliance with current environmental health and safety regulations to the President.

The committee is charged with examining the gradations of response possible for a given environmental health and safety regulation and recommending what it believes to be the most appropriate course of action for the institution and its employees. In this context, the committee recommends UAH policy for approval by the President and monitors regulatory developments and compliance.

The UAH EHS Committee is advisory to the President and includes representation by members of the faculty and administration. The Assistant Vice President for Research serves on the committee to facilitate research input on all committee issues.

E. Special Committees

Faculty-chaired committees overseeing aspects of the UAH EHS program impacting research activities (Chemical Safety Committee, Institutional Biosafety Committee, Radiation Safety Committee, Machine Shop Safety Committee) shall maintain their role of faculty governance and shall report to and be appointed by the Vice President for Research. Additionally, the Chemical Safety Committee, Institutional Biosafety Committee and the Radiation Safety Committee review research proposals relative to their field of expertise.

These committees and other non-faculty chaired EHS committees will be responsible for recommending policies related to their area of program oversight to the EHS Committee.

F. UAH Faculty, Staff, and Students

It is the responsibility of individuals to conduct their activities at UAH in compliance with all applicable government, UAH, and department policies and regulations.

The success of UAH's environmental health and safety management activities directly depends upon the active involvement of individuals through participation in training; abiding by established safety and environmental procedures; reporting hazards and potential violations of regulations; and recommending improvements.

UAH faculty, staff, students, and anyone using UAH resources or property shall follow established UAH EHS policy and abide by federal, state, and local laws and regulations.

Department heads and supervisors are responsible for ensuring their employees comply with the provisions of this plan. Each department is responsible for providing all necessary supplies such as personal protective equipment, soap, bleach, Hepatitis B vaccinations, etc. to its employees.

The BBP will be reviewed and updated every third year or as necessary by the UAH OEHS. Additional information can be found in the University Biosafety Manual and the webpage of the UAHuntsville Office of Environmental Health & Safety (<http://www.uah.edu/OEHS/>).

Questions or concerns can be addressed to the OEHS at (256) 824-2171.

IV. BBP Exposure Determination

BBP Exposure Determination is made without regard to the use of personal protective equipment (i.e., employees whose expected job functions include occupational exposure to blood or other potentially infectious material are considered to be exposed even if they wear personal protective equipment). The purpose of an exposure determination is to identify the UAH job classifications that are required to comply with this BBP.

Each University unit must develop a list of **job classifications** and/or job descriptions under their supervision that may have occupational exposure to bloodborne pathogens. Supervisors are responsible to enforce compliance with this BBP Plan for all applicable employees.

Employees that provide first aid as a collateral duty, such as Wellness Center, the UAHuntsville Faculty and Staff Clinic, nursing staff and students, police officers, custodians, athletic trainers or those trained to use the AED (Automated External Defibrillators), may have exposure to bloodborne pathogens and must comply with the BBP.

V. Compliance Methodology

UAH protects its employees by implementing a Bloodborne Pathogens Exposure Control Plan. UAH follows all "Universal Precautions" to help keep employees protected and healthy when there may be the potential to come into contact with blood or other body fluids. These "Universal Precautions" help to prevent the spread of infection. These precautions treat all human blood, body fluids and other potentially infectious fluids as if they are infectious.

A. Exposure Control Plan

Employees covered under this exposure control plan must receive an explanation of hazards of their jobs and how to protect themselves as per this Exposure Control Plan during their initial training session. All employees have the opportunity to review this plan at any time during their work shifts by visiting <http://www.uah.edu/OEHS/>. When requested by an employee, a copy of the BBP will be provided free of charge. The UAH OEHS is responsible for reviewing and updating the Exposure Control Plan annually or more frequently if necessary to reflect new regulations or modified tasks and procedures that affect occupational exposure.

