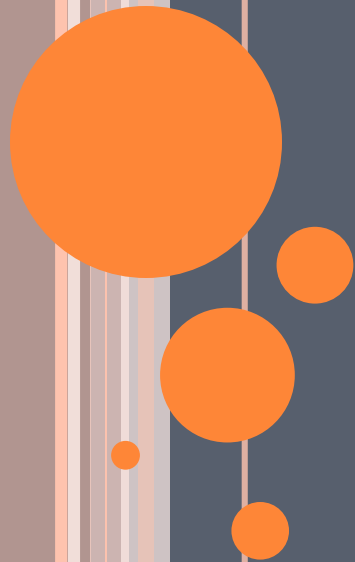




**UNIVERSITY OF TOLEDO
BLOODBORNE PATHOGEN
PROGRAM**



BLOODBORNE PATHOGEN PROGRAM

PURPOSE

- Established under the provisions of the Ohio Public Employment Risk Reduction Program – OSHA Bloodborne Pathogen Standard.
- Purpose is to protect employees from health hazards associated with bloodborne pathogens.



BLOODBORNE PATHOGEN STANDARD

- Exposure Control Plan
- Exposure Determination
- Engineering and Work Practice Controls
- Personal Protective Equipment
- Housekeeping
- Regulated Waste
- Training
- Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up
- Communication of Hazards to Employees (signs and labels)
- Record Keeping

WHAT ARE BLOODBORNE PATHOGENS?

- Bloodborne pathogens are microorganisms that are present in blood, tissue, blood products, **other potential infectious materials (OPIM)**
- Other Potentially Infectious Materials:
 - Spinal, pleural (lung), peritoneal (abdomen), pericardial (heart), amniotic, and synovial (joint) fluids
 - Saliva from dental procedures
 - Any body fluid visibly contaminated with blood
 - Semen
 - Vaginal secretions



FLUIDS NOT CONSIDERED A RISK FOR BBP

- Vomit
- Feces
- Urine
- Sweat
- Nasal discharges
- Saliva (non dental)
- Tears



BLOODBORNE PATHOGENS OF MOST CONCERN IN THE WORKPLACE

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



HUMAN IMMUNODEFICIENCY VIRUS

- HIV affects the body's immune system and can lead to AIDS
- Symptoms of early infection – night sweats, weight loss, swollen glands
- Very fragile virus and will not survive for a long period of time outside the body
- Risk of transmission through an exposure is 3-4%



HEPATITIS B VIRUS

- Virus affects the liver
- Symptoms include loss of appetite, nausea, vomiting, fever, abdominal pain, jaundice
- 100 times more infectious than HIV
- Can live on dried surfaces for up to one week
- 6-30% chance of infection from a puncture wound (contaminated needle)
- Up to 30% of infected individuals can become carriers without having symptoms
- Vaccine preventable



HEPATITIS C VIRUS

- Virus affects the liver
- Symptoms include loss of appetite, nausea, abdominal pain, jaundice, fatigue, dark urine
- No vaccine to prevent HCV

A doctor in a white lab coat with a blue stethoscope around their neck is holding a white rectangular sign. The sign has the text 'Hepatitis C' written on it in a large, bold, blue font. The doctor's hands are visible at the top and bottom edges of the sign.

Hepatitis C

TWO SPECIFIC CRITERIA FOR INFECTION TO OCCUR

1) The blood/body fluid must be infected

AND

2) The virus must enter the body – exposure incident



TASKS AND ACTIVITIES THAT MIGHT INVOLVE EXPOSURE

- Emergency First Aid
- Cleanup Blood/OPIM
- Contaminated Equipment
- Handling of Blood or Blood Products
- Needlesticks
- General Healthcare



EXPOSURE INCIDENT

- Virus enters the body:
 - Through a mucous membrane (eyes, mouth, or nose)
 - Through an opening in the skin (cuts, abrasions, open sores, acne)
 - Through a penetration of the skin by a contaminated sharp object (includes needlesticks and human bites)
- Includes:
 - Blood getting on a recent cut
 - Blood splashing into the eye
 - Being stuck by a needle
 - Cleaning up a blood or OPIM spill does not constitute an exposure incident even if someone gets blood on their skin unless the area of contact is unhealthy (cut, rash, etc.).



