

The University of Texas at Dallas



BIOHAZARD

EXPOSURE CONTROL PLAN FOR BLOODBORNE PATHOGENS

Developed in accordance with Texas Department of State Health Services (DSHS), Exposure Control Plan, Health and Safety Code 81.304 to be analogous with the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standard, 29CFR1910.1030

**Environmental Health and Safety Office
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INTRODUCTION & SCOPE

On December 6, 1991, the Occupational Safety Health Administration (OSHA) promulgated the final rule (29CFR1910.1030) for occupational exposure to bloodborne pathogens. The rule, commonly referred to as the bloodborne pathogen standard, was designed to eliminate or minimize occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens.

The rule making effort was based on an OSHA determination that employees face a significant health risk from occupational exposure to blood and other potentially infectious materials considering that these materials may contain bloodborne pathogens, including hepatitis B virus that causes Hepatitis B, a serious liver disease, and human immunodeficiency virus, which causes Acquired Immunodeficiency Syndrome (AIDS). In an effort to eliminate or minimize exposure to bloodborne pathogens, the standard requires employers to institute a program of engineering and work practice controls, personal protective clothing and equipment, informational training, Hepatitis B vaccination, post exposure evaluation and follow-up, sign and label programs, and other provisions for employees who may be reasonably anticipated to come into contact with blood or other potentially infectious materials during the performance of their duties.

The preamble to the final rule for occupational exposure to bloodborne pathogens, published in the Federal Register on December 6, 1991 (56 FR 64004), describes the rationale behind the standard and discusses provisions of the standard.

The Texas Department of State Health Services (DSHS) adopted the OSHA standard for occupational exposure of governmental employees to minimize the risk of bloodborne pathogens. The Texas DSHS Exposure Control Plan became effective September 1, 2000.

New sections were adopted to extend the protections provided to employees of private entities by Occupational Safety and Health Administration (OSHA) rules, to employees of state and local governments, and for related purposes. The new sections are required by Health and Safety Code, Chapter 81, Subchapter H, which was added by Chapter 1411 (House Bill 2085), §§26.01-26.03, 76th Legislature.

The new sections decrease the risk of exposure to bloodborne pathogens for employees who work in governmental units by increased training and education; increased use of vaccination for employees; and increased use of personal protective equipment. The recommendation for the use of needleless systems and sharps with engineered sharps injury protection will reduce the risk of injury and transmission of bloodborne pathogens to governmental unit employees.

DEFINITIONS

Blood: human blood, human blood components, and products made from human blood.

Bloodborne Pathogens: 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).

Clinical Laboratory: a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated: the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated sharps injury: Any sharps injury that occurs with a sharp used or encountered in a health care setting that is contaminated with human blood or body fluids.

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

Employee: An individual who works for a governmental unit or on premises owned or operated by a governmental unit whether or not he or she is directly compensated by the governmental unit.

Employs: Engages the services of employees.

Engineered sharps injury protection: A physical attribute that: (A) is built into a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids and that effectively reduces the risk of an exposure incident by a mechanism, such as barrier creation, blunting, encapsulation, withdrawal, retraction, destruction, or another effective mechanism; or (B) is built into any other type of needle device, into a non-needle sharp, or into a non-needle infusion safety securement device that effectively reduces the risk of an exposure incident.

Engineering Controls: means controls (e.g., sharps disposal containers, self sheathing needles) that isolate or remove the bloodborne pathogens hazard from the work place.

Exposure incident: A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Governmental unit: This state and any agency of the state, including a department, bureau, board, commission, or office and includes: (A) a political subdivision of this state, including any municipality, county, or special district; or (B) Any other institution of government, including an institution of higher education.

Hand washing Facilities: means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional: is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV: Hepatitis B virus.

HCV: Hepatitis C virus.

Health care professional: A person whose legally permitted scope of practice allows him or her to independently evaluate an employee of a governmental unit and determine the appropriate interventions after an exposure incident; this would include hepatitis B vaccination and post exposure evaluation and follow up.

