TDCJ Bloodborne Pathogen Program

The OSHA Bloodborne Pathogen Program

The OSHA Standard for Occupational Exposure to Bloodborne Pathogens (Standard) (29CFR1910.1030) requires that each person who has a risk of exposure to bloodborne pathogens in the workplace through occupational exposure be given initial and annual training for occupational hazards. They should also have a copy of the standard. If you do not have a copy of the Standard, contact your Risk Manager.

TDCJ is not under the jurisdiction of OSHA. However, a recently enacted state law requires the agency to comply with the Standard. The Standard was originally written for the protection of workers in a health care facility, so some of the provisions do not apply to TDCJ employees; even so, where applicable, it is the intent of TDCJ to comply with the Standard.

The TDCJ Exposure Control Plan

Supervisors are responsible for employees at risk for occupational exposure to bloodborne pathogens. Employees at risk are also responsible for being familiar with the TDCJ Exposure Control Plan (ECP) and following the guidelines of the ECP. A copy of the ECP is available on the Agency web site or through your unit Risk Manager's office.

Bloodborne Pathogens

A bloodborne pathogen is an infectious agent that is transmitted through exposure to blood or contaminated body fluids and can cause illness or disease. Some examples of bloodborne pathogens include hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV).

Common Bloodborne Pathogens

- **HIV**
- **HBV**
- **HCV**

Definitions

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

Bloodborne Pathogens means 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).

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

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination means 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.

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

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral (see below) contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Mucous Membrane means the membrane inside the eyelid that surrounds the eye, the inside of the nose, inside the mouth or inside the penis, vagina or rectum.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials (**OPIM**) means 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;

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment (**PPE**) is 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.

Special Medical Waste means 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.

Universal Precautions is 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 means 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).

Selected Bloodborne Pathogens

Hepatitis B Virus (HBV)

Hepatitis B Virus can survive in dried blood for two weeks or longer.

- Symptoms: When present, fatigue, sore muscles, fever, loss of appetite, nausea, vomiting, abdominal pain, jaundice. 50% or more of cases occur without symptoms. Rarely the acute illness results in death.
- Incubation period: 3 weeks – 3 months, averages 6-8 weeks
- Risk of exposure: about 2-3% of TDCJ offenders are carrying the virus. In the free world less than 1% of the population are carriers. Some groups, such a s health care workers or people born in some foreign countries, especially Southeast Asia, are more likely to carry the virus.
- Outcome: 95% recover without permanent damage and are then immune to reinfection. When acute symptoms occur, they last a few weeks, although fatigue may persist for several months. About 5% develop chronic hepatitis. Chronic hepatitis is usually without symptoms, but the person remains contagious and about ¼ with chronic hepatitis will develop cirrhosis or liver cancer after 10-30 years.
- Risk of transmission: About 30% of unvaccinated people will become infected after a needlestick exposure to HBV-infected blood. This is the most risky type of exposure. The risk after other types of exposure is lower.
- Persistence of the virus: HBV can survive in dried blood for at least two weeks.
- Treatment/prevention: Acute hepatitis B must resolve on its own. Although treatment is available for chronic hepatitis B it is effective in only ½ the cases or less. The best approach is through prevention by vaccination. Vaccine is usually given before any exposure can occur for high-risk employees. Vaccination shortly after an exposure can still protect an employee who was not vaccinated before the exposure.

Hepatitis C Virus (HCV)

- Symptoms: similar to hepatitis B, except most cases have no symptoms.
- Incubation period: 2 – 26 weeks, averaging about 7 weeks.
- Risk of exposure: about 30% of TDCJ offenders are carrying the virus. In the free world less than 2% of the population are carriers. Some groups, such as injection drug users are at very high risk.
- Outcome: 15-25% recover without permanent damage to the liver but may be reinfected if another exposure occurs. When acute symptoms occur, they last a few weeks, although fatigue may

Only 15 – 25 percent of people with hepatitis C clear up their infection.

persist for several months. About 75-85% develop chronic hepatitis. Chronic hepatitis is usually without symptoms, but the person remains contagious and about ¼ with chronic hepatitis will develop cirrhosis or liver cancer after 10-30 years.

