

BLOODBORNE PATHOGENS:

The Unexpected Hazard

PROGRAM SYNOPSIS:

Bloodborne pathogens are sometimes called the “Unexpected Hazard” because, for most of us, we just don’t expect to come into contact with blood or bodily fluids when performing our normal job duties. Nevertheless, an unexpected encounter with bloodborne pathogens can happen at anytime. Responding properly when confronted with blood and other bodily fluids is critical to your health and safety. That’s the purpose of this program—to provide viewers with the knowledge needed to take the appropriate actions when encountering bloodborne pathogens unexpectedly.

Topics include modes of transmission, the Exposure Control Plan, occupational exposure, universal precautions, barrier devices, handling, disposal and disinfection of potentially infectious materials and responding to an exposure.

PROGRAM OUTLINE:

DEFINITION OF BLOODBORNE PATHOGENS

- Blood, spinal fluid, semen and other bodily fluids or tissues can be infected with tiny microorganisms such as viruses or bacteria. These microorganisms have the ability to spread infection to anyone coming into contact with contaminated material.
- Collectively known as “bloodborne pathogens”, these infectious microorganisms include such viruses as hepatitis, HIV, Ebola and other hemorrhagic fevers. These illnesses can be fatal and some have no known cure.
- HIV attacks the immune system, leaving it prone to contracting other infections. The deterioration of the immune system can lead to AIDS.

MODES OF TRANSMISSION

- It’s important to understand exactly how bloodborne pathogens can enter and infect our bodies. The various ways in which infectious microorganisms enter our body are often called “modes of transmission” or “routes of entry.”
- Remember that bloodborne pathogens can infect almost all types of bodily fluids, not just blood. This is why sexual contact is the most common mode of transmission for illnesses spread by bloodborne pathogens. Away from work, practicing safe sex is one of the most important ways to prevent contracting these types of illnesses.
- In the workplace, the most common mode of transmission is absorption. Absorption can occur when blood or other infected material comes into direct contact with existing cuts or open sores in the skin.
- Absorption may also occur when infected material comes into contact with the mucus membranes of the eyes, nose or mouth.
- In addition, handling sharp contaminated items can result in infection if the sharp object cuts or punctures the skin.
- Ingestion and inhalation are two additional but less common modes of transmission. Ingestion occurs when infected material is eaten or swallowed and inhalation occurs when infected materials are inhaled into the lungs.

THE EXPOSURE CONTROL PLAN

- To help prevent exposure to bloodborne pathogens, your organization has developed a bloodborne pathogens exposure control plan.
- The exposure control plan outlines the job specific training each employee will receive related to bloodborne pathogens.
- The exposure control plan will also include a description of the signs and labels used to designate biological hazards.
- Any engineering or work practice controls used to eliminate or reduce the risk of exposure to bloodborne pathogens will also be included in the plan.

- The exposure control plan also includes a list of jobs which have occupational exposure to bloodborne pathogens.
- The exposure control plan is available for employee review upon request.

OCCUPATIONAL EXPOSURE

- If your job is designated as having “occupational exposure” to bloodborne pathogens, it means that you may reasonably expect to contact or handle blood or other potentially infected materials.
- Some jobs with occupational exposure include healthcare workers, first responders, laundry workers, custodial staff, laboratory workers, industrial nurses, first aid providers and others.
- Employees who have occupational exposure will receive specific training on how to prevent exposure to bloodborne pathogens while performing their job duties.
- Employees who have occupational exposure may choose to receive the hepatitis B vaccine at no cost.

