Bloodborne Pathogens Training

This training covers the requirements of OSHA's Bloodborne Pathogen regulation 29 CFR 1910.1030. The goal of this training is to educate employees about the dangers associated with occupational exposure to blood and OPIM (Other Potentially Infectious Material) and some precautions that can be taken to avoid employee exposure to potentially infectious materials.

In addition, this course also covers OSHA's revisions to 1910.1030 Occupational Exposure to Bloodborne Pathogens; Needlestick and Other Sharps Injuries; Final Rule published on January 18, 2001 and which took effect on April 18, 2001.

Learning Objectives

After completing this training, an employee should be able to:

- Know the risks associated with occupational exposure to blood and other body fluids.
- Know the precautions to take for occupational exposure to blood and other potentially infectious material.
- Know the requirements for an occupational exposure control plan and methods of compliance.
- Know the requirements for Hepatitis B vaccinations and post-exposure evaluation and follow-up.
- Know the methods the employer will use to communicate hazards to employees.
- Know the employer's requirements for training employees.
- Know the recordkeeping requirements for the bloodborne pathogen exposure control program.
- Know the revisions to the bloodborne pathogen standard covering needlesticks and other sharps injuries.

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).
Engineering Controls – controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.
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.
HBV – hepatitis B virus.
HIV – human immunodeficiency virus.
Occupational Exposure – reasonably anticipated skin, eye, other 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 – human body fluids such as 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; all body fluids in situations where it is difficult or impossible to differentiate between body fluids; any unfixed tissue or organ (other than intact skin) from a human, living or dead; HIV-containing cell or tissue cultures or organ cultures;

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 needlesticks, 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.
Universal 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).

Bloodborne Pathogens

Blood and other potentially infectious materials (OPIM) have long been recognized as a potential threat to the health of employees who are exposed to these materials by percutaneous contact (penetration of the skin). Injuries from contaminated needles and other sharps have been associated with an increased risk of disease from more than 200 infectious agents. The primary agents of concern in current occupational settings are the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV).

In September 1986, OSHA was petitioned by various unions representing healthcare employees to develop an emergency temporary standard to protect employees from occupational exposure to bloodborne pathogens. The agency decided to pursue the development of a Section 6(b) standard and published a proposed rule on May 30, 1989. The agency also concluded that the risk of contracting the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV) among members of various occupations within the healthcare sector required an immediate response and therefore issued CPL 2-2.44, January 19, 1988. That instruction was superseded by CPL 2-2.44A, August 15, 1988; subsequently, CPL 2-2.44B was issued February 27, 1990 and the most current compliance directive, CPL 2-2.69, was issued November 27, 2001.

To reduce the health risk to workers whose duties involve exposure to blood or other potentially infectious materials, OSHA created the Bloodborne Pathogen Standard (29 CFR 1910.1030) on December 6, 1991. The provisions of the standard were based on the Agency's determination that a combination of engineering and work practice controls , personal protective equipment, training, medical surveillance, hepatitis B vaccination, signs and labels, and other requirements would minimize the risks of disease transmission. The bloodborne pathogen standard was revised in 2001 to reflect language in the Needlestick Safety and Prevention Act of November 6, 2000. The revised standard took effect April 18, 2001, but was not enforced until July 18, 2001.

Risks of Occupational Exposure

Bloodborne pathogens include, but are not limited to:

- HBV, which causes hepatitis B
- HIV, which causes acquired immunodeficiency syndrome (AIDS)
- HCV, which causes hepatitis C
- Human T-lymphotrophic virus Type 1
- Pathogens causing: malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, and viral hemorrhagic fever.

Exposures occur in a variety of ways including through needle sticks or cuts from other sharp instruments contaminated with an infected person's blood or through eye, nose, mouth, or broken skin contact with a person's blood. Important factors that may determine the overall risk for occupational transmission of a bloodborne pathogen include the type and number of blood contacts that an employee has. Most exposures do not result in infection. Following a specific exposure, the risk of infection may vary with factors such as:

- The pathogen involved
- The type of exposure
- The amount of blood/OPIM involved in the exposure
- The amount of virus in the person's blood/OPIM at the time of exposure

The employer must have an exposure control plan in place for reporting exposures in order to quickly evaluate the risk of infection, inform employees about treatments available to help prevent infection, monitor employees for side effects of treatments, and to determine if infection occurs. This may involve testing of the employee's blood and that of the source person and offering appropriate post exposure treatment.

