



Proud Tradition *Promising Future*

NEW PRAGUE AREA SCHOOLS

Bloodborne Pathogen & Infectious Disease Training

If at anytime during this training or in the future you have questions regarding this information, please contact Jenny Schoenecker, RN, LSN, Director of Health Services at 952-758-1760 or jenschoenecker@isd721.org



Course Topics

- What are bloodborne pathogens (BBPs)?
- Why are they harmful?
- How can I protect myself?
- What is our Exposure Control Plan?

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.



Why do I need this training?

Reminder on how to protect yourself from infectious diseases, including Bloodborne Pathogens (BBPs)

Satisfy OSHA requirement for annual training

Question: Who is responsible for your safety?



Who is responsible?

Your employer is required to provide you with the knowledge and tools needed to protect yourself and others from hazards in the workplace but...

**YOU ARE RESPONSIBLE FOR
YOUR OWN SAFETY!**

Transmission of Diseases

Organisms can enter the body by:

- Inhalation

Air



- Ingestion

Contaminated food,
water



- Direct blood contact

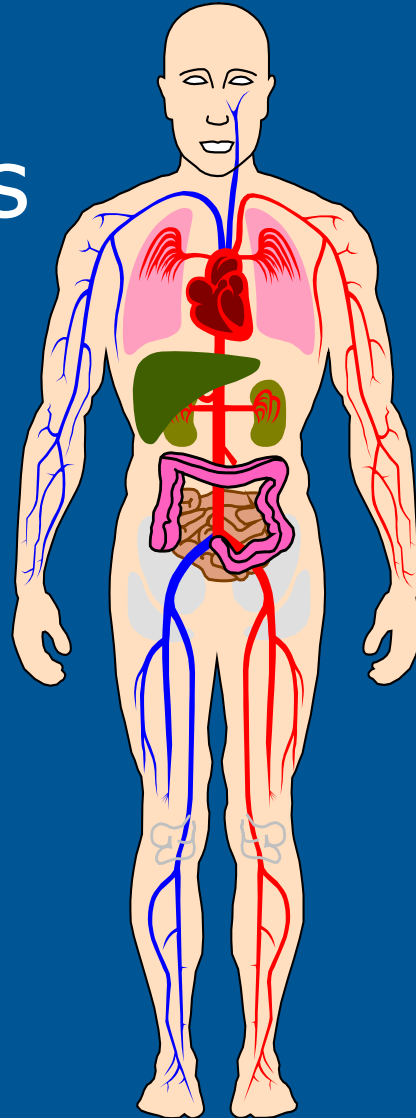


Bloodborne Pathogens (BBPs)

Microorganisms
present in

Blood,

or



Other
Potentially
Infectious
Materials

Bloodborne Pathogens (BBPs)

“OPIM” is:

- Semen
- vaginal secretions
- body fluids such as pleural, cerebrospinal, pericardial, peritoneal, synovial, and amniotic
- saliva in dental procedures
- any body fluids visibly contaminated with blood
- body fluid where it is difficult to differentiate
- any unfixed tissue or organ (other than intact skin) from a human (living or dead)
- HIV- or HBV-containing cultures (cell, tissue, or organ), culture medium, or other solutions
- blood, organs, & tissues from animals infected with HIV, HBV, or BBPs

Transmission of BBPs

Bloodborne pathogens can enter your body through:

- contaminated instrument injuries
- a break in the skin (cut, lesion, etc.)
- mucus membranes (eyes, nose, mouth)
- other modes



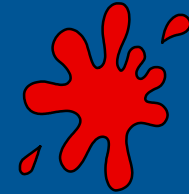
Transmission of BBPs

Risk of infection depends on several factors:



- The pathogen involved
- The type/route of exposure
- The amount of virus in the infected blood at the time of exposure
- The amount of infected blood involved in the exposure
- Whether post-exposure treatment was taken
- Specific immune response of the individual

