Compliance Training

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Bloodborne Pathogens - January 2016

Bloodborne Pathogens

Training Requirements

At paragraph 29 CFR 1910.1030(g)(2), OSHA's Bloodborne Pathogens Standard requires that employers provide both new hire and annual retraining to employees. This month's training module will fulfill the annual requirement for retraining.

Exposure Risks

Clinical healthcare workers experience the risk of exposure to and/or transmission of bloodborne pathogens during the performance of work-related tasks. This risk is known as "occupational exposure." The standard defines occupational exposure as reasonably anticipated skin, eye, mucous membrane, or parenteral (i.e., puncture wound) contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

The Bloodborne Pathogens Standard requires employers to develop policies referred to as an Exposure Control Plan. The purpose of these policies is to reduce occupational exposure to employees, thereby also reducing the risk of acquiring a bloodborne infection.

Transmission

Bloodborne pathogens are transmitted when contaminated blood or body fluids enter the body of another person. In the healthcare setting, transmission commonly occurs through:

- A puncture wound by a sharp object, such as a needle, sharp instrument, broken glass, etc. that is contaminated with blood or other potentially infectious materials;
- Contact between broken or damaged skin and infected body fluids; or
- Contact between mucous membranes and infected body fluids.

Unbroken/intact skin forms a protective barrier against bloodborne pathogens. However, infected blood or body fluids can enter your system through puncture wounds, open sores, cuts, abrasions, acne, and any sort of damaged or broken skin, including blisters. Bloodborne pathogens can also be transmitted through the mucous membranes of the eyes, nose, or mouth. For example, a splash of contaminated blood to your eye, nose, or mouth could result in transmission.

THIS TRAINING SESSION IS RECOMMENDED FOR:

All employees who have the potential for occupational exposure to bloodborne pathogens.

Training Objectives

This training module will provide information about bloodborne pathogens and limiting the potential for exposure, and will provide an understanding of the following topics:

- Transmission;
- Signs and symptoms of exposure;
- Methods for preventing transmission of Bloodborne Pathogens;
- Spill control;
- Waste management;
- Hepatitis B vaccination; and
- Exposure follow-up.

Interactive Training Reminder

Compliance Training is an interactive training program in which you can address questions with other staff members or supervisors to obtain clarification for situations in your work setting.

Write down any questions that you have about the training topic and address them with your Training Coordinator or supervisor.

Signs and Symptoms

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There are three pathogens that present the greatest risk to workers in the medical and dental office environments in the United States. Signs and symptoms of these three viruses are described below.

Hepatitis B Virus (HBV) - According to the CDC, one-third of persons infected with HBV do not show any symptoms. Symptoms may include: abdominal pain; nausea; fatigue; jaundice; joint pain; fever; and rash. Currently, there is no known cure for HBV infection, although treatments with antiviral medications and interferon can help reduce liver damage.

Hepatitis C Virus (HCV) - Symptoms of HCV include: loss of appetite; fatigue; nausea and vomiting; vague stomach pain; and jaundice (yellowing of the skin and whites of eyes). In most cases, infected persons do not show symptoms for years or even decades before the disease progresses to chronic liver disease. There is no vaccine for HCV, however, in October of 2014, the FDA approved a new drug combination (ledipasvir and sofosbuvir) that has shown to be an effective, although expensive, treatment for HCV infection.

Human Immunodeficiency Virus (HIV) - Within 2-4 weeks after infection with HIV, many (but not all) persons experience swollen glands, sore throat, rash, fatigue, muscle and joint aches and pains, headache. These symptoms may last anywhere from a few days to a few weeks. HIV differs from other viruses in a major way—over time, your immune system can clear most viruses out of your body. That isn't the case with HIV – the human immune system can't seem to get rid of HIV. There is no vaccine for HIV and no known cure for HIV infection, although current treatment regimens are greatly extending healthy living periods for those infected.

Exposure Control Plan Elements

Your practice's exposure control plan will adopt a range of methods that will work to reduce exposure, including universal precautions, work practice controls such as hand hygiene, personal protective equipment such as gloves, safer medical devices such as sharps with engineered protections. The employer bears the responsibility to provide protective measures, while employees have a responsibility to follow them.

Universal Precautions – The Bloodborne Pathogens Standard states that Universal Precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluids is difficult or impossible, all body fluids shall be considered as potentially infectious. Under universal precautions, workers should assume that all patients are potentially infected with a bloodborne pathogen, and use a set of standard measures to prevent transmission, regardless of a patient's known infected status.

Work Practice Controls – Hazards are reduced through the use of work practice controls, because they alter the way a task is performed to make it safer. For example, your practice will prohibit reaching by hand into a tray of instruments that being prepped for disinfection/sterilization. The work practice control will require the use of a mechanical device, such as tongs or forceps, to retrieve instruments, thereby reducing the risk of sharps injury.