UNIVERSAL PRECAUTIONS

- The vast majority of non healthcare-related jobs do not have occupational exposure to bloodborne pathogens; however, all workers may unexpectedly be confronted with blood or potentially infected materials, so it is critically important to know how to protect yourself. This protection is achieved by practicing “universal precautions.”
- Universal precautions is the practice of treating all blood, bodily fluids and potentially infected materials as if they are contaminated with bloodborne pathogens.
- For workers without occupational exposure, universal precautions simply mean avoiding direct contact with potentially infected materials and sharp objects.
- After knocking a coffee mug to the floor, a worker quickly begins to pick up the broken glass with his bare hands and suffers a minor cut.
- This improper action caused an injury and left behind sharp broken glass that is now potentially contaminated with bloodborne pathogens.
- To make matters worse, a co-worker attempts to finish cleaning up the broken glass and she is also cut.
- Because of these mistakes, she is now potentially infected with bloodborne pathogens.
- The correct way to handle this type of situation is to not touch the broken glass and immediately notify the proper authority at your facility that a clean up of broken glass is required.
- This will allow a person properly trained in the handling of bloodborne pathogens and sharp objects to safely remedy the situation.
- A worker is suddenly injured and bleeding. A well-meaning co-worker attempts to help by applying direct pressure to the wound in an effort to stop the bleeding; unfortunately, this incorrect action allows his unprotected skin to come into direct contact with potentially infected blood.
- He is now potentially infected with bloodborne pathogens.
- The correct action to take when faced with this situation is to avoid touching the injured person and to immediately activate your organization’s plan to summon emergency responders.
- While waiting for help to arrive, talk to the injured person and attempt to keep them calm. Reassure them that help is on the way.

- Encourage them to apply direct pressure to their wound but do not touch them and avoid all contact with their blood or other fluids.
- Properly-trained first responders are best able to provide assistance and will bring with them the proper protective equipment to avoid being exposed to bloodborne pathogens.
- Each of these examples clearly illustrates the concept of universal precautions for most workers. Avoid all contact with blood and bodily fluids and do not handle broken glass, needles and other potentially contaminated sharp objects.

BARRIER DEVICES

- For workers with occupational exposure, universal precautions mean always maintaining an impenetrable barrier against blood, bodily fluids or other potentially infected material.
- This is achieved by the use of protective equipment such as gloves, smocks, masks, goggles and face shields. These types of protective equipment are also referred to as “barrier devices.”
- Barrier devices form a protective barrier between the user and all potentially contaminated materials. The most common type of barrier device is latex or nitrile gloves.
- If sharp hazards are present that could tear, cut or puncture a latex or nitrile glove, cover it with a glove made of a more rugged, leak-proof material.
- Gloves should be inspected for holes, cuts or other damage before use.
- It is very important that you know how to properly remove soiled gloves after use because you should never touch any bare skin with the outside of either glove.
- Remove the first glove by pinching the palm side near the wrist and carefully pull it off so that it turns inside out.
- Next, while holding the removed glove in the palm of your gloved hand, carefully slip two fingers under the remaining glove at your wrist.
- Then, pull the glove towards your fingers, allowing it to turn inside out. When done correctly the first glove will end up inside the glove you just removed.
- The gloves must then be placed into a proper biohazard container for disposal.
- Always wash your hands thoroughly with soap and warm water after disposing of soiled gloves.
- In many situations, protective gloves are the only barrier devices needed for protection; however in situations where blood or bodily fluids could splash into the facial area, eye and face protection may also be required.
- In some situations where there is a likelihood of a large amount of infected material, masks, aprons or gowns may also be required.
- If you have any questions about the protection required to safely perform your job, stop and consult your supervisor.

HANDLING, DISPOSAL AND DISINFECTION OF POTENTIALLY INFECTIOUS MATERIALS

- An important part of your organization’s exposure control plan is the proper handling and disposal of potentially contaminated items.
- Potentially infectious materials must be placed in approved biohazard containers or bags. This includes dressings, bandages, gloves, needles or any other disposable item that may be contaminated with bloodborne pathogens.
- Approved biohazard containers are typically red in color and will display this symbol.

- Remember that potentially contaminated sharp objects must not be handled directly.
- Sharps must be handled using tongs, a broom and dust pan or other device to avoid being punctured or cut.
- Sharp objects must be disposed of in approved biohazard “sharps” containers. Sharps containers are puncture-resistant in order to protect other workers who may have to handle the container.
- Never dispose of needles, broken glass or similar items in the regular trash.
- Disinfecting potentially contaminated surfaces is another critical part of the exposure control plan. Simply cleaning up after an incident is not enough.
- One recommendation is to use a disinfectant solution of approximately 1 and 1/2 cups of bleach mixed with one gallon of water. This creates a 10 percent bleach solution that will kill any remaining infectious material.
- There are also disinfectant solutions commercially available. Be sure to select one that is approved for this intended use.
- Keep in mind that any non-disposable PPE such as face shields and goggles must also be thoroughly cleaned and disinfected after exposure.