Bloodborne Pathogen Diseases



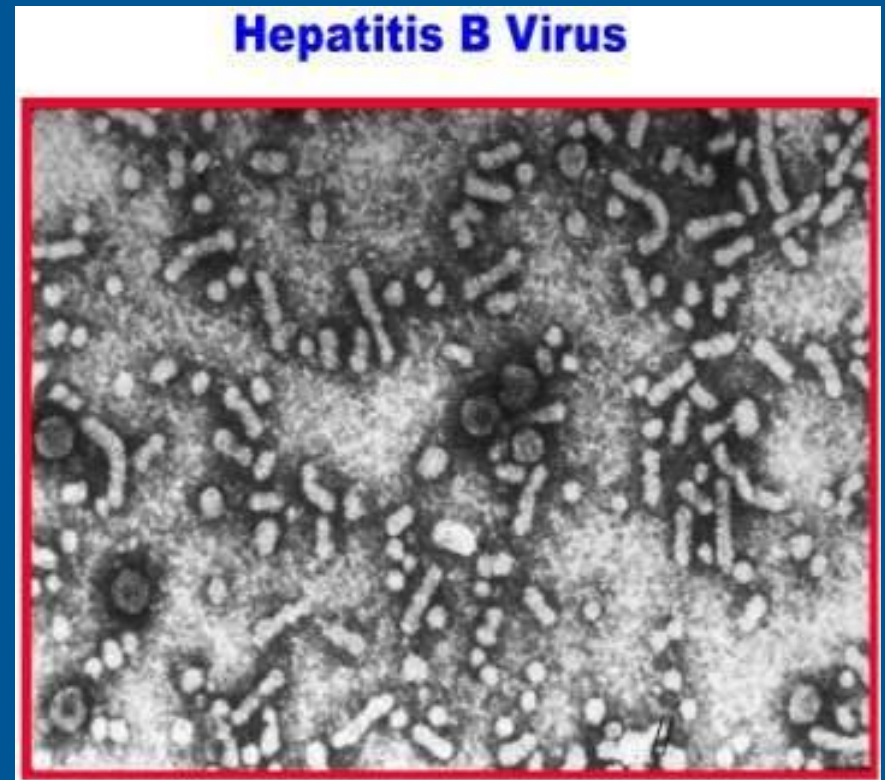
Main bloodborne pathogens and diseases of concern

- Hepatitis B Virus (HBV) – Hepatitis B
- Hepatitis C Virus (HCV) – Hepatitis C
- Human Immunodeficiency Virus (HIV) – AIDS

HBV - Hepatitis B Virus

General Facts

- Hearty - can live for 7+ days in dried blood
- 100 times more contagious than HIV
- Thousands of new infections per year
- 1.25 million carriers
- 4,000 deaths/year
- No cure, but there is a preventative vaccine



HBV - Hepatitis B

Clinical Features

Incubation period	Average 60-90 days Range 45-180 days
No sign or symptoms	30%
Acute illness (jaundice)	30%-50% (≥ 5 years old)
Chronic infection (carrier)	2%-10% (of infected adults)
Premature death from chronic liver disease	15-25% (of chronically infected)
Immunity	Protected from future infection

HBV - Hepatitis B

Symptoms

- flu-like symptoms
- fatigue
- abdominal pain
- loss of appetite
- nausea, vomiting
- joint pain
- jaundice



Normal eyes



Jaundiced eyes

Hepatitis B Statistics

- 19 total reported cases of acute hepatitis B virus infection in Minnesota in 2013
- As of December 31, 2013, there are 21,585 people in MN living with chronic HBV

HCV - Hepatitis C Virus

General Facts

- The most common chronic bloodborne infection in the U.S.
- 3.2 million (1.6%) Americans infected; 2.7 million chronically infected
- Thousands of new infections each year
- Leading cause of liver transplantation in U.S.
- 8,000-10,000 deaths from chronic disease/year
- No broadly effective treatment
- No vaccine available



Healthy human liver



Hepatitis C liver

A healthy human liver contrasted with a liver from an individual who died from hepatitis C.

