



Bloodborne Pathogens Safety

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Introduction

Understanding the Problem with BBP Exposures

Bloodborne pathogen (BBP) exposures occur every day, and you may not even notice. Workers who frequently handle blood, bodily fluids, materials contaminated with blood or bodily fluids, and medical waste are exposed to BBP infections at a higher rate than the general working population.

According to the Occupational Safety and Health Administration (OSHA), occupations where BBP exposures can occur include:

- Correctional Health Care Workers
- First Responders/Emergency Response Personnel
- Health Care Workers
- Maintenance and Waste Workers

OSHA estimates that 5.6 million workers in the healthcare industry and related occupations are at risk of occupational exposure to bloodborne pathogens. The Centers for Disease Control and Prevention (CDC) estimates that about 385,000 sharps-related injuries alone occur annually among health care workers in hospitals. Sharps injuries can result in bloodborne pathogen infections, which we will explain later in this training. Most injuries occur to nursing staff, although laboratory staff, physicians, housekeepers, and other health care workers are also at risk. The CDC estimates that half or more of sharps injuries go unreported.

After taking this course, you should be able to:

- Identify Bloodborne Pathogens (BBP) and Other Potentially Infectious Materials (OPIM)
- Describe how BBP and OPIM are transmitted through the chain of infection
- Describe OSHA requirements through the Exposure Control Plan (ECP)
- Apply Universal precautions and describe how to protect yourself from exposure
- Recall engineering and work practice controls that are set up to protect you
- Explain what to do in case you are exposed
- Identify Biohazard labels, waste signage, and waste disposal requirements

Bloodborne Pathogens

Overview

OSHA established the Bloodborne Pathogen (BBP) standard through the Code of Federal Regulations (CFR) 1910.1030. This law applies to all employers with employees who have occupational exposure to blood or other potentially infectious materials (OPIM).

OSHA requires that each work setting is examined to determine whether there is any "reasonably anticipated exposure." All workplaces with the potential for Bloodborne pathogen injuries must establish an Exposure Control Plan (ECP) to properly train employees on the

Bloodborne pathogen hazards of the job and implement safety measure to protect against injuries and illnesses.

The main sections of the Exposure Control Plan include:

- Responsibilities and Training
- Universal Precautions
- Engineering and Work Practice Controls
- Personal Protective Equipment
- Housekeeping
- Vaccination
- Labeling
- Post-Exposure Follow-Up
- Recordkeeping

This training module is meant to fulfill the educational requirements of the Bloodborne Pathogen standard. We will explore the ECP requirements in another section.

Bloodborne pathogens (BBPs) are disease-causing microorganisms that travel through the blood or other bodily fluids, also known as **Other Potentially Infectious Material (OPIM)**.

OPIM includes the following categories:

(1) Human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any bodily 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, HIV- or HBV-containing culture medium, blood, organs, or other tissues from experimental animals infected with HIV or HBV.

The next lesson will focus on the primary infectious diseases that can be transmitted through contact with blood or other potentially infectious materials (OPIM).

Many diseases can be transmitted through the bloodstream, such as malaria, syphilis, and brucellosis. However, three main diseases are highlighted in the standard due to the serious infections that can result. This course will spend some time reviewing these:

- Hepatitis B Virus (HBV)
- Hepatitis C Virus (HCV)
- Human Immunodeficiency Virus (HIV)

Infectious Pathogens

HBV, HCV, and HIV

Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease. According to the World Health Organization (WHO), an estimated 257 million people are living with Hepatitis B virus infection.

In 2015, Hepatitis B resulted in 887,000 deaths, mostly from liver diseases (including cirrhosis and hepatocellular carcinoma). Hepatitis B is a serious occupational hazard for health workers. However, it can be prevented through available, safe, and effective vaccines.

The Hepatitis B virus is often transmitted through contact with the blood or body fluids of an infected person. The Hepatitis B virus is still virulent and infectious for 7 days, even outside of the body.

