



Blood-borne Pathogen Employee Training

Revised June 2010

All Employees are required to attend initial and annual OSHA Training

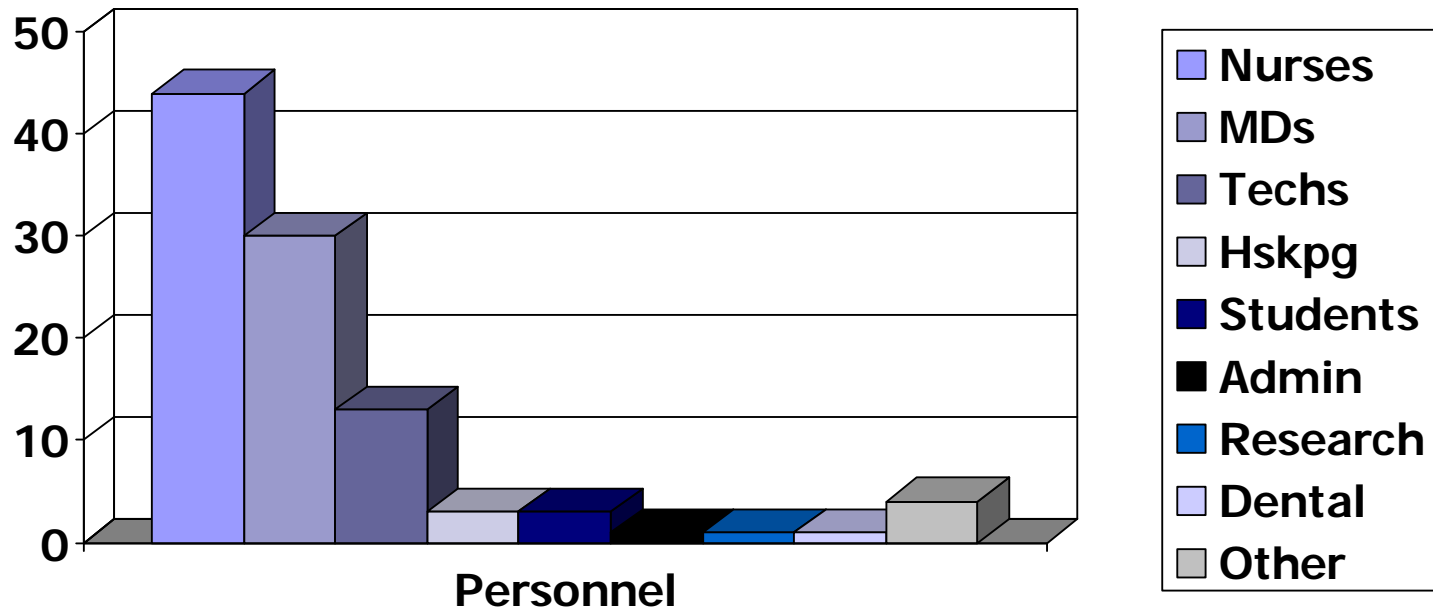


Why Blood-Borne Pathogen Training? Protect Yourself!

- Healthcare workers sustain approximately 385,000 percutaneous injuries from needles and other sharps devices annually in the U.S. – equivalent to more than 1,000 injuries a day
- Approximately 50% of all such injuries are reported

Who is Exposed in the Hospital?

Exposure Percentages



Location of Injury

- 93.3% of injuries to hands
- 55.7% of injuries are to the non-dominant hand
- Rate of Percutaneous Injuries has declined since enactment of the OSHA Standard
- Injuries from contaminated sharps decreased by 51% from 1993 to 2001
 - Better education regarding risks
 - Increased training regarding the use of safety devices
 - Increased use of safety devices

Hepatitis B

Inflammation of the liver

- Flu-like symptoms
- Jaundice, enlarged liver, fever, and nausea
- 3-6 months before symptoms appear
- 300,000 people in the US infected annually
- Risk of infection from exposure for healthcare personnel is between 6% and 30%
- Vaccination available and considered 80-95% effective

Hepatitis C

- Hepatitis strain
- Progresses to chronic hepatitis in many patients
- 4 million individuals currently infected in the U.S.
- No vaccine, immune globulin, or antiviral therapy is available
- Risk of infection from exposure after a needlestick is approximately 1.8%

