

# Blood Borne Pathogens Training For School Personnel



# OSHA Defined:

- Occupational Safety and Health Administration
- Published a standard to reduce or eliminate health risk, resulting in:
  - Annual training of employees
  - Safe workplace environment
  - Exposure Control Plans

# Exposure Control Plan

- Defines who is at risk
- Outlines procedures to minimize or eliminate exposures to blood-borne diseases
- Procedures to follow in event of exposure



# Who is covered?

- Anyone who can anticipate coming in contact with blood or body fluids while at work.
- The school system is required to identify personnel whose job duties may expose them to blood or body fluids.
- Everyone is required to receive information on the dangers of exposure.

# Bloodborne Pathogens

## What are they?

- Infectious materials in human blood and body fluids that can cause disease in humans.
- Exposure can result in serious illness or death.

# Who is at risk?

- Anyone who comes in contact with human blood or body fluids.
- Anyone who touches potentially contaminated surfaces or equipment.

# Workplace Transmission



- Blood
- Body Fluids containing visible blood
- Semen and vaginal secretions
- Torn or loose skin

# Not infectious for bloodborne pathogens

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- Feces
- Urine
- Tears
- Saliva



- Vomitus
- Sputum
- Sweat

\*\* unless visible blood



# Workplace Transmission

- Special-Education Area
  - Special-Ed children:
    - More prone to injury
    - Likely to have special medical needs
    - Dependent on adults for their personal care

# Workplace Transmission

- Accidental Injury
  - Broken Glass
  - Sharp metal
  - Needles
  - Knives
  - Orthodontic wires that are exposed

# How do bloodborne pathogens enter your body?

- Indirect Transmission
  - Open cuts and nicks
  - Skin abrasions
  - Dermatitis
  - Acne
  - Mucous membranes of eyes, nose or mouth



# Standard Precautions

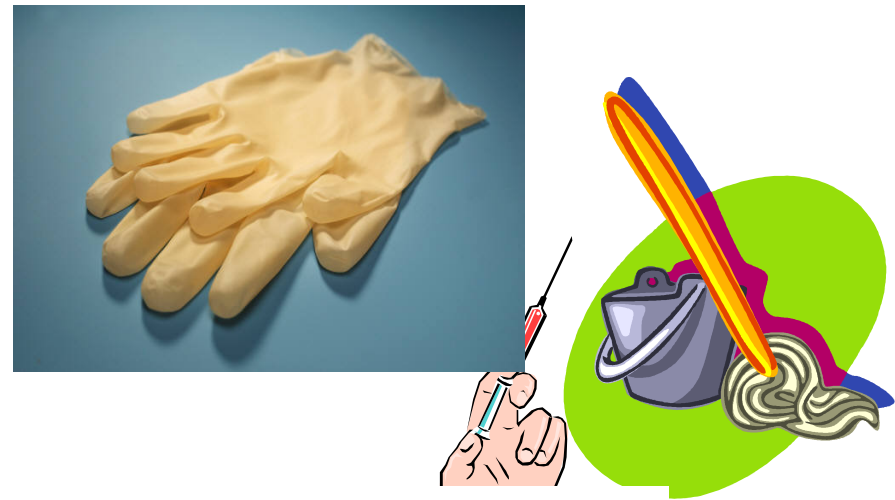
- Treat all blood and body fluids as potentially infectious.
- Critical because it is impossible to tell who is infected with HBV or HIV by appearances.
- Many have no knowledge or symptoms of their disease.



# Reducing Your Risk of Exposure

## Personal protective equipment

- Gloves, mask, gown, lab coat, face shield, protective eye wear
- -Should fit properly
- Engineering controls
- Housekeeping
- Hepatitis B vaccine





# PPE Selection Based on Anticipated Exposure

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- Gloves- any time contact with blood or other body fluids may occur
- Masks and eye protection- if there is any chance of splashing into the mouth nose or eyes
- Gowns/lab coats, shoe covers- risk of splattering or spilling on clothes or skin



# Engineering Controls

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- Devices that reduce employee risk by isolating or removing the hazard

Examples:

Sharps containers

Safety medical devices

Biosafety cabinets

Negative pressure rooms



# Work Practice Controls

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- Depends on you!
- Examples- proper handwashing,  
getting Hep B vaccine



proper handling of sharps  
proper disposal of infectious  
waste  
wearing appropriate PPE



# Work Practice Controls



- Handwashing- Single most important means of preventing the spread of infection



\* Waterless hand cleaner-only if no soap and water available!



# When to wash hands

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- Before and after touching someone or something potentially infectious
- After removing gloves
- After handling potentially infectious material
- After using the bathroom
- Before eating, smoking, applying cosmetics, handling contact lens



# Personal Hygiene

- Minimize spattering, spraying and splashing when attending to an injured person.
- Don't eat, drink, smoke, apply cosmetics or lip balm or handle contacts where there is a risk for exposure.
- Don't keep food and drink in refrigerators, freezers or countertops where blood or other infectious materials are present.