After infection, incubation time for the virus is approximately 75 days. The virus can be detected within 30 to 60 days post infection, and develop into chronic Hepatitis B.

Reuse of needles and syringes is a prominent point of transmission for the Hepatitis B virus. According to the World Health Organization (WHO), infection can also occur during medical, surgical and dental procedures, tattooing, razor use, and other similar equipment contaminated with infected blood.

Most people do not experience symptoms during the acute infection phase. However, some people with acute illness experience symptoms that last several weeks, including:

- jaundice (yellow skin or yellowing of the whites of your eyes)
- extreme fatigue
- loss of appetite
- nausea
- abdominal pain and
- dark urine

Acute hepatitis can also result in acute liver failure, or death. Chronic liver disease can turn into cirrhosis or liver cancer.

The Hepatitis B vaccine is touted as the primary method to prevent Hepatitis B infection. The complete vaccine series stimulates protective antibody levels in more than 95% of infants, children and young adults. Protection can last for over 20 years, without the need for a vaccine booster.

The presence of symptoms may indicate an infection, however lab tests for the Hepatitis B surface antigen, HBsAg, will confirm it.

Hepatitis C virus (HCV) can cause acute and chronic infection. Acute HCV infection does not usually result in symptoms and is rarely life-threatening. Chronic Hepatitis C infection results in liver disease. According to the World Health Organization (WHO), "an estimated 71 million people have chronic Hepatitis C infection. Approximately 399,000 people die each year from Hepatitis C, from cirrhosis and liver cancer."

The following are the most common ways Hepatitis C is transmitted:

- Drug injection through shared equipment
- Reusing medical equipment without proper sterilization
- Transfusion of blood and blood products, without proper screening

Hepatitis C is not transmitted through food and water nor is it transmitted through casual contact with an infected person.

Hepatitis C symptoms can range from a short bout of mild illness to a serious, lifelong disease. Some infected individuals (15-45%) can overcome the virus within 6 months of infection without treatment. Acute symptoms can include:

- nausea
- vomiting
- fatigue
- dark urine
- loss of appetite, and
- abdominal pain

Chronic HCV infections can develop in another percentage of individuals infected. Of those who have chronic disease, many develop cirrhosis or liver cancer.

Unfortunately, there is no vaccine for Hepatitis C. Prevention of Hepatitis C infection relies on reducing the risk of exposure in high risk populations and healthcare settings. In addition to vaccines, prevention strategies for workers include:

- hand hygiene
- hand washing
- use of gloves
- safe injections;
- safe sharps waste disposal
- bloodborne pathogen prevention training

The presence of symptoms may indicate an infection, but only a blood test can confirm the presence of HCV antibodies.

Most persons with Hepatitis C infection can be cured with antiviral medicines, greatly reducing their risk of death from cirrhosis and liver damage.

The Human Immunodeficiency Virus (HIV) primarily targets the immune system. HIV impairs the ability of the immune system to fight infections and cancer. It works by destroying and damaging immune cells. Persons infected with HIV eventually become immunodeficient and are unable to fight disease. The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS), which is categorized by certain infections and diseases.

HIV can be transmitted by the exchange of body fluids from infected individuals, such as blood, breast milk, semen and vaginal secretions. For healthcare workers, accidental needlesticks are the primary cause of work-related HIV infections.

Individuals cannot become infected through ordinary day-to-day contact such as kissing, hugging, shaking hands, or sharing personal objects such as food or water.

Symptoms vary depending on the stage of infection. People with HIV are most infectious during the first few months of infection. Initially, individuals may experience no symptoms or influenza-like symptoms including a fever, headache, rash, or sore throat. As the infection progresses, it weakens the immune system. Other signs and symptoms include swollen lymph nodes, weight loss, fever, diarrhea and cough.