- Risk of transmission: About 3 – 10% of exposed people will become infected after a needlestick exposure to HCV-infected blood. Shared (intentionally or unintentionally) needles and other sharps are the most important means of transmission of this virus.
- Persistence of the virus: Ability of the virus to survive outside the body is unknown, but thought to be short – on the order of minutes to hours.
- Treatment: No vaccine is available for prevention. Chronic infection can be treated but response to treatment averages only about 40%.

Human Immunodeficiency Virus (HIV)

- Symptoms: a flu-like illness with fatigue and sore muscles may occur a few weeks after infection. People are then usually without symptoms for several years until symptoms of advanced disease, such as weight loss, recurrent infections, swollen glands and others occur. Initial infection is usually not recognized because symptoms are absent of very mild.
- Incubation period: 6 weeks – 6 months for blood test to become positive. AIDS takes several years to develop.
- Risk of exposure: About 2.5% of TDCJ offenders carry the virus. Female offenders are more likely to be infected (about 5%). Less than 1% of the free world population are infected.
- Outcome: All infections become chronic. Infected persons remain contagious. AIDS develops after several years of infection, although treatment may slow or delay the onset of AIDS.
- Risk of infection: 0.67% (1/150) for a hollow-bore needle stick; 0.4% (1/250) for a solid needle exposure to HIV containing blood. Risk from sexual exposure is similar, while exposures to non-intact skin and mucous membranes is lower.
- Persistence of the virus: HIV is inactivated after only a few minutes exposure to air. It may persist longer in undried blood.
- Treatment: There is no effective vaccine for prevention. Modern treatments greatly slow the progression of disease and prolong survival, but so far have not cured anybody.

Infectious Body Fluids

Blood is the most important body fluid that may contain a bloodborne pathogen. Other body fluids that can contain these pathogens even if no blood is visible (OPIM) include spinal fluid, joint fluid, amniotic fluid (the water from childbirth) semen, vaginal secretions and the small amount of fluid that surrounds the heart, lungs and intestines. Except for semen, it is unlikely that a non-medical worker would have an exposure to any of these other fluids without blood also being present.

INFECTIOUS BODY FLUIDS

- **Blood**
- **Semen**
- **Vaginal Secretions**
- **Spinal Fluid**
- **Joint Fluid**
- **Fluid around Heart, Lungs and Intestines**
- **Saliva during dental work**

Other body fluids do not contain bloodborne pathogens in enough quantity to transmit infection, unless the fluid is contaminated with visible blood. These fluids are not

considered OPIM unless they have visible contamination with blood or are part of a mixture of fluids in which it is impossible to tell if blood is or is not present. These non-OPIM fluids include urine, feces, tears, nasal secretions, sputum or vomit. Even though these fluids are not associated with transmission of bloodborne pathogens unless blood is also present, care should still be taken to minimize exposure to these fluids.

Urine, Feces, Saliva, Vomit, Tears, Nasal Secretions and Sweat cannot transmit bloodborne pathogens unless they contain VISIBLE BLOOD.

Routes of Exposure

An exposure can only take place if the pathogen can get into the body of the exposed person. This can happen if blood or OPIM comes into contact with a mucous membrane, broken skin (such a recent cut, burn or abrasion) or a parenteral exposure (see definitions).

Examples of exposure pathways that may occur for TDCJ employees include:

- A needlestick or sharp exposure when shaking down a cell.
- An injury received during a use of force.
- "Chunking" exposure to a mucous membrane or broken skin (if the body fluid contains visible blood).
- Exposure to a mucous membrane or broken skin when administering first aid.
- Indirect exposure by touching visible blood and then touching a mucous membrane or a cut.

There is no exposure unless the pathogen can enter the body.

These examples do not constitute all possible ways for exposure to occur. Employees are expected to recognize other potential exposures. If you are uncertain about an exposure it is better to report it than to assume there is no danger.

Other means of transmission not expected to occur in the workplace include sexual contact or transmission from mother to infant during or after childbirth.

Prevention of Exposures

Administrative controls

- All employees must be familiar with the TDCJ Exposure Control Plan
- Annual bloodborne pathogen refresher training is required for all persons at risk of an occupational exposure.

Work Practices

- Properly label containers and storage areas.

- Disinfect contaminated equipment and materials before releasing for re-use.
- Dispose of contaminated materials according to Infection Control Manual Policy B-14.25.
- Clean spill of blood or OPIM when they occur by trained personnel using appropriate personal protective equipment and disinfectant.