This plan has many stages to eliminate or reduce potential risk of exposure to employees. These stages include:

1. Engineering controls

2. **Work practice controls**
3. **Use of personnel protective equipment**
4. **Employee training**
5. **Vaccination**

1. Engineering Controls

Engineering Controls are controls that isolate or remove the bloodborne pathogen's hazard from the workplace. Examples: sharps disposal containers, self-sheathing needles, safer medical devices such as sharps with engineered sharps injury protections and needleless systems. Where potential for occupational exposure still exists after implementation of these controls, personal protective equipment shall also be utilized. UAH will identify the need for changes in engineering controls and work practices through reviews of the sharps injuries with follow-up exposure investigation and through discussion with the appropriate supervisor and or safety committee.

1.1. Sharps Containers: The container is to be open when in use to allow unobstructed access and securely closed for disposal in a waste stream designated for biohazardous waste. Only approved sharp containers are to be utilized. The person disposing of sharps is responsible for monitoring the container and disposing of the container when it is two-thirds full. Contact the **OEHS at 2352** for sharps disposal.

1.2. Biosafety Cabinets: The person working in the cabinet will disinfect the work surface of the Biosafety Cabinet after each use. If the cabinet has a front drain, it will be checked monthly, disinfected, and drained if required. The cabinet will have an annual performance certification that the Principal Investigator is responsible for arranging. This certification is also required prior to initial cabinet use or prior to use after any cabinet relocation.

1.3. Sharps with Engineered Sharps Injury Protections: These devices are needle-less or otherwise altered with a built-in feature or mechanism that effectively reduces the risk of an exposure incident. It is recommended that these devices be utilized in all applications at UAH when there is potential for occupational exposure to blood or OPIM involving sharps.

Implementation or active evaluation of engineered sharps devices is mandated in the following instances:

1.3.1. University employees with human subject research or direct patient contact duties. Examples include drawing blood or administering injections.

1.3.2. University employees working with experimental animals at animal biosafety level 2 (ABSL-2+) or above. Examples include injection of lentiviral agents into animals or blood draws from animals exposed to lentiviral agents.

1.3.3. University employees working at ABSL-2 and for whom it has been determined present a high risk of significant exposure to dangerous pathogens via sharps injury. Examples include injections of rabies virus or plasmodium species into animals.

It is the responsibility of those with supervisory or managerial duties at UAH to ensure that employees in 1.3.1 – 1.3.3 are utilizing engineered sharp devices. It is also the responsibility of the supervisor to include non-managerial staff in the evaluation of safety devices. A list of these devices is available at the Occupational Health Care Worker Safety Center at the University of Virginia Health System at the following website: <http://www.healthsystem.virginia.edu/internet/epinet/>

If a supervisor does not believe that utilizing an engineered sharps device is possible or warranted for a specific application, they must:

- Document which devices have been evaluated, the extent of the evaluation, and identify which employees performed the evaluations
- Document the rationale for not utilizing an engineered sharps device. This rationale is only acceptable if it demonstrates the device is medically contraindicated for the human or animal research subject, is unreliable in operation, or is incompatible with another essential component of the research.

1.4. Work Area Restrictions

1.4.1. General: In work areas where there is a reasonable likelihood of exposure to blood or other potentially infectious materials, employees should comply with the following work area restrictions:

- No eating or drinking, applying cosmetics or lip balms, smoking or handling contact lenses
- Food and beverages are not kept in refrigerators, freezers, shelves, cabinets, or counter tops or bench tops where blood or other potentially infectious materials are present
- Mouth pipetting is prohibited; automatic or manual pipetting devices should be provided
- All procedures will be conducted in a manner that will minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious material.

1.4.2. Research Facilities: This section applies to research laboratories engaged in culture, concentration, experimentation, and manipulation of potentially infectious materials.

