Infectious Disease and Bloodborne Pathogens

Annual Refresher Training
Infectious Diseases

A disease caused by a microorganism or other agent, such as a bacterium, fungus, or virus, that enters the body of an organism
The Infection Chain

- Infectious Agent
- Reservoir
- Modes of Escape
- Modes of Transmission
- Modes of Entry
- Host Susceptibility
Definition of Bloodborne Pathogen

• Pathogenic microorganism
• Present in human blood
• Can cause disease in humans

Most common BBPs are:
• Hepatitis B
• Hepatitis C
• HIV
Human Immunodeficiency Virus (HIV)

- HIV is the virus that causes AIDS. HIV affects the immune system, slowing destroying white blood cells.
- Virus is killed easily outside of body (once blood is dry, HIV considered no longer communicable)

From the Public Health Image Library – Center for Disease Control and Prevention
Hepatitis B Virus (HBV)

- Attacks liver
- 6-10% of people infected after age 5 become chronic
- Death occurs in 15-25% of chronically infected people
- Can survive for 7-14 days outside the body.
- Vaccine preventable

From the Public Health Image Library – Center for Disease Control and Prevention
Hepatitis C Virus (HCV)

- Attacks liver
- No vaccine
- 50-55% develop chronic liver disease
- Treatment with interferon but has side effects
Purpose of OSHA Standard

- To reduce or eliminate occupational exposure to potentially infectious materials which could cause disease or death.
- Designed to protect 5.6 million workers in healthcare and related occupations.
Who Does it Cover?

- All employees
- Employer responsible for evaluating potential for exposure
- Excludes Good Samaritan activities
Modes of Transmission

- Sexual contact
- Exposure to another person’s blood
  - Contaminated needle sharing
  - Blood contact with non-intact skin or mucous membranes
  - Transfusions
- Infected mother to child
BBP Program Requirements

• Evaluation of employee activities
• Post exposure procedures
• Personal protective equipment
• Training
• Annual review
Common Occupational Transmissions

- Needle-sticks
- Contaminated sharps/glass/ceramics
- Mucous membranes (eyes, nose, mouth)
- Open wound that is exposed to someone else’s blood (includes skin rash, dermatitis, broken cuticles, cut)

Important to know and discuss job responsibilities prior to start of work!
Universal Precautions

All human blood and certain human body fluids are treated as if known to be infected with HIV, HBV, HCV, and other bloodborne pathogens.

It is your responsibility to treat every student or employee as if they were infected with a BBP, no matter how unbelievable it may seem.
Vaccinations

- **HIV**
  - There is NO vaccine for HIV. Some treatments can improve length of life dramatically.

- **Hepatitis B Virus**
  - The HBV vaccination is administered in a series of 3 injections
    - Given at 0, 1, and 6 month intervals
    - Effective in 95% of people who complete series of all three shots
    - Series may continue if exceeded interval (i.e. do not have to start over even if 1st shot was 2 years ago)

- **Hepatitis C Virus**
  - There is NO vaccine. Treatment is only effective in 40% of cases.
Engineering Controls - Sharps

- Sharps containers
  - Closable
  - Puncture resistant
  - Leak proof
  - Labeled or color coded

- Determine sharp disposal method
  - Use licensed contractor
  - Deliver to local hospital
  - Mail-in systems
Administrative Controls

- No food or application of cosmetics in the area where blood or other body fluids are present!
- Direct victims in self-care where possible
- Hand-washing facilities
Gloves shall be worn when it can be reasonably anticipated that you may:

- Have hand contact with blood or other infectious materials
- Have hand contact with mucous membranes
- Have hand contact with non-intact skin
- Handle or touch contaminated items or surfaces

Please speak with your supervisor if you need PPE
Gloves

- Don prior to contact with blood
- Check for proper fit
- Check for punctures
- Wash hands before/after
- Pull snug to insure good fit
- Peel off from wrist to fingers
- Dispose of in waste container
- Do not reuse
First Aid Procedures

- Assess the situation - call nurse for assistance or send injured to nurse’s office if possible
- Use personal protective equipment
- Instruct injured person on self-care – if they can hold a tissue to their nose or apply a band aid themselves, have them do it!
- **Wash hands**
- Do not perform first aid unless trained to do so!
Cleaning Procedures

• Call a custodian if clean up is needed
• Use gloves
• Use disposable towels to absorb spill
• Clean spill area with soap and water
• Use proper disinfectant
• Dispose of waste in proper container
Hand-washing

• Use warm water only
• Apply liquid soap to palms first
• Lather well; spread lather to back of hands and wrists
• Scrub for at least 15 seconds, including fingernails and area between fingers
• Rinse well & dry completely
• Turn off faucet using disposable towels
Infectious Waste

• Typically in normal trash

• Red biohazard bags require special disposal procedures. Use only IF:
  – Saturated or dripping
  – Pourable
  – Call custodian to assist
EXPOSURES: DEFINITIONS AND PROCEDURES
What qualifies as a blood exposure?

- “Exposure Incident” means a specific eye, mouth, other mucous membrane, non-intact* skin, or parenteral** contact with blood or other potentially infectious materials that results from the performance of an employee’s duties.

- *Non-intact skin includes skin with dermatitis, hang-nails, cuts, abrasions, chafing, acne, etc.

- **Parenteral means piercing mucous membranes or the skin barrier though such events as needle sticks, human bites, cuts, and abrasions.

- When an employee experiences an “exposure incident”, the employer must institute the required follow-up procedures in their plan.
Five steps if exposed to blood

1. Wash exposed area IMMEDIATELY!
2. Flush splashes to nose, mouth, or skin with water.
3. Irrigate eyes with water or saline.
4. Report the exposure to supervisor.
5. Use worker’s compensation procedures if needed.
Training

- Offered to all employees Annual
- Includes the following:
  - Background of Standard
  - Activities which may result in exposure
  - Safe work practices/PPE
  - How to handle clean-ups
  - Signs & symptoms of disease
  - Post exposure procedures
Quiz and Questions

• Please open the BBP Quiz in the email attachments. When complete, please send to the quiz to Heather Roman at the District Office. This will be your documentation of training for this year.

• If you have any questions throughout the school year, please ask your school nurse.