UT'S RESPONSIBILITIES UNDER THE BLOODBORNE PATHOGEN STANDARD

- Develop and implement an Exposure Control Plan
- Identify employees/job duties at high risk for exposure (having “occupational exposure”)
- Provide pre-exposure vaccinations for HBV to those employees at no cost
- Assure all high-risk employees are appropriately trained
- Assist departments/areas in developing internal standard operating procedures (SOPs)
- Establish procedures to protect all UT employees regardless of risk



EXPOSURE DETERMINATION

“OCCUPATIONAL EXPOSURE”

- “Having a reasonable anticipation of coming into contact with blood or other potentially infectious materials (OPIM) as part of one’s job duties”
 - Allied Health Professionals Faculty/Instructors (Cardiovascular, EMS, Medical Assisting, Nursing, Respiratory)
 - Athletic Physician, Trainers, Coaches, Equipment Managers
 - Laboratory/Research personnel handling blood or OPIM
 - Biology Lab Coordinator and Technician
 - Physicians, nurses, and other medical staff who provide medical treatment
 - Campus Police Officer
 - Student Recreation Center staff who provide first aid and blood or OPIM cleanup
 - Custodians and Plumbers
 - Linen Department
 - Other Clinical personnel in patient care areas at the UT Medical Center



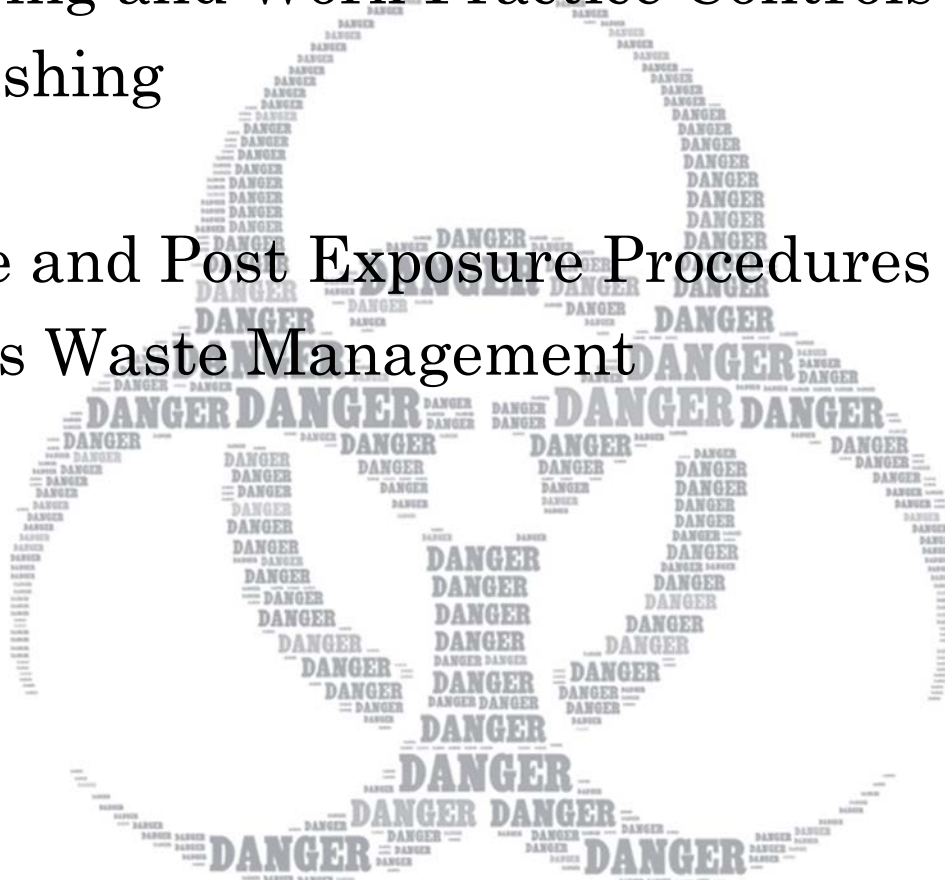
EXPOSURE DETERMINATION

- Must be offered pre-exposure vaccine at no cost
 - 3 doses, highly effective (90%) – given at: initial dose, 1 month, and 6th month intervals.
 - Employee may decline (declination form)
- Must complete bloodborne pathogen training at the time of initial assignment and annually thereafter (new or changed rules)
- Must follow provisions of individual department/area SOPs.