Without treatment, individuals can develop severe illnesses such as tuberculosis, cryptococcal meningitis, severe bacterial infections and cancers such as lymphomas and Kaposi's sarcoma.

Currently there is no cure for HIV; however, new treatments have been developed. The treatment options vary and must be tailored to the individual. The best prevention measure is to implement stringent safety measures and avoid contact with blood or OPIM.

The presence of symptoms may indicate infection, but several tests are required to confirm HIV infection.

Bloodborne Pathogen Transmission

How BBP's are Transmitted

Bloodborne pathogens (BBPs) are transmitted into the bloodstream through multiple routes of entry. They cannot be transmitted through casual contact (such as shaking hands) or through airborne droplets (such as coughing or sneezing). The following entry routes are the most common ways BBP exposures occur by parenteral contact (breaks in the skin or mucous membranes):

- **Needlestick injuries:** One of the most common routes of infection is through accidental needlestick pokes or sharps cuts.

- Breaks in the skin: Infectious fluids can enter the bloodstream through breaks in the skin such as through bites, open wounds and cuts.
- Mucous membranes: BBPs can be transmitted through mucous membranes in the eyes, nose, or mouth.
- Contaminated objects: Handling contaminated objects and then rubbing your eyes, nose, or an open skin wound can result in infection.

The following high-risk tasks can put employees at risk for a BBP infection:

- Medical and dental procedures involving blood and OPIM
- Using needles to inject medication or draw blood
- Working in a lab that handles blood, OPIM, or human tissues
- Cleaning surfaces contaminated with blood or OPIM
- Transporting blood or OPIM
- Handling medical waste or sharps contaminated with blood or OPIM
- Handling clothing contaminated with blood or OPIM
- Performing emergency, first aid, or life saving procedures

Sharps injuries are a result of skin punctures from a needle, scalpel, or other sharp object that may result in exposure to blood or other body fluids. In healthcare settings, sharps injuries often occur when staff are moving too quickly to meet the demands of a high pressure, fast-paced environment with limited resources. Sharps injuries can also occur when staff are not following protocol or procedures, such as passing sharps hand-to-hand between team members, recapping needles, placing sharps in disposal containers, or failing to use a safer sharps device.

According to a report from the Exposure Prevention Information Network (EPINet), nearly half of all sharps injuries occurred during sharps use, and almost 40% of needle injuries involving a safety designed needle, occurred before the safety device was activated. Overall, nursing staff and surgical team members had the highest rates of needlestick injuries.

Sharp injuries are also a risk in other industries because of employees with medical conditions, such as diabetes, have to self-administer medicine.

The Needlestick Safety and Prevention Act was signed into law in 2000. OSHA updated the Bloodborne Pathogen Program to specifically address needlestick injuries due to their continuing problem in the workplace. Employers were mandated to implement the following changes:

- Identify, evaluate, and implement use of safer medical devices such as needleless systems, self-sheathing needles, sharps with engineered sharps injury protections, sharps disposal containers, etc.
- Track needlestick injuries through a sharps injury log.
- Include non-managerial healthcare staff with direct patient care duties, in identifying, evaluating and choosing effective engineering & work practice controls.

- Provide training to staff with occupational bloodborne pathogen exposures. Staff must be trained in methods to prevent or reduce their workplace exposures, including engineering controls, work practices and personal protective equipment. Include any new engineering controls or techniques that can reduce their exposure risk.

In order to prevent infections, we need to understand the chain of events that lead to infection. Infection Transmission occurs when the pathogen leaves its source host, then it is conveyed by some mode of transmission, and enters through an appropriate portal of entry to cause infection in a new susceptible host. This sequence is often called the chain of infection.