HIV

Weakness of the immune system

- Inability to fight infection
- Fatal, no known cure or vaccine
- Approximately 40,000 people in the US are infected annually; approximately 1,000,000 currently infected
- Can take years for symptoms to develop
- Risk of infection following exposure is between 0.3% (needlestick and cut exposure) and 0.1% (skin and mucous membrane)

Modes of Transmission

- Blood
- Other Potentially Infectious Material (OPIM)
 - Semen
 - Cerebral spinal fluid
 - Synovial fluid
 - Amniotic fluid
 - Vaginal secretions
 - Pleural fluid
 - Peritoneal fluid
 - Saliva

Methods of Exposure

- Sexual contact
- Sharing of hypodermic needles
- From mother to child at/before birth
- Accidental puncture from contaminated needles or other sharps
- Contact between broken or damaged skin and infected body fluids
- Contact between mucous membranes and infected body fluids



How to Avoid Blood-Borne Pathogen Exposure

- **Universal Precautions**
- **Personal Protective Equipment (PPE)**
- **Engineering Controls**
- **Work Practices**

Avoiding BBP Exposures

■ Universal Precaution

Treat all blood and body fluids as if they are infectious, regardless of the perceived status of the source individual.

■ Use of Personal Protective Equipment (PPE)

Gloves

Eye and face protection

Gowns

■ Engineering Controls

- Avoid recapping needles
- Do not break or shear needles
- Move needles using mechanical devices
- Do not reuse disposable sharps
- Avoid needles if alternatives are available

Avoiding Exposure

□ Work Practices

- Hand-washing
- No eating, drinking, or smoking in the work place
- Do not apply cosmetics or lip balm in the work place
- Do not handle contact lenses in the work place
- Handle contaminated laundry as little as possible
- Dispose of Sharps in the appropriate containers (bio-hazardous)
- Broken glassware should be cleaned up quickly and carefully using mechanical means
- Never pipette or suction blood or body fluids by mouth
- All work surfaces should be cleaned and decontaminated after contact with blood or body fluids
- Dispose of all contaminated laundry in contained labeled bio-hazardous

Hepatitis B Vaccine

- **Spectrum Offers Hep B Vaccines to All Employees with Routine Exposure to Blood-borne Pathogen Exposure at no cost.**

HBV vaccine recommended for all employees with routine exposure to bloodborne pathogens

- Vaccination is a 3-injection series
- Routine booster is recommended by the U.S. Public Health Service
- Vaccine has resulted in significant decrease in rate of infection for healthcare workers
- Most Military Treatment facilities require proof of vaccine as a condition of employment

Procedure Following BBP Exposure

- Seek immediate medical attention and evaluation
- Wash the exposed area
- Wash or flush eyes or mucous membranes with running water for at least 15 minutes
- Identify source and test source for HBV, HIV, and HCV
- Consider baseline blood collection of your blood for testing
- Post exposure prophylaxis when medically indicated according to U.S. Public Health Service recommendations
- Report the incident to the Human Resources Dept., your representative or after hours call 800-325-3982
- Complete appropriate paperwork and the Post-Exposure Follow-up Packet

Case Studies

Case Study #1

- Nurse drawing blood attempts to recap a needle using a one-handed technique. The cap falls off the needle, penetrating her right index finger.
- Baseline HIV test was negative. Nurse discontinued post-exposure prophylaxis.
- Nurse developed symptoms of HIV within 2 weeks, and tested positive for HIV 3 months later.

Case Study #2

- Phlebotomist sustained a needle-stick injury and blood spilled into the space between the wrist and cuff of the phlebotomist's gloves, contaminating her chapped hands.
- The phlebotomist washed her hands immediately and refused prophylaxis and did not receive baseline testing for HIV.
- 8 months after the injury, the phlebotomist developed acute hepatitis, 9 months after the injury the phlebotomist was sero-positive for HIV, 16 months after the injury the phlebotomist was diagnosed with chronic HIV infection.
- The Phlebotomist died 28 months after the needle-stick injury.

Questions & Answers

1. Which of the following, if contaminated with blood, would be considered a potentially infectious material under the Bloodborne Pathogen Standard?
 - a. Saliva
 - b. Blood
 - c. Semen
 - d. ***All of the above***

2. When should the employee report an occupational exposure to Spectrum?
 - a. ***After seeking immediate medical attention, first aid.***
 - b. The day after the exposure occurred.
 - c. It is okay not to report the exposure to Spectrum if the person is not HIV positive.