METHODS OF CONTROL

- Standard Precautions
- Engineering and Work Practice Controls
- Hand washing
- PPE
- Exposure and Post Exposure Procedures
- Infectious Waste Management



STANDARD PRECAUTIONS

- This is a prevention strategy in which all blood and other potentially infectious materials are treated as though they were infectious.
- CDC recommends Isolation Procedures to be used in addition to Standard Precautions
 - Airborne
 - Contact
 - Droplet

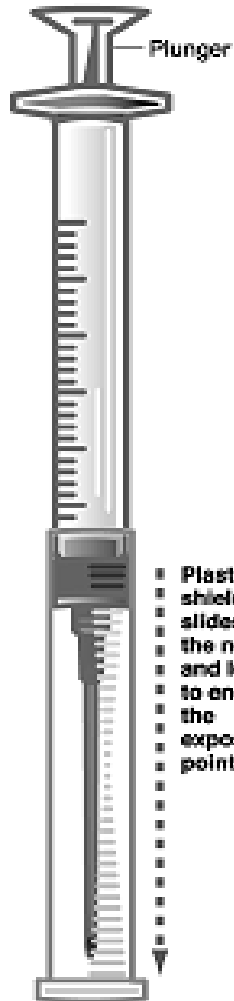


ENGINEERING AND WORK PRACTICE CONTROLS

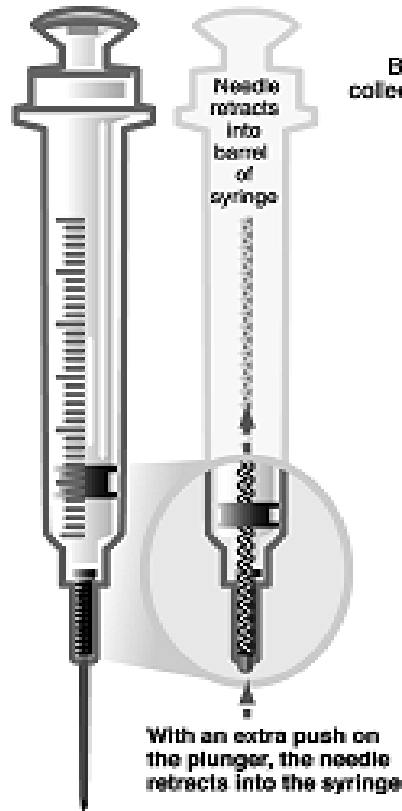
- Engineering and Work Practice Controls are procedures that are established to minimize or eliminate personal contact with bloodborne pathogens including:
 - Avoiding actions which may splash, spray, splatter, or create droplets
 - Never pipette or suction infectious materials by mouth
 - Always using appropriate personal protective equipment
 - Using approved sharps containers whenever necessary
 - Disposing of glass, etc. in puncture resistant containers
 - Using needleless systems, if possible
 - Never eating, drinking, smoking, applying cosmetics or lip balm, or handling contact lenses where blood or OPIM are present
 - Decontaminating all surfaces, tools, and equipment that come in contact with blood or OPIM as soon as possible



