

# e-Compliance Training

## Bloodborne Pathogens - January 2020



### 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. This training module will provide an understanding the following topics:

- Bloodborne pathogens transmission;
- Signs and symptoms of common viruses caused by bloodborne pathogens;
- Work practice and engineering controls;
- Spill control;
- Waste management;
- Hepatitis B vaccination; and
- Post-exposure follow-up.

### Initial and Annual Retraining

Paragraph 29 CFR 1910.1030(g)(2) of 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 training requirement.

### Occupational Exposure

The Bloodborne Pathogens 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*. Many dental and healthcare workers experience the risk of exposure to and/or transmission of bloodborne pathogens as part of their jobs. Examples of tasks that involve occupational exposure include, but are not limited to: performing injections, handling biohazardous waste, performing or assisting in minor surgical procedures, wound care, oral exams, hygiene appointments, fillings and extractions, processing/sterilizing instruments, etc.

*Other potentially infectious materials* (OPIM) include: semen, vaginal secretions, cerebrospinal fluid, synovi-

al fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; any unfixed tissue or organ (other than intact skin) from a human (living or dead); and 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.

### Transmission

Bloodborne pathogens are transmitted when contaminated blood or OPIM enter the body of another person. In the health and dental care settings, 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.



## 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.

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. A splash of contaminated blood or other fluids to your eye, nose, or mouth could result in a bloodborne infection, because mucous membrane exposure is also a potential source of transmission.

### Common Pathogens

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)** - HBV can survive outside the body at least 7 days and still be capable of causing infection. Symptoms begin an average of 90 days after exposure, but can appear any time between 8 weeks and 5 months after exposure. Symptoms may include: fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, clay-colored bowel movements, joint pain, and jaundice. There are several antiviral medications for persons with chronic infection.

**Hepatitis C Virus (HCV)** - Symptoms of HCV include: fever, fatigue, dark urine, clay-colored stool, abdominal pain, loss of appetite, nausea, vomiting, joint pain, jaundice. The average time from exposure to symptoms ranges from 2 to 12 weeks. For some people, hepatitis C is a short-term illness but for 70%–85% of people who become infected with hepatitis C, it becomes a long-term,

chronic infection. Chronic hepatitis C is a serious disease than can result in long-term health problems, even death. Most people with chronic HCV infection are asymptomatic or have non-specific symptoms such as chronic fatigue and depression. Many eventually develop chronic liver disease, which can range from mild to severe, including cirrhosis and liver cancer. There is no vaccine for hepatitis C, although research is underway for development of a vaccine. There are now several approved therapies for hepatitis C infection.

### **Human Immunodeficiency Virus (HIV)**

1. *Acute HIV Infection* - Within 2 to 4 weeks after infection with HIV, about 40-90% of people experience a flu-like illness, which may last for a few weeks. This is the body's natural response to infection. When people have acute HIV infection, they have a large amount of virus in their blood and are very contagious. But people with acute infection are often unaware that they're infected because they may not feel sick right away or at all. If present, the flu-like symptoms may include: fever, chills, rash, night sweats, muscle aches, sore throat, fatigue, swollen lymph nodes, and mouth ulcers.

2. *Clinical Latency (HIV inactivity/dormancy)* - This period is sometimes called asymptomatic HIV infection or chronic HIV infection. During this phase, HIV is still active but reproduces at very low levels. People may not have any symptoms or get sick during this time. For people who aren't taking medicine to treat HIV, this period can last a decade or longer, but some may progress through this phase faster. People who are taking medicine to treat HIV (ART) as prescribed may be in this stage for several decades. It's important to remember that people can still



transmit HIV to others during this phase. However, people who take HIV medicine as prescribed and get and keep an undetectable viral load (or stay virally suppressed) have effectively no risk of transmitting HIV.

3. *Acquired immunodeficiency syndrome (AIDS)* - AIDS is the most severe phase of HIV infection. Without treatment, people with AIDS typically survive about 3 years. People with AIDS can have a high viral load and be very infectious.

No effective cure currently exists for HIV. But with proper medical care, HIV can be controlled. Treatment for HIV is called antiretroviral therapy or ART. If taken the right way, every day, ART can dramatically prolong the lives of many people infected with HIV, keep them healthy, and greatly lower their chance of infecting others.

**Prevention**

Your employer is required by the Bloodborne Pathogens Standard to implement specific protective measures as outlined below, and it is your responsibility to follow them. You can be disciplined for failing to follow safety measures that have been implemented.

**Universal Precautions** – Under universal precautions, every patient is treated as if they are infected with a bloodborne pathogen. Take the same precautions with every patient, without regard to known infectious status. Some patients may not know they are infected; others may not wish to disclose the information. Universal precautions will ensure that you are protected at all times.

**Hepatitis B Vaccination** - Your employer must make the hepatitis B vaccine available at no cost to all employees who have occupational exposure. You are permitted to accept or decline the vaccination series (unless the employer has made receipt of the vaccine a condition of employment prior to you accepting a position with the practice). If you decline the vaccine, you will be asked to sign a "Hepatitis B Vaccination Declination Statement," which will be maintained as part of your employee medical record.

Protection remains intact for at least 20 years among healthy vaccinated individuals who received the hepatitis B vaccination >6 months of age. The vaccine confers long-term protection against clinical illness and chronic hepatitis B virus infection. The CDC indicates that immunity appears to persist even when antibody levels become low or decline below detectable levels.

**Engineering Controls** – Engineering controls help to reduce bloodborne pathogen hazards by isolating or removing them. Common engineering controls include sharps disposal containers, self-sheathing needles, needleless IV systems, etc.

