
Texas A&M University System Health Science Center
Institute of Biosciences and Technology

BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

INTRODUCTION

In accordance with Texas Health and Safety Code, Chapter 81, Subchapter H, and analogous to OSHA Bloodborne Pathogens Standard, the Institute of Biosciences and Technology uses this Exposure Control Plan to prevent or minimize the exposure of employees to bloodborne pathogens.

DEFINITIONS

BLOOD – human blood, human blood components, and products made from human blood

BLOODBORNE PATHOGENS – pathogenic microorganisms that are present in human blood and that can cause diseases in humans, including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).

EMPLOYER – for the purposes of the IBT Bloodborne Pathogens Exposure Control Plan, an employer is considered to be the department or unit in which the employee is employed.

OCCUPATIONAL EXPOSURE – a 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 duties.

OTHER POTENTIALLY INFECTIOUS MATERIALS (OPIM) - include the following:

1. 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 visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids and blood
2. any unfixed tissue or organ (other than intact skin) from a human, living or dead
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.

**EXPOSURE
DETERMINATION**

The Texas Department of Health Bloodborne Pathogens Rule requires employers to perform an exposure determination for employees who have occupational exposure to blood or other potentially infectious materials (OPIM). The exposure determination is made without regard to the use of personal protective equipment. This exposure determination is required to list all job classifications in which employees have occupational exposure, regardless of frequency.

The IBT job titles / classifications in which employees in those positions have occupational exposure are listed in Appendix I.

Methods of Compliance

- A. Universal precautions are observed to prevent contact with blood or other potentially infectious body fluids. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious.
- B. Engineering controls are important in eliminating or minimizing employee exposure to bloodborne pathogens, and reduce employee exposure in the workplace by either removing or isolating the hazard or isolating the worker from exposure. Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.
 - 1. Engineering control equipment includes:
 - a. sharps disposal containers
 - b. autoclave
 - c. disposable resuscitation equipment
 - d. disposable pipette bulbs
 - e. biological safety cabinet (a.k.a., biohood)
 - f. needleless systems
 - g. sharps with engineered sharps injury protection for employees
 - 2. Additional engineering controls used throughout the facility include:
 - a. Handwashing facilities which are readily accessible to all employees who have exposure to blood or OPIM.
 - b. Antiseptic towelettes or waterless disinfectant when proper handwashing facilities are not available.

*Methods of Compliance
(continued)*

- C. Work Practice Controls establish standard practices by which a task is performed.
 - 1. Employees wash hands and any other potentially contaminated skin area immediately after glove removal. Employees wash hands as soon as possible with soap and water when waterless disinfectants have been used first.
 - 2. Whenever an employee's skin or mucous membranes have been exposed to blood or OPIM, the affected area is washed with soap and water or flushed with water as appropriate as soon as possible.
 - 3. Contaminated needles and sharps are not bent, broken, recapped, removed, sheared or purposely broken. They are discarded immediately in a container that is closable, leak-proof, puncture resistant, and biohazard labeled or color-coded.
 - 4. Contaminated, reusable sharps are placed in a puncture-resistant, leak-proof container, properly labeled or color-coded, until they can be processed. The employee shall use the appropriate protective equipment to remove these reusable sharps for decontamination.
 - 5. During use, containers for contaminated sharps are easily accessible to personnel; located as close as is feasible to the immediate area where sharps are being used or can be reasonably anticipated to be found; maintained upright throughout use; are not allowed to overfill; and replaced routinely.
 - 6. Eating, drinking, applying cosmetics or lip balm, smoking or handling contact lenses is prohibited in working areas where occupational exposure may occur.
 - 7. Mouth pipetting/suctioning is prohibited.
 - 8. Food and drink are not kept in refrigerators, freezers, shelves, cabinets, or on countertops or benchtops where blood or OPIM are present.
 - 9. All procedures in which blood or OPIM are present are performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these materials.
- D. Collection of Specimens
 - 1. Specimens of blood or OPIM are placed in a container, which prevents leakage during the collection, handling processing, storage, transport, or shipping of the specimens.
 - 2. The container used to collect specimens is labeled with a biohazard label or color-coded unless universal precautions are used throughout the procedure and the specimens and containers remain in the facility. If the specimen containers are sent to another facility, a biohazard or color-coded label is affixed to the outside of the container.