HIV: Human immunodeficiency virus.

Needleless system: A device that does not use a needle and that is used: (A) to withdraw body fluids after initial venous or arterial access is established; (B) to administer medication or fluids; or (C) for any other procedure involving the potential for an exposure incident.

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: 1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; 2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and 3) HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV

containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral: piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment: specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes, e.g., uniforms, pants, shirts, or blouses, not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste: 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.

Regulated waste/special waste from health care-related facilities: Solid waste which if improperly treated or handled may serve to transmit an infectious disease(s) and which is composed of the following: (A) animal waste; (B) bulk blood, bulk human blood products, or bulk human body fluids; (C) microbiological waste; (D) pathological waste; or (E) sharps.

Research Laboratory: a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharp: An object used or encountered in a health care setting that can be reasonably anticipated to penetrate the skin or any other part of the body and to result in an exposure incident and includes: (A) needle devices; (B) scalpels; (C) lancets; (D) a piece of broken glass; (E) a broken capillary tube; (F) an exposed end of a dental wire; or (G) a dental knife, drill, or bur.

Sharps injury: Any injury caused by a sharp, including a cut, abrasion, or needlestick.

Sterilize: the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions/standard precautions: an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls: controls that reduce the likelihood of exposure by altering the manner in which a task is performed, e.g., prohibiting recapping of needles by a two-handed technique.

APPLICABILITY & RESPONSIBILITIES

Although the Environmental Health and Safety Office (EH&S) is charged with the overall responsibility to develop and implement the University's exposure control plan, several other University departments will provide vital support in the effort to adequately protect University employees with occupational exposure and to achieve regulatory compliance with the Texas DSHS requirements.

Individual departments will be responsible for ensuring that the provisions of the University's exposure control plan and the mandates of the Texas DSHS bloodborne pathogen standard are carried out.

Departments that have been identified as having employees with occupational exposure include, but are not necessarily limited to:

- Athletics
- Biology
- Chemistry & Biochemistry
- Environmental Health and Safety
- Physical Plant
- Police Department
- Brain Sciences
- Student Health Services

EXPOSURE DETERMINATIONS

A review of all employee positions at the University has been conducted to determine which employees have occupational exposure to blood or other potentially infectious materials during the performance of their duties. EH&S and individual University departments completed the review. The review identified job classification/descriptions in which all employees in those job classifications have occupational exposure and job classifications in which some employees have occupational exposure. In addition, for those job classifications in which some employees have occupational exposure, tasks and procedures or groups of closely related tasks and procedures in which occupational exposure occurs was identified. The exposure determination was conducted without regard to the use of personal protective equipment.

Job classifications in which all University employees in the specific job classification have occupational exposure pursuant to 29 CFR § 1910.1030:

- Environmental Health & Safety Personnel
- Lifeguards
- Nurse Practitioners/Registered Nurses
- Medical Assistants
- Patrol Officers
- Physicians
- Physicians Assistants
- Police Guards

Job classifications in which some University employees in the specific job classification have occupational exposure pursuant to 29 CFR § 1910.1030:

- Custodial/Housekeeping Personnel
- Residential Assistants
- Plumbers
- Grounds Personnel
- Athletic Trainers
- Research Professors
- Research Assistants
- Research Associates
- Research Technicians
- Laboratory Assistants
- Laboratory Technicians
- Locker-room Attendants

OSHA identified occupational settings where individuals are reasonably anticipated to come into contact with blood or other potentially infectious materials during the performance of their duties; these include, in part: health care facilities, health clinics, research laboratories, linen services, law enforcement, fire and rescue, schools, life saving, and regulated waste removal. Considering the scope of applicability of the standard and the fact that UTD conducts

activities utilizing or involving blood and other potentially infectious materials and employs individuals identified as employees who may be reasonably anticipated to come into contact with blood or other potentially infectious materials during the performance of their duties, the University is required to comply with the requirements established in the standard.