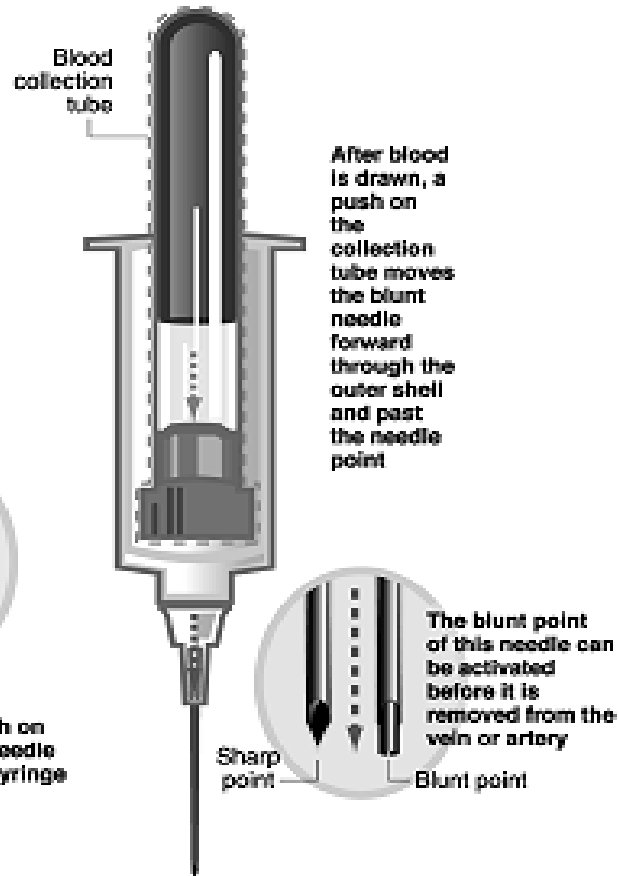
PREVENTING NEEDLESTICKS



Syringe with protective shield



Syringe with retractable needle



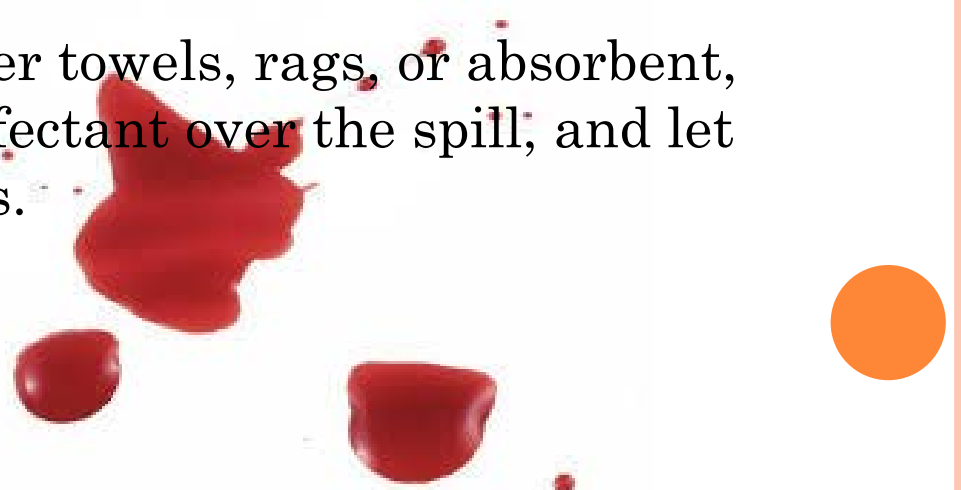
Blunt-tip blood-drawing needle



ENGINEERING AND WORK PRACTICE CONTROLS (CONT)

○ Decontamination Procedures:

- Use biohazard spill kit if available!
- Isolate and limit access to the area.
- Wear gloves and other personal protective equipment, as necessary.
- Use a freshly prepared bleach solution diluted 1:10 with water or other EPA registered tuberculocidal disinfectant.
- Cover the spill with paper towels, rags, or absorbent, gently pouring the disinfectant over the spill, and let it set at least 10 minutes.



ENGINEERING AND WORK PRACTICE CONTROLS (CONT)

- Decontamination Procedures Continued:
 - Assure that all areas of blood/OPIM are in contact with the disinfectant.
 - Use a NO TOUCH technique (i.e. dust pan and sweeping tool)
 - Dispose of contaminated materials in red bag (unless sharp, which must go into a puncture proof resistant container).
 - Mop/wipe area clean with disinfectant.
 - Decontaminate mops and other reusable equipment after use.
 - Thoroughly wash hands with water and soap.