Questions & Answers

3. It has been suggested that percutaneous injury rates have declined due to:
 - a. Increased use of safety devices and training regarding their use
 - b. OR personnel are more careful as a matter of course
 - c. Better education regarding the risks of exposure
 - d. ***A and C***

4. A Nurse is splashed in the eye with the patient's blood during a procedure. The Nurse should?
 - a. Irrigate the eye with running water for 15 minutes when you have a chance.
 - b. Immediately irrigate the eye with water for as long as you can stand it and then forget the whole incident.
 - c. ***Irrigate the eye with running water for 15 minutes and report the incident as a potential blood-borne pathogen exposure incident.***
 - d. Forget the whole incident, the patient is probably not HIV, HBV, or HCV positive.

Questions & Answers

5. **Uncontaminated sharps may be disposed in which of the following ways?**
 - a. ***Red sharps disposal container***
 - b. In a regular trash container
 - c. Either of the above
 - d. None of the above

6. **Blood-borne pathogens may enter your system through:**
 - a. Open cuts
 - b. Skin abrasions
 - c. Blood
 - d. Mucous membranes
 - e. ***All of the above***

7. **If HCW is holding a needle and needs to attend to something else. The HCW should:**
 - a. Recap the needle
 - b. Toss the needle to a nurse for disposal
 - c. ***Immediately dispose of the needle in a red sharps container***
 - d. Set the needle down on a surface and cover it so no one will find it and get hurt

Questions & Answers

8. Which of the following exposures pose a risk for bloodborne pathogen?

- a. A nurse sustains a needlestick while drawing up insulin to administer to a patient with diabetes.
- b. *A lab worker is splashed in the eye with urine from a patient with HIV.*
- c. *An operating room technician with chapped and abraded hands notices blood under his/her gloves after assisting in a surgery on a patient with hepatitis C infection.*
- d. While cleaning the bathroom, a housekeeper's intact skin has contact with feces.

9. The type of occupational exposure to HIV-infected blood that poses the greatest risk for infection transmission is

- a. *A percutaneous injury.*
- b. A mucous membrane exposure.
- c. A bite.
- d. Skin contact with HIV-infected blood.

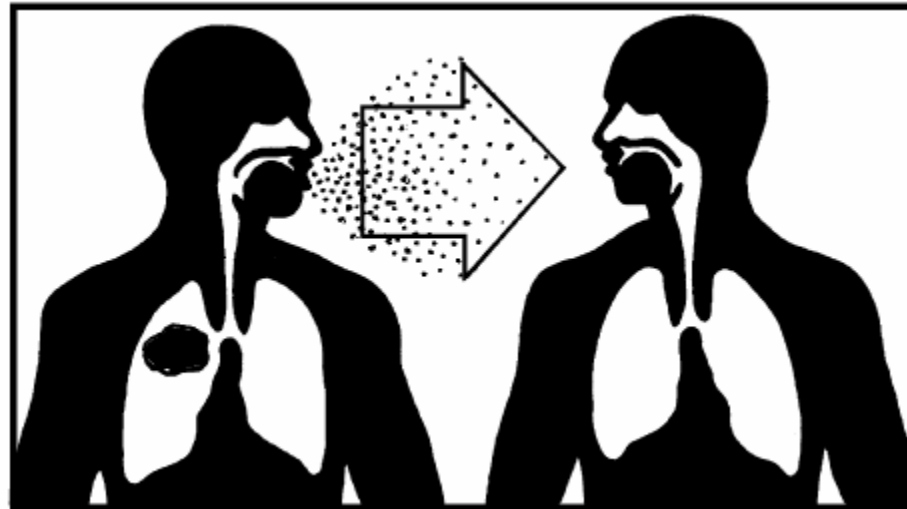
Tuberculosis

- According to the CDC, 12,904 TB cases were reported in the U.S. in 2008. Through a broad range of Federal and community initiatives, TB rates have declined steadily. The TB rate in 2008 was the lowest recorded since national reporting began in 1953.
- There were 644 deaths from TB in the U.S. in 2006, the most recent year for which these data are available. This is a 46% decline from the 1,202 TB deaths reported in 1996.

What is Tuberculosis?

- TB, or tuberculosis, is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of your body, but they usually attack the lungs. TB disease was once the leading cause of death in the United States.
- People who are infected with latent TB do not feel sick, do not have any symptoms, and cannot spread TB. But they may develop TB disease at some time in the future. People with TB disease can be treated and cured if they seek medical help.
- People who have latent TB infection but are not yet sick can take medicine to substantially reduce the risk that TB infection will progress to disease.

