

## INSTRUCTOR GUIDE

TOPIC: BLOODBORNE PATHOGENS REFRESHER

LEVEL OF INSTRUCTION:

TIME REQUIRED: TWO HOURS

MATERIALS: APPROPRIATE AUDIO VISUAL SUPPORT  
PROTECTIVE GLOVES  
PROTECTIVE FACESHIELD/MASK

VIDEO: BLOODBORNE PATHOGENS IN THE WORKPLACE  
FOR FIRST RESPONDERS, BTR TECHNICAL TRAINING  
(OPTIONAL)

REFERENCES: EMERGENCY CARE, EIGHTH EDITION, BRADY  
OSHA REGULATION 29 CFR 1910.1030  
PREVENTING DISEASE TRANSMISSION, AMERICAN RED CROSS

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### PREPARATION:

MOTIVATION:

OBJECTIVE (SPO): 1-1

The individual will demonstrate the basic knowledge required to recognize the presence of bloodborne pathogens and the precautions that can be taken to protect against them, from memory, without assistance, to a written test accuracy of 70%.

OVERVIEW:

### BLOODBORNE PATHOGEN REFRESHER

- \* Training Requirements
- \* Scene Safety
- \* Basic Precautions

## BLOODBORNE PATHOGEN REFRESHER

- SPO 1-1 The individual will demonstrate the basic knowledge required to recognize the presence of bloodborne pathogens and the precautions that can be taken to protect against them, from memory, without assistance, to a written test accuracy of 70%.
- EO 1-1 Identify the OSHA regulatory requirements associated with bloodborne pathogens training.
- EO 1-2 Identify items at the scene that could indicate the presence of a bloodborne pathogen.
- EO 1-3 Identify various precautions that could be taken to protect against bloodborne pathogens.

This drill is designed to meet the annual refresher training requirement for bloodborne pathogens as required by 29 CFR 1910.1030. The session should also provide an opportunity to review any policies and procedures related to bloodborne pathogens as well as the exposure control plan.

I. TRAINING REQUIREMENTS (1-1)

A. Initial and Refresher Training

1. Employers shall ensure that all employees with occupational exposure participate in a bloodborne pathogens training program
2. Training shall be provided as follows
  - a. At the time of initial assignment to tasks when occupational exposure may take place
  - b. At least annually thereafter

B. Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure

C. The training program shall contain at a minimum the following elements

1. An accessible copy of the regulatory text of the standard and an explanation of its contents
2. A general explanation of the epidemiology and symptoms of bloodborne diseases
3. An explanation of the modes of transmission of bloodborne pathogens
4. An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan
5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials
6. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment
7. Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment

8. An explanation of the basis for selection of personal protective equipment
9. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge
10. Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
12. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident
13. An explanation of the signs and labels and/or color coding required
14. An opportunity for interactive questions and answers with the person conducting the training session

D. Record keeping

1. The employer shall establish and maintain an accurate record for each employee with occupational exposure
2. The record shall consist of
  - a. Name and social security number of the employee
  - b. A copy of the employee's hepatitis B vaccination status including dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination
  - c. A copy of all results of examinations, medical testing, and follow-up procedures
  - d. The employer's copy of the health care professional's written opinion
  - e. A copy of the information provided to the health care professional
3. The employer shall ensure that employee medical records are kept confidential and not disclosed or reported without the employee's express

written consent to any person within or outside the workplace except as required by 29 CFR 1910.1030 or as may be required by law

4. Training records shall include the following information
  - a. Dates of the training sessions
  - b. Contents or a summary of the training sessions
  - c. Names and qualifications of persons conducting the training
  - d. Names and job titles of all persons attending the training sessions
  - e. Training records shall be maintained for 3 years from the date on which the training occurred

## II. SCENE SAFETY (1-2)

### A. Disease Transmission

1. Disease transmission is a two-way street
  - a. You can infect a person with whom you come in contact
  - b. The person you come in contact with can infect you
2. A pathogen is a disease-producing organism that enters the body, i.e., a germ
3. The immune system relies heavily on the skin to keep the level of pathogens entering the body to a minimum
4. Most infectious diseases are caused by one of six types of pathogens
  - a. Viruses which include hepatitis, measles, mumps, chicken pox, meningitis, rubella, influenza, warts, colds, herpes, shingles, HIV infection (including AIDS), and genital warts
  - b. Bacteria which includes tetanus, meningitis, scarlet fever, strep throat, tuberculosis, gonorrhea, syphilis, chlamydia, toxic shock syndrome, Legionnaires' disease, diphtheria, and food poisoning
  - c. Fungi which includes Athlete's foot and ringworm
  - d. Protozoa which includes malaria and dysentery

- e. Rickettsia which includes typhus and Rocky Mountain spotted fever
  - f. Parasitic Worms which includes abdominal pain, anemia, lymphatic vessel blockage, lowered anti-body response, respiratory, and circulatory complications
5. For a disease to be transmitted, all of the following conditions must be met
- a. Pathogen must be present
  - b. Pathogen must be of sufficient quantity to cause disease
  - c. Person must be susceptible to the specific pathogen
  - d. Pathogen must enter the body through the correct entry site
6. Means by which a pathogen can enter the body
- a. Direct contact - contact with solid or liquid blood
  - b. Indirect contact - contact with an object that has been contaminated (do not assume that the blood or fluid is harmless if it is dry)
  - c. Airborne - tiny droplets sprayed during breathing, coughing, or sneezing