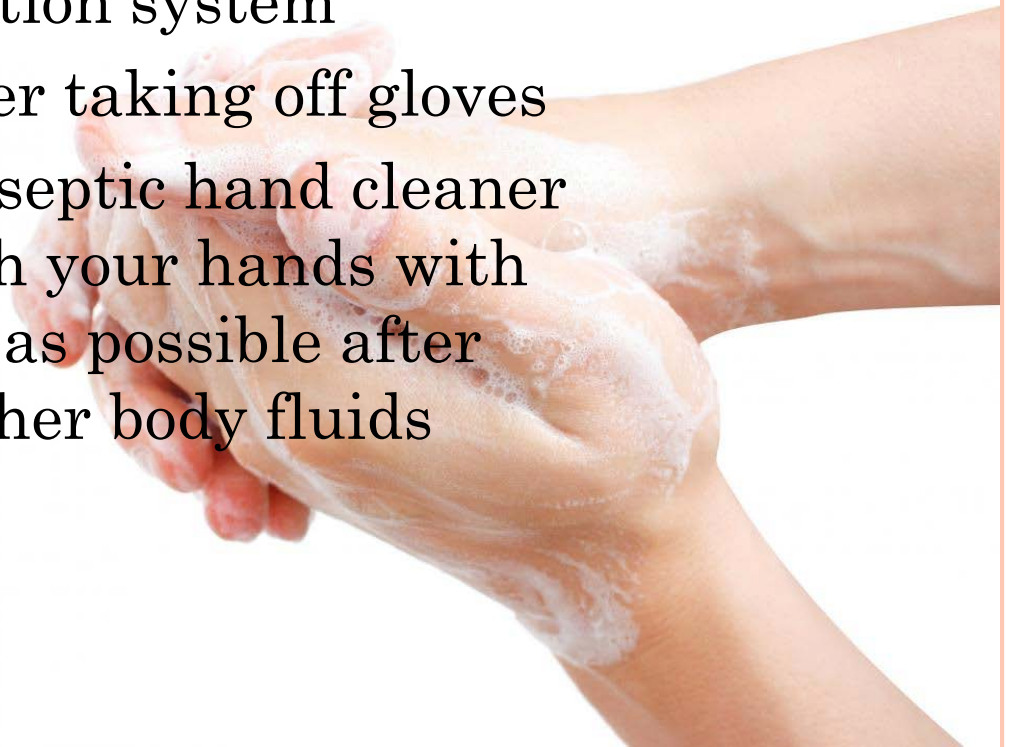
SAFE CLEAN-UP PRACTICES

- Wear appropriate gloves and other required PPE
- Never pick up broken glass or similar items with hands - use dust pan and broom
- Put glass, etc. in “puncture resistant” container and properly dispose
- Always handle trash as if a sharp might be present



HAND WASHING

- One of the most important work practice controls!
- Hand washing facilities should be readily accessible and adequately stocked or utilize a waterless hand disinfection system
- Always wash hands after taking off gloves
- If you are using an antiseptic hand cleaner or wipes, you must wash your hands with soap and water as soon as possible after contact with blood or other body fluids



PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Personal protective equipment is specialized clothing or equipment worn or used by you for protection against a hazard.
 - Provides a barrier between you and the hazard.
- Examples include: Latex/non-Latex gloves, goggles, gowns, lab coats, aprons, face-shields, isolation masks, N-95 respirators, etc.
- **Remove all PPE in area of use**



PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Gloves:
 - Latex, Synthetic Latex or nitrile gloves are probably the most important protective apparel that can be worn to protect yourself from bloodborne pathogens
- Goggles:
 - Anytime there is a risk of splashing of contaminated fluids, goggles and/or other eye protection should be used to protect your eyes
- Lab coat or apron:
 - Water resistant clothing such as lab coats or aprons may be worn to protect your clothing and to keep blood or other contaminated fluids from soaking through to your skin.
- Face Shield:
 - Face shields may be worn in addition to goggles to provide additional face protection. A face shield will protect against splashes to the nose and mouth



PROPER GLOVE REMOVAL

1. Before removing disposable gloves, gather any contaminated materials and dispose of in red biohazard bag.

2. Strip off one glove from the wrist, turning it inside out so the “clean” side is on the outside.



PROPER GLOVE REMOVAL

3. Place the glove in the other hand and strip off the glove on that hand, turning it inside out.
4. Dispose of the gloves/material in a regulated waste container.
 - Make sure bag is intact and that there is no danger of leaking. If the bag is torn or punctured or is contaminated on the outside, place the bag inside a second biohazard bag.
 - **DO NOT** throw the biohazard bag into the regular trash.



LIMITATIONS

- Engineering controls, work practices and personal protective equipment all have limitations.
- Exposure incidents are reduced but still may occur.



EXPOSURE AND POST-EXPOSURE PROCEDURES FOR ALL EMPLOYEES

- If a potential exposure incident has occurred:
 - Immediately care for the site of exposure
 - Wash with soap and water
 - If in eyes, nose or mouth – flush with water
 - Notify supervisor immediately
 - Go to a healthcare provider (UTMC Occupational Health, located in the Emergency Department) for evaluation within 2 hours:
 - To verify whether an exposure incident has occurred
 - To receive HB vaccine, if indicated
 - To receive prophylaxis (if within two hours reduces chance of conversion to 1:2400)
 - Complete a UT Injury and Illness Incidence/Occurrence.
 - Send the completed form to the Safety & Health Department on the Health Science Campus at Mail Stop 1078, or to Risk Management on the Main Campus at Mail Stop 219.

*There is no charge to the employee for these services



INFECTIOUS WASTE MANAGEMENT



- Infectious waste (blood-soaked towels, clothing, applicable sharps, etc.) must be managed in accordance with UT's Infectious Waste Management Program. This means that:
- Infectious wastes are stored separately from regular waste
- Infectious wastes must be placed in containers that are leak proof, closable, puncture resistant and labeled with the universal biohazard label
- Infectious wastes are transported by a licensed transporter to an approved infectious waste treatment and disposal facility

RECORDKEEPING

○ Medical Records

- including dates of Hepatitis B vaccinations and related information as well as medical evaluations and reports
- These records must be maintained for the duration of employment plus 30 years and must be kept confidential.

○ Training Records

- Including the dates of training and the name(s)/title(s) of the individual's who provided the training.
- These records must be maintained for three years. A copy of these records must also be maintained by EHRS.



PROTECT YOURSELF

- Read the Exposure Control Plan
 - a copy is available to you
- Use engineering and work practice controls
- Use personal protective equipment
- Know what to do in case of an exposure