It is important to know the risks of infection for the various types of bloodborne pathogens to which you may be exposed.

- **HBV** – Workers who have received the hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. For an unvaccinated person, the risk from a single needle stick or cut exposure to HBV-infected blood ranges from 6-30% and depends on the hepatitis B e antigen (HBeAG) status of the source individual. Individuals who are both hepatitis B surface antigen (HBsAG) positive and HBeAG positive have more virus in their blood and are more likely to transmit HBV.
- **HCV** – Based on limited studies, the risk for a needle stick or cut exposure to HCV-infected blood is approximately 2%. The risk following a blood splash is unknown, but is believed to be very small; however, HCV infection from such an exposure has been reported.
- **HIV** – The average risk for HIV infection after a needle stick or cut exposure to HIV-infected blood is about 1 in 300. Stated another way, 99.7% of needle stick or cut exposures do not result in HIV infection.

Precautions and Preventive Measures

Many needle sticks and other cuts can be prevented by:

- Using safer techniques (e.g., not recapping needles two-handed)
- Disposing of used needles in proper sharps disposal containers
- Using medical devices with safety features designed to prevent injuries

Many exposures to the eyes, nose, mouth, or skin can be prevented by using appropriate barriers (e.g., fluid resistant gloves, eye and face protection, and gowns) when contact with blood/OPIM is expected.

Hepatitis B vaccine has been available since 1982 to prevent HBV infection. All workers who have a reasonable chance of exposure to blood or body fluids should receive hepatitis B vaccine. Vaccination ideally should occur during the worker's training period. Workers can be tested 1-2 months after the vaccine series to make sure that vaccination has provided immunity to HBV infection.

There is no vaccine against hepatitis C, and no treatment after an exposure to prevent infection. Immune globulin is not recommended. For these reasons, following recommended infection control practices is imperative.

There is no vaccine against HIV. However, results from a small number of studies suggest that the use of zidovudine (and other drugs) after certain occupational exposures, may reduce the chance of HIV transmission.

Post exposure treatment is not recommended for all occupational exposures to HIV because most exposures do not lead to HIV infection and because the drugs used to prevent infection may have some serious side effects. Taking these drugs for exposures that pose a lower risk for infection may not be worth the risk of side effects. Employees should discuss the risks and side effects with a health care provider before starting post-exposure treatment for HIV. If the source individual cannot be

identified or tested, decisions regarding follow-up should be based on the exposure risk and whether the source is likely to be a person who is infected with a bloodborne pathogen. Follow-up testing should be available to all workers who are concerned about possible infection through occupational exposure.

Treatment for bloodborne pathogen exposure should normally begin as soon as possible. For HBV exposure, treatment should begin as soon as possible, within 24 hours and no later than seven days. For HIV exposure, treatment should begin within hours.

Exposure Control Plan Requirements

All employers with employees who have occupational exposure to, or potential occupational exposure to bloodborne pathogens are required to establish a written Exposure Control Plan designed to minimize or eliminate employee exposure. Written exposure control plans must contain the following elements:

1. An Exposure Determination
    - A list of all job classifications in which all employees in those job classifications have occupational exposure.
    - A list of job classifications in which some employees have occupational exposure.
    - A list of all tasks and procedures (or groups of closely related tasks and procedures) in which occupational exposure may occur when they are performed by employees in the listed job classifications.

2. Methods of Compliance
3. HIV and HBV research laboratories and production facilities (if applicable).
4. Hepatitis B vaccination and post-exposure evaluation and follow-up.
5. Communication of hazards to employees.
6. Recordkeeping.
7. Procedures for evaluating circumstances surrounding exposure incidents.

This plan is to be made available for employees to review. The plan must be reviewed at least annually, and updated as necessary to reflect new or modified tasks and procedures affecting occupational exposure, and to reflect new or revised employee positions having occupational exposure to bloodborne pathogens. The plan must be available to OSHA upon request for examination and/or copying.

