



## *Bloodborne Pathogens*





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OSHA Office of Training and Education

# Introduction

- ✎ Approximately 5.6 million workers in health care and other facilities are at risk of exposure to bloodborne pathogens such as human immunodeficiency virus (HIV – the virus that causes AIDS), the hepatitis B virus (HBV), and the hepatitis C virus (HCV)
- ✎ OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure

# Who is covered by the standard?

-  All employees who could be “reasonably anticipated” as the result of performing their job duties to face contact with blood and other potentially infectious materials
-  “Good Samaritan” acts such as assisting a co-worker with a nosebleed would not be considered occupational exposure

# Some Workers Who are at Risk

- ✎ Physicians, nurses and emergency room personnel
- ✎ Orderlies, housekeeping personnel, and laundry workers
- ✎ Dentists and other dental workers
- ✎ Laboratory and blood bank technologists and technicians
- ✎ Medical examiners
- ✎ Morticians
- ✎ Law enforcement personnel
- ✎ Firefighters
- ✎ Paramedics and emergency medical technicians
- ✎ Anyone providing first-response medical care
- ✎ Medical waste treatment employees
- ✎ Home healthcare workers








# How does exposure occur?

- ✎ Most common: needlesticks
- ✎ Cuts from other contaminated sharps (scalpels, broken glass, etc.)
- ✎ Contact of mucous membranes (for example, the eye, nose, mouth) or broken (cut or abraded) skin with contaminated blood



# Exposure Control Plan

- ✎ Identifies jobs and tasks where occupational exposure to blood or other potentially infectious material occurs
- ✎ Describes how the employer will:
  - 👤 Use engineering and work practice controls
  - 👤 Ensure use of personal protective equipment
  - 👤 Provide training
  - 👤 Provide medical surveillance
  - 👤 Provide hepatitis B vaccinations
  - 👤 Use signs and labels

# Exposure Control Plan

-  Written plan required
-  Plan must be reviewed at least annually to reflect changes in:
  -  tasks, procedures, or assignments which affect exposure, and
  -  technology that will eliminate or reduce exposure
-  Annual review must document employer's consideration and implementation of safer medical devices
-  Must solicit input from potentially exposed employees in the identification, evaluation and selection of engineering and work practice controls
-  Plan must be accessible to employees

# Universal Precautions

-  Treat all human blood and certain body fluids as if they are infectious
-  Must be observed in all situations where there is a potential for contact with blood or other potentially infectious materials



# Engineering and Work Practice Controls

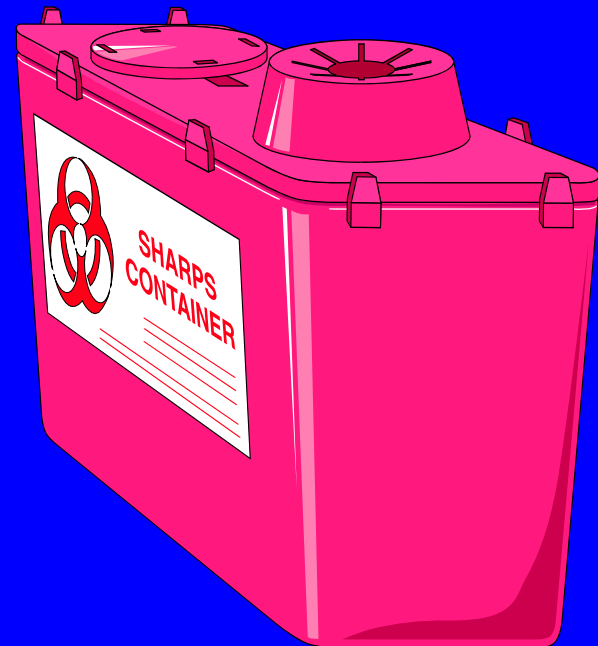
- ✎ These are the primary methods used to control the transmission of HBV and HIV
- ✎ When occupational exposure remains after engineering and work practice controls are put in place, personal protective equipment (PPE) must be used

# Engineering Controls



These controls reduce employee exposure by either removing the hazard or isolating the worker.