According to the CDC, hand hygiene is one of the most important work practice controls for preventing transmission of bloodborne pathogens and other healthcare-associated infections. Healthcare workers should practice hand hygiene at the following key points in time: before patient contact; after contact with blood, body fluids, or contaminated surfaces (even if gloves are worn); before invasive procedures; and after removing gloves (removing contaminated gloves can deposit pathogens on your hands); after each patient encounter.

Washing hands with soap and water is the best way to remove overt contamination. If soap and water are not available, use an alcohol-based hand sanitizer that contains between 60 - 95% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do not eliminate heavy contamination, and the use of sanitizers is not a substitute for hand washing if hand washing facilities are available.

Washing hands with soap and water

- Wet your hands with clean running water (warm or cold) and apply soap.
- Rub your hands together to make a lather and scrub the backs of your hands, between your fingers, and under your nails.

- Continue rubbing your hands for at least 20 seconds.
- Rinse your hands well under running water.
- Dry your hands using a clean towel or air dry.

Cleaning hands with alcohol-based hand rub

- Follow the directions on the bottle for the manufacturer's recommended use.
- Place the recommended amount of product in your palm, and then rub the product all over the tops of your hands, in between your fingers and around and under fingernails.
- Continue rubbing until your hands are dry.
- If the proper amount of product were used, it should take at least 15 seconds of rubbing before your hands feel dry.
- You should not rinse your hands with water or towel-dry them when using sanitizer products.

Personal Protective Equipment

The use of personal protective equipment (PPE) will be determined by the procedures performed in your practice and the anticipated exposure during such procedures.

Gloves – Gloves must be worn when it is reasonable to anticipate hand contact with blood, other potentially infectious materials, mucous membranes, non-intact skin, when performing vascular access procedures, and when handling or touching contaminated items and surfaces. Gloves should be removed after contact with each patient, and hand hygiene should be performed. Wearing gloves is not a substitute for hand hygiene.

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

For example, healthcare workers in the dental setting will always wear masks and eye protection because the splash, spray, and spatter of saliva (saliva is considered potentially infectious in the dental setting) is expected. Giving an injection to a patient rarely produces splash, spatter, or spray of blood or other potentially infectious materials (occasionally there may be droplets of blood), so the use of a mask and eye protection may not be needed for routine injections.

Gowns and Other Protective Garments - Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or other similar outer garments must be worn in occupational exposure situations where there is the potential for splash, spatter, or spray of blood or other potentially infectious materials. General work clothes (i.e. uniforms, pants, shirts or blouses) are not intended to function as protection against a hazard, and are not considered to be PPE. All PPE must be removed before leaving the workplace, and cannot be laundered at home.

Engineering Controls – Engineering controls isolate or remove the hazard from the workplace. Common engineering controls include sharps disposal containers, self-sheathing needles, etc.

Any contaminated sharp (i.e., disposable syringes with needles, scalpels, dental instruments, suture needles, winged steel needles, IV catheter stylets, and phlebotomy needles are responsible for nearly 80% of sharps injuries in healthcare) can cause a percutaneous (puncture) injury and result in transmission of a bloodborne pathogen. The Standard requires healthcare employers to evaluate the use of sharps devices and implementation of the "safer medical devices" that are designed to limit the potential for sharps injury. It is important to discuss the use of sharps in your practice with your safety training coordinator and/or supervisor. This will ensure your familiarity with the devices selected by the practice and their appropriate use for procedures.

Housekeeping - An employer is required to ensure that the worksite is maintained in a clean and sanitary condition by implementing a schedule or protocol for decontamination based on the location within the facility, type of surface to be cleaned, type of soil or contaminant present, and tasks or procedures being performed in the work area. All equipment and environmental and working surfaces must be cleaned and decontaminated after contact with blood or other potentially infectious materials with an appropriate disinfectant after completion of procedures, immediately or as soon as feasible

when surfaces are overtly contaminated, or after any spill of blood or other potentially infectious materials.

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Spill Control – You should exercise caution when handling specimens that present biological exposure hazards. Ask your supervisor where your practice's spill kit is located. When a spill or leak is discovered, you should:

1. Use absorbent material to contain the spill and keep it from spreading (i.e., paper or cloth toweling, or other absorbent material).
2. Use recommended personal protective equipment to prevent exposure to the blood or other potentially infectious material that has spilled.
3. Clean up the materials and dispose of them as recommended in your Exposure Control Plan.
4. The site should be properly decontaminated in accordance with procedures outlined in your Exposure Control Plan.

Waste Disposal - Regulated waste has two major categories: contaminated sharps and other regulated waste. Contaminated sharps must be discarded immediately or as soon as feasible into containers that are closable, puncture resistant, leak-proof on the sides and bottom, and color-coded (red or orange) or labeled as a biohazard.

Other regulated waste (non-sharp items contaminated with blood or other potentially infectious materials) must be placed into containers that are closable, constructed to contain all contents and prevent leakage, and color-coded or labeled as a biohazard. Check with your Safety Training Coordinator to understand what items are to be placed into biohazard containers for your facility.