EH&S is charged with the overall responsibility for the development and implementation of a bloodborne pathogens compliance program. The program is designed to provide and achieve regulatory compliance and, most importantly, will provide a means in which University employees will be better informed and protected from exposures to blood and other potentially infectious materials during the performance of their duties. EH&S will provide technical assistance to individual University departments in their effort to address the mandates established in the standard.

EXPOSURE CONTROL

Employees incur risk each time they are exposed to blood or other potentially infectious materials. Any exposure incident may result in infection and subsequent illness. Considering the possibility of becoming infected from a single exposure incident, exposure incidents must be prevented whenever possible. The goal of the bloodborne pathogen standard is to reduce the significant risk of infection by:

- Eliminating or minimizing occupational exposure to blood and other potentially infectious materials
- Providing the hepatitis B vaccine
- Providing post exposure medical evaluation and follow-up

Identifying the tasks and procedures where occupational exposure may occur and the positions whose duties include those tasks and procedures are a critical element of exposure control. By identifying those job classifications with occupational exposure, identification can be made of those employees who are entitled to the provisions of the standard. All personnel who hold positions determined to have occupational exposure are entitled to the protection afforded by the standard.

Exposure Control Plan

The key provision of the bloodborne pathogens standard is the written Exposure Control Plan. The Exposure Control Plan identifies individuals who will receive training, protective equipment, vaccinations, and other provisions of the standard. Exposure Control Plan is designed to eliminate or minimize employee exposure and:

- Provide a means in which employees are able to find out what provisions are in place in his or her workplace
- Provide a document for regulatory officials to evaluate the University's compliance status
- Can be used for the employee training effort

Based on the requirements established by the standard, the University of Texas at Dallas Exposure Control Plan for Bloodborne Pathogens has been developed and designed to eliminate or minimize University employee occupational exposure to bloodborne pathogens during the performance of their duties, and to achieve regulatory compliance with the OSHA Bloodborne Pathogens Standard.

The University's plan contains the following elements;

- Exposure determination.
- Schedule and methods of implementation for:
 - Universal precautions
 - Engineering and work practice controls
 - Personal protective equipment
 - Housekeeping
 - HIV and HBV research laboratories
 - Hepatitis B vaccination and post-exposure evaluation and follow-up

- Communication of hazards to employees
- Record keeping
- Procedure for the evaluation of circumstances surrounding exposure

The plan will be reviewed and updated annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The plan will be provided upon request for examination and copying to all University employees, employee representatives, and regulatory authorities. EH&S is the custodian of the document. Arrangements to examine or copy the document can be made by contacting EH&S at (972) 883-4111.

METHODS OF COMPLIANCE

Universal Precautions

Universal precautions will be observed by all University employees to prevent contact with blood and other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids will be considered potentially infectious.

Universal precautions are methods of preventing disease by preventing transfer of blood and body fluids, e.g., semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, and saliva in dental procedures. The underlying concept of universal precautions is that all blood and certain body fluids are considered to be infectious for bloodborne pathogens. An employee will treat all blood and certain body fluids as though they are contained with bloodborne pathogens and will accomplish this through a variety of measures including, but not necessary limited to:

- Engineering controls and Work practice controls
- Personal protective equipment
- Housekeeping

The only exception to the use of universal precautions is in rare instances, such as unexpected medical emergency, where employees may not be able to put on gloves, don a gown, or tie on a facemask immediately. In those situations where leeway must be accorded the provider of health care or public safety services, the employees must not ignore the underlying concept of universal precautions. Only under unexpected extraordinary circumstances will employees have the option of deciding not to use personal protective equipment if they feel such equipment will prevent the proper delivery of health care or public safety services or will create a greater hazard to their personal safety if they used such equipment. The universal precaution exemption provided in the standard applies not to the general concept of Universal Precautions, but only to the use of personal protective equipment under rare and relatively limited circumstances.