Knowledge of the chain of infection provides a framework to identify control measures. In general, control measures are directed at breaking segments of the infection chain using an effective intervention. Interventions are directed at:

1. Controlling or eliminating the pathogen at the source of transmission
2. Protecting portals of entry
3. Increasing susceptible host defenses

In reviewing the OSHA BBP Exposure Control Plan, we can implement infection control strategies to break the BBP infection chain. Here some examples:

You can control or eliminate the pathogen at the source of transmission by:

- Implementing engineering and work practice controls such as
 - safety needles, hand hygiene and sharps disposal containers
- You can also use warning signs and labels such as
 - Biohazard signs
- You can also implement training such as
 - management and staff training on how to prevent BBP infections
- And you can implement housekeeping procedures such as
 - disinfecting and sterilizing all contaminated surfaces and equipment

Another intervention strategy is protecting portals of entry. You can do that by wearing personal protective clothing such as gloves, coveralls, and face shields.

A third intervention strategy you can implement is increasing susceptible host defenses. You can accomplish this by requiring HBV vaccination for all staff.

Exposure Control Plan

ECP Overview

An exposure control plan is a written document designed to eliminate or minimize employee exposure to BBPs. It is a master plan that details how a workplace is taking the initiative in protecting its employees from this risk. Your supervisor should specify where your workplace Exposure Control Plan (ECP) is located.

Procedures and safety controls should be updated as needed to ensure effectiveness. According to the Occupational Safety and Health Administration (OSHA), the required Exposure Control Plan elements include the following:

- **Determine exposures** to include the identification of job classes and tasks where employees are at risk.
- **Implement universal precautions** and treat all blood and OPIM as if it were infectious for bloodborne pathogens.
- **Use engineering controls** to isolate or remove the bloodborne pathogens hazards from the workplace. Examples include the use of sharps disposal containers and safer medical devices
- **Implement and use work practice controls** to reduce exposures such as proper handling of sharps, specimens, laundry, and disposal of contaminated equipment. It also covers the adequate cleaning of contaminated surfaces and items.
- **Use biohazard waste labels and signs, or red bags and red containers, to communicate hazards.** These warning labels must be placed on regulated waste containers, contaminated reusable sharps containers, refrigerators and freezers designated for blood or OPIM. Warning labels must also be used for storage, transport, or shipping containers for blood or OPIM. Contaminated equipment and laundry that is being shipped or serviced and transported must also be labeled. Special procedures exist for labs and research facilities.
- **Personal protective equipment (PPE)** such as gloves, gowns, eye protection, and masks must be provided without any cost to employees. PPE must be cleaned, repaired, and replaced as needed.
- **Adequate housekeeping is required** to disinfect contaminated work surfaces, replace coverings, and keep the work area in a clean and sanitary condition
- **Training must be provided** that covers all elements of the standard. Topics include bloodborne pathogens and diseases, control methods to prevent occupational exposure, Hepatitis B vaccine, medical evaluations and post-exposure follow-up. Training must be provided initially, annually, and as needed.
- **Emergency procedures must be developed** in case of an incident and should involve a post- incident investigation with corrective actions to prevent recurrence.
- **Worker medical and training records must be kept, including a sharps injury log.**
- **Regulated waste must be disposed of in red bags or containers with biohazard waste signage.** Cleanup using manual means is not acceptable.
- **Hepatitis B vaccinations must be offered** to all workers who have occupational exposure to BBPs. Vaccination declination forms must be provided.
- **Post-exposure evaluation and follow-up must be provided to any employee involved in an exposure incident.** Exposure incidents are defined as eye, mouth, mucous membrane, non-intact skin, or parenteral contact with blood or OPIM. This evaluation and follow-up includes documenting of the incident, source and employee

testing, prophylaxis, counseling, and evaluation report. The healthcare professional will provide a confidential written opinion and diagnosis to the employer.

- **Special standards, training, and procedures for HIV and HBV Research Laboratories and Production Facilities.**

Exposure control plans should be evaluated annually to review technology changes that can eliminate or reduce BBP exposure. Non-managerial staff working with BBP should also be involved in the identification, evaluation, and selection of effective engineering and work practice controls.