Methods of Compliance

The first principle of methods of compliance is that universal precautions shall be observed to prevent contact with blood or other potentially infectious material. If differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious material.

Engineering controls must be used to eliminate or minimize employee exposure. Where occupational exposure remains after the institution of these controls, personal protective equipment shall also be used. Any engineering controls must be regularly maintained to assure their effectiveness. In addition, handwashing facilities, or some other effective way for employees to disinfect their hands, must be readily accessible. It is the employer's responsibility to ensure that employees wash as soon as possible after they remove their gloves and personal protective equipment. Employers must also ensure facilities for the flushing of mucous membranes, eyes, face, and the body after any contact with blood or other potentially infectious material.

If contaminated needles or sharps must be recapped, bent, or removed, a one-handed technique or mechanical device must be used. As soon as possible after use, sharps must be disposed of in a proper container; the container must be:

- Puncture resistant and closable
- Labeled with the *Biological Hazard* placard or red-colored

- Leak proof on the bottom and sides
- Be constructed and placed to prevent employees, patients, and visitors from reaching into the container

When there is occupational exposure, the employer must provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to:

- Fluid resistant gowns
- Fluid resistant gloves
- Fluid resistant laboratory coats
- Face shields or masks and eye protection
- Resuscitation bags
- Pocket masks or other ventilation devices

Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious material 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.

If an employee exposure does occur, the employee should immediately:

- Wash the skin with soap and water and flush mucous membranes with water.
- Evaluate the exposure source and determine the risk of infection.
- Seek medical evaluation per the company's written bloodborne pathogen program.

The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows 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.

The employer shall assure that appropriate personal protective equipment, in the appropriate sizes, is readily accessible at the work site or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, non-latex, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided. The employer must pay for any cleaning or disposal of PPE and shall repair or replace PPE as needed.

Proper gloves must be worn whenever contact with potentially infectious material is anticipated. Disposable (single use) gloves such as surgical or examination gloves must be replaced as soon as practical when contaminated or as soon as feasible when they are torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves can be disinfected for reuse as long as they maintain their integrity.

If a garment is penetrated by blood or other potentially infectious material, the garment shall be removed immediately or as soon as feasible. All personal protective equipment shall be removed prior to leaving the work area, and placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

Good housekeeping requires that employers ensure the worksite is maintained in a clean and sanitary condition. All equipment and environmental working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious material. Broken glassware which may be contaminated must be cleaned up using mechanical means, such as a brush and dustpan, tongs, or forceps.

Contaminated laundry must be handled as little as possible with a minimum of agitation, and be placed an transported in bags or containers which are labeled or color-coded. The employer must

ensure that employees who have contact with contaminated laundry wear protective gloves and other personal protective equipment.

Understanding Hepatitis B

Although the potential for HBV transmission in the workplace setting is greater than for HIV, the modes of transmission for these two viruses are similar. Both have been transmitted in occupational settings by percutaneous inoculation or contact with an open wound, nonintact (e.g., chapped, abraded, weeping, or dermatitis) skin, or mucous membranes, with blood, blood-contaminated body fluids, or concentrated virus.

Blood is the single most important source of HIV and HBV in the workplace setting. Protection measures against HIV and HBV for workers should focus primarily on preventing these types of exposures to blood as well as the establishment of an HBV vaccination program and delivery system. Persons who contract HBV are at risk of developing chronic liver disease (chronic active hepatitis, cirrhosis, and primary liver cancer), and are infectious to others.

The risk of hepatitis B infection following a parenteral (i.e., needle stick or cut) exposure to blood is directly proportional to the probability that the blood contains hepatitis B surface antigen (HbsAG), the immunity status of the recipient, and on the efficiency of the transmission.

The probability of the source of the blood being HbsAG positive ranges from 1 to 3 per thousand in the general population to 5% - 15% in groups at high risk for HBV infection, such as immigrants from areas of high endemicity (China and Southeast Asia, sub-Saharan Africa, most Pacific islands, and the Amazon Basin); clients in institutions for the mentally retarded; intravenous drug users, homosexually active males; and household (sexual and non-sexual) contacts with HBV carriers.