HCV - Hepatitis C

Clinical Features

Incubation period	Average 6-7 weeks Range 2-26 weeks
No sign or symptoms	80%
Acute illness (jaundice)	≤20% (Mild)
Chronic infection	75%-85%
Chronic liver disease	10%-70% (most are asymptomatic)
Deaths from chronic liver disease	1%-5%
Immunity	No protection from future infection identified

Age-related

HCV - Hepatitis C

Symptoms

- flu-like symptoms
- jaundice
- fatigue
- dark urine
- abdominal pain
- loss of appetite
- nausea



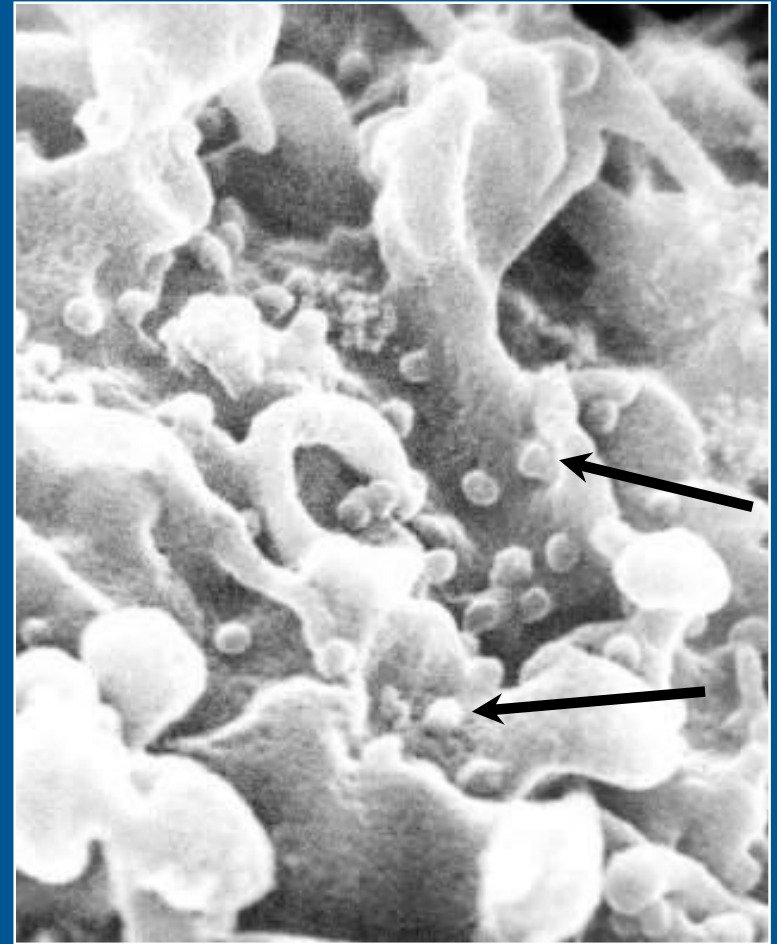
Hepatitis C Statistics

- 47 total reported cases of acute hepatitis C virus infection in Minnesota in 2013
- As of December 31, 2013, there are 40,943 people alive and living in MN with Hepatitis C
- Most new cases are from intravenous drug use

Human Immunodeficiency Virus (HIV)

General Facts

- Fragile – survives only a few hours in dry environment
- Attacks the human immune system
- Cause of AIDS
- >1 million infected persons in U.S.
- No cure; no vaccine available yet



HIV - seen as small spheres on the surface of white blood cells

Human Immunodeficiency Virus (HIV)

HIV Infection → AIDS

- Many have no symptoms or mild flu-like symptoms
- Most infected with HIV eventually develop AIDS
- Incubation period \approx 10-12 yrs
- Treatments are limited; do not cure



Living with HIV/AIDS in MN

- As of December 31, 2013, 7,723 people are assumed alive and living in MN with HIV/AIDSs
 - 4,095 living with HIV infection
 - 3,628 living with AIDSs
- There were 301 new cases in 2013 which is an 4% increase from 2012



Transmission of BBPs

Occupational Exposure:

means reasonably **anticipated** skin, eye, mucous membrane, or parenteral (piercing of the skin) contact with blood or OPIM that may result from the performance of an employee's duties