The plan must be reviewed and updated annually, and whenever necessary to reflect new tasks and procedures which affect occupational exposure and new or revised employee positions with occupational exposure.

Case Studies

BBP Cases

Case Study

WELCH, W. Va. – A January 2014 investigation by the U.S. Department of Labor's Occupational Safety and Health Administration revealed that correctional officers and other staff at McDowell medium-security federal prison in Welch were allegedly exposed to bloodborne pathogens and other workplace safety and health hazards. OSHA issued notices to the Federal Correctional Institution at McDowell, a part of the U.S. Department of Justice Federal Bureau of Prisons.

"Federal prison employees are often exposed to blood or other potentially infectious materials. It is imperative that employers take every reasonable precaution to protect these workers against these types of safety and health hazards," said Prentice Cline, director of OSHA's Charleston Area Office. Ten serious violations were identified, including the agency's failure to:

- Train employees on the bloodborne pathogens policy and limitations of personal protective equipment.
- Ensure the person conducting training was knowledgeable about the subject.
- Use puncture-resistant containers to transport contaminated sharps and other sharps.
- Provide health care professionals, who evaluate an employee following an exposure, a copy of the bloodborne pathogens regulation, the exposed employee's duties, documentation of the route of exposure or its circumstances, and medical records relevant to treatment of the employee. (and)
- Select and require puncture-resistant gloves while conducting pat-down operations.

A serious violation occurs when there is substantial probability that death or serious physical harm could result from a hazard about which the employer knew or should have known.

As required by the Occupational Safety and Health Act of 1970, federal agencies must comply with the same health and safety standards as private sector employers. The federal agency equivalent of a private sector citation is the notice of an unhealthful or unsafe working condition, which informs agency officials of violations. OSHA cannot propose monetary penalties against another federal agency for failure to comply with its standards.

This was the first OSHA inspection of the McDowell facility. The employer was given 15 business days from receipt of the notices to comply or request an informal conference with OSHA's area director.

Source: <https://www.osha.gov/news/newsreleases/region3/08122014>

Universal Precautions

Engineering Controls, Work Practice Controls & Emergency Procedures

Universal precautions refer to the practice of avoiding contact with patients' bodily fluids, by means of the wearing of nonporous personal protective equipment (PPE). The BBP regulation requires that:

- Employees use Universal Precautions to prevent contact with blood or other potentially infectious materials (OPIM).
- Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.
- Employees use PPE as barrier protection to prevent contamination.
 - Gloves, masks, gowns, hoods, face shields, booties and other protective must be used if blood or OPIM exposure is anticipated.

When using PPE, follow these best practices:

- Wear personal protective equipment when potential exposures exist
- Check your PPE for damage before use
- Discard PPE that is torn, punctured, or damaged
- Replace PPE that is damaged
- Remove your PPE prior to leaving the work area

PPE should be readily accessible. Items such as contaminated gloves, clothing, PPE, or other materials should be placed into the labeled biohazard bags or containers until it is disposed of, decontaminated, or laundered.

Let's take a look at the proper way to remove and discard gloves.

Gloves are a key component in protecting yourself against exposure to pathogens. They provide a protective barrier to your skin whenever there is chance that your hand might contact something which is infected. Disposable gloves must be used to handle any type of bodily fluid.

If gloves become torn, punctured, or contaminated, they must be replaced immediately. They should also be removed as soon as the cleaning process is completed.

In order to ensure that pathogens do not contaminate skin, used gloves must be removed very carefully. First, pinch and grab the outside of one glove near the wrist, without contacting the skin, and then peel it off and hold it in the still gloved hand. Using the exposed hand, tuck one or two fingers inside the remaining glove at the wrist, and then peel that glove off.

Once complete, both gloves should be inside out, with one held inside the other. The purpose of this exercise is to ensure that your bare skin never touches the contaminated outer surface of either glove. Once the gloves are off, hands should be washed with soap and water.