- Laboratory doors shall be kept closed when work with potentially infectious material is in progress;
- Access to the work area shall be restricted to authorized personnel. Only personnel trained on the potential hazards of BBP and who comply with the entry and exit procedures shall be allowed to enter;
- Vacuum lines shall be protected with liquid disinfectant traps and HEPA filters that are checked twice a year and replaced as necessary. Filters must be labeled with the date installed.
- Each laboratory shall contain a facility for hand washing and an eye wash station.

2. Work Practice controls

Work Practice Controls are controls that reduce the likelihood of exposure by altering the manner in which a task is performed: Examples,

Housekeeping Precautions
Laundry Precautions
First-Aid Precautions

2.1. Housekeeping Precautions

To prevent contamination:

- Use a dust pan and broom to pick up sharp objects
- Place sharp objects in labeled sharps container
- Place all contaminated waste in red biohazard bags within a secondary container
- Wash hands as soon as possible after contamination and after removing gloves
- Do not handle items such as pens, door handles, elevator buttons while wearing gloves
- Do not wear gloves out of the laboratory

2.1.2. Hand Washing

Hand washing is considered to be the single most important defense against disease transmission. Hand washing facilities are available to the employees with potential exposure to blood or other potentially infectious materials. Supervisors must make sure that employees wash hands as soon as possible after an exposure to blood or OPIM. If

employees incur exposure to their skin or mucous membranes, those areas shall be washed or flushed with water as appropriate as soon as feasible following contact. To wash your hands, you must follow special procedures to avoid cross-contamination.

- Turn on the water
- Wet your hands
- Apply soap
- Rub your hands together, for at least 20 seconds
- Rinse your hands
- Use a dry paper towel to turn the water off

Thorough hand washing is extremely important but, soap and water alone have not been shown to kill the Hepatitis B virus. This is why it is necessary to wear disposable, water-impervious vinyl or latex gloves whenever there is a potential for exposure to blood or other bodily fluids visibly tinged with blood and any object contaminated with these fluids.

When hand washing facilities are not readily available, either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes should be used. When antiseptic hand cleansers or towelettes are used, be sure to wash hands with soap and running water as soon as possible. Hands should also be washed as soon as possible after removing gloves or any other personal protective equipment.

2.1.3. Needles

- Contaminated needles and other contaminated sharps shall not be bent, recapped, removed, sheared or purposely broken.
- If no alternative is feasible, then the recapping or removal of the needle must be accomplished using a mechanical device or the one-handed technique.

2.1.4. Specimen Containers:

- Specimens of blood or other potentially infectious materials will be placed in a container that prevents leakage during the collection, handling, processing, storage, and transport of the specimens.
- The container used for this purpose will be labeled or color-coded in accordance with the requirements of the OSHA standard.
- Any specimens that could puncture a primary container will be placed within a secondary container that is puncture resistant.
- If outside contamination of the primary container occurs, the primary container shall be placed within a secondary container that prevents leakage during the handling, processing, storage, transport, or shipping of the specimen

2.1.5. Sharps containers

- Known or suspected contaminated sharps shall be discarded immediately or as soon as feasible in containers that is closeable, puncture-resistant, leak-proof on sides and bottom, and marked with an appropriate biohazard label. If sharps container is not pre-labeled, biohazard labels are available through EHS.
- Must not be opened, emptied or cleaned manually or in any other manner that would expose employees to the risk of injury.
- When containers of contaminated sharps are being moved from the area of use or discovery, the containers shall be closed immediately before removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping

2.1.6. Containers for Reusable Sharps:

Contaminated sharps that are reusable are to be placed immediately or as soon as feasible after use, into appropriate containers. At UAH these containers are puncture resistant, labeled with a biohazard symbol, and are leak proof on the sides and bottom.