Engineering and Work Practice Controls

Engineering and work practice controls serve to reduce employee's exposure in the workplace by either removing the hazard or isolating the worker from exposure. In fact, these control measures are viewed as the primary means of eliminating or minimizing employee exposure. These controls may include process or equipment redesign, e.g., self-sheathing needles, process or equipment enclosure, e.g., biosafety cabinets, and employee isolation. In general, engineering controls act on the source of the hazard and eliminate or reduce employee exposure without reliance on the employee to take self-protective action. By comparison, work practice controls reduce the likelihood of exposure through alteration of the manner in which a task is performed. While work practice controls also act on the source of the hazard, the protection they provide is based upon the behavior of the employer and employee behavior rather than installation of a physical device such as a protective shield.

The two control methodologies frequently work in tandem because it is often necessary to employ work practice controls to assure effective operation of engineering controls. Where occupational exposure remains after institution of these controls, departments must provide and assure employees use personal protective equipment. Primary

reliance on engineering controls and work practices for controlling exposure is consistent with good industrial hygiene practice and with the TDH adherence to a hierarchy of controls.

University facilities and employees will use engineering and work practice controls to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment will also be used. Engineering controls will be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

Work Practice Control

Universal precaution will be observed at this campus in order to prevent contact with blood or other potentially infectious materials. All blood and body fluids will be considered infectious regardless of the perceived status of the source individual.

The following work practice controls shall be used to minimize employee exposure:

Employees shall wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

Employees shall wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

Contaminated needles and other contaminated sharps shall not be bent, recapped or removed. Shearing or breaking of contaminated needles is prohibited.

Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers. These containers shall be:

- Puncture resistant
- Appropriately labeled or color coded
- Leak proof on the sides and bottoms

Eating, smoking, drinking, applying cosmetics or lip balm, and handling contact lenses is prohibited in work areas where there is reasonable likelihood of occupational exposure.

Food and drink will not be stored in refrigerators, freezers, shelves, cabinets, or on cabinet tops or bench tops where blood or other potentially infectious materials are present.

All procedures involving blood or other potentially infectious materials shall be performed in a manner to minimize splashing, spraying, spattering, and generation of droplets of these substances.

Mouth pipetting/suctioning of blood or other potentially infectious materials is strictly prohibited.

Specimens of blood or other potentially infectious materials shall be placed in a container, which prevents leakage during collection, handling, processing, storage, transport, or shipping. The container for storage, transport, or shipping shall be labeled or appropriately color-coded and closed prior to being stored, transported, or shipped. Appropriate labeling/color-coding is required when such specimens/containers leave the facility.

If outside contamination of the container occurs, the primary container will be placed within a second container, which prevents leakage during handling, processing, storage, transport, or shipping and will be appropriately labeled. If the specimen could puncture the primary container, the primary container will be placed within a secondary container, which is puncture-resistant in addition to the above characteristics.

Equipment that may become contaminated with blood or potentially infectious materials shall be decontaminated as necessary, unless decontamination of such equipment or portions of such equipment is not feasible. If decontamination is not feasible:

- A readily observable label shall be attached to the equipment stating which portions remain contaminated.
- The appropriate administrator shall inform all affected employees, the servicing representative, and/or manufacturer, in writing, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

Personal Protective Equipment

University departments at no cost shall provide personal protective Equipment to the employees.

University departments will provide at no cost to the employee, appropriate personal protective equipment to prohibit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

Employee will use appropriate personal protective equipment unless it can be demonstrated that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

Cleaning, laundering, and/or disposal, repair and replacement of personal protective equipment will be the responsibility of the departments.

All personal protective equipment will be removed prior to leaving the work area. If blood or other potentially infectious material penetrates a garment, the garment will be removed immediately or as soon as feasible.

When personal protective equipment is removed it will be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

❖ Gloves

- Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin.
- Disposable, single-use gloves will be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured or when their ability to function as a barrier is compromised.
- Disposable, single-use gloves will not be washed or decontaminated for reuse.
- Utility gloves may be decontaminated for reuse if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibits other signs of deterioration or when their ability to function as a barrier is compromised.
- Latex Gloves used in a wet procedure will be replaced after one hour of use.

❖ Masks, Eye Protection and Face Shields

- Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, will be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

❖ Gowns, Apron and Other Protective Body Clothing

- Appropriate protective clothing will be worn in occupational situations.