Examples:

- ✎ Sharps disposal containers
- ✎ Self-sheathing needles
- ✎ Safer medical devices
  - ⦿ Needleless systems
  - ⦿ Sharps with engineered sharps injury protections



# Safer Medical Devices

-  *Needless Systems:* a device that does not use needles for the collection or withdrawal of body fluids, or for the administration of medication or fluids
-  *Sharps with Engineered Sharps Injury Protections:* a non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident

# Work Practice Controls

These controls reduce the likelihood of exposure by altering how a task is performed. Examples:

- ✎ Wash hands after removing gloves and as soon as possible after exposure
- ✎ Do not bend or break sharps
- ✎ No food or smoking in work areas



# Personal Protective Equipment

- ✎ Specialized clothing or equipment worn by an employee for protection against infectious materials
- ✎ Must be properly cleaned, laundered, repaired, and disposed of at no cost to employees
- ✎ Must be removed when leaving area or upon contamination







# Examples of PPE

- ✎ Gloves
- ✎ Gowns
- ✎ Face shields
- ✎ Eye protection
- ✎ Mouthpieces and resuscitation devices



# Housekeeping

Must develop a written schedule for cleaning and decontamination at the work site based on the:

-  Location within the facility
-  Type of surface to be cleaned
-  Type of soil present
-  Tasks or procedures being performed

# Housekeeping (cont'd)

Work surfaces must be decontaminated with an appropriate disinfectant:

- ✎ After completion of procedures,
- ✎ When surfaces are contaminated, and
- ✎ At the end of the work shift





# Regulated Waste

Must be placed in closeable, leak-proof containers built to contain all contents during handling, storing, transporting or shipping and be appropriately labeled or color-coded.



# Laundry

- ✎ Handle contaminated laundry as little as possible and use PPE
- ✎ Must be bagged or containerized at location where used
- ✎ No sorting or rinsing at location where used
- ✎ Must be placed and transported in labeled or color-coded containers



# Hepatitis B Vaccination Requirements

✎ Must make available, free of charge at a reasonable time and place, to all employees at risk of exposure within 10 working days of initial assignment unless:

- ⊙ employee has had the vaccination
- ⊙ antibody testing reveals immunity

✎ The vaccination must be performed by a licensed healthcare professional



# Hepatitis B Vaccination Requirements (cont'd)

- ✎ Must be provided even if employee initially declines but later decides to accept the vaccination
- ✎ Employees who decline the vaccination must sign a declination form
- ✎ Employees are not required to participate in antibody prescreening program to receive vaccination series
- ✎ Vaccination booster doses must be provided if recommended by the U.S. Public Health Service

# What to do if an exposure occurs?

- ✎ Wash exposed area with soap and water
- ✎ Flush splashes to nose, mouth, or skin with water
- ✎ Irrigate eyes with water or saline
- ✎ Report the exposure
- ✎ Direct the worker to a healthcare professional

# Post-Exposure Follow-Up

- ✎ Document routes of exposure and how exposure occurred
- ✎ Record injuries from contaminated sharps in a sharps injury log, if required
- ✎ Obtain consent from the source individual and the exposed employee and test blood as soon as possible after the exposure incident
- ✎ Provide risk counseling and offer post-exposure protective treatment for disease when medically indicated in accordance with current U.S. Public Health Service guidelines
- ✎ Provide written opinion of findings to employer and copy to employee within 15 days of the evaluation

# Biohazard Warning Labels

- ✎ Warning labels required on:
  - ⊙ Containers of regulated waste
  - ⊙ Refrigerators and freezers containing blood and other potentially infectious materials
  - ⊙ Other containers used to store, transport, or ship blood or other potentially infectious materials
- ✎ Red bags or containers may be substituted for labels









# Training Requirements

- ✎ Provide at no cost to employees during working hours
- ✎ Provide at time of initial assignment to a job with occupational exposure and at least annually thereafter
- ✎ Additional training needed when existing tasks are modified or new tasks are required which affect the worker's occupational exposure
- ✎ Maintain training records for 3 years





# Training Elements

-  Copy of the standard
-  Modes of transmission
-  Site-specific exposure control plan
-  Hazard recognition
-  Use of engineering controls, work practices and PPE
-  Live question and answer sessions

# Medical Recordkeeping Requirements

- ✎ Employee's name and social security number
- ✎ Employee's hepatitis B vaccination status
- ✎ Results of examinations, medical testing, and post-exposure evaluation and follow-up procedures
- ✎ Health care professional's written opinion
- ✎ Information provided to the health care professional
- ✎ Employee medical records must be kept confidential and not disclosed or reported without the employee's written consent (unless required by law)
- ✎ Medical records must be maintained for duration of employment plus 30 years according to OSHA's rule governing access to employee exposure and medical records

# Sharps Injury Log

- ✎ Employers must maintain a sharps injury log for the recording of injuries from contaminated sharps
- ✎ The log must be maintained in a way that ensures employee privacy and must contain, at a minimum:
  - ⊗ Type and brand of device involved in the incident
  - ⊗ Location of the incident
  - ⊗ Description of the incident

# Summary

- ✎ OSHA's Bloodborne Pathogens standard prescribes safeguards to protect workers against the health hazards from exposure to blood and other potentially infectious materials, and to reduce their risk from this exposure
- ✎ Implementation of this standard not only will prevent hepatitis B cases, but also will significantly reduce the risk of workers contracting AIDS, Hepatitis C, or other bloodborne diseases