

# BLOODBORNE PATHOGENS TRAINING

# OBJECTIVES

This program will outline bloodborne pathogens topics such as:

- Common Bloodborne Diseases and how you can be exposed
- A review of the UPMC Exposure Control Plan
- A review of “Standard Precautions”
- Personal Protective Equipment and Work Practices to control against exposure

**POLICY AWARENESS REMINDER:** It is your responsibility to comply with all UPMC policies. The UPMC policies can be found on the INFONET.

# BLOODBORNE PATHOGENS

What are bloodborne pathogens?

- Bloodborne pathogens (BBP) are microorganisms present in human blood/body fluids and other potentially infectious materials that can cause disease in humans.
- Other potentially infectious materials may include:
  - Unfixed tissue or organs (not treated with chemicals )
  - HIV/Hepatitis C/Hepatitis B containing cell or tissue cultures

# EXPOSURE TO PATHOGENS

The Occupational Safety and Health Administration (OSHA) regulates exposure to bloodborne pathogens and has developed a Bloodborne Pathogen Exposure Control standard.

Any employee who could reasonably anticipate coming in contact with bloodborne pathogens as part of their job duties are covered by this standard.

# UPMC EXPOSURE CONTROL PLAN

- Bloodborne pathogen exposures are also addressed in the UPMC Exposure Control Plan.
- In most facilities, each individual department has a written exposure control plan that details information specific for your job. You should know where to locate this plan.
- You will receive training within your department whenever changes to processes, equipment, and/or procedures relating to BBP control occur.

# TRANSMISSION OF PATHOGENS

Bloodborne pathogens can be transmitted through:

- Accidental punctures and cuts with contaminated sharp materials (e.g. Needle stick).
- Contact between mucous membranes or broken skin and infected body fluids (e.g. Splash).
- Sharing of needles.
- Sexual contact.

# BLOODBORNE DISEASES

The three Bloodborne diseases of most concern are:

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

# HUMAN IMMUNODEFICIENCY VIRUS

Human Immunodeficiency Virus (HIV) is a virus that infects human T-cells and decreases a person's ability to fight off other disease causing germs. It may ultimately lead to the development of Acquired Immune Deficiency Syndrome (AIDS).



# CONTRACTING HIV

HIV can be contracted by:

- Occupational exposure to the blood or body fluids of a patient infected with HIV.
- Sexual contact.
- Sharing needles.
- An unborn baby through its infected mother (though the risk can be lowered with appropriate pre-natal treatment).

# MYTHS ABOUT CONTRACTING HIV

You cannot contract HIV from:

- Telephones, toilet seats, doorknobs or insect bites
- Shaking hands, being sneezed or coughed on
- Donating blood

# HEPATITIS B

The Hepatitis B virus is known as a bloodborne virus, because it is transmitted from one person to another via blood or fluids contaminated with blood.

- The virus attacks the liver.
- It can cause scarring of the liver, liver cancer, liver failure, and death.
- Symptoms of infection include jaundice, fatigue, abdominal pain, vomiting.
- It can be prevented with the Hepatitis B vaccine.

# HEPATITIS B VACCINE

- The Hepatitis B vaccine is available free of charge to UPMC employees with anticipated exposure to blood or body fluids.
- Should you choose to decline, this will require an acknowledgement, however you can ~~always~~ change your mind at any time and receive the vaccinations.
- The vaccine, which is delivered in a series of three injections, can be obtained by contacting any UPMC Employee Health department.
- The Hepatitis B vaccine is one of the most effective and safest vaccines in the world.

# HEPATITIS C

- Hepatitis C is similar to Hepatitis B.
- May remain dormant with no symptoms for 10-20 years.
- People may be contagious even if they have no symptoms.
- There currently is no vaccine available.
- Chronic Hepatitis C infection is the leading cause of liver transplant in the U.S.

# PROTECTING YOURSELF

You can protect yourself and your co-workers by following standard precautions:

- Using Personal Protective Equipment (PPE)
- Using safe-needle devices as specified
- Dispose of sharps and wastes appropriately
- Obtain the Hepatitis B vaccinations
- Perform Hand Hygiene

# STANDARD PRECAUTIONS

- Standard Precautions combine the previous Universal Precautions approach of treating all blood and body fluids as infectious with body substance isolation practices.
- The precautions are applied to all patients receiving care, regardless of infection status.

# PERSONAL PROTECTIVE EQUIPMENT

Bloodborne pathogen exposure can be prevented with the proper use of specialized equipment and clothing. Common types of PPE include:

- Gloves
- Face Shields
- Gowns
- Masks
- Goggles





# PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment is usually available at each patient room and other designated locations within your department. PPE must be worn anytime there is potential contact with blood and body fluids.