❖ Laundry

- Contaminated laundry will be handled as little as possible with a minimum of agitation. Contaminated laundry will be bagged or containerized and will not be sorted or rinsed in the location of use.
- Contaminated laundry shall be placed in red bags. If contaminated laundry is sent to a facility that does not utilize Universal Precautions in the handling of all laundry, the department will ensure that the red bags are labeled with the universal biohazard symbol and the word “biohazard”.
- Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or of leakage from the bag or container, the laundry will be placed and transported in bags or containers that prevent soak-through and/or leakage of fluids to the exterior.
- The department will provide employees who have contact with contaminated laundry with protective gloves and other appropriate personal protective equipment.

Housekeeping

All equipment and environmental and working surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious material.

Departments will maintain worksites in a clean and sanitary condition. The department will determine and implement an appropriate written schedule for cleaning and method of decontamination.

Contaminated work surfaces will be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated following the last cleaning.

Protective coverings, e.g., plastic wrap, aluminum foil, or imperviously-backed absorbent paper, used to cover equipment and environmental surfaces, will be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the work shift if they may have become contaminated during the shift.

All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

Broken glassware, which may be contaminated, will not be picked up directly with the hands. The spill and/or debris will be cleaned up using mechanical means such as a brush and dustpan, tongs, or forceps.

Reusable sharps that are contaminated with blood or other potentially infectious materials will not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

Medical Waste – Sharps

“Sharps Waste” means any device having acute ridged corners, edges or purterbances capable of cutting or piercing.

Contaminated sharps will be discarded immediately or as soon as feasible in containers that are:

- Closable
- Puncture resistant
- Leak proof on sides and bottom
- Appropriately labeled or color-coded

Reusable containers will not be used.

During use containers for contaminated sharps will be:

- Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found, e.g., laundries
- Maintained upright throughout use
- Replaced routinely and not be allowed to overfill

When moving containers of contaminated sharps from the area of use, the containers will be:

- Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping
- Placed in containers located in the designated medical waste accumulation area
- Placed in a secondary container if leakage is possible

Other Regulated Waste Containment

Regulated waste will be placed in containers, which are:

- Closable
- Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping
- Appropriately labeled or color-coded
- Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping
- Placed in containers located in the designated medical waste accumulation area

If outside contamination of the regulated waste container occurs, it will be placed in a second container. The second container will be:

- Closable
- Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping
- Appropriately labeled or color-coded
- Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping

Disposal of all regulated waste will be in accordance with applicable regulations of the Texas DSHS.

HIV & HBV RESEARCH LABORATORIES

HIV and HBV research laboratories engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV are required to comply with the special provisions outlined in this section in addition to the other requirements contained in this plan and guidelines established by the National Institutes for Health and the Centers for Disease Control. These special provisions do not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissue, or organs. Research laboratories will adhere to the following special practices.

Special Practices

- All regulated waste will either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.
- Laboratory doors will be kept closed when work involving HIV, HBV or any other bloodborne pathogen is in progress.
- Contaminated materials that are to be decontaminated at a site away from the work area will be placed in a durable, leak proof, labeled or color-coded container that is closed before being removed from the work area.
- Access to the work area will be limited to authorized persons. Written policies and procedures will be established whereby only persons who have been advised of the potential biohazard, who meet specific entry requirements, and who comply with all entry and exit procedures will be allowed to enter the work areas and animal rooms.
- When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol will be posted on all access doors. The hazard warning sign will comply with established requirements (refer to the Signs section of this plan).
- All activities involving other potentially infectious materials will be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials will be conducted on the open bench.
- Laboratory coats, gowns, smocks, uniforms, or other appropriate personal protective clothing will be used in the work area and animal rooms. Personal protective clothing will not be worn outside of the work area and will be decontaminated before being laundered.
- Special care will be taken to avoid skin contact with other potentially infectious materials. Gloves will be worn when handling infected materials or animals and when making hand contact with other potentially infectious materials is unavoidable.
- Before disposal all waste from work areas and from animal rooms will either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.
- Vacuum lines will be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.
- Hypodermic needles and syringes will be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe- needle units, i.e., where the needle is integral to the syringe, will be used for the injection or aspiration of other potentially infectious materials.
- Extreme caution will be used when handling needles and syringes. A needle will not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe will be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.
- All spills will be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.
- A spill or accident that results in an exposure incident will be immediately reported to the laboratory director or other responsible person.
- A biosafety manual will be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel will be advised of potential hazards, will be required to read instructions on practices and procedures, and will be required to follow them.

