



BLOODBORNE PATHOGENS

Annual Refresher

Monmouth County Fire Academy

BBP TRAINING

- The OSHA Standard
- Definition of a BBP
- Common BBP Diseases
- Modes of Transmission
- Recognizing Exposure
- Exposure Control
- PPE
- HBV Immunization



BBP TRAINING

- Emergencies involving blood or infectious material
- Exposure follow-up
- Post Exposure follow-up
- Questions



OSHA BB PATHOGENS STANDARD

- OSHA 1910.1030
 - Anyone who may be exposed to BB pathogens is required to complete training for awareness
 - The major intent of this regulation is to prevent the transmission of bloodborne diseases in the work place
 - An Exposure Control Plan must established by your employer

WHAT IS A BBP?

- Microorganisms that are carried in the blood that can cause or transmit diseases in humans.

HIV/AIDS

- HIV is the virus that leads to AIDS
- Depletes the immune system
- Lives in blood and other bodily fluids
- Transmitted through sexual contact, needle sharing, or during birth
- No cure, no vaccine
- Incubation period = 10 years



HEPATITIS B

- Liver infection caused by HBV
- Sexual contact; sharing needles, syringes or from mother to baby at birth
- Carried in blood and other bodily fluid
- Can lead to cirrhosis or liver cancer.
- The best way to prevent Hepatitis B is by getting vaccinated.
- No cure
- Can survive outside the body for 7 days



HBV Vaccination

- Must be provided by employer
- Consent or declination forms
- Series of 3 shots
 - Initial/2 months / 6 months
- Vaccine effective after all 3
- Synthetic, yeast based vaccine



HEPATITIS C



- Liver infection caused by HCV
- Sharing needles, needle sticks, mother to baby at birth
- Low risk of transmission through sexual contact
- Can lead to cirrhosis or liver cancer.
- No vaccination available
- A cure is now possible. Advancements are being made

HEPATITIS C

- Can survive outside the body for up to 3 weeks
- Most common chronic BBP infection
- Signs & Symptoms may not appear for 10 years
- PPE & Awareness = Prevention