## B. Disease Concerns

1. Some diseases can have serious results
- a. Herpes - causes infection to the skin and mucus membranes
  - b. Meningitis
    - 1) Transmitted by oral and nasal secretions
    - 2) Incubation period 2 to 10 days
    - 3) Causes a severe infection to the coverings of the brain and spinal cord
  - c. Tuberculosis
    - 1) Transmitted by respiratory secretions, airborne or on

contaminated objects

- 2) Incubation period 2 to 6 weeks
- 3) Predominantly affects the respiratory system

d. Hepatitis

- 1) Transmitted by blood, stool, or other body fluids, or contaminated objects
- 2) Incubation period weeks to months depending on type
- 3) Causes viral infection of the liver

e. HIV

- 1) Transmitted by infected blood via intravenous drug use, unprotected sexual conduct, blood transfusions, or (rarely) accidental needle sticks
- 2) Incubation period several months or years
- 3) Attacks the white blood cells and destroys the body's ability to fight infection

- f. Other diseases such as measles, mumps, and chicken pox which may pose a serious risk for adults, especially if they have not been immunized against them

C. Exposure Control

1. The OSHA regulation requires that the employer develop an Exposure Control Plan
2. It should include the following elements
  - a. Exposure determination
  - b. Schedules and methods for implementing elements of 29 CFR 1910.1030
  - c. Procedures for evaluating exposure incidents
3. Safety requirements in advance - suggested immunizations

- a. Hepatitis B vaccine
- b. Verification of immune status with respect to commonly transmitted contagious diseases
- c. Access or availability of immunizations in the community

D. Body Substance Isolation

1. Handwashing
2. Eye protection
  - a. If prescription eyeglasses are worn, removable side shields can be applied to them
  - b. Goggles
3. Gloves
  - a. Vinyl or latex needed for contact with blood or bloody body fluids
  - b. Should be changed between contact with different patients
  - c. Heavy-weights and tear-resistant gloves must be worn when cleaning the ambulance and soiled equipment

NOTE: Some providers may have a latex allergy. Vinyl or other synthetic gloves may also be required.

4. Gowns - needed for large splash situations such as major trauma
5. Masks
  - a. Surgical type for possible blood splatter
  - b. N-95 or High Efficiency Particulate Air (HEPA) respirator if patient suspected for or diagnosed with tuberculosis
  - c. Airborne disease - surgical-type mask (worn by patient)

III. BASIC PRECAUTIONS (1-3)

## A. Universal Precautions

1. Disposable gloves - required when blood or other body fluids are present or likely to be present
  - a. A separate pair of gloves should be used for each patient being treated
  - b. Care should be taken to avoid contact with the outside surfaces of the gloves
  - c. Care should be taken when touching equipment or supplies that have been exposed
2. Surgical-type masks - may be needed when there is a potential for exposure to splashing blood or other body fluids during procedures such as suctioning
3. Eye wear - may be needed when there is a potential for exposure to splashing blood or other body fluids during procedures such as suctioning
4. Gowns

NOTE: While emergency care providers are trained in the universal precautions as part of their emergency care training, firefighters who may be assisting with vehicle extrication or patient movement may not be aware of the dangers of being exposed to blood or other body fluids. Consideration should be given to wearing disposable gloves under regular firefighting gloves for protection. Remember that leather gloves and firefighter protective clothing can absorb blood and body fluids and become contaminated.

## C. Other Precautions

1. Use extreme caution around sharp, blood-covered objects such as knives, scissors, and intravenous needles.
2. Use a pocket mask or other devices to prevent cross infection during direct mouth-to-mouth rescue breathing
3. Ensure that contaminated equipment and supplies are properly decontaminated or disposed of as medical waste and not ordinary refuse
4. Place biohazard warning labels on any container or equipment that has been contaminated or areas that contain potentially infectious material

D. Exposures

1. May include contact with potentially infectious blood or other body fluids through needle sticks, broken skin, or membranes of the eyes, nose, or mouth
2. Clean the area of contact thoroughly
3. Document what happened
4. Notify the supervisor immediately
5. Secure necessary follow-up care
6. Follow any post-exposure policies and procedures

E. Since it is impossible for emergency care providers to identify patients who carry infectious diseases just by looking at them, all body fluids must be considered infectious and appropriate precautions taken at all times.

F. Ryan White Comprehensive AIDS Resources Emergency (CARE) Act Regarding Emergency Response Employees

1. Federal act which applies to all 50 states
2. Mandates procedures by which emergency response personnel can seek to find out if they have been exposed to potentially life-threatening diseases while providing patient care
  - a. Designate an emergency response person in each organization to act as the "designated officer"
  - b. The designated officer is notified when a provider has been exposed to an airborne disease
  - c. The designated officer may submit a request for a determination as to whether or not a provider has been exposed to bloodborne or other infectious disease

A publication entitled "Occupational Exposure to Bloodborne Pathogens: Precautions for Emergency Responders" OSHA Publication 3130, is available from the U.S. Department of Labor. You also want to get a copy of the full text of OSHA regulation 29 CFR 1910.1030. This can be downloaded from the OSHA website (OSHA.GOV).

REVIEW:

BLOODBORNE PATHOGEN REFRESHER

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REMOTIVATION: OSHA regulations require that annual refresher training be provided in bloodborne pathogens to any employee that have the potential of coming in contact with or being exposed to a bloodborne pathogen. While it is a legal requirement, it is also a good safety practice.

ASSIGNMENT:

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EVALUATION: