Bloodborne Pathogens

Safety Guidelines
What are bloodborne pathogens?

- Bloodborne pathogens are microorganisms present in blood, and other body fluids, that can cause disease in humans.

- Pathogens include, but are not limited to, Hepatitis B virus (HBV), Hepatitis C (HCV) and Human Immunodeficiency Virus (HIV).

(OSHA, 2018)
Contact Transmission

• Direct Contact
  ◦ Blood or body fluid from patient directly enters healthcare worker’s body through contact with mucous membrane or break in the skin (cuts, abrasions)

• Indirect Contact
  ◦ Transferred through contaminated intermediate object or person
    • Healthcare workers hands, patient-care devices, or inadequately cleaned instruments

(CDC, 2016)
Safe Work Practices

Preventing exposure to bloodborne pathogens

1. Prevent needlesticks and other sharp-related injuries
2. Avoid mucous membrane contact
3. Precautions during aerosol-generating procedures

(CDC, 2016)
Needlestick or Infectious Material Exposure

If needlestick, sharp, or exposure to infectious material occur, do the following:

- Immediately wash exposed area with water
  - If wound, clean additionally with soap or disinfectant
- Report incident immediately to employer (instructor, if in clinical setting) and follow instructions for immediate medical attention.

(OSHA, 2018)
Hepatitis Virus (HBV, HCV)

- Liver inflammation caused by a virus
- Usually asymptomatic or mild symptoms:
  - Fever, fatigue, dark urine, jaundice, abdominal pain, clay-colored stool

(CDC, 2018)
Transmission of HBV

Spread by parenteral contact with:
- Infected blood; blood products; body fluid
- Sharing contaminated needles, syringes, or drug preparation equipment
- Infected mother to her newborn
- Sexual contact with infected partner

(CDC, 2018)
Prevention of HBV

- Vaccination with HBV vaccine given at 0, 1, and 6 months.
- Complete the series for full protection.
- Recommended for all health care workers.
- Use of standard precautions and recommended personal protective equipment.

(DOSH, 2001; CDC, 2018)
Transmission of HCV

Spread primarily through parenteral exposure:
- Contaminated blood or blood products
- Injection drug use (most common means in United States)
- Needlestick injuries in healthcare setting
- Birth to HCV-infected mother

(CDC, 2018)
Prevention of HCV

- There is no vaccine.
- Standard precautions and use of personal protective equipment.

(CDC, 2018)
Human Immunodeficiency Virus (HIV)

- HIV invades, attacks and weakens the T-cells in your immune system, eventually leaving you immunocompromised.

- Symptoms:
  - Fever, sore throat, rash, poor appetite, rapid weight loss and swollen glands

(CDC, 2015)
Transmission of HIV

Spread through:
- Contaminated blood or blood products
- Bodily fluids
- Sexual contact
- Contaminated needles
- Mother to child
- Exposed cuts or scratches to hands

(CDC, 2015)
Prevention

- There is **no** vaccine
- Standard precautions and use of personal protective equipment
- Careful handling and disposal of used sharps
- Use syringes and needles with safety devices
- Use resuscitation bag if needed, **NO** mouth-to-mouth

(CDC, 2015)
References