Exposure Incident:

is a broken skin, mucous membrane or sharps injury exposure to blood or OPIM

Occupational Transmission



Risk of infection following a needlestick or cut from a positive (infected) source:

- HBV: 6%-30%
- HCV: 1.8%
(range 0%-7%)
- HIV: 0.3%

Exposure Control Plan

To eliminate/minimize your risk of exposure

- Exposure determination
- Exposure controls
- Training and Hazard Communication
- Hepatitis B Vaccine
- Post exposure evaluation & follow-up
- Recordkeeping



A copy of the district plan is located on the district web page:

<http://www.npaschools.org/sites/default/files/documents/8/MGMT%20PLAN%20Bloodborne%20Pathogens.pdf>

Exposure Controls

UNIVERSAL PRECAUTIONS

A system of infection control that treats all human blood and OPIM as if it is infected with a bloodborne disease.



Cleaning Procedures

- **USE GLOVES!**
- **Use disposable towels to absorb spill**
- **Clean spill area with soap and water**
- **Use proper disinfectant**
- **Dispose of waste in proper container (regular waste as long as it is not saturated or dripping)**

**CUSTODIAL STAFF RESPONSIBLE FOR CLEAN UP
WHENEVER POSSIBLE!**

Exposure Controls

Sharps disposal containers are:

- Closable
- Puncture-resistant
- Leak-proof
- Labeled or color-coded
- Upright, conveniently placed in area where sharps used



DO NOT OVERFILL!

Exposure Controls

Safe Work Practices

Wash hands after each glove use and immediately or ASAP after exposure.



Exposure Controls

Safe Work Practices



Don't eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses in any work areas where there is the possibility of exposure to blood or OPIM.

Exposure Controls

Safe Work Practices

During clean-up of spills and broken glassware/sharps contaminated with blood or OPIM, do the following:



- Wear protective eyewear and mask if splashing is anticipated.
- Remove glass and other sharps materials using a brush and dust pan, forceps, hemostat, etc. Do not use your hands.
- Properly discard all materials into a sharps or puncture-resistant waste container.
- Use paper/absorbent towels to soak up the spilled materials.

Exposure Controls

Personal Protective Equipment Gloves



latex gloves

- Latex
- Nitrile
- Vinyl
- Utility



Nitrile and vinyl gloves

Exposure Controls

Remove gloves safely and properly

- Grasp near cuff of glove and turn it inside out. Hold in the gloved hand.
- Place fingers of bare hand inside cuff of gloved hand and also turn inside out and over the first glove.
- Dispose gloves into proper waste container.
- Clean hands thoroughly with soap and water (or antiseptic hand rub product if handwashing facilities not available).



Hepatitis B Vaccine



- Provided at no cost to you if your job is an “at-risk” position
- 3 shots: 0, 1, & 6 months
- Effective for 95% of adults
- If you decline, you must sign a “Declination Form”
- Vaccine available at later date if desired



Exposure Incident

If you have an exposure incident to blood or OPIM, immediately do the following:



- Thoroughly clean the affected area
 - Wash needlesticks, cuts, and skin with soap and water
 - Flush with water splashes to the nose and mouth
 - Irrigate eyes with clean water, saline, or sterile irrigants

- Report exposure to (*supervisor and Jenny Schoenecker, Exposure Control Officer*); fill out an Incident Report Form

Post-exposure evaluation

- Provide immediate post-exposure medical evaluation and follow-up to exposed employee:
 - At no cost
 - Confidential
 - Testing for HBV, HCV, HIV
 - Preventive treatment when indicated
- Test blood of source person if HBV/HCV/HIV status unknown, if possible; provide results to exposed employee, if possible