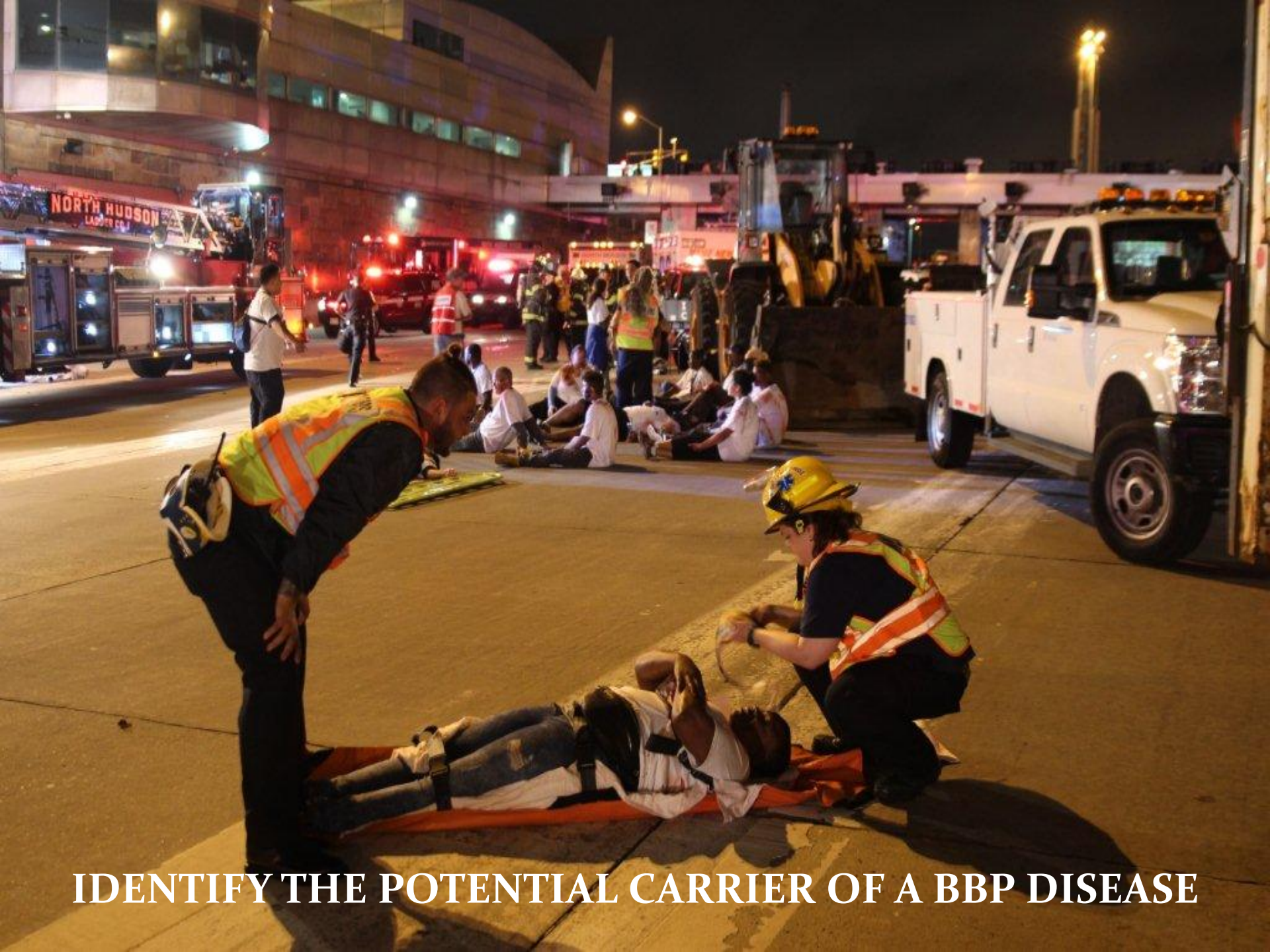
SYMPTOMS

- Symptoms of HIV or HBV/HCV are very similar
- Flu-like
- Jaundice
- Fatigue
- Abdominal pain
- Weight loss
- Muscle/joint pain
- **NO SYMPTOMS AT ALL!!!**



WHAT IS A BBP EXPOSURE ?

- A specific incident of contact with potentially infectious bodily fluids
- If there is no infiltration of mucus membranes or open skin surfaces it is not considered an occupational exp.
- BBP can enter the body through...
 - Cracked/broken skin
 - Ingestion (mouth)
 - Eyes
 - Needle sticks



IDENTIFY THE POTENTIAL CARRIER OF A BBP DISEASE

BBP EXPOSURE AT EMERGENCY INCIDENTS

- Fires
- Motor vehicle accidents
- Mass casualty incidents
- Technical rescues
- Hazmat
- EMS assists
- Medical emergencies
- Elevator rescues
- Industrial accidents



BBP SAFETY

- Begins in the firehouse...before the alarm is transmitted
- Ensure the apparatus is fully stocked with BBP PPE
- Universal precautions must be followed by all
- PPE donning and doffing proficiency





AT NIGHT, VEHICLE FLUIDS AND BODILY FLUIDS ALL LOOK THE SAME!!!

UNIVERSAL PRECAUTIONS

- Gloves
- Sanitizing wipes
- Goggles
- Face shield
- Barrier gowns



BBP TOOL DECON KIT

- Bleach
 - 1:10 solution
- 5 gal bucket
- Scrub brushes
- Bio hazard bags
- Waste must be disposed according to CDC & DOT guidelines
- Phmsa.dot.gov/hazmat/transporting-infectious-substances



EN-ROUTE TO THE SCENE

- Ensure all members don universal precautions
- Have plenty of spare gloves readily available
- Keep spare gloves away from moisture, oils, and dirt



PPE RULES TO REMEMBER

- Always check PPE for defects or tears before using
- If PPE becomes torn or defective remove and get new
- Remove PPE before leaving a contaminated area
- Do not reuse disposable equipment
- Properly dispose of contaminated PPE

SCENE SAFETY



USE THE SPAN OF CONTROL TO
PROVIDE ENOUGH SUPERVISION

- Incident Command
- Safety Officer
- Accountability
- Medical Officer
- Victim Tracking Officer
- Resources available
- Rest and rehab
- Decentralization of command

