BLOODBORNE PATHOGENS - 1910.1030

Introduction

Bloodborne pathogens are pathogenic microorganisms that are present in human blood and can infect and cause disease in humans. These pathogens include but are not limited to, Hepatitis B Virus (HBV) which causes Hepatitis B, a serious liver disease and Human Immune Deficiency Virus (HIV) which causes Acquired Immunodeficiency Syndrome (AIDS).

The Occupational Safety and Health Administration (OSHA) has determined that certain employees (particularly health care employees) face a significant health risk as a result of occupational exposure to blood and other potentially infectious materials (OPIM), because they may contain bloodborne pathogens.

To minimize or eliminate the risk of occupational exposure to bloodborne pathogens, OSHA issued the Occupational Exposure to Bloodborne Pathogens Standard. This standard prescribes actions that employers must take to reduce the risk of exposure to bloodborne pathogens in the workplace.

These actions include: the use of engineering and work practice controls; personal protective equipment; training; medical surveillance; Hepatitis B vaccinations; signs and labels; and other provisions.

In this section, the key provisions of the Bloodborne Pathogens Standard are summarized. Additional information is contained in the attached handouts.

Scope And Application

The standard applies to all employees with occupational exposure to blood and OPIM. Occupational exposure means "a reasonably anticipated skin, eye,

mucous membrane or parenteral contact with blood or OPIM that may result from the performance of the employees' duties". Blood is defined as "human blood, human blood components, and products made from human blood".

OPIM includes 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 visibly contaminated with blood; and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. OPIM also includes: unfixed tissue or organ from a human; HIV - containing cells or tissue cultures, organ cultures, and HIV - or HBV - containing culture medium or other solutions; and blood organs, or other tissue from experimental animals infected with HIV or HBV.

The Bloodborne Pathogens Standard covers many types of employees including those in healthcare, non-healthcare, and permanent and temporary work sites. Examples of employees in healthcare facilities include physicians and surgeons, nurses, dentists and dental workers, and laboratory personnel. Non-healthcare facilities employees include those who service and repair medical and dental equipment, infectious waste disposal employees and employees in law enforcement and correctional institutions.

OSHA has estimated that nearly 5.3 million employees are at risk of exposure to bloodborne pathogens.

Exposure Control Plan

The Exposure Control Plan (ECP) is the key provision of the standard. It requires the employer to identify employees who will receive the training, protective equipment, vaccination, and other provisions of the standard.

The ECP requires employers to identify in writing, tasks and procedures as well as job classifications where occupational exposure to blood occurs without regard to personal protective equipment. The plan must also set forth the schedule for implementing other provisions of the standard and specify the procedure for evaluating circumstances surrounding exposure incidents. It must be accessible to employees and available to OSHA and NIOSH (National Institute for Occupational Safety and Health) representatives. Employers must review and update the plan annually or more often if changes in exposure occur.

Methods Of Compliance

The standard describes various methods of compliance that the employer must take to protect their employees from exposure to bloodborne pathogens. These methods include universal precautions, engineering and work practice controls, personal protective equipment, and housekeeping.

Universal precautions is an approach to infection control in which all human blood and certain body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. Universal precautions is OSHA's required method of control to protect employees from exposure to all human blood and OPIM.

Engineering controls are controls that isolate or remove the bloodborne pathogens hazard from the workplace. Examples of engineering controls include puncture-resistant sharps containers; mechanical needle recapping devices; and biosafety cabinets. To ensure effectiveness, engineering controls must be examined and maintained or replaced on a regularly scheduled basis.

Work practice controls reduce the likelihood of exposure by altering the manner in which a task is performed. Some examples of work practice requirements in

the standard include not bending or breaking contaminated sharps and hand washing when gloves are removed and as soon as possible after contact with body fluids.

Personal protective equipment must be used if occupational exposure remains after instituting engineering and work practice controls, or if these controls are not feasible. Personal protective equipment is specialized clothing or equipment that is worn by an employee for protection against a hazard. Employers must provide, at no cost, and require employees to use appropriate personal protective equipment such as gloves, gowns, masks, mouth pieces, and resuscitation devices. The employer must clean, repair, and replace these safety items when necessary.

In addition to other compliance methods, the standard requires that the employer maintain the work site in a clean and sanitary condition. Employers must follow certain procedures for cleaning and decontaminating the environment, equipment and work surfaces, and for handling contaminated laundry and regulated waste.

Contaminated work surfaces must be decontaminated with a disinfectant upon completion of procedures or when contaminated by splashes, spills, or contact with blood or OPIM. The employer must develop a written schedule for cleaning and decontaminating the work site based on the location within the facility, type of surface to be clean, amount of soil and the task being performed. Reusable trash containers must also be cleaned on a regular basis and after contamination.

Contaminated laundry is any laundry that may contain blood or OPIM or may contain sharps. The standard requires that contaminated laundry be handled as little as possible with a minimum of agitation. It must be bagged or containerized at the location where it was used and not be sorted or rinsed

where it was used. Contaminated laundry must also be placed and transported in bags or containers and properly labeled. When a facility uses universal precautions in handling soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with universal precautions.

Regulated waste is defined in the standard as 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 and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological waste containing blood or OPIM.

Regulated waste must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting, or shipping and labeled appropriately.

HIV AND HBV Research Laboratories and Production Facilities

The standard describe various requirements for HIV and HBV research laboratories and production facilities. A research laboratory produces or uses 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 which produces high volumes and high concentrations of HIV and HBV.

Some requirements in the standard specific to these facilities include: regulated waste must be incinerated, autoclaved or decontaminated before disposal; laboratory doors must be closed when work involves HIV and HBV; hazard

Warning signs must be used and placed on access doors; and biological safety cabinets must be used when working with potentially infectious material.

Additional training and experience also apply to employees in these facilities.

Hepatitis B Vaccination and Past Exposure Evaluation and Follow-Up

The employer is required to 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 an exposure incident. All medical evaluations and procedures must be provided: at no cost to the employee; at a reasonable time and place; under the supervision of a licensed physician or health care professional; and provided according to current recommendations of the U.S. Public Health Service.

The Hepatitis B vaccine and vaccination series must be offered within 10 working days of initial assignment to employees who have occupational exposure to blood or OPIM. Exceptions to this requirement are: when employees have previously completed the hepatitis B vaccination series; immunity is confirmed through anti-body testing; or the vaccine is contraindicated for medical reasons. Employees must sign a declination form if they choose not to be the vaccinated, but may request and obtain the vaccination at a later date at no cost.

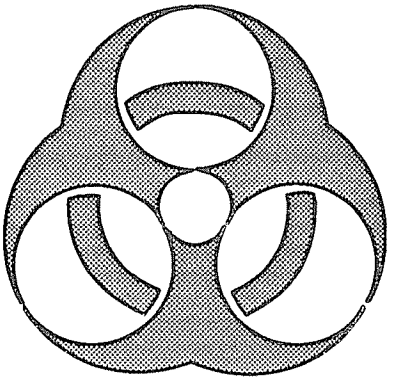
A confidential medical evaluation and follow-up must be made available to employee following an exposure incident. An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM that results from the performance of an employee's duties.

The evaluation and follow-up procedures must include documenting the circumstances of exposure, identifying and testing the source individual if feasible, testing the exposed employee's blood if he/she consents, post-exposure prophylaxis, counseling, and evaluation of reported illnesses.

Following the post-exposure evaluation, the health care professional must provide a written opinion to the employer. This opinion is limited to a statement that the employee has been informed of the need, if any, for further evaluation or treatment. All other findings are confidential. The employer must provide a copy of the written opinion to the employee within 15 days of the evaluation.

Communication Of Hazards To Employees

The hazards of bloodborne pathogens must be communicated to employees through signs, labels and training.



The standard requires that warning labels be attached to containers of regulated waste, refrigerators or freezers containing blood or OPIM, and other containers used to store, transport, or ship blood or OPIM.

The warning label must include the universal biohazard symbol followed by the term **"BIOHAZARD"** in a fluorescent orange or orange-red color with lettering or symbols in a contrasting color.

The labels are not required when: red bags or red containers are used for regulated waste; regulated waste has been decontaminated; individual containers of blood or OPIM are placed in a labeled container during storage, transport, shipment, or disposal; and containers of blood or blood products are labeled as to the content and have been released for transfusion or other clinical use. Contaminated equipment must also be labeled with the label stating which portion of the equipment remains contaminated.

The biohazard label must also be posted at the entrance to HIV and HBV research laboratories and production facilities work areas.

The employer must ensure that all employees with occupational exposure participate in an effective training program. Training must be provided within 90 days after the effective date of the standard and annually thereafter.

Training must be provided by an individual who is knowledgeable in the subject matter, at no cost to employees, during regular accessible to employees.

Some elements of the training program include providing: an accessible copy of the regulatory text and explanation of its contents; an explanation of the modes of transmitting and epidemiology of HBV and HIV; an explanation of the written exposure control plan and how to obtain a copy; an explanation of use and limitations of engineering controls, work practices, and personal protective equipment.

The training materials must be appropriate in content, language, and vocabulary to the educational, literacy, and language background of the employee.

Recordkeeping

Employers must establish and maintain accurate records for each employee with occupational exposure.

There are two types of employee related records required by the Bloodborne Pathogens Standard: medical and training.

The medical records must include: employee's name and social security number, employee's Hepatitis B vaccination status; post-exposure evaluation and follow-up procedures results; the healthcare professionals written opinion;

and other specific information provided to the healthcare professional.

The medical record must be kept confidential and retained for the duration of employment plus thirty years in accordance with OSHA'S Access to Employee Exposure and Medical Records Standard. These records must be made available upon request to employees, anyone with written consent of the employee, and NIOSH and OSHA representatives.

Training records must include the following: training dates, contents or summary of the training session, names and qualifications of the trainers, and names of job titles of trainees. All training records must be kept three years from the date of the training.

If the employer ceases to do business, medical and training records must be transferred to the successor employer. If there is no successor employer, the employer must notify the Director of NIOSH for instructions regarding disposal of records. This must be done at least three months prior to disposing of the records.

Dates

All provisions of the Bloodborne Pathogens Standard are now in effect.