Bloodborne Pathogens (BBP) Training
This module is designed to serve as the required basic bloodborne pathogens refresher training for the employees and to meet the requirements of the Occupational Safety and Health Administration’s (OSHA’S) Bloodborne Pathogen Standard 29CFR 1910.1030. A basic understanding of the bloodborne pathogens, transmission modes, protection methods, reporting procedures, and other pertinent information is provided in this module. A copy of the School’s Exposure Control Plan is available at each school in the Nurse’s Office or in the Principal’s office.

How to receive credit for the Training
• Print the post-test quiz, complete and give to your building secretary.

Bloodborne Diseases Overview
Bloodborne Pathogens are pathogenic microorganisms that are present in human blood and other potentially infectious materials (OPIM) and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HBC), and the human immunodeficiency virus (HIV). “Hepatitis” means “inflammation of the liver”.

Introduction
Occupational exposure to bloodborne pathogens, such as HBV, HCV, and HIV does occur. Blood is the number one source of these viruses in the workplace. Most of the people with occupational exposures were stuck by a contaminated needle or other sharp object, or had contaminated blood splash their broken skin, eyes, nose or mouth. Your risk of contracting one of these viruses at school is low, most likely because your contact with blood is infrequent.

Hepatitis B virus (HBV)
What is Hepatitis B?
• Hepatitis B is an inflammatory liver disease caused by the hepatitis B virus.
• Hepatitis B virus results in liver cell damage that can lead to scarring of the liver (cirrhosis) and increased risk of liver cancer in some people.
• In a dried state, HBV may remain viable on surfaces for up to 1 week and maybe longer.
• It is 100 times more infectious than HIV, has no cure and can be fatal.
• It is the only bloodborne disease with a vaccine available for protection.

Transmission
• HBV is transmitted primarily through “blood to blood” contact, by accidental needle sticks or other contaminated sharps injuries, sexual contact, mucous membrane contact, and though open cuts. Risk most often occurs in unprotected direct or indirect contact with infected blood. It is not transmitted by casual contact.
Symptoms
• Many people with newly acquired hepatitis B have no symptoms at all or they may be very mild flu-like symptoms - loss of appetite, nausea, fatigue, muscle or joint aches, mild fever, possible jaundice and dark urine.

• Symptoms may not become noticeable for 1-9 months, after exposure.

Disease Outcome
• Acute Infection: 95% of infected adults develop antibodies and recover spontaneously within six months. Upon recovery, they develop immunity to the virus and they are not infectious to others.

• Chronic infection: 5% of infected adults become chronically infected, and can infect others. The HBV virus remains in blood and body fluids - they may or may not show outward signs or symptoms.

Preventing HBV Infection
- things you can do:
• Get the HBV vaccinations - vaccination provides protection for more than 15 years, and possibly a lifetime. HBV booster shots are not recommended.
• Wear gloves and other personal protective equipment when cleaning up blood and other potentially infectious material.
• Cover any broken skin with bandages.
• Clean up and potentially infectious material with an EPA-registered tuberculocidal disinfectant.
• Call custodian for clean up of blood spills.

Hepatitis C virus (HCV)

What is Hepatitis C?
• Hepatitis C virus (HCV) causes inflammation of the liver.

• Many infected individuals show no signs or symptoms.

• Hepatitis C is a slow-progressing disease that may take 10-40 years to cause serious liver damage in some people.

• Hepatitis is the leading indicator for liver transplant.

Transmission
• Injection drug use is the primary risk for HCV infection (60% of new cases).

• The hepatitis C virus is found mainly in blood.

• HCV is not spread through kissing or casual contact.

• HCV may be transmitted by using razors, needles, toothbrushes, nail files, a barber’s scissors, tattooing equipment, body piercing or acupuncture needles if these items are contaminated by blood of an infected person.
•HCV may be transmitted by accidental needle sticks-needles contaminated with HCV-positive blood.
•HCV is not able to reproduce outside the body.
•HCV is rarely spread by sexual contact.

Symptoms
•Most people who are infected with the HBV do not have symptoms and are leading normal lives.
•If symptoms are present, they may be very mild and flu-like: nausea, fatigue, loss appetite, fever, headaches, and abdominal pain.
•Most people do not have jaundice although jaundice can occur along with dark urine.