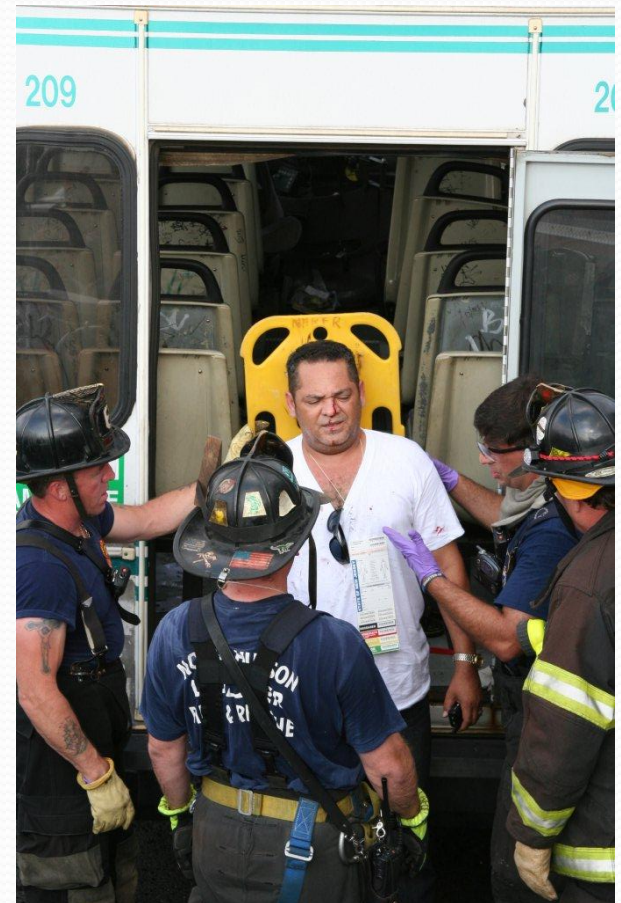


APPARATUS CONTAMINATION

- Notify supervisor immediately
- Superior will make decision if vehicle should be O/S-
Notify repair division
- A Dept. report should be filed detailing the contamination
- Label will be affixed to steering wheel warning of
contamination
- Vehicle should be sent out for commercial cleaning

EQUIPMENT CONTAMINATION

- Equipment should be bagged using Universal Precautions
- After being bagged the item will be labeled as Biohazardous
- The item will either be discarded properly or cleaned using one cup of bleach to 1 gallon water solution
- Avoid splashing when cleaning contaminated tools



BBP EXPOSURE AT FIRES

- Carrying burn victims
- Carrying injured victims or firefighters
- Fires at medical facilities (needles from melted sharps containers)
- Fires in structures known be hot spots for drug use



FIREFIGHTER EXPOSURE

- Wash affected area with soap & warm water
- Report exposure incident to supervisor
- No member shall decide for themselves if an exposure has taken place
- Keep all Universal Precautions in place
- Any member exposed shall be transported to hospital for evaluation
- Fill out all necessary exposure forms

EXPOSURE FOLLOW-UP

- Confidential medical evaluation
- Document route of exposure
- Identify source individual
- Test source individuals blood (with individual's consent/court order)
- Provide results to exposed employee

PPE EXPOSURE

- Items shall be removed using Universal Precautions
- Use Soap & Water to wash body areas immediately
- Notify your supervisor
- All PPE will be placed in Bio-Hazard storage bags and deconned by agency.
- Fill our proper paperwork
- Have a plan in place for spare PPE



WRITTEN EXPOSURE PLAN

The (**Your facility name**) is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 *CFR* 1910.1030, "Occupational Exposure to Bloodborne Pathogens."

Implementation of various methods of exposure control, including:

- Universal precautions
- Engineering and work practice controls
- Personal protective equipment
- Housekeeping
- Hepatitis B vaccination
- Post-exposure evaluation and follow-up
- Communication of hazards to employees and training
- Recordkeeping
- Procedures for evaluating circumstances surrounding exposure incidents

EXPOSURE PLAN CONT'D...

- Person responsible for administering the BBP Program
- Job classification that may be exposed
- Control methods (Universal Precautions)
- Exposure Control Plan (Training)
- PPE/Housekeeping/Labeling
- HBV vaccination forms (consent/decline)
- Exposure forms (evaluation and follow-up)
- Incident investigation

RECORD KEEPING

Medical records include:

- Hepatitis B vaccination status
- Post-exposure evaluation and follow-up results
- All paperwork must be kept confidential

Training records include:

- Training dates
- Contents of the training
- Signature of trainer and trainee
- Must be centrally located along with written exposure plan

ALL INCIDENTS CARRY THE POTENTIAL FOR A BBP EXPOSURE...PROTECT YOURSELVES. AND EACH OTHER!!!



QUESTIONS??



Photos by Ron Jeffers, Al Pratts & Jack Hueston

Thanks to Middletown FD for their input