Engineering Controls

- Dispose of potentially contaminated sharps in an approved container, according to Infection Control Manual Policy B-14.24

Use Personal Protective Equipment (PPE)

- PPE includes water-resistant gowns, gloves, face shields, use of force shield, shoe covers and other equipment determined appropriate for a particular job or task.
- PPE are to be used whenever exposure to blood or OPIM can reasonably be anticipated.
- The employee is responsible for using the appropriate PPE.
- The supervisor is responsible for assuring the appropriate PPE is available and is used.
- PPE should be inspected before use. If damaged get it replaced.
- PPE needs to be cleaned an disinfected when dirty or contaminated.

Employees at Risk for Exposure

TDCJ job classifications fall into three exposure categories for protection against occupational exposure to bloodborne pathogens, according to the tasks required in the particular job classification. These categories are as follows:

Category I: Jobs requiring tasks that involve exposure to human blood, body fluids, or tissues.

All procedures or other job-related tasks that involve an inherent potential for mucous membrane or skin contact with human blood, body fluids, or tissues, OR a potential for spills or splashes of them are Category I tasks. Use of appropriate personal protective equipment will be required for every employee engaged in Category I tasks.

Examples of Category I tasks include: use of force, contact body search, providing emergency first aid, cell search.

Category I job classifications include:

- Correctional Officer
- Sergeant of Correctional Officers
- Lieutenant of Correctional Officers
- Captain of Correctional Officers
- Major of Correctional Officers
- Wardens and assistant wardens
- Offender dental lab technician and dental lab clerk

Category II: Jobs requiring tasks that involve no exposure to human blood, body fluids, or tissues but employment may require performing unplanned Category I tasks.

The normal work routine involves no exposure to blood, body fluids, or tissues, BUT exposure or potential exposure may be required as a condition of employment. Appropriate personal protective equipment will be readily available to every employee engaged in Category II tasks.

Examples of exposure risks for job classifications required to perform Category 2 tasks include: providing emergency first aid, handling contaminated laundry, cleaning blood spills, exposure to trash or waste that may contain sharps.

Category II job classifications include:

- Unit housekeeping personnel
- Laundry Manager II
- Laundry Manager III
- Offender laundry worker
- Offender SSI - Waste

Category III: jobs in which required tasks involve no exposure to human blood, body fluids or tissues, AND Category I tasks are not a condition of employment.

The normal work routine involves no exposure to human blood, body fluids or tissues (although situations may be imagined or hypothesized under which anyone, anywhere, might encounter potential exposure to body fluids). Persons who perform these duties are not called upon as part of their employment to perform or assist in emergency medical care or first aid or to be potentially exposed in some other way. Under unusual circumstances, persons in job classifications requiring only Category III tasks may provide emergency first aid, but doing so is not expected as a job requirement.

Category III job classifications include:

All other TDCJ job classifications not included in Category I or Category II

The list of tasks given as examples for each risk category is not complete; employees are expected to know through training and experience when a task involves exposure to a bloodborne pathogen and when personal protective equipment must be used.

Labeling

A universal biohazard sign in fluorescent orange or orange-red must be attached to any container containing blood or OPIM, sharps or materials contaminated with blood or OPIM. A red bag may be used in place of a labeled container for contaminated clothing or regulated medical waste.

Disposal of Sharps

TDCJ employees ordinarily should not use needles in the execution of their jobs. However, needles or sharps may be found as a result of a shakedown or other situation. These needles or sharps shall be considered contaminated and placed in a disposable sharps container without further manipulation, unless needed as evidence. If a needle or sharp is required as evidence it shall be placed in a rigid closable container that will not allow inadvertent needlestick injury. The container should be color coded (red) and/or biohazard labeled.

Contaminated needles and sharps must be discarded immediately or as soon as feasible in containers that are:

- closable
- puncture resistant
- leakproof on sides and bottom, and
- biohazard labeled or color-coded

During use, containers for contaminated sharps should be 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; and replaced routinely when soiled or more than 2/3 full.

Labeling and Disposal of Contaminated Waste

The following types of waste are considered special medical waste and must be disposed of according to Infection Control Manual Policy B-14.25:

- Liquid or semi-liquid blood or OPIM
- Contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed
- Items that are caked with dried blood or OPIM that could be released when handled
- Contaminated needles and sharps

Infectious body fluids must be disposed of properly.