Containment Equipment

- Certified biological safety cabinets or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals will be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.
- Biological Safety Cabinets will be certified when installed, whenever they are moved and at least annually.
- HIV and HBV research laboratories will meet the following criteria:
 - Each laboratory will contain a facility for hand washing and an eye wash facility, which is readily available within the work area
 - An autoclave for decontamination of regulated waste will be available

HEPATITIS B VACCINATION, POST EXPOSURE EVALUATION AND FOLLOW-UP

The department will make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

The department will ensure that all medical evaluations and procedures including the Hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis are:

- Made available to the employee
- Made available to the employee at a reasonable time and place
- Student will be referred to the Student Health facility on campus
- Performed by or under the supervision of a licensed physician/licensed healthcare professional
- Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place

An accredited laboratory will be available to the employee to conduct required laboratory tests.

Hepatitis B Vaccination

Hepatitis B vaccination will be offered to employees who have occupational exposure to bloodborne pathogen and has received the required training. Vaccinations will be administered in amounts and at times prescribed by standard medical practice. Each identified employee will receive information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, and the benefits of being vaccinated. The employee will be offered the hepatitis B vaccine within 10 working days of appointment or assignments unless the employee previously received the complete hepatitis B vaccination series, antibody-testing shows that the employee is immune, or the vaccine is contraindicated for medical reasons. The University will not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

An employee declining a Hepatitis B Vaccination will sign a Hepatitis B declination form. The original signed statement will be maintained in the employee's permanent personnel file and copies will be provided to the employee, the employee's department and EH&S.

If an employee initially declines hepatitis B vaccination, but at a later date while still covered under the standard decides to accept the vaccination, the department will make the hepatitis B vaccination available at that time.

If the U.S. Public Health Service recommends a routine booster dose(s) of hepatitis B vaccine at a future date, such booster dose(s) will be made available.

Post Exposure Evaluation and Follow-up

An employee who experiences an “exposure incident” must report it immediately to his/her supervisor and/or the Environmental Health and Safety Office. Following a report of an exposure incident, the department will make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

- Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred.
- Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law.
- The source individual's blood will 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 department will establish that legally required consent cannot be obtained. When law does not require the source individual's consent, the source individual's blood, if available, will be tested and the results documented. When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.
- Results of the 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.
- Collection and testing of blood for HBV and HIV serological status.
- The exposed employee's blood will be collected as soon as feasible and tested after consent is obtained.
- If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample will 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 will be done as soon as feasible.
- Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service.
- Counseling and evaluation of reported illness.

Information Provided to the Healthcare Professional

The department will ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination will be provided a copy of the bloodborne pathogens standard regulation. The department will provide the healthcare professional evaluating an employee after an exposure incident with the following information:

- A copy of the bloodborne pathogens standard (regulation).
- A description of the exposed employee's duties as they relate to the exposure incident.
- Documentation of the route(s) of exposure and circumstances under which exposure occurred.
- Results of the source individual's blood testing, if available.
- All medical records relevant to the appropriate treatment of the employee including vaccination status, which are the University's responsibility to maintain.

Healthcare Professionals Written Opinion

The department will 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 healthcare professional's written opinion for HBV vaccination and post exposure follow-up will be limited to the following information:

- Whether vaccination is indicated for an employee, and if the employee has received such vaccination.
- A statement that the employee has been informed of the results of the evaluation.
- A statement 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.

All other findings or diagnoses will remain confidential and will not be included in the written report.