Hepatitis B Vaccination - Hepatitis B vaccination has been found to be 80% to 95% effective in preventing infection of clinical hepatitis B. According to the CDC, protection against illness is virtually complete for individuals who successfully complete the HBV vaccination series.

The Standard states, "the employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure." 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.

While an employer is required to offer the vaccine at no cost, an employee is permitted to refuse vaccination (unless the employer has made receipt of the vaccine series a condition of employment prior to the employee accepting a position with the practice). An employee choosing to refuse the vaccine must sign a "Hepatitis B Vaccination Declination Statement," which will be maintained as part of his/her medical record.

Post Exposure Incident Treatment - An exposure incident is identified within the Standard as a specific eye, mouth, or 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.

After an exposure incident, you should immediately notify your supervisor and/or Safety Training Coordinator. Immediate notification is extremely important, because the patient or source individual may still be in the facility, and can be asked to provide a blood sample and consent to testing of his/her blood sample for HIV and hepatitis B and C. The Standard requires that the results of the patient testing be provided to you if you are the exposed employee. This information may be vital in your decision to have follow-up treatment.

The Standard requires that the patient's blood shall be tested as soon as possible after consent is obtained in order to determine HBV, HCV, and HIV infectivity. When a patient is already known to be infected with HBV, HCV or HIV, testing for HBV, HCV or HIV status need not be repeated. Additionally, the Standard requires a practice to offer testing of the exposed employee's blood for HIV, and hepatitis B and C. This is known as a baseline testing to establish an employee's condition at the time of the exposure.

Communication Hazards to Employees - Medical waste and other items contaminated with blood or other potentially infectious materials must be identified by the international biohazard symbol and/ or the color red. Containers (i.e., sharps containers, trash containers for non-sharps medical waste, contaminated laundry hampers, etc.) must be labeled or appropriately color-coded to identify that they contain biohazardous materials.

Pharmaceutical Disposal Methods

IN LAST MONTH'S ISSUE, WE PUBLISHED AN ARTICLE regarding proposed legislation for the disposal of unused pharmaceuticals. Most medical and dental practices will not be impacted by the regulations, due to the small amount of pharmaceutical waste that they generate. In this article, we will provide a description of some disposal methods that are acceptable alternatives to using a certified waste hauler for very small quantities of pharmaceutical waste.

One of the proposed EPA regulations would prohibit flushing of hazardous waste pharmaceuticals down sinks or toilets. The EPA and state environmental protection agencies have discouraged this practice for years, and most practices are aware that municipal sewage treatment plants are not engineered for pharmaceutical removal. Antibiotics, in particular, should never be disposed of into sewage systems, as they may kill bacteria that are necessary for the treatment of sewage. If your practice is still flushing unwanted meds, please choose one of the following alternative disposal methods.

Return to Source

A medical facility should first attempt to return expired or unwanted medicines through its supplier or distributor. Because disposal of pharmaceuticals is regulated at the manufacturing level, such entities may have an established means of safely destroying or disposing of unwanted meds.

Some unused or expired pharmaceuticals may be handled by reverse drug distributors for credit. Contact the manufacturer for their return policy or the Healthcare Distribution Management Association (HDMA) at (703) 787-0000 for information about reverse distributors.

Landfill Disposal

If your practice is a Conditionally Exempt Small Quantity Generator*, you may dispose of pharmaceuticals in solid form in the trash, if it is destined for a municipal or commercial solid waste facility. (Solid waste landfills must be designed to protect the environment from contaminants that may be present in the solid waste stream.)

* Conditionally Exempt Small Quantity Generators produce less than 2.2 lbs. of acutely hazardous waste per month, and are therefore exempt from several hazardous waste regulations.

With a few considerations, landfill disposal can be accomplished in a responsible manner. Inadvertent access by animals, children, and illicit drug users must be prevented:

- Keep pharmaceuticals in their original container, since the labels may contain safety information, the container is chemically compatible, and typically watertight and childproof.
- To discourage any unintended use of the drug, add an unpalatable substance such as cat litter or coffee grounds and a small amount of water to make the substance unusable.
- Double enclose the contained drugs in an unmarked brown bag or box to prevent immediate identification of a drug container (e.g., if a plastic garbage bag tears, trash can tips over, etc.).
- Place in the trash as close to garbage pick up times as possible.

Certified Waste Haulers

Disposal through a certified hazardous waste hauler is often the most convenient disposal method, but is often the most expensive option. If this is the only option that seems feasible for your practice due to the amount of waste generated, for example, ask your medical waste hauler whether it offers the service of disposing of unused pharmaceutical products, and what their sorting/packaging requirements are.

We will keep you apprised if and when the proposed EPA legislation is finalized, and if it brings about changes that impact the medical or dental practice setting.