Preventing HCV infection
•There is no vaccine to prevent HCV.
•Avoid handling anything that may have blood of an infected person on it.
•Handle needles and sharps with extreme caution-never recap, bend, or shear needles or separate the needle from the syringe. Use sharps containers for disposal.

Human Immunodeficiency Virus (HIV)
What is HIV?
•HIV (human immunodeficiency virus) is the virus that causes AIDS. Aids stands for Acquired Immunodeficiency Syndrome. Acquired means that the disease is not hereditary buts develops after birth from contact with a disease causing agent (in this case HIV). Immunodeficiency means that the disease is characterized by a weakening of the immune system. Syndrome refers to a group of symptoms that collectively indicate or characterize a disease. In the case of AIDS this can include the development of certain infections and/or cancers, as well as a decrease in the number of certain cells in a person's immune system.
•AIDS weakens the immune system so that it cannot fight other deadly disease. AIDS is a fatal disease. There is no cure and no vaccine for AIDS

Transmission
•The HIV virus will not survive long outside the human body. HIV particles are reduced by 90-99% with several hours upon drying.
•Employees providing first aid or medical care involving fresh blood are at-risk
•Transmission may occur through accidental needle-sticks, sexual contact, open cuts, or mucous membranes of the eyes or inside of the nose.
• Biting is not a common way of transmitting HIV; however severe trauma with extensive tissue tearing and damage and presence of blood would be of concern.

• Saliva, tears, and sweat-HIV has been found is saliva and tears is very low quantities from some AIDS patients. However, finding a small amount of HIV in a body fluid does not necessarily mean that HIV can be transmitted by that body fluid. HIV has not been found from the sweat of HIV-infected persons. Contact with saliva, tears, or sweat has never been shown to result in transmission of HIV.

• HIV is not spread by caual contact.

**Symptoms**
Many people who are infected with HIV do not have any symptoms at all for many years. Symptoms include:
• Rapid weight loss, dry cough, recurring fever or profuse night sweats, profound and unexplained fatigue, swollen lymph glands in the armpits, groin, or neck, diarrhea that lasts for more than a week, and white spots or unusual blemishes on the tongue, in the mouth or in the throat.

• Pneumonia, red, brown, pink or purplish blotches on or under the skin or inside the mouth, nose or eyelids, and memory loss, depression, and other neurological disorders.

**Modes of Transmission for all BBP**
• It is important to know how bloodborne diseases are transmitted so that you may take protective measures when providing first aid or cleaning up blood. Bloodborne pathogens are spread through infected human blood and other potentially infectious material (OPIM) such as semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid, especially is blood is visible. It situations where it is difficult or impossible to differentiate between body fluids-there are considered potentially infectious.

**Basics of Infections**
All of theses factors must be present for a potential exposure to occur:
1. The infected source must have an infectious agent in the blood or other potentially infectious material.
2. An entry site must be present.
3. A potential route of transmission must be present-such as a contaminated sharp object.
4. An unprotected, susceptible person is contaminated through non-intact skin.
The school district has an Exposure Control Plan available to you. A copy is kept in the school office and the Nurse’s Office at each building. The Exposure Control Plan addresses: employee responsibilities, exposure determination, safe work practices and engineering controls, personal protective equipment, housekeeping, communication of hazards to employees, the Hepatitis B Vaccination, post-exposure follow-up, and record keeping and surveillance.

How am I exposed at work?
Anytime there is “blood-to-blood” contact with infected blood or other potentially infectious materials, there is potential for transmission.

**Direct transmission**-Infected blood enters your bloodstream through an open cut, abrasion, sore, acne, damaged or broken skin such as blisters or sunburn, mucous membranes of the eyes, nose or mouth.

**Indirect transmission**-Touch contaminated object or surface and transfer the infection to your mouth, eyes, nose, or open skin.

Protecting yourself from Exposure

**UNIVERSAL OR STANDARD PRECAUTIONS**

- Universal or standard precautions require you to consider every person a possible carrier of a bloodborne pathogen and to treat his or her body fluids as if they were infected.

**Personal Protective Equipment (PPE)**

1. Always protect yourself before becoming exposed to blood or body fluids and have a protective barrier between you and the potentially infectious material.