2.1.7. Cleaning and Decontamination

All equipment, environmental, and other working surfaces need to be cleaned and decontaminated after contact with blood or other potentially infectious materials. Each PI with laboratories presenting an exposure hazard must determine and implement an appropriate **written schedule for cleaning and decontamination process.**

Written schedule must include and be based on the:

- Location
- Type of surfaces
- The tasks or procedures to be performed in the area
- The necessary personal protective equipment
- The disinfectant necessary

The disinfecting agent should be selected based on the area or substance to be decontaminated as well as the suspected agents to be destroyed. Information concerning the utility and selection of disinfectants may be obtained by visiting the EPA Antimicrobial Information Network at <http://ace.orst.edu/info/nain/>

Must be left in contact with contaminated work surfaces, tools, objects, or potentially infectious materials for at least 10 minutes before cleaning.

2.1.7.2. Cleaning wet blood/bodily fluids:

- Place paper towel or absorbent material over the contaminated fluid to soak up
- Spray paper towel area with disinfectant
- Use Red biohazard bag for contaminated paper towels
- Spray area with disinfectant solution and wipe dry

2.1.7.3. Cleaning dried blood/body fluids:

- Spray with disinfectant solution
- Wipe with paper towel
- Properly dispose of contaminated PPE, towels, rags in a red biohazard bag inside a rigid, puncture resistant, leak-proof secondary container with a biohazard label on the outside of the container and lid, during use, storage and transport.

2.1.7.4. Equipment

All work surfaces will be decontaminated:

- After completion of procedures and immediately or as soon as feasible after any spill of blood or other potentially infectious materials, as well as at the end of the work shift if the surface may have become contaminated since the last cleaning
- Equipment that has become potentially contaminated with blood or other potentially infectious materials shall be decontaminated as necessary unless the decontamination of the equipment is not feasible.
- If decontamination of equipment or portions thereof is not feasible, then readily observable labels shall be attached to equipment which remains contaminated. The labels shall state which portions remain contaminated. The equipment should also be wrapped or contained to prevent exposure to contaminants

All bins, pails, cans, and similar receptacles intended for reuse which may have become contaminated:

- Cleaned and decontaminated immediately or soon as feasible upon visible contamination.
- Must be inspected and decontaminated on a regularly scheduled basis, at least a monthly basis.

2.2. Laundry Precautions

- Wear gloves and other PPE to handle contaminated laundry and separate contaminated laundry from non-contaminated.
- Bag and handle contaminated laundry with a minimal amount of agitation, at the location where it was used.
- Use melt away bags that can be thrown directly into washers without having to unload or remove contaminated laundry from bags.

- Rinsing soiled laundry in the utility rooms is acceptable, if it is not contaminated with blood, OPIM, or does not contain sharps.
- Do not hold contaminated laundry bags close to your body or squeeze or place your hand underneath to support when transporting.

2.3. First-Aid Precautions

- Wash your hands before and after any medical intervention.
- Wear gloves whenever you are in contact with another's blood, body secretions, or tissues.
- Wear a facemask or body gown whenever there is a possibility of blood splashing onto the rescuer.
- Dispose of contaminated sharp objects in the appropriate puncture-proof container.
- Dispose of all contaminated equipment in an appropriate biohazard container

2.3.1. If you get blood on you:

- Wash it off as soon as possible with soap and water
- Flush your eyes with water at a sink or eyewash station immediately
- Report the incident your supervisor

3. Personal Protective Equipment (PPE)

All personal protective equipment used at this facility will be provided without cost to employees. Personal protective equipment will be chosen based on the anticipated exposure to blood or other potentially infectious materials. The UAHuntsville Biosafety Manual and OEHS are available for consultation on selection of appropriate personal protective equipment. The protective equipment will be considered appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employees' clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time that the protective equipment will be used.

Employees must:

- Utilize protective equipment in occupational exposure situations.
- Remove garments that become penetrated by blood or other potentially infectious material immediately or as soon as feasible.
- Replace all personnel protective clothing that are torn or punctured, or that lose their ability to function as a barrier to bloodborne pathogens.
- Remove all personal protective equipment before leaving the work area. It shall then be placed in an appropriately designated container or area for storage, washing, decontamination or disposal
- Wash hands immediately or as soon as feasible after removal of gloves or other PPE.