*Methods of Compliance
(continued)*

3. Specimens of blood and other potentially infectious body substances or fluids are usually collected within a clinic, doctor's office, or laboratory setting. These specimens are appropriately labeled to indicate the contents and other pertinent information.
4. If outside contamination of the primary container occurs, the primary container is placed within a secondary container, which prevents leakage during the handling, processing, storage, transport, or shipping of the specimen. The secondary container is labeled with a biohazard label or color-coded.
5. Any specimen that could puncture a primary container is placed within a secondary container that is puncture proof.

E. Contaminated Equipment

1. Equipment is decontaminated prior to handling or servicing, unless the decontamination of the equipment is not feasible.
2. Contaminated equipment is labeled with a biohazard label.

F. Personal Protective Equipment

Where occupational exposure remains after institution of engineering controls and work practice controls, personal protective equipment is used.

1. Personal protective equipment is provided by the employer without cost to the employee.
2. Personal protective equipment is considered appropriate only if it is fluid resistant and does not permit blood or OPIM to pass through or reach the employee's clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment is used.
3. Examples of personal protective equipment include:
 - a. gloves
 - b. gowns
 - c. laboratory coats
 - d. masks
 - e. face shields
 - f. eyewear with side shields
 - g. mouthpieces
 - h. resuscitation bags, pocket masks, or other ventilation devices
 - i. aprons
 - j. shoe covers.
4. All personal protective equipment is cleaned, laundered, and disposed of by the employer at no cost to employees. All repairs and replacements are made by the employer at no cost to employees.

*Methods of Compliance
(continued)*

5. Personal protective equipment shall be utilized whenever contact with blood or OPIM may occur.
 - a. Gloves are worn whenever it is reasonably anticipated that hand exposure to blood, OPIM, non-intact skin, or mucous membranes may occur.
 - b. If the employee is allergic to certain kinds of gloves, hypoallergenic gloves or other alternatives will be provided.
 - c. Disposable gloves will not be re-used and will be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn, punctured, or compromised.
 - d. Utility gloves can be decontaminated for re-use only if the gloves do not have any punctures, cracks, or tears. They are discarded if they are cracked, peeling, torn, punctured, deteriorated, etc.
 - e. Masks in combination with eye protection devices are worn whenever splashes, spray, splatter, or droplets of blood or OPIM may be generated and eye, nose, or mouth contamination can reasonably be anticipated.
 - f. Appropriate protective body coverings such as gowns, aprons, caps, and/or shoe covers are worn when gross contamination can be reasonably anticipated.
 - g. All garments that are penetrated by blood are removed immediately or as soon as feasible.
 - h. Personal protective equipment is removed before leaving the work area and after a garment becomes contaminated.
 - i. Used protective equipment is placed in appropriately designated areas or containers when being stored, washed, decontaminated, or discarded.
- G. Housekeeping
 1. Employers shall ensure that the work site is maintained in a clean and sanitary condition.
 2. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, the type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.
 3. All contaminated work surfaces are decontaminated after completion of procedures, immediately or as soon as feasible after any spill of blood or OPIM, and at the end of the work shift.

***Methods of Compliance
(continued)***

G. Housekeeping

4. Protective coverings (e.g., plastic wrap, aluminum foil, etc) used to cover equipment and work surfaces are removed and replaced as soon as feasible when they become contaminated or at the end of the work shift.
5. Bins, pails, cans, and similar receptacles are inspected and decontaminated on a regularly scheduled basis.
6. Any broken glassware that may be contaminated is not picked up directly with the hands. A tool such as forceps is used to pick up the glass fragments.

H. Regulated Waste Disposal

1. All contaminated sharps are discarded as soon as feasible in sharps containers located as close to the point of use as feasible in each work area.
2. Regulated waste other than sharps is placed in appropriate containers that are closable, leak resistant, labeled with a biohazard label or color-coded, and closed prior to removal. If outside contamination of the regulated waste container occurs, it is placed in a second container that is also closable, leak proof, labeled, and closed prior to removal.
3. All regulated waste is properly disposed in accordance with the "Management and Disposal of Biological Waste at Texas A&M University" written program.

I. Laundry Procedures

1. Laundry contaminated with blood/bloody body fluids or OPIM is placed in a biohazard bag or color-coded laundry bag.
2. Contaminated laundry is decontaminated at the work site by autoclaving, washing with hot soapy water and bleach, or other acceptable method of treatment.