COMMUNICATION OF HAZARDS TO EMPLOYEES

Efforts directed at communicating hazards of bloodborne pathogens to University employees through the use of labels, signs, and information and training are intended to provide employees with adequate warning to eliminate or minimize their exposure.

Information and Training

All University employees with occupational exposure to blood or other potentially infectious materials will participate in a bloodborne pathogens information and training program, which is provided at no cost to the employee and conducted during their normal working hours.

Training will be provided at the time of initial assignment to tasks where occupational exposure may take place or within 90 days after the effective date of the standard and at least annually thereafter.

Annual training will be provided for all employees with occupational exposure within one year of their previous training. Employees will receive additional training when changes or modifications of tasks or procedures occur or when new tasks or procedures affect the employee's occupational exposure. The additional training will be limited in scope by only addressing the new exposure created.

Material will be used that is appropriate in content and vocabulary to educational level, literacy, and language of employees undergoing the training program.

The training program will contain the following elements:

- An accessible copy of the regulatory text of the bloodborne pathogens standard and an explanation of its contents.
- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of UTD's Exposure Control Plan and the means by which the employee can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
- An explanation of the basis for selection of personal protective equipment.
- Information on the hepatitis B vaccine, including information on its efficiency, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- Information on appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- Information of the post-exposure evaluation and follow-up that the department is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color-coding required by the standard.
- An opportunity for interactive questions and answers with the person conducting the training session.

Individuals knowledgeable in the subject matter covered in the training program as it relates to the specific workplace being addressed will conduct training.

Labels

- Labels will be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials; and other containers used to store, transport, or ship blood or other potentially infectious materials.
- The labels will include the universal biohazard symbol and the word “biohazard”. In the case of regulated waste, the words “biohazard waste” may be substituted. The label will be fluorescent orange or orange-red with lettering or symbols in a contrasting color.

There are several exemptions to the labeling requirement:

- Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use do not need to be labeled in accordance with the provisions outlined in this section.
- Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment, or disposal do not need to be labeled in accordance with the provisions outlined in this section.
- Regulated waste that has been decontaminated does not need to be labeled.
- Red bags can be substituted for labels on bags or containers of regulated waste.

Signs

Signs will be posted at the entrance to HIV or HBV research laboratories and will bear the following legend and information:

- Name of Infectious Agent
- Special requirements for entering the area
- Name and telephone number of the laboratory director or other responsible person

These signs will be fluorescent orange-red or predominately so, with lettering or symbols in a contrasting color.

RECORDKEEPING

Human Resources will maintain an accurate record for each employee. Departments will provide all medical records to Human Resources on employees with occupational exposure, in accordance with Health and Safety Code, Chapter 81, Subchapter H. The record shall include:

- Name and social security number of the employee
- A copy of the employee's hepatitis B vaccination status including the dates of all the vaccinations and any medical records relative to the employee's ability to receive vaccination
- A copy of all results of examinations, medical testing, and follow-up procedures required. The copy of the healthcare professional's written opinion as required
- A copy of the information provided to the healthcare professional as required

Human Resources will ensure that employee medical records required are:

- Kept confidential
- Are not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by the standard or as may be required by law

Human Resources will maintain the records required for at least the duration of employment plus thirty years in accordance with Health and Safety Code, Chapter 81, Subchapter H.

Training Records

Training records will be maintained for three years from the date of training. The following information will be documented:

- The dates of the training sessions.
- The contents or a summary of the training sessions.
- The names and qualifications of persons conducting the training.
- The names and job titles of all persons attending the training sessions.

EH&S will serve as the custodian of all bloodborne pathogens standard training records. All training records required by this standard will be provided upon request for examination and copying to all employees, employee representatives, and representatives from the Texas DSHS in accordance with Health and Safety Code, Chapter 81, Subchapter H.

APPENDIX A

Hepatitis B Vaccine Declination

Texas Department of State Health Services, Health and Safety Code 81.304
(CFR1910.1030 App A)

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.

Name: _____

Job Title: _____

Department: _____

Signature: _____

Date: _____