Gloves:

- Should be worn whenever touching blood or body fluids, or surfaces soiled with blood or body fluids.
- When you clean toilets and sinks
- When you handle trash

When emptying trash watch for:

- Sharp objects
 - Broken glassware
 - Used syringe
- Change gloves when it is torn or punctured
 - Not to be worn outside of the work area

Protective clothing/Footwear:

- Shall be worn as an effective barrier against blood and OPIM

Face shields and eye protection:

- Shall be worn whenever splashes, spray, spatter, droplets, or aerosols may be generated causing eye, nose, mouth contamination

4. Training

Training for all employees will be conducted for employees prior to initial assignment to tasks where occupational exposure to bloodborne pathogens may occur. The OEHS conducts BBP Training annually. Training information is on the OEHS web site.

Training for employees includes the following:

- Overview of bloodborne pathogens;
- Epidemiology, symptoms, and routes of transmission of bloodborne pathogens;
- Prevention techniques;
- Explanation of the use of and limitations of engineering controls, work practices, and personal protective equipment;
- Spill cleanup procedures;
- Accident and Exposure follow-up procedures;
- Elements of **29 CFR 1910.1030**; (OSHA BBP)
- Exposure Control Plan, HBV vaccinations, Methods of compliance, Hazard Communication, Record Keeping; and

Recordkeeping

Employee Training records must be maintained within their departmental files.

5. Vaccination Program

All University personnel (staff, students, faculty), who have been identified as having exposure to blood or other potentially infectious materials, must be provided or acquire an HBV Vaccination series upon assignment that poses a risk of exposure. They have the option to decline the vaccination but must read and sign the Vaccination Declination Form (attachment A) within 24 hours of the assignment. This form verifies that personnel were informed of the potential health hazards that Hepatitis B virus represents in their work environment. In addition, the form records the individual's choice to decline the Hepatitis B vaccine. Employees (faculty and staff) consenting to vaccination will receive the Hepatitis B vaccine (HBV) at no cost. The employee's department incurs the cost. Vaccinations are provided through The UAHuntsville Faculty and Staff Clinic. Employees who initially decline the HBV vaccine, but later wish to have it may have the vaccine provided at no cost.

Students consenting to vaccination must arrange for the HBV vaccination at the Student Wellness Center. Students must acknowledge their decision to decline the HBV vaccination by signing a waiver declination form from their academic department

5.1. Post-Bloodborne Pathogens Exposure Procedure

Bloodborne pathogen exposure incident occurs when potentially infectious material comes into contact with the eyes, mouth, other mucous membrane, damaged skin or penetration through the skin (parenteral- under the skin) during the performance of an employee's duties.

5.2. If you are exposed

- Rinse the affected area with copious quantities of water and prevent others from coming into contact with the pathogen.
- Contact the Office of Counsel / Risk Management to see a medical providers for post - exposure evaluation and/or medical treatment provided in **Section 5.3. Post-Bloodborne Pathogens Exposure Evaluation**
- Notify your supervisor immediately after the BBP exposure incident and provide detailed information about the incident. The Supervisor must ensure the timely submission of the requisite forms to Risk Management

5.3. Post-Bloodborne Pathogens Exposure Evaluation

Immediately following washing, employees should contact Risk Management in the Office of Legal Counsel for a medical post-BBP exposure evaluation and/or medical treatment:

Office of Legal Counsel / Risk Management - Kerry Mitchell
(256) 824-6633

All Other Times and Holidays

Contact Public Safety at 824-6596 and go to the emergency room. Make sure that an Employee Injury Report is completed on-line at the Office of Counsel web site.