If an item can be cleaned and disinfected (for example, a plastic coated mattress) it should be handled in that manner, even if it will subsequently be discarded. If the object is not saturated with blood or caked with dried blood it does not have to be disposed of as special medical waste.

Spills

Spills of blood or OPIM must be contained and cleaned up immediately. Broken glass must not be picked up with the hands. Appropriate PPE should be worn by the person cleaning up the spill. Contaminated materials must be disposed of properly. A spill kit containing supplies necessary for cleaning small spills can be obtained from the unit medical department – refer to Infection Control Manual Policy B-14.25 Attachment A for further guidance. Large spills may require additional PPE such as gowns or shoe covers.

HBV vaccination

The most contagious of the common bloodborne pathogens is hepatitis B virus. Fortunately, there is an effective vaccine that offers almost complete protection. Hepatitis B vaccine is given in a series of 3 shots, and should be started by the medical department at the unit you are assigned to work. If your job involves category 1 or category 2 tasks (see Employees at Risk, above) and you haven't been offered the vaccine, contact the medical department to get started on the series. Employees whose job only requires category 3 tasks do not get the vaccine routinely, but can still be protected if an exposure occurs because the vaccine will still prevent hepatitis B if it is started within 3 days after the exposure.

When an Exposure Occurs

For any exposure it is important to report it as soon as possible. TDCJ has a policy (Health Services Division Policy B-14.5) that governs the medical management of exposures to bloodborne pathogens. After an exposure occurs, a medical person should determine the manner of exposure and the body fluid involved in the exposure. Your role here is to be able to give an accurate account of the exposure, so it is important to note whether blood or OPIM were involved, and what parts of your body were exposed. However, do not leave the blood or OPIM in place for the medical staff to see – wash it off with soap and water as soon as possible. If it does not cause undue delay, it may be helpful to have a coworker or supervisor view and take note of the extent of the exposure before cleaning up.

If an Exposure Occurs

- **Make sure safety and order are restored**
- **Render first aid if needed**
- **Note type of body fluid, whether blood is present and extent of exposure**
- **Wash off body fluid and change contaminated clothing ASAP**
- **Report the injury**
- **Report to medical department for evaluation of the exposure**

Regardless of whether the exposure was capable of transmitting an infection, the medical department will offer baseline testing for HIV, hepatitis B and hepatitis C. This testing is optional, but highly recommended because you may need the results in the future to help establish a workers compensation claim. If the medical person judges the exposure to present a risk of transmission of infection, additional tests will be recommended at 6 weeks, 3 months, 6 months and 12 months after exposure, unless results of the source or baseline testing make the additional blood tests unnecessary.

An exposed employee can get the results of the source's blood tests if a proper request is made through the medical department at the time the exposure is first evaluated. The employee is required to keep those results confidential and may be subject to legal or disciplinary actions if they disclose the results to anyone else.

Under some circumstances the medical department will recommend treatment after the exposure to prevent HIV or hepatitis B. The preventive treatment for HIV is most effective if started

within a few hours after the exposure and for hepatitis B within 3 days after exposure, so prompt reporting of an exposure is very important.

Post-exposure preventive treatment for HIV, if needed, should be started within 2-6 hours after the exposure.

Evaluation and treatment of an exposure will be provided through unit medical staff at no cost to the employee. Employee medical records relating to the exposure will be stored in the Office of Preventive Medicine for 30 years.

If an employee chooses to seek medical evaluation and treatment of an exposure through an outside physician, it will be at their own expense. Workers Compensation will usually not cover the evaluation of an exposure or preventive treatment.

As of April 2001 there has been no documented instance of transmission of a bloodborne pathogen to a TDCJ employee as a result of an occupational exposure reported to the Office of Preventive Medicine.

Relevant TDCJ Administrative Directives and Policies

The following policies and directives are relevant to bloodborne pathogens:

- AD 6.60 – Management of Inmate and Employee Bloodborne Pathogen Issues
- Health Services Division Policy B-14.4 – Prevention of Hepatitis B Virus Infection in TDCJ Facilities
- Health Services Division Policy B-14.5 – Occupational Exposure Counseling and Testing for TDCJ Employees
- Infection Control Manual Policy B-14.24 – Disposal of Sharps, Needles and Syringes
- Infection Control Manual Policy B-14.25 – Medical Waste Management
- Infection Control Manual Policy B-14.31 – Personal Protective Equipment and Other Protective Supplies