RESPONDING TO AN EXPOSURE

- Despite everyone’s best efforts, it is possible that you may inadvertently be exposed to bloodborne pathogens. Should this be the case, knowing how to properly respond can lower the risk of contracting a bloodborne disease.
- Thoroughly wash needle sticks, cuts and exposed skin with soap and warm water.
- If splashed in or around the eyes, flush them thoroughly with clean water for approximately 20 minutes.
- After this immediate washing, report the incident to the appropriate authority within your organization. Once reported, your employer must ensure that proper treatment, medical testing and recordkeeping takes place.

PREPARE FOR THE SAFETY MEETING

Review each section of this Leader's Guide as well as the program. Here are a few suggestions for using the program:

Make everyone aware of the importance the company places on health and safety and how each person must be an active member of the safety team.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Copy the review questions included in this Leader's Guide and ask each participant to complete them.

Make an attendance record and have each participant sign the form. Maintain the attendance record and each participant's test paper as written documentation of the training performed.

Here are some suggestions for preparing your video equipment and the room or area you use:

Check the room or area for quietness, adequate ventilation and temperature, lighting and unobstructed access.

Check the seating arrangement and the audiovisual equipment to ensure that all participants will be able to see and hear the program.

CONDUCTING THE PRESENTATION

Begin the meeting by welcoming the participants. Introduce yourself and give each person the opportunity to become acquainted if there are new people joining the training session.

Explain that the primary purpose of the program is to provide viewers with the knowledge needed to take the appropriate actions when encountering bloodborne pathogens unexpectedly.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Lead discussions about specific situations at your facility in which your employees may unexpectedly encounter bloodborne pathogens and how they should respond to such a situation.

After watching the program, the viewer should be able to explain the following:

- What bloodborne pathogens are and how they can enter our bodies;
- What the components of the Exposure Control Plan are;
- What the concepts of occupational exposure and universal precautions are;
- Which types of barrier devices are available for avoiding inspection;
- How to properly handle, dispose of and disinfect potentially infectious materials;
- How to respond to an exposure properly.

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REVIEW QUIZ

Name _____ Date _____

Please provide answers to the following to show how well you understand the information presented during this program.

1. Some bloodborne illnesses can be fatal and some have no known cure.
 - a. True
 - b. False
2. We can only be infected by bloodborne pathogens by contacting blood.
 - a. True
 - b. False
3. What is the most common mode of transmission of bloodborne pathogens in the workplace?
 - a. Absorption
 - b. Ingestion
 - c. Inhalation
4. Employees who have occupational exposure may choose to receive the Hepatitis B vaccine at no cost.
 - a. True
 - b. False
5. For workers without occupational exposure, universal precautions simply means avoiding direct contact with potentially infected materials and sharp objects.
 - a. True
 - b. False
6. What is the most common type of barrier device?
 - a. Goggles
 - b. Latex or nitrile gloves
 - c. Smocks
 - d. Face shields
7. Approved biohazard containers are typically _____ in color.
 - a. Green
 - b. Blue
 - c. Red
8. You should only dispose of needles or broken glass in the regular trash if you feel certain they have not been contaminated with potentially infectious materials.
 - a. True
 - b. False
9. Non-disposable PPE such as face shields and goggles must be thoroughly cleaned and disinfected after exposure.
 - a. True
 - b. False
10. How long should you flush your eyes if splashed with a potentially infectious material?
 - a. 5 minutes
 - b. 10 minutes
 - c. 20 minutes

ANSWERS TO THE REVIEW QUESTIONS

1. a

2. b

3. a

4. a

5. a

6. b

7. c

8. b

9. a

10. c