Post-exposure evaluation



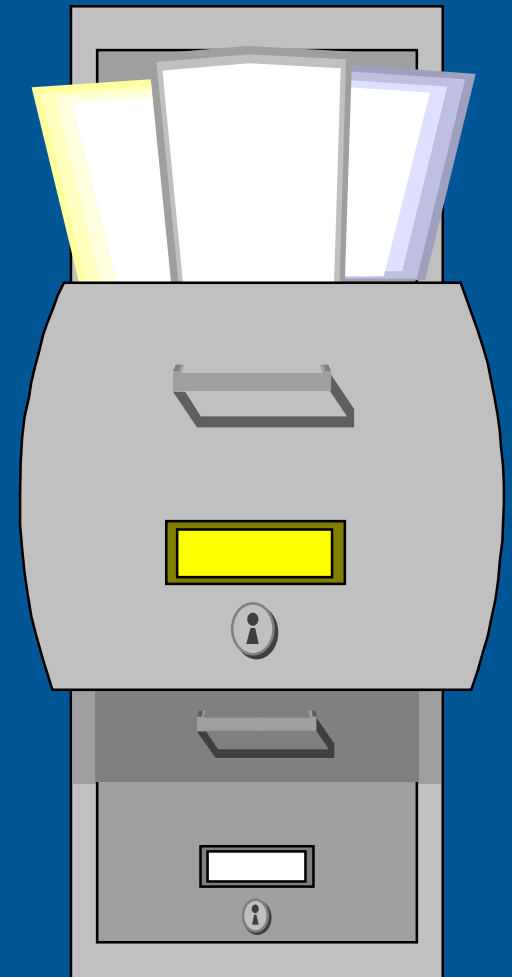
- Provide exposed employee with copy of the evaluating health care professional's (HCP) written opinion within 15 days of completion of evaluation
- Provide employee with information about laws on confidentiality for the source individual
- Provide post-exposure treatment as needed, including counseling

Post-exposure Treatment

- HCV – No treatment
- HBV – Immune globulin and vaccination if not immune
- HIV – Anti-HIV medications for high risk exposures
- Tested for infection at baseline, 3, and 6 months

Recordkeeping Medical Records

- Confidential
- Hepatitis B vaccination and post-exposure evaluations
- HCP's written opinions
- Information provided to HCP as required
- Maintain for length of employment + 30 years



Sharps Injury Log

We keep a separate sharps injury log.

We also document sharps injuries on the OSHA 300 or equivalent form.

The injury is recorded as a confidentiality case.

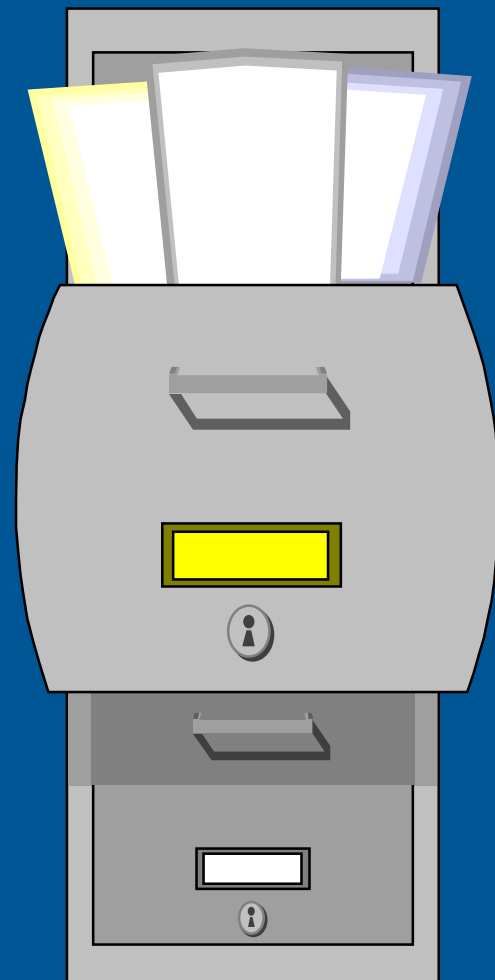
The log includes the following information:

- Type and brand of device involved.
- Department or work area where exposure occurred.
- An explanation of how the incident occurred.



Recordkeeping Training Records

- Dates
- Content summary
- Trainer name & qualifications
- Attendee's names & job titles
- Maintain for 3 years



**QUESTIONS? Please contact
Jenny Schoenecker @ 952-758-
1760 or
jenschoenecker@isd721.org**

**THANK YOU!
Please complete quiz by clicking
on link below:**

[QUIZ](#)