# SAFER MEDICAL DEVICES

There are engineering control devices in place that are designed to reduce the potential for bloodborne pathogen exposures.

- These include needle-less systems and safe-needle devices.



# SAFER MEDICAL DEVICES

Needle-less systems should NEVER be bypassed with needle devices. If you have concerns with using a needle-less system, contact your supervisor and the Infection Prevention Department.

Safe-needle devices MUST be used unless:

- They are not available for the specified task.
- They pose a risk to patients or employees.

Many accidents occur because employees fail to activate the safety device after using the needle. The safety device MUST be activated IMMEDIATELY after the needle is used.

# SAFER MEDICAL DEVICES

- The majority of accidents occur because employees fail to follow safe work practices and/or do not activate the safety device in a timely manner after using the needle.
- Your safety is everyone's responsibility, especially yours!
  - Know correctly how safety mechanisms work on devices before use.
  - Activate the safety device IMMEDIATELY after the needle is used.
  - Dispose of sharps correctly in a sharps container, never in a trash can or red biohazard bag.
  - If you encounter a sharps device that you do not know how to safely use notify your supervisor to obtain safety instructions
- If you have concerns with using a safety device and/or needle-less system, contact your Supervisor, Employee Health and/or the Infection Prevention Department.

# PROPER DISPOSAL

**Non-sharps** - Materials contaminated with blood or other infectious material must be handled carefully and disposed of in infectious waste containers.

- These containers are typically red and are lined with red biohazard bags.

# PROPER DISPOSAL

- **Sharps** - Materials (syringes with or without needles attached, scalpels, etc.) must be disposed of in approved sharps containers.
- Safety devices must be engaged immediately after use and before putting the sharp into the sharps container.
- When feasible portable sharps containers should be kept as close to the use area as possible.
- These containers **MUST** be removed for disposal when they are  $\frac{3}{4}$  full or reach the “full” line, whichever is less.
- **NEVER** reach your hand into a sharps container.

# PROPER DISPOSAL

Employees handling filled sharps containers should:

- Visually inspect sharps containers before handling.
- Close the lid before manipulating the container.
- Secure filled sharps containers
  - If its overfilled,
    - Use forceps to remove protruding devices
    - Place removed devices in a new container
- Inspect waste container
  - If there is anything sticking out, take corrective actions and notify you're a supervisor in the area to address immediately.

# HAND HYGIENE

- The most effective way to prevent the spread of infection is to perform hand hygiene following the World Health Organization's Five Moments of Hand Hygiene:
  - Before touching a patient
  - Before clean/aseptic procedures
  - After body fluid exposure risk
  - After touching a patient
  - After touching patient surroundings
  
- To enhance this practice, waterless hand sanitizers are placed in various accessible locations and may be used for hand hygiene unless hands are visibly soiled.
  
- Hand washing with soap and water is required following care of patients with GI illness causing diarrhea such as C-diff or Norovirus.



# IF YOU HAVE AN EXPOSURE

- Immediately wash hands and other skin surfaces with soap and water.
- If the eyes are splashed, irrigate the eyes with large amounts of clean water or sterile saline.
- If the mouth or nose is involved, flush with plain water and/or mouthwash if available.

# IF YOU HAVE AN EXPOSURE

- Report the injury to your supervisor and seek medical evaluation / treatment AS SOON AS POSSIBLE.
- During business hours report to the Employee Health Department.
  - During non-business hours, exposure consultation is always available by contacting (412) 784-7402 or reporting to the Emergency Department.
- Report the injury as soon as possible (within 24-48 hours) by contacting WorkPartners at: 1-800-633-1197 or online through My HUB.
- UPMC Bedford Memorial employees must complete an incident report and exposure incident form as soon as possible (within 24-48 hours) by contacting their supervisor or Employee Health at 814-623-3546.
- Supervisors are required to complete and document a follow-up investigation on all exposure incidents.

# POST-EXPOSURE FOLLOW-UP

- All testing and treatment after an exposure is provided free of charge.
- Employee Health will coordinate your post exposure treatment (not you or another physician).
- Your confidential medical records will be kept by Employee Health for at least 30 years after the exposure.
- The healthcare worker must report the exposure and have baseline testing completed in order to receive the results of the source patient's test.
- If source patient refuses testing after informed consent discussion, available blood may be used for bloodborne pathogen testing.

# FOR MORE INFORMATION

- If you have any questions on this training module or want more information about bloodborne pathogens
- Monday through Friday during business hours:
  - contact your supervisor, Safety Office or Infection Prevention Representative.
- After hours and weekends
  - contact (412) 784-7402 and ask for the Employee Health Services on-call person to be paged.