TB is spread through the air from one person to another. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs, sneezes, or during high risk procedures such as intubation or bronchoscopy. People nearby may breathe in these bacteria and become infected.



Difference Between Latent TB and TB Disease

■ Latent TB

- No Symptoms
- Do Not Feel Sick
- Cannot spread TB to others
- Usually has a Positive Skin Test
- Can Develop TB in the future
- Chest X-ray, sputum test normal

TB Disease

- Bad Cough
- Pains in Chest
- Coughing up blood or sputum
- Weakness & Fatigue
- Weight loss, No appetite
- Chills, fever, night sweats
- May spread to others
- Positive skin test
- May have abnormal chest x-ray

What if I have been vaccinated with BCG?

- **BCG is a vaccine for TB. This vaccine is not widely used in the United States, but it is often given to infants and small children in other countries where TB is common. BCG vaccine does not always protect people from TB.**

- **If you were vaccinated with BCG, you may have a positive reaction to a TB skin test. This reaction may be due to the BCG vaccine itself or to latent TB infection. But your positive reaction probably means that you have latent TB infection if:**
 - a. **you recently spent time with a person who has TB disease**
 - b. **you are from an area of the world where TB disease is very common (most countries in Latin America and the Caribbean, Africa, Asia, Eastern Europe, and Russia)**
 - c. **you spend time where TB is common (homeless shelters, drug-treatment centers, health care clinics, jails, prisons)**

Spectrum's TB Exposure Control Plan

■ PRIOR TO ASSUMING JOB RESPONSIBILITIES

- Employees will be screened for signs and symptoms of tuberculosis (PPD/Mantoux test).**
- Employees who have had a positive PPD test will be required to complete a PPD Reactor Form (assessment of Tuberculin Status) and provide results of last chest x-ray results.**
- If symptoms are present, the employee will be referred to his/her private physician or local health department. The employee must provide written medical clearance prior to assuming job responsibilities.**



Spectrum's TB Exposure Control Plan

ON AN ANNUAL BASIS each site employee will:

- **Be required to provide PPD/Mantoux Skin Test results or be evaluated for symptoms of tuberculosis by completing the PPD Reactor Form (if previous skin test positive).**
- **Individual with previous positive skin test reactions and intact immune systems do not need repeat chest x-rays unless symptoms develop that may be indicative of TB.**
- **Spectrum will track the initial and annual PPD/Reactor Form. Results will be kept in employee's confidential medical file.**

Spectrum's TB Exposure Control Plan

- **If an employee converts from an initial negative PPD to a reaction of 10 mm or greater (5 mm if immune suppressed):**
 - 1. Recorded on OSHA Log 300**
 - 2. Reported to the local Health Department**
 - 3. The employee is referred to the local Health Department or their private physician for evaluation and treatment.**
 - 4. Report to Spectrum's Workers Compensation Claims Hotline**
 - 5. The employee must provide a written statement from the treating entity that patient contact is permissible.**

Questions & Answers

- TB is spread by the following modes of transmission:
 1. Needle stick
 2. *From one person to another through coughing and sneezing*
 3. Splash of human fluids around mouth and nose area

- People infected with latent TB
 1. Can develop TB in the future
 2. Do not feel sick
 3. May have a positive skin test
 4. Can not spread TB to others
 5. Chest X-ray negative
 6. *All of the above*
 7. Answer 1, 4, 5

- If you have received the BCG vaccine you are immune from contracting TB
 1. True
 2. *False*

Questions & Answers

- **Symptoms of TB Disease**
 1. Bad Cough, Pains in Chest, Weakness or fatigue
 2. Can have a negative chest x-ray
 3. Chills, fever, night sweats, Weight loss, positive PPD
 4. Can spread to others
 5. All of the above
 6. *Answers, 1,3,4*

- **If you are a known PPD reactor**
 1. You must complete an initial and annual PPD reactor form (Chest x-ray results on file at Spectrum).
 2. You don't have to worry about contracting TB
 3. All of the above
 4. *Answer 1*

- **OSHA Federal Law requires Healthcare professionals to be tested prior to assuming their job responsibilities and annually thereafter.**
 1. *True*
 2. False

Questions?

- Please call **Human Resources** at
800-325-3982 ext. 4113

or

email any questions to
sbowe@spectrumhealth.com

**A Copy of the BBP/TB Exposure Control Plan, Training
and Post-Exposure Follow-up Procedure can be found
on TeamHealth Institute On-Line**