# Biohazardous Waste Disposal

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- Discard contaminated sharps in approved sharps containers
- Discard all other infectious material in red biohazard trash bags
- Picked up by biohazard waste technicians
- Incinerated



# International Biohazardous Waste Symbol

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# Housekeeping/Decontamination

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- Disinfect equipment and surfaces with approved disinfectant (Dispatch, 10% bleach solution, Saniwipes) when..
  - Surfaces become contaminated
  - At the end of the work shift
  - After any spill of blood or other potentially infectious material (OPIM)



# Blood or OPIM Spill Procedure

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- Prevent accidental exposure to others
- Wear appropriate PPE
- Absorb spill (paper towels or biohazard spill kit)
- Spray Dispatch or bleach solution, set for 10 min. or air dry
- Dispose of all cleaning materials and PPE in biohazard trash bag





# Bloodborne Pathogens of Concern

- Hepatitis B
- Hepatitis C
- HIV/AIDS



# Hepatitis B

- Infection of the liver
- Can lead to cirrhosis, liver cancer and death
- 20% risk of infection with a contaminated sharp
- Virus can survive in dried blood up to 7 days



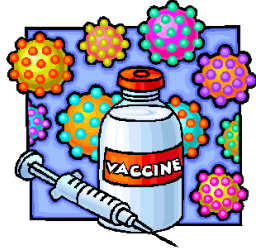
# Symptoms of Hepatitis B

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- Fatigue
- Loss of appetite, nausea
- Jaundice (yellowing of skin and eyes)
- Fever
- Abdominal pain, joint pain
- 30% have no symptoms
- Preventable





# Hepatitis B Vaccine

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- Recommended for all high risk groups
- Free- provided by employee health
- Safe
- 3 shots- initial , 1mo., 6mo.
- Life long immunity
- Decline- must sign OSHA waiver



# Hepatitis C

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- Most common chronic blood borne infection in US
- Causes liver damage, cirrhosis and liver cancer
- Leading reason for liver transplants
- 2% risk of infection by contaminated sharp

# Symptoms of Hepatitis C

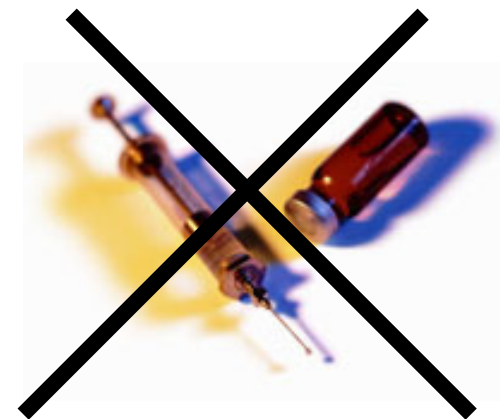
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- Same as Hepatitis B
- May occur within 2 weeks to many years
- 85% don't know they are infected

# Hepatitis C Vaccine

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- **There is NO vaccine and NO cure for Hepatitis C!**
- There are 50,000 needlesticks annually related to HCV infected patients



# Major Risk Factors for Hepatitis B and C

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- Sexual activity with multiple partners
- IV drug use
- Hep B- neonatal transmission
- Hep C- blood transfusion prior to 1990



- small risk- tattooing, body piercing, shared nasal cocaine





# HIV/AIDS

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- Attacks the body's immune system
- Unable to fight off other infections
- No vaccine and no cure
- 6,000 new infections every day

# Symptoms of HIV

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- Mild flu-like symptoms initially (fever, swollen glands)



- May be free of symptoms for months to many years
- Eventually leads to AIDS and death

# HIV Transmission

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- High risk sexual activity and IV drug abuse account for 80%



- Neonatal

- Accidental occupational exposure



# Chances of Infection

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- If you are exposed to HIV infected blood/body fluids by:
  - A dirty needle/sharp: 3 in 1000 (0.3%)
  - Mucous membrane splash: 1 in 1000 (0.1%)
  - Non intact skin: 1 in 1000 (0.1%)
  - Prompt antiviral treatment after exposure can reduce risk of infection by 60 – 80%

# Should we be concerned?

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- NC rank by state:

10<sup>th</sup> for new cases of HIV/AIDS

12<sup>th</sup> for syphilis

19<sup>th</sup> for Hep. B

Source: State Center for Health Statistics 2003

# What if I am exposed?

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- Wash with soap and water
- Splash to mucous membranes- rinse or flush with water for 15 min.
- Have source of infection remain available



# Who needs to know?

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## Contact:

Principal

School Nurse

Human Resources Department

Follow guidelines found in your Exposure  
Control Plan

# Post Exposure Follow Up

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- Follow county's policy for exposure
- Complete appropriate forms referenced in your counties exposure control plan
- Confidentiality is maintained





# Bloodborne Pathogens for Schools

- As a school employee you must react to emergencies not only with your heart but with your head. Know the facts and take precautions to protect yourself. Students, co-workers and loved ones are counting on you!

# References

- Bureau of Business Practice, (1997). *Bloodborne Pathogens Safety Program Planner* (Manual)
- Coastal Training Technologies Corp, (2000). *Bloodborne Pathogens* (Brochure) Virginia Beach, VA
- East Carolina University Infection Control (Not available) *OSHA Bloodborne Pathogen and Tuberculosis Training* (Powerpoint). Greenville, NC: Maxine Edwards.

The background is white and filled with numerous question marks of various colors (green, pink, blue, cyan, purple) and sizes. Some question marks have decorative swirls at their stems. The text is centered and written in a bold, purple, serif font.

**Questions?  
See your School  
Nurse**