Post- BBP-Exposure Evaluation will include the following:

- Documentation of the route of exposure and the circumstances related to the incident;
- The employee will be offered the option of having blood collected for testing of the employees HIV/HBV/HCV serological status. The blood sample will be preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV status. However, if the employee decides prior to that time that testing will be conducted then the appropriate action can be taken and the blood sample discarded;
- If necessary, the identification of the source and, if possible, the status of the source will be determined. The blood of the source subject will be tested (after consent is obtained) for HIV/ HBV/HCV infectivity;
- Results of testing of the source subject will be made available to the exposed employee but the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual will be strictly followed. Current Alabama law concerning disclosure of the HIV status of an individual without consent is governed by the requirements of **the Alabama Confidentiality of HIV Related Information Act**. This law provides that an employee who has been notified of the identity and test result status of the source individual must not divulge this information to others unless the source individual signs a special written consent.
- The employee will be offered post-exposure prophylaxis in accordance with the current recommendations of the U.S. Department of Health and Human Services.
- The employee will be given appropriate counseling concerning precautions to take during the period after the exposure incident. The employee will also be given information on what potential illness to be alert for and to report experiences to appropriate personnel.

If the exposure involves a non-human primate or non-human primate tissue, the Standard Operating Procedures for Management of Herpes B Virus exposure or SIV exposure developed by Employee Health Services will be followed.

5.4. Procedures for Evaluating the Circumstances of a BBP Exposure Incident

Employees should notify their supervisor immediately after the exposure incident. The supervisor records the details of the exposure incident including the route of exposure, the infective agent and an estimate of the dosage.

The Employee or his/her Supervisor will submit the Employee Injury Report to the Office of Counsel within 48 hours. The report must include the route of exposure, the infective agent, and an estimate of the dosage.

If the exposure involves a sharp, the supervisor will also collect and provide the following information regarding the exposure on the "SHARPS INJURY REPORT"(attachment B):

- Employee Name;
- Social Security Number;
- Date of Incident (mm/dd/yy);
- Occupation;
- Department;
- Building;
- Type and Brand of Device;
- A brief description of how the injury occurred, including the task which was being performed as well as any protective equipment worn or utilized;
- Was an animal involved?
- Was immediate treatment sought? If so, where;
- Recommendation for preventing recurrence;
- Supervisor's Name;
- Date.

The Department of Environmental Health and Safety compiles these "Sharps Injury Report" forms into an "Occupational Injury Log". The Office of Environmental Health and Safety will annually review the Sharps Injury Reports to determine if changes are necessary to the procedures outlined in the Exposure Control Plan and to ensure that appropriate changes are implemented.

VI. Biological Waste and Medical Waste

Regulated biological/medical waste includes liquid or semi-liquid blood or other potentially infectious materials, contaminated items that would release blood or other potentially infectious materials if compressed, items caked with dried blood or other potentially infectious materials and are capable of releasing these infectious agents during handling, and sharps. The Alabama Department of Environmental Management defines regulated medical waste as:

1. **Animal Waste** - carcasses and body parts of animals exposed to human infectious agents as a result of the animal being used for the production and/or testing of biologicals and pharmaceuticals or in research. Bulk blood, blood components and potentially infectious body fluids from these animals shall be handled as specified in (b) for human blood and body fluids. All materials discarded from surgical procedures involving these animals which are grossly contaminated with bulk blood, blood components, or body fluids shall be treated as specified for surgical waste.
2. **Blood and Body Fluids** - all human bulk blood, bulk blood components (serum and plasma, for example), and bulk laboratory specimens of blood, tissue, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, pericardial

fluid, and amniotic fluid. Precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine or vomitus unless they contain visible blood. Free-flowing material or items saturated to the point of dripping liquids containing visible blood or blood components would be treated/handled as bulk blood and bulk blood components.

3. **Medical Waste** - A solid waste or combination of solid wastes which because of its infectious characteristics may either cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or pose a substantial present hazard or potential hazard to human health or the environment when improperly treated, stored, transported, disposed, or otherwise managed.
4. **Microbiological Waste** - discarded cultures and stocks of human infectious agents and associated microbiologicals; human and animal cell cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; waste from the production of biologicals; discarded live and attenuated vaccines; culture dishes and devices used to transfer, inoculate and mix cultures. Only those animal vaccines which are potentially infectious to humans shall be considered microbiological waste.
5. **Pathological Waste** - all discarded human tissues, organs, and body parts which are removed during surgery, obstetrical procedures, autopsy, laboratory, embalming, or other medical procedures, or traumatic amputation. Extracted teeth are not included in this definition.
6. **Sharps** - any used or unused discarded article that may cause punctures or cuts and which has been or is intended for use in animal or human medical care, medical research, or in laboratories utilizing microorganisms. Such waste includes, but is not limited to, hypodermic needles, IV tubing with needles attached, scalpel blades, and syringes (with or without a needle attached). Items listed above that have been removed from their original sterile containers are included in this definition. Glassware, blood vials, pipettes, and similar items are to be handled as sharps if they are contaminated with blood or body fluids.
7. **Special Waste** - those wastes requiring specific processing, handling or disposal techniques as determined necessary but are different from the techniques normally utilized for handling or disposal. Examples of such waste types may include, but are not limited to: large dead animals or large quantities of dead animals and residue, and medical waste. Biological waste is defined as the disposal of any non-human disease agent or equipment that has come in contact with the non-human disease agent. It can be deactivated by autoclaving. Examples of biological waste are general zoonotic vectors used in research and cultures used in plant pathology research. The equipment could include petrie dishes and disposal pipettes as long as they do not contain human disease agents. Biological waste is not regulated under the Alabama Department of Environmental Management's (ADEM) medical waste requirements. However, good

laboratory practice would include autoclaving of all biological waste prior to disposal. The procedures are provided below.

8. Autoclavable Waste

8.1. Packaging

ADEM regulations have specific prohibitions on the disposal of all items bearing either an international biohazard symbol or any wording indicating that the items contain infectious waste, biohazardous waste or medical waste. In order to dispose of treated medical waste as trash the autoclave bag must not be red or orange nor contain any wording or symbols indicating that it contains medical waste. The state prohibits using an orange/red bag for autoclaving and then placing it into a black trash bag for disposal.

Purchase clear autoclave bags that meet the ASTM dart test standard. These bags can be purchased through Fisher and Baker or other companies. To provide for proper identification of biohazardous materials in the laboratory it is suggested that you acquire outer secondary containers such as a trash receptacle and affix a biohazard symbol on their exterior surface. The autoclave bag can then be placed inside the secondary container. This allows the material to be clearly identified in the lab and still allows disposal of the bagged material in the solid waste stream. Upon autoclaving the bag can be placed in the municipal trash stream.

Sharps are prohibited from disposal in autoclave bags. If you generate sharps they must be placed into an approved sharps container. Glassware that contains human disease agents should be autoclaved and placed into double lined cardboard boxes for disposal.

9. Recordkeeping and Testing

Autoclaves used for the treatment of medical waste must be operated in accordance with ADEM medical waste regulations. Steam sterilizers should be equipped to continuously monitor and record temperature and pressure during the entire length of each cycle. Sterilizers not so equipped shall have affixed a temperature sensitive tape to each bag or container of medical waste or obtain approval from OEHS

ADEM of an equivalent test

- Each bag or container shall be exposed to a minimum temperature of 250 degrees Fahrenheit and at least 15 pounds of pressure for 30 minutes. Processing requirements may be altered if proper decontamination is assured by appropriate testing, and approval is received from ADEM.
- Each sterilizer shall be evaluated for effectiveness under full loading by an approved method at least once for each 40 hours of combined operation. (Note: The 40 hour testing requirement is for every 40 hours of operation treating medical waste. Treating non-medical waste does not count toward the 40 hours.) *Bacillus stearothermophilus* is the only biological indicator that can be utilized without ADEM approval.
- A written log or other means of documentation as approved by ADEM shall be maintained for each steam sterilization unit and shall contain the following:

- a. The date, time (including duration), and operator for each cycle.
- b. Approximate weight or volume of medical waste treated during each cycle.
- c. The temperature and pressure maintained during each cycle.
- d. Method utilized for confirmation of temperature and pressure; and
- e. Dates and results of calibration and maintenance.
- f. Owners or operators of steam sterilizers shall not place untreated regulated medical waste in areas or containers designated for pickup and delivery to a solid waste disposal facility.
- g. Sterilizers utilized for waste treatment shall not be utilized for sterilization of equipment, food or other related items.
- h. ADEM requires that units treating medical waste retain the operating log for a minimum of three years.

10. Regulated Biological / Medical Waste Treatment and Disposal Methods

10.1. Human Blood and Blood Products

Human blood and blood products are classified and managed as medical waste because of the possible presence of infectious agents that cause blood-borne disease. Wastes in this category include bulk blood and blood products as well as smaller quantities of blood samples drawn for testing or research. Waste human blood must be treated by steam sterilization. After sterilization, the liquid portion may be safely poured off into a sanitary sewer drain. Animal blood is not regulated as medical waste unless it has been intentionally exposed to a human infectious agent and is capable of transmitting the disease back to humans.

10.2. Cultures and Stocks of Infectious Agents

Cultures and stocks of human infectious agents, regardless of storage method, must be managed as medical waste. Cultures and stocks of zoonotic disease are not regulated as medical waste if they have neither been intentionally exposed to a human infectious agent nor capable of transmitting that disease to humans.

10.3. Pathological Waste

Animal pathological wastes are considered to be medical waste only if the animal has been intentionally exposed to a human infectious agent and it is capable of transmitting the disease back to a human. Animals that are accepted at the University that may be carriers of human infectious agents, e.g., rabies, are not regulated as medical waste. As long as the human disease agent was not deliberately introduced to the animal as part of a treatment or research regimen at the University and the animal is not capable of transferring this disease back to humans it is not regulated as a medical waste.

10.4. Sharps

All hypodermic needles and syringes, intravenous needles and tubing, scalpel blades, lances, and other such devices are regulated as medical waste. Even if these materials are unused they are still regulated.

10.5. Sharps Container

1. All sharps must be packaged in an approved sharps container. The sharps container must be red in color and display the International Biohazard Symbol or one of the following phrases:
2. Medical Waste
3. Infectious
4. Biohazard

The generator must ensure that the container is properly sealed and labeled. If the container is not properly sealed, or there is any doubt about the integrity of the sharps container it will not be accepted for disposal. Sharps containers should only be used for sharps. If the sharps have been exposed to human disease agents they must be autoclaved prior to being picked up by OEHS.

10.6. Glassware

Glassware exposed to a human infectious agent must be managed as a sharp until it has been autoclaved. This includes pipettes, capillary tubes, test tubes, stir rods, and other laboratory equipment. All glassware that has been exposed to human infectious agents must be autoclaved prior to disposal. After the glassware has been autoclaved it can be thrown in the trash.

11. Waste Pick-up

Please call to place a pickup request for medical waste. In general medical waste is picked up within 3 working days of your pickup request

References

1. OSHA Bloodborne Pathogen Standard, 29 CFR 1910.1030
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051
2. Using Sharps Safely in the Lab
<http://www.safety.vanderbilt.edu/bio/using-sharps-in-lab.php>
3. Sharp injury Prevention
<http://www.tn.gov/sos/rules/0800/0800-01/0800-01-10.20100729.pdf>
4. Bloodborne Infectious Diseases
<http://www.cdc.gov/niosh/topics/bbp/>

ATTACHMENT A

The University of Alabama in Huntsville

Hepatitis B Vaccination Declination Form

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.

Signature

Date