There are two primary ways of protecting employees from infection by BBPs: using safer equipment (**engineering controls**) and changing the way procedures involving infectious materials are carried out (**work-practice controls**). When neither of these two prevention methods is able to completely protect employees from infection, PPE should also be used.

Employers must select and implement appropriate engineering controls to prevent employee exposure to BBPs. The standard requires that those at risk of BBP exposure be included in the process of evaluation and selection of these devices. On the job training in the use of the approved safety devices used in your work area is required.

Examples of engineering controls include:

- Provide sharps disposal containers in work areas
- Provide safer medical devices such as:
 - Sharps with engineered sharps injury protections
 - Needleless systems
 - Self-sheathing needles

Work Practice Controls are practices that reduce the possibility of exposure by changing the way a task is performed to reduce exposure. Examples of work practice controls include:

- Requiring all employees to wash hands after removing gloves
- Safe handling of sharps, such as avoiding the recapping of needles
- Safe handling of tissue and blood or body fluid specimens
- Disinfect work areas contaminated with blood or OPIM
- Prohibiting eating, drinking, and smoking in areas where blood or OPIM may be encountered
- Cleaning all contaminated surfaces and items

The particular engineering and work-practice controls used will vary according to the unique needs of each workplace. The important thing is that supervisors actively implement protocol to

protect employees, and that employees follow procedures and workplace controls to minimize their risk of exposure to bloodborne pathogens or OPIM.

Let's take a look at the proper way clean up a contaminated work area.

A situation may arise where you encounter smears or pools of blood or other infectious fluids. Some work teams have people specifically trained and equipped to properly handle such a situation, in which case they should be contacted. If you are responsible for cleaning up a contaminated area, follow these guidelines.

- Treat all bodily fluids as if they are infectious.
- Wear disposable latex or vinyl gloves during the entire cleaning and disposal process.
- If there is any chance of splatter or splashing, also use goggles or a face shield.
- Clean up the fluid spill and disinfect with paper towels or disposable rags, and place all contaminated articles in a plastic biohazard trash bag.

Handwashing is one of the most important practices used to prevent transmission of bloodborne pathogens. Handwashing should be completed as soon as PPE is removed. Know where the nearest handwashing station is and use an antiseptic cleanser with a clean disposable towel or antiseptic wipes if there are no handwashing stations available.

Let's take a look at the proper way to wash your hands after an exposure.

One of the most important protections against infection is one of the simplest - proper hand washing.

To properly wash your hands, wet them with clean water. Lather your hands by rubbing them together with soap. Be sure to lather the backs of your hands and wrists, between your fingers, and under your nails. Continue scrubbing for at least 20 seconds. Rinse completely and dry with a clean paper towel. Use a clean paper towel to turn off the faucet, and discard all paper towels.

Remember never to eat, drink, apply cosmetics, or handle contact lenses where infectious pathogens might be present.

Even with all your precautions, you may be exposed to blood or body fluids during your work day. An exposure incident is defined as a specific eye, mouth, nose or skin contact with potentially infectious materials.

Let's take a look at what steps you should follow if you are exposed to blood or OPIM.

In a situation involving unprotected exposure to blood or potentially infected materials, remain calm and take the following steps:

- Remove contaminated clothes as soon as possible and place them in a red biohazard bag

- Wash exposed skin with non abrasive soap and water
- Flush exposed mucous membranes with water for at least 15 minutes
- Report the incident to your supervisor
- Contact a doctor within 24 hours of exposure for testing

Biohazard Signs and Labels

Appropriate Signage

For safety, all containers holding hazardous materials must have the appropriate biohazard signs and labels.