Any contaminated sharp can cause a percutaneous (puncture) injury and result in transmission of a bloodborne pathogen (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 health and dental care). The Standard requires health and dental care employers to evaluate the use of sharps devices and implement use of "safer devices" that are designed to limit



the potential for sharps injury. Although safer devices may be less convenient in some cases, they protect you against bloodborne pathogens.

**Work Practice Controls** reduce bloodborne pathogens hazards by changing the way a task is performed to make it safer. For example, your practice most likely prohibits recapping of needles, unless required by a procedure. If you do need to recap a needle, you would never use two hands. You would either use a one-handed scoop technique, or use tongs or forceps to recap, thereby reducing the risk of getting stuck by a contaminated sharp. Another important work practice control is that food and drink, cosmetics, lip balm, etc. may not be present or applied in areas where blood or other potentially infectious materials are present, or in contaminated areas.

Hand washing is another critical work practice control for preventing transmission of infections. Hand hygiene should be performed 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; after removing gloves (removing contaminated gloves can deposit pathogens on your hands); and 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 do not eliminate heavy contamination, and may not be as effective when hands

are visibly dirty or greasy. At this time, the Bloodborne Pathogens Standard still indicates actual hand washing with soap and water whenever feasible.

### **Soap and Water Technique**

- 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.

### **Hand sanitizer Technique**

- 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.
- Do not rinse your hands with water or towel-dry them when using sanitizer products.



See the following videos from the CDC for specific visual demonstrations:

<https://www.cdc.gov/handwashing/videos.html>

### **Personal Protective Equipment**

Your practice's Safety Officer and/or management will examine procedures performed, determine the expected exposure, and designate personal protective equipment (PPE) to be used during such procedures. The practice will then inform all staff of the PPE to be used when performing various procedures, along with how to put it on, take it off, care for and dispose of it.

**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. Use of 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 splashes, 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 is expected (saliva is considered infectious in the dental setting, because blood is often present in saliva during dental procedures). Giving an injection to a patient rarely produces splash, spatter, or spray of blood or other potentially infectious materials, 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 may NOT be laundered by employees at their homes, due to the potential for migration of contaminants.

**Housekeeping** – Your employer will have a written 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 with an appropriate disinfectant after completion of procedures, immediately or as soon as feasible when surfaces are overtly contaminated with blood or other potentially infectious materials, or after any spill of blood or other potentially infectious materials.



**Spill Control** – You should exercise caution when handling specimens that present biological exposure hazards. Your practice will have a spill kit, and your Safety Officer will inform you of its location. When a spill or leak is discovered, you should:

1. Use absorbent material to contain the spill (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. Decontaminate the site in accordance with procedures outlined in your Exposure Control Plan.
5. An incident report should be completed and turned in to your safety officer or supervisor to allow for corrective actions, which will help to prevent recurrence.

**Waste Disposal** - Regulated waste (the term for medical waste in the Standard) has two major categories: contaminated sharps and other regulated waste. To be classified as regulated waste, an item must be both be contaminated with blood or OPIM, and be capable of releasing those materials during handling.

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-red) or labeled with the international biohazard symbol. 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 contents and prevent leakage, and color-coded or labeled.

**Labeling/Color coding** - Items contaminated with blood or other potentially infectious materials must be identified by the international biohazard symbol and/ or the color red/orange-red. Containers (i.e., sharps containers, medical waste containers for non-sharps and/or contaminated laundry, etc.) must be labeled or appropriately color-coded.

**Exposure Incidents**

An exposure incident is identified within the Standard as *a specific eye, mouth, or mucous membrane, non-intact skin, or parenteral (puncture wound) 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.

You are entitled to a confidential medical examination after an exposure incident. Your employer may send you to an occupational health clinic, another provider, or may allow you to see your own primary care physician. The physician you see will counsel you on the treatment and testing recommendations, based on the nature of the exposure incident you experienced. Your employer will not be told the results of any testing. ●

International Biohazard Symbol





# e-Compliance Training Test

## Bloodborne Pathogens - January 2020

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NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

STAFF POSITION: \_\_\_\_\_

*Return your test to your supervisor or Compliance Coordinator upon completion. Individual tests will be maintained to document participation and understanding of the information. Review the training information to find the correct answers to any questions that may have been missed.*

**1** All Personal Protective Equipment (PPE) must be removed before leaving the workplace, and may NOT be laundered by employees at their homes, due to the potential for migration of contaminants.

**Select One**      **T**      **F**

**2** Food and drink, cosmetics, lip balm, etc. may not be present or applied in areas where blood or other potentially infectious materials are present, or in contaminated areas.

**Select One**      **T**      **F**

**3** After an exposure incident (such as a needlestick with a contaminated needle), you should wait to see if you experience any signs and symptoms of a bloodborne pathogen infection before reporting the incident to your Safety Officer.

**Select One**      **T**      **F**

**4** There are vaccines for both hepatitis B and hepatitis C to prevent infection.

**Select One**      **T**      **F**

**5** Use of gloves is not a substitute for hand hygiene. Hands must still be washed after removing gloves.

**Select One**      **T**      **F**

**6** Under the concept of Universal Precautions, you treat certain higher-risk patients as if they are infected.

**Select One**      **T**      **F**

**7** 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.

**Select One**      **T**      **F**

**8** To be classified as regulated waste, an item must be both be contaminated with blood or OPIM, and be capable of releasing those materials during handling.

**Select One**      **T**      **F**

**9** 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.

**Select One**      **T**      **F**

**10** Protection from the hepatitis B vaccine remains in place for 5 years after vaccination.

**Select One**      **T**      **F**