2. Always have PPE readily available and wear in exposure situations.

3. Remove and replace PPE that is torn or punctured.

4. Put contaminated PPE in plastic-lined containers with biohazard label.

**Gloves**

Single use disposable gloves are the most common PPE, and should be worn if there’s any chance of contact with blood or contaminated material. Before you put them on, cover any cuts abrasions or other broken skin on your hands. Gloves should be snugly on your fingers, and be pulled up over your wrists as far as possible.

**Glove Removal**

When removing gloves, be very careful not to allow the outside surfaces touch your bare skin. To avoid the risk of infection, remove gloves as follows:

- Grasp the first glove, and peel it off from the wrist to fingertips.
- Transfer it to your gloved hand, then repeat the process.
- Pull the second glove down and over the first, not touching the outside of the glove.
- Discard both gloves promptly: Never re-use disposable gloves.
- Immediately wash your hands with soap and running water.
Other PPE

- Goggles and face shields: If there is a risk of splashing.
- Aprons and shoe covers: May be worn to protect your clothing and shoes.
- Resuscitation devices: use for CPR always use mechanical resuscitation device prior to performing CPR
- Blood spill clean-up kits: available in the custodian’s closet.

PPE Availability

- Notify the School Nurse, Custodian or the School Principal if you need personal protective equipment.

Clean up

If it is your job to clean up blood or body spills remember:
- Always wear gloves to protect your hands from contact with blood or other infectious material
- When every possible use disposable materials to absorb blood such as paper towel and discard appropriately.
- When cleaning up contaminated items such as glass use a broom and dustpan. *Never use your hands*
- Once the blood is absorbed, clean the area with an approved disinfectant solution.
- After cleaning, immediately disinfect all non-disposable equipment used, including mops and vinyl gloves. If these items are not properly disinfected, infectious materials could be spread to other areas and other people.
- If you empty garbage cans or laundry bins, always pick up and carry the bags by the top.

-never hold them against your body or place a hand underneath to support them -sharp objects can penetrate bags and cut you

Disposable Red Biohazard bags are available for regulated waste. Dispose of in custodian’s closet Call custodian to clean up any blood or other potentially infectious material.

Contaminated sharps:
- Do not break, bend, or recap needles
- Use broom and dustpan to pick up and discard in sharps container

What To Do if Exposed

If you think you may have been exposed to HIV, HBV, HCV, *Don’t panic.*
- immediately wash area with soap and water.
- If infectious material gets in your eyes, nose, or mouth flush with large amounts of water.
• As soon as possible report the incident to your principal and school nurse.
• You will then be advised about testing counseling and follow-up steps.
• Treatment works best if started within the first 24 hours after exposure.
• **Remember being exposed to infectious material does not automatically mean you are infected.**

**Hepatitis B Vaccinations**

• Three shot series that protect you against Hepatitis are provided at no cost to employees.

• Offered to all employees free of charge who are considered to work in “high risk” areas, such as: first responders, coaches, custodians, PE teachers, school nurses and anyone who works with students who need to be changed, fed or any clean up of bodily fluids.

**At-Risk Positions**

• “At-risk employees” means employees identified as being at risk for occupational exposure to blood and other potentially infectious materials. Employees listed in at-risk job categories are those who because of their usual duties might be exposed to blood or other potentially infectious fluids at part of their usual day of performing occupational task.

• The list may not be all-inclusive for at-risk exposure determination. Employees not included in the list who believe they are at risk for occupational exposure to blood and other potentially infectious materials may request the vaccination.

Examples of at-risk Positions
Coaches
Custodians
Physical Education Teachers
School Administrators
School Nurses
First Responders
Exceptional Children Teachers, Teacher Assistants
Bus Drivers and Assistants of some Special Needs Children and Developmentally Delayed Children

**Additional Tips**

• Keep soiled hands away from your eyes, nose and mouth.

• Always wash your hands before eating, drinking, smoking, handling contact lenses, or applying cosmetics or lip balm.
•Wear gloves whenever you may be exposed to bloodborne pathogens.

•When assisting someone who is bleeding, try to get the person to stop the bleeding with direct pressure.

Conclusion

Play it safe!!
Use Universal precautions-protect yourself!
Hand-washing is your best defense against acquiring any infection!

(Complete the Blood Borne Pathogen Training and Quiz Verification form and turn in to your building secretary.)