Signage is required for:

- Regulated waste containers
- Refrigerators and freezers containing blood or other potentially infectious material (OPIM)
- Containers used for storage, transport, or shipment of blood or OPIM

All labels must be easily identifiable, with the universal color for BBP as fluorescent orange, red, or orange-red. All bags used for regulated waste must be red or orange-red and labeled with the biohazard symbol. Double-bagging protects leakage if the first bag is punctured.

Regulated waste is considered:

- Liquid or semi-liquid blood or OPIM
- Contaminated items that release blood or OPIM in a liquid state when compressed
- Contaminated items with dried blood or OPIM capable of releasing particles during handling
- Contaminated sharps
- Pathological and microbiological wastes with blood or OPIM

Properly labeled containers or red biohazard bags must be used for all regulated waste. Disposal must be arranged, usually through a vendor, by an approved incineration or disposal facility.

Non-regulated waste is waste that is not generated by a medical facility or human health-related research lab. Non-regulated waste can be disposed of in regular plastic trash bags, as long as it has been decontaminated or autoclaved before disposal.

All non-regulated waste bags must be labeled, signed, and dated to confirm the materials inside are decontaminated using acceptable procedures and safe for disposal. Labels on waste bags must be readily visible. In summary, refrain from handling non-regulated waste unless it is marked and labeled.

Conclusion

Summary

Congratulations! Through this course, you learned about:

- Bloodborne Pathogens (BBP) and Other Potentially Infectious Materials (OPIM)
- How BBP and OPIM are transmitted through the chain of infection
- OSHA requirements through the Exposure Control Plan (ECP)
- Universal precautions and how to protect yourself from exposure
- Engineering and work practice controls that are set up to protect you
- What to do in case you are exposed, and
- Biohazard labels, waste signage, and waste disposal requirements

Your employer should review specific procedures related to your company Exposure Control Plan that applies to your specific job tasks and work sites. Safety begins with you...remember to implement controls to break the chain of infection.

Resources

Supporting Documents

BBP Key Terms

AIDS

Acquired Immune Deficiency Syndrome is caused by infection with the human immunodeficiency virus (HIV). This virus is passed through blood-to-blood and sexual contact.

HIV infection almost always progresses to AIDS. AIDS reduces the body's immune system and puts the individual at risk for developing a number of opportunistic infections. However, with recent advances in medical treatment, the onset of AIDS can be significantly delayed. There also have been advances in treatments for the patient with AIDS. Individuals with HIV/AIDS are increasingly living longer and healthier lives.

BBP

Bloodborne Pathogens; microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B virus and human immunodeficiency virus.

BSI

Body Substances Isolation is an infection control approach that defines all body fluids and substances as being infectious. BSI is an acceptable alternative to Universal Precautions, provided all necessary provisions are adhered to.

Contaminated Sharps

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

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

Controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) 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.

HCV

Hepatitis C virus.

HIV

Human immunodeficiency virus (see AIDS).

Needleless systems

Devices that do not use needles for: the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; the administration of medication or fluids; or any other procedure involving the potential for occupational exposure to bloodborne pathogens due to injuries from contaminated sharps that penetrate the skin.

OPIM

Other potentially infectious materials (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, and any body fluid that is visibly contaminated with blood. OPIM also includes all body fluids in situations for which 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, 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 Contact

Parenteral contact occurs when mucous membranes or the skin barrier is pierced by needle sticks, human bites, cuts, or abrasions.

PPE

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 PPE.

Regulated Waste

Regulated waste includes liquid or semi-liquid blood, OPIM, 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.

Sharps

Examples of sharps includes sharp-edged tools or devices. This term usually refers to needles (e.g., hypodermic or IV), but it can also include blades, scalpels, and other sharp objects that can puncture the skin.

Sharps with engineered sharps injury protections

These sharps include a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Sterilize

To sterilize something means to use a physical or chemical procedure to destroy all microbial life.

Universal Precautions

Universal precautions describe 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 BBPs.

Work Practice Controls

Work-practice controls 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)

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