

**Loss Control Services: SAFETY TOPIC OF THE MONTH**

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**M.0810: Bloodborne Pathogens – The Basics****Facilitator Outline**

**Purpose:** Monterey County Schools Workers' Compensation JPA Loss Control Services provides these monthly topics to promote safety awareness, injury prevention and regulatory compliance for member districts. These topics may be adapted specifically to the needs of your district by editing and reformatting. If desired, the topic may be expanded with video/DVD, Powerpoint, or other media.

**Instructions:** Make copies of the handouts and quiz for those attending. As the facilitator for this training – please keep track of attendance in accordance with your district recordkeeping requirements. Thirty minutes should be allocated to allow for review/discussion of the handouts and the quiz – it is possible to condense the topic time to 15 minutes or less if time constraints are severe. You may use the quiz as a pre or post discussion topic; using it as a pre-quiz and then discussing the answers after review of the materials is a good way to assure an interactive session in a minimal amount of time.

**Answers to: Handout #2: PRE -QUIZ - Bloodborne Pathogens – The Basics**

1. Which of these terms is not a bloodborne disease?  
a) **HGV** b) HBV c) HCV d) HIV e) all are correct f) none are correct
2. How many millions of Americans are infected with HCV?  
a) 1.25 b) 2.7 c) **3.9** d) 5.1 e) 6.4
3. HIV survives for long periods of time outside the human body. **False**
4. Direct contact with contaminated human blood is the most likely transmission route of HIV. **True**
5. Healthy intact human skin is a good barrier against bloodborne pathogens. **True**
6. Mucous membranes are a perfect barrier to prevent blood exposure. **False**
7. Which of the following is Other Potentially Infectious Materials (OPIM) that may contain blood?  
a) urine b) vomit c) feces d) saliva e) **all should be considered OPIM**
8. An impromptu pathogen barrier could be a clean plastic garbage bag. **True**
9. The term that describes treating all blood or OPIM as contaminated is:  
a) impromptu barriers b) adverse reactions c) **universal precautions**  
d) viral paranoia e) clean hands method f) limits of exposure
10. The employer Exposure Control Plan is enforced by California EPA. **False (Enforced by Cal-OSHA)**
11. The “bonus” question adds extra feedback and interactive discussion from the group.

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## **Handout #1 – *Bloodborne Pathogens – The Basics***

**Introduction: What are Bloodborne Pathogens?** Bloodborne pathogens are microorganisms present in human blood that can lead to diseases. California Code of Regulations, Title 8, Section 5193, Bloodborne Pathogens requires employers to develop an Exposure Control Plan if work activities of employees may cause an exposure to blood or other infectious materials. There are three high risk infections that may occur due to exposure to blood or body fluids.

### 1. Human Immunodeficiency Virus (HIV)

- ✓ HIV is the virus that leads to acquired immunodeficiency syndrome (AIDS).
- ✓ HIV does not survive well outside the body.
- ✓ Contact with saliva, tears, or sweat has never been shown to result in the transmission of HIV.

### 2. Hepatitis B Virus (HBV)

- ✓ About 1.25 million Americans are chronically infected with hepatitis B.
- ✓ Hepatitis B can lead to chronic liver disease, liver cancer, and even death.
- ✓ A hepatitis B vaccination has been available since 1982.
- ✓ The hepatitis B virus can survive for at least 1 week in dried blood on surfaces such as a worktable, knife, tools, broken glass, or sharp metal.

### 3. Hepatitis C Virus (HCV)

- ✓ An estimated 3.9 million Americans have been infected with HCV.
- ✓ Seventy percent of infected persons will suffer from chronic liver disease.
- ✓ Drug treatment is effective in only 10 percent to 40 percent of patients.

## **A. Transmission of Bloodborne Pathogen**

The possibility of the transmission of bloodborne pathogens is very low when working in a school environment.

The most likely scenario in the school environment is **direct contact with contaminated blood**.

#### a. Other possible routes of transmission include:

- ✓ Contacting body fluids that contain infected blood.
- ✓ Being cut or scraped by a sharp object that is contaminated with infected blood.

Non-workplace transmission sources include:

- ✓ Unprotected sexual contact.
- ✓ Drug use with unclean needles.

#### b. Routes of Entry

- ✓ Healthy skin is an excellent barrier to bloodborne pathogens. Infected blood in contact with healthy skin will not result in the transmission of bloodborne pathogens
- ✓ Non-intact skin—The infected blood must make physical contact with skin that is damaged or not completely intact.
- ✓ Mucous membranes—The infected blood can enter your body's bloodstream through a mucous membrane.