Universal precautions, engineering controls, and personal protective equipment are all effective measures for reducing the exposure risk to employees. Universal precautions should be followed any time workers are exposed to blood, certain other body fluids, or any body fluid visibly contaminated with blood.

Available vaccines stimulate active immunity against HBV infection and provide over 90% protection against hepatitis B for 7 or more years following vaccination. Hepatitis B vaccines also are 70%-88% effective when given within one week after HBV exposure.

Use of hepatitis B vaccine is strongly endorsed by the medical, scientific and public health communities as a safe and effective way to prevent hepatitis B disease and possible death. Hepatitis B vaccines have been shown to be very safe when given to infants, children, and adults. There is no confirmed evidence that indicates that hepatitis B vaccine can cause chronic illnesses.

You may have hepatitis B (and be spreading the disease) and not know it; sometimes a person with HBV infection has no symptoms at all. Only a blood test can tell for sure. If you have symptoms:

- Your eyes or skin may turn yellow
- You may lose your appetite
- You may have nausea, vomiting, fever, stomach or joint pain
- You may feel extremely tired and not be able to work for weeks or months

In addition to universal precautions, the following accepted measures would help reduce employee risk to contracting bloodborne diseases:

- After they are used, disposable syringes and needles, scalpel blades, and other sharp items should be placed in puncture-resistant containers for disposal.
- Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with: blood, other body fluids to which universal precautions apply, or potentially contaminated articles. Hands should always be washed after gloves are removed, even if the gloves appear to be intact.

- All spills of blood and OPIMs should be promptly cleaned up using an EPA-approved germicide or a 1:100 solution of household bleach in the following manner while wearing gloves. Visible material should first be removed with disposable towels or other appropriate means that will assure against direct contact with blood. The germicidal solution should be carefully poured onto the surface where the spill has occurred and left for twenty minutes (or whatever the manufacturer's instructions state). After the contact time, the germicidal should be washed off with clean water and then the area should be scrubbed with a liquid soap, and rinsed. Gloves should be worn throughout this activity and if splashing is anticipated, protective eyewear should be worn along with an impervious gown or apron which provides an effective barrier to splashes.
- Although soiled lined may be contaminated with pathogenic organisms, the risk of actual disease transmission is low. All soiled linen should be handled as little as possible and with minimum agitation, and bagged at the location where it was used. Linen soiled with blood should be placed and transported in labeled bags that prevent leakage. Normal laundry cycles should be used according to the washer and detergent manufacturer's recommendations. Personnel involved with the handling and sorting of contaminated laundry should wear protective equipment such as gloves, gowns, masks, and eye protection.
- Protected work clothing contaminated with blood or other body fluids to which universal precautions apply should be placed and transported in labeled bags or containers that prevent leakage. Personnel involved in the bagging, transport, and laundering of contaminated clothing should wear gloves.
- Infectious waste shall be handled as a regulated waste, and as such, shall be stored, transported, and disposed of according to current and applicable local, state, and federal regulations.

Employers must make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure to bloodborne pathogens, and post-exposure evaluation and follow-up, to all employees who have had an exposure incident. In addition, the employer must ensure all medical evaluations and procedures, including the hepatitis B vaccine and vaccination series and post-exposure evaluation, and follow-up are:

- Made available at no cost to the employee.
- Made available to the employee at a reasonable time and place.
- Performed by/under the supervision of a licensed physician or by/under the supervision of another licensed health care professional.
- Provided according to recommendations of the U.S. Public Health Service that are current at the time these evaluations and procedures take place. Current recommendations of the U.S. Public Health Service can be obtained through the Centers for Disease Control (CDC) or online at cdc.gov.

Hepatitis B vaccination must be made available after the employee has received the training, and within ten working days of initial assignment to all employees who have occupational exposure unless:

- The employee has previously received the complete hepatitis B vaccine series.
- Antibody testing has revealed that the employee is immune.
- The vaccine is contraindicated for medical reasons.

If the employee initially declines hepatitis B vaccination but at a later date, while still covered under the standard, decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time. Employees who decline to accept hepatitis B vaccination offered by the employer MUST sign a Declination Statement.

The employer also has to ensure that the health care professional evaluating an employee after an exposure incident is provided with the following information:

- A copy of the OSHA bloodborne pathogen standard.
- A description of the exposed employee's duties as related 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 employer's responsibility to maintain.

The employer also has to obtain and provide the employee with a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation. The health care professional's written opinion for hepatitis B vaccination must be limited to whether hepatitis B vaccination is indicated for an employee; if the employee has received the vaccination; that the employee has been informed of the results of the evaluation; and 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 must remain confidential and must not be included in the written report.

The source individual's blood must 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 employer must established that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, must be tested and the results documented. When the source individual is already known to be infected with HIV or HBV, testing for the individual's known HIV or HBV status need not be repeated. Results of the source individual's testing must be made available to the exposed employee, and the employee must be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Communication of Hazards

Biological and blood-related hazards to employees are primarily communicated through tags, labels, and placards affixed to containers of blood or other potentially infectious material, and contaminated articles or equipment. That is the visual element of communication of hazards to employees. Proper employee training provides the necessary knowledge and skills needed to enable employees to fully protect themselves.

Warning labels help employees easily and quickly identify bloodborne exposure risk when handling containers or equipment. They should be of fluorescent orange, orange-red, or predominately so, with lettering and symbols of contrasting colors and the bloodborne placard symbol displayed with the legend "BIOHAZARD" similar to the placard shown in the example below.

Labels should be placed directly on, or as close to the container or equipment as feasible, by any method that will prevent its loss or accidental removal. Individual containers of blood or other potentially infectious material that is placed in a labeled container during storage, transport, shipment, or disposal are exempted from the labeling requirement.

Training

Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours. Training must be provided at the time of initial assignment, and at least annually thereafter. Training must be appropriate for the student's level of education, literacy, and language. The person conducting the training has to be knowledgeable in the elements contained in the training program as it relates to the specific workplace where the training is being held. Training must include at least the following:

- Accessible copy of the bloodborne text, and an explanation of it's content.
- A general explanation of bloodborne diseases and their symptoms.

- An explanation of the employer's control plan and how to obtain a copy.
- An explanation of how to recognize tasks that may involve exposure to blood or other potentially infectious material.
- An explanation of the use and limitations of methods that will prevent or reduce exposure, including engineering controls, work practices, personal protective equipment, and the signs and symbols used to indicate biohazards.
- Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment, and how to select the proper personal protective equipment.
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine or vaccination will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency, and the procedures to follow if an exposure incident occurs, including the method of reporting the incident.
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- An opportunity to ask the trainer any questions.

Recordkeeping

The employer is required to establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records", which includes requirements for employee medical record retention (the duration of employment plus 30 years), written authorizations, access to employee records, and employee information. The required record must include:

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

The employee medical records must be kept confidential, and not disclosed or reported without the employee's express written consent. Employee medical records required by OSHA shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, and to OSHA..

Training records must include the following information:

- The dates of the training sessions.
- The contents or the 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.

Training records must be maintained for at least three years from the date on which the training occurred. Records must be made available to OSHA upon request for examination or copying. Training records must also be provided upon request for examination or copying to employees, and employee representatives. If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer must notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three-month period.

Revisions and Additions to the Bloodborne Pathogen Standard

The Needlestick Safety and Prevention Act (Pub L. 106-430) was signed was signed into law on November 6, 2000. Because occupational exposure to bloodborne pathogens from accidental sharps injuries in health care and other occupational settings continues to be a serious problem, Congress felt that a modification to OSHA's Bloodborne Pathogens Standard was appropriate to set forth in greater detail (and make more specific) OSHA's requirements for employers to identify, evaluate, and implement safer medical devices.

OSHA revised the standard in response to an identified need to provide safer needle devices as they become available, and to involve front-line employees in evaluating and choosing the devices. The updated standard also requires employers to maintain a log of injuries from contaminated sharps.

CFR 1910.1030(c)(1) was revised to read:

"The Exposure Control Plan shall be reviewed and updated at least 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 review and update of such plans shall also:

- Reflect changes in technology that will eliminate or reduce exposure to bloodborne pathogens; and
- Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

An employer who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the exposure control plan.

The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

- The type and brand of device involved in the incident.
- The department or work area where the exposure incident occurred.
- An explanation of how the incident occurred.

The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904. The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

Bloodborne Pathogens Test

Employee Printed Name _____Signature _____

Instructor's Printed Name _____ Signature_____

Date of Training _____

Successful completion of this training requires a minimum score of 80% correct on this test.

1. Which of the following is not considered a bloodborne pathogen?
   A. Hepatitis B
   B. Hepatitis C
   C. HIV
   D. Hemophilia

2. How can occupational exposures to bloodborne pathogens be prevented?
   A. By using gloves, face protection, and gowns when contact with blood is expected
   B. By wearing long-sleeved clothing
   C. By consulting with your supervisor regarding high-risk assignments
   D. By avoiding all saliva contact with individuals you are not sure about

3. The risk of infection following an occupational exposure depends mostly upon what?
   A. The sex of the source individual
   B. Air temperature and the amount of sweat the source individual is producing
   C. The nationality of the source individual
   D. The type of exposure and the pathogen involved.

4. Immediately following an exposure to blood:
   A. Wash needle sticks and cuts with soap and water
   B. Flush splashes to the nose, mouth, and skin with water
   C. Irrigate eyes with clean water, saline, or sterile fluids
   D. All of the above

5. After an exposure incident resulting in infection, what information should NOT be placed on a evaluating health care professional's written opinion?
   A. Whether hepatitis B vaccine is indicated for an employee
   B. The source individual's name
   C. That the employee has been informed of the results of the evaluation
   D. If the employee received a vaccination

6. Who must pay for an employee's hepatitis B vaccination or vaccination series?
   A. The source individual who infected the employee
   B. The employer
   C. The employee's health insurance company
   D. The Centers for Disease Control (CDC)

7. Universal Precautions means:
   A. All blood exposure is likely to transmit a virus
   B. All blood exposure is likely to lead to AIDS
   C. All human blood is treated as if known to be infectious for bloodborne pathogens
   D. Precautions taken to prevent exposures are the same all over the world

8. In September 1986, OSHA was petitioned by whom to develop an emergency temporary standard to protect employees from occupational exposure to bloodborne diseases?
   A. United Meatpackers of America
   B. National Federation of Emergency Medical Technicians (NFEMT)
   C. Various unions representing health care employees
   D. United Autoworkers

9. One function of a written exposure control plan is:
   A. Communication of hazards to employees
   B. Information from supervisors regarding employees who may be infectious
   C. Identify all quarantined areas to avoid without proper PPE
   D. Identify by name all contaminated surfaces that employees will be working around

10. Employers are required to retain employee medical records for how long?
   A. 30 years
   B. 3 years
   C. The duration of employment plus 3 years
   D. The duration of employment plus 30 years

11. The purpose of the sharps injury log is:
   A. To identify and penalize employers whose employees receive excessive needle sticks
   B. To help track all needle sticks to help identify problem areas or operations
   C. For recording of percutaneous injuries from contaminated sharps
   D. Both B & C

12. The annual review of the Exposure Control Plan must document what?
   A. Employee absenteeism rates due to needle sticks
   B. Consideration and implementation of available and safer medical devices
   C. The best way to display placards, signs, and labels in order to communicate hazards
   D. The number of soiled clothing items incinerated each year due to contamination

13. Revisions to the OSHA Bloodborne Standard were:
   A. A recognition by Congress that current employee training was inadequate
   B. Mandated since accidental exposure to bloodborne pathogens is a serious problem
   C. Mandated because there was consensus that the former standard was ambiguous
   D. Required because decontamination procedures proved ineffective

14. When is Bloodborne Pathogen training required?
   A. At least annually
   B. During a new employee's training period
   C. Every two years
   D. Both A & B

15. Biological and blood-related warning signs should look like what?
   A. Colored black and yellow with the word CAUTION written on it
   B. Colored red with the word DANGER written on it
   C. Colored red with the word BIOHAZARD written on it
   D. Colored bright orange with the word PATHOGEN written on it