***Hepatitis B Vaccination
Program***

- A. All employees who have been identified as having occupational exposure to blood or OPIM are offered the hepatitis B vaccine (HBV) by the employer at no cost to the employee.
- B. The vaccination program is administered under the supervision of a licensed physician or licensed healthcare professional.
- C. The HBV is offered after bloodborne pathogen training and within 10 working days of their initial assignment to work unless the employee has previously received the complete HBV series, antibody testing has revealed that the employee is immune, or that the vaccine is contraindicated for medical reasons.

***Hepatitis B Vaccination
Program
(continued)***

- D. IBT employees may receive the HBV at a healthcare facility contracted by the employer.
- E. Employees who decline the HBV sign a Declination of Vaccination Statement (Appendix II). Employees who later elect to receive the HBV may then have the vaccine provided at no cost.
- F. Any necessary booster doses of the HBV are provided by the employer at no cost to the employee.

***Post Exposure Evaluation
and Follow-Up***

- A. If an employee suffers an occupational exposure, the employee must report the incident to his/ her supervisor and complete a TWCC-1 First Report of Injury or Illness form.
- B. The employee is offered a confidential medical evaluation and follow up that includes:
 - 1. Documentation of the route(s) of exposure and the circumstances related to the incident.
 - 2. Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law. After obtaining consent, unless law allows testing without consent, the blood of the source individual should be tested for HIV/HBV infectivity, unless the employer can establish that testing of the source is infeasible or prohibited by state or local law.
 - 3. The results of testing of the source individual are made available to the exposed employee with the employee informed about the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual.
 - 4. The employee is offered the option of having his/her blood collected for testing of the employee's HIV/HBV serological status. The blood sample is preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV serological status. If the employee decides prior to that time that the testing will be conducted, then testing is done as soon as feasible.
 - 5. The employee is offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service.

***Post Exposure Evaluation
and Follow-Up
(continued)***

6. The employee is given appropriate counseling concerning infection status, results and interpretations of tests, and precautions to take during the period after the exposure incident. The employee is informed about what potential illnesses can develop and to seek early medical evaluation and subsequent treatment.
7. The unit head or supervisor of an employee with occupational exposure is designated to assure that the IBT Exposure Control Plan is followed and maintains records required by the Plan.

***Interaction with Health
Care Professionals***

- A. A written opinion is obtained from the healthcare professional when a IBT employee is sent to obtain the HBV, or when a TAMU employee is evaluated after an exposure incident. In order for the healthcare professional to adequately evaluate the employee, the healthcare professional is provided with:
 1. a copy of the IBT Exposure Control Plan
 2. a description of the exposed employee's duties as they relate to the exposure incident
 3. documentation of the route(s) of exposure and circumstances under which the exposure occurred
 4. results of the source individual's blood tests (if available)
 5. medical records relevant to the appropriate treatment of the employee.
- B. Healthcare professionals should limit their written opinions to:
 1. whether the HBV is indicated
 2. whether the employee has received the vaccine
 3. the evaluation following an exposure incident
 4. whether the employee has been informed of the results of the evaluation
 5. whether the employee has been told about any medical conditions resulting from exposure to blood or OPIM which require further evaluation or treatment (all other findings or diagnosis shall remain confidential and shall not be included in the written report)
 6. whether the healthcare professional's written opinion is provided to the employee within 15 days of completion of the evaluation.

Use of Biohazard Labels

Biohazard warning labels and/or color-coding are used to identify any work area or object that has the potential to be exposed to blood or other infectious materials. Labels are placed on such objects as: sharps containers; specimen containers; contaminated equipment; regulated waste containers; contaminated laundry bags; refrigerators and freezers containing blood or OPIM; and containers used to store, transport, or ship blood or OPIM.

Training

- A. Training for all employees is conducted prior to initial assignment to tasks where occupational exposure may occur.
- B. Annual refresher training is provided within one year of the employee's previous training.
- C. Training is conducted by a person knowledgeable in the subject matter and includes an explanation of the following:
 - 1. Title 25 Health Services, Part 1 Texas Department of Health, Chapter 96 Bloodborne Pathogen Control
 - 2. epidemiology and symptomatology of bloodborne diseases
 - 3. modes of transmission of bloodborne pathogens
 - 4. how to recognize tasks and activities that may place employees at risk of exposure to blood or OPIM
 - 5. the IBT Bloodborne Pathogens Exposure Control Plan
 - 6. the use and limitations of work practices, engineering controls, and personal protective equipment
 - 7. the types, selection, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment
 - 8. the employee's responsibility to reduce the risk of exposure to bloodborne pathogens for himself/herself and for co-workers
 - 9. the IBT Hepatitis B Vaccination Program
 - 10. procedures to follow in an emergency involving blood or OPIM
 - 11. procedures to follow if an exposure incident occurs to include U.S. Public Health Service Post Exposure Prophylaxis Guidelines
 - 12. post exposure evaluation and follow up
 - 13. warning labels and signs, where applicable, and color coding
 - 14. an opportunity to ask questions with the person conducting the training
- D. Additional training is given as new information is acquired or job duties change.

Recordkeeping

- A. Employee medical records shall include:
 - 1. the employee's name and social security number
 - 2. Hepatitis B vaccination status, including the dates of all the HBV vaccinations
 - 3. a copy of all results of examinations, medical testing, and follow-up procedures related to an occupational exposure
 - 4. the employer's copy of the healthcare professional's written opinion
 - 5. a description of the employee's duties as they related to the exposure incident
 - 6. a description of the route of exposure and the circumstances under which exposure occurred
 - 7. results of the source individual's blood testing, if available.
- B. Confidentiality of medical records is maintained.
- C. Employee medical records are maintained in the personnel files by the employer.
- D. Employee medical records are maintained in accordance with the TAMUS Records Retention Schedule.
- E. Training records are maintained by the employer in the employee's personnel files for at least three years from the date on which the training occurred. Training records include:
 - 1. the dates of the training sessions
 - 2. the contents or a summary of the sessions
 - 3. name(s) and qualifications of the person(s) conducting the training
 - 4. names and job titles of those in attendance.

***Contaminated Sharps
Injury Log***

- A. In accordance with the requirements of the Texas Bloodborne Pathogens Rule, TAMU maintains a log and reports injuries from contaminated sharps to the Texas Department of Health. A contaminated sharp includes, but is not limited to, a needle, scalpel, lancet, broken glass, broken capillary tube used or encountered in a health care setting that is contaminated with human blood or body fluids.

***Contaminated Sharps
Injury Log
(continued)***

The sharps injury log includes the following information:

1. name and address of the facility where the injury occurred
 2. name and address of the reporting official
 3. date and time of the injury
 4. age and sex of the injured employee
 5. type and brand of sharp involved
 6. original intended use of the sharp
 7. whether the injury occurred before, during, or after the sharp was used for its original intended purpose
 8. whether the exposure was during or after the sharp was used
 9. whether the device had engineered sharps injury protection, and if yes, was the protective mechanisms activated and did the exposure incident occur before, during, or after activation of the protective mechanism
 10. whether the injured person was wearing gloves at the time of the injury
 11. whether the injured person had completed a hepatitis B vaccination series
 12. whether a sharps container was readily available for disposal of the sharp
 13. whether the injured person received training on the exposure control plan during the 12 months prior to the incident
 14. the involved body part
 15. the job classification of the injured person
 16. the employment status of the injured person
 17. the location / facility / agency and the work area where the sharps injury occurred
 18. a listing of the implemented needleless systems and sharps with engineered sharps injury protection for employees provided by the employer
- C. Most of the information listed above will be included on a TWCC-1 First Report of Injury or Illness form that is filed by the employer of the injured employee. The employer must attach an addendum to the TWCC-1 form with the remainder of the required data (e.g., #5 –13 and #18). The employer provides all of the required information for a contaminated sharps injury report to the WCI division of the TAMUS Office of Risk Management and Safety (ORMS).
- D. ORMS reports to the Texas Department of Health (TDH) an incident in which an IBT employee sustains a contaminated sharps injury.
- E. The required information is reported to TDH not later than ten working days after the end of the calendar month in which the contaminated sharps injury occurred.

APPENDIX I

JOB TITLES OF IBT EMPLOYEES WITH OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS

<u>DEPARTMENT</u>	<u>JOB TITLE</u>
Administration	Medical Emergency Team Members
IBT Security	Assistant Director of Security Security Officer Security Officer in Training
IBT Safety Office	Safety Coordinator
Research Staff	Professor Associate Professor Assistant Professor Technician I Postdoctoral Research Associate Graduate Assistant, Research Research Assistant Research Associate Laboratory Attendant I & II Laboratory Coordinator Associate Research Scientist Laboratory Operations Coordinator

APPENDIX II

HEPATITIS B VACCINE DECLINATION STATEMENT

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 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 myself.

Printed Name _____

Signature _____

Date _____