#### c. What are Infectious Body Fluids? (Also known as OPIM "Other Potentially Infectious Material")

- ✓ Blood and body fluids containing blood, such as saliva, vomit, feces, and urine.
- ✓ Body fluids not likely to be encountered at work include semen, vaginal secretions, and cell cultures.

## B. Universal Precautions

“Universal Precautions”: Treat all human blood and certain human body fluids (OPIM) as if they contain bloodborne pathogens. The primary precaution is to have a barrier that will prevent transmission of fluids.

### Protective Barriers

Universal precautions call for avoiding contact with all potentially contaminated blood or body fluids by wearing PPE (Personal Protective Equipment) and using protective barriers.

- ✓ Gloves: Latex or nitrile gloves should be worn by first responders when applying bandages or putting pressure on wounds. Personnel must wear gloves when performing cleanup and decontaminating duties.
- ✓ Eye Protection: Safety glasses or goggles should be worn when needed.
- ✓ Protective Clothing: Protective suits or aprons are worn to protect your skin and clothing from spurting blood.
- ✓ Nose and Mouth Protection: Wearing a dust mask will protect the mucous membranes of the nose and mouth. A CPR mask is designed to protect the responder in case the victim vomits while you perform CPR.
- ✓ Impromptu Barriers: Impromptu barriers in your workplace might include a piece of plastic, a clean plastic garbage bag, paper, or your shirt. The idea is to use something as a barrier between your skin and the victim’s blood or body fluids.

## C: Safe Work Practices and Decontamination

### a. Safe Work Practices

1. Remove contaminated clothing and PPE as soon as possible.
2. Thoroughly wash your hands, face, or any other areas of your skin that may have come into contact with potentially infected blood or body fluids.
3. Clean and disinfect tools, work surfaces, and equipment that made contact with potentially infected blood or body fluids.
4. Dispose of all items that cannot be decontaminated such as rags, paper towels, PPE, etc.

### b. Decontamination

Remember universal precautions; assume the body fluids that contaminated the equipment or work surface are infected with bloodborne pathogens.

1. Obtain a "body fluid disposal kit" that contains fluid clean-up materials such as:
  - ✓ Absorbent powder
  - ✓ Disinfectant solution
  - ✓ Disposal bags
  - ✓ PPE
2. Put on protective gloves and protective eyewear.
3. Obtain disinfectant solution, such as 1/4-cup of bleach per gallon of water.
4. Wipe down all contaminated surfaces with the disinfectant solution.
5. Dispose of all contaminated gloves, towels, rags, absorbent powder, etc. Place it all in the disposal bag. Disposal is done in accordance with District policy to comply with health regulations.

## D. Important Note on Exposure Control

Always follow the exposure control plan rules and policies provided by the employer. This will help assure that universal precautions are always followed and that proper supplies and PPE are available to prevent exposure. If an exposure occurs, always report it and follow the instructions of a medical provider for follow-up care.

## NOTES:

## Handout #2: PRE -QUIZ - *Bloodborne Pathogens – The Basics*

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Department \_\_\_\_\_ Job Title \_\_\_\_\_

Instructions: Please provide the best answer for each question – the “best” answer may be open to discussion during review of the quiz!

- Which of these terms is not a bloodborne disease?  
a) HGV   b) HBV   c) HCV   d) HIV   e) all are correct   f) none are correct
- How many millions of Americans are infected with HCV?  
a) 1.25   b) 2.7   c) 3.9   d) 5.1   e) 6.4
- HIV survives for long periods of time outside the human body.   True   False
- Direct contact with contaminated human blood is the most likely transmission route of HIV.   True   False
- Healthy intact human skin is a good barrier against bloodborne pathogens.   True   False
- Mucous membranes are a perfect barrier to prevent blood exposure.   True   False
- Which of the following is Other Potentially Infectious Materials (OPIM) that may contain blood?  
a) urine   b) vomit   c) feces   d) saliva   e) all should be considered OPIM
- An impromptu pathogen barrier could be a clean plastic garbage bag.   True   False
- The term that describes treating all blood or OPIM as contaminated is:  
a) impromptu barriers   b) adverse reactions   c) universal precautions  
d) viral paranoia   e) clean hands method   f) limits of exposure
- The employer Exposure Control Plan is enforced by California EPA.   True   False
- Bonus Question: Do you have something to add to the discussion regarding your experience with situations involving bloodborne pathogens?

