Bloodborne Pathogens Training Notes

Slide 1 – Cover slide
• Welcome statements
• Introduce yourself as the bloodborne pathogens program (or BBP) trainer.
• Inform participants that this training course is about one (1) hour in length.
• Any questions that cannot be answered by you during this training session will be addressed by the Environmental Health and Safety Offices.

Slide 2 – Purpose
The purpose of this bloodborne pathogens program training course is to inform you of the potential for occupational exposure to bloodborne diseases and how to reduce or eliminate your exposure potential. Your attendance complies with an Ohio law that is similar to OSHA.

Slide 3 – Exposure Determination
Miami University determined the job classifications employees work in that may result in an exposure to blood or other potentially infectious materials. For example, physicians, nurses, and other workers whose primary function is medical treatment have a high potential (daily) for exposure.

Slide 4 – Topics to be covered
We’ll look at:
• How diseases are transmitted
• Methods that will reduce your potential for exposure
• What you should do in the event of an exposure
• Information on the Hepatitis B vaccination; and
• Spill clean-up procedures

Slide 5 – Bloodborne...transmission
Bloodborne diseases are transmitted in a variety of ways:
• Passing through our skin layer (cut or stick);
• Contact with our mucous membranes;
• Unprotected sex with an infected partner;
• or a mother infecting her child.
The likelihood of any disease being transmitted depends upon the volume and concentration of the material, how transmission occurs (e.g., needle stick versus splash), and our own immune status.

Slide 6 – Universal precautions
[READ] “Universal precaution is a simple approach to infection control. It is a concept that assumes that all human blood and certain human body fluids are treated as if known to be infected by bloodborne pathogens.”
Always presume that blood or other potentially infectious materials are contaminated with disease agents.
Always presume contamination

Slide 7 – Terms used in this training
• Bloodborne pathogens or BBP.
• Human immunodeficiency virus or HIV.
• Acquired immunodeficiency syndrome or AIDS.
• Hepatitis B virus or HBV. The “B” designates the type and there are currently six (6) types (e.g., HCV).
• Other potentially infectious materials or OPIM. Let’s look at what OPIMs are...
Slide 8 – OPIM
Bodily fluids contaminated with blood or infectious agents are defined as OPIM.
• Semen and vaginal secretions (e.g., sexually transmitted diseases or STDs)
• Dentists have a high risk potential considering the volume of saliva they encounter. We are not.
• Any body fluids with visible blood.
• People in medical and emergency response situations may be confronted with a mix of specific body fluids most of us won’t likely encounter in the workplace.

Slide 9 – Not Considered OPIM
There is no evidence that vomit, sweat, tears, urine, or feces have ever resulted in anyone acquiring HBV or HIV.
You may recall the three “P’s” we don’t have to be concerned with carrying HBV or HIV...pee, poop, and puke.

Slide 10 – Human immunodeficiency virus
HIV targets our immune system. The concentration or number of viruses in the blood is very low. This low concentration provides for a low risk of us becoming infected (up to a 1 in 300 chance from a needle stick). The virus can survive outside a host body for about five (5) hours. However, the risk and the fear factors lie with the fact that there is no vaccine currently available for HIV and we don’t know the latency period between HIV infection and AIDS.

Slide 11 – AIDS epidemiology
“HIV and AIDS remain a persistent problem for the United States and countries around the world. While great progress has been made in preventing and treating HIV, there is still much to do” http://www.cdc.gov/hiv/statics/basics.html.

Slide 12 – Hepatitis
Hepatitis is an inflammation of the liver. There are currently six (6) known types of hepatitis. While types A and E typically spread as a result of poor sanitation (i.e., through fecal matter), only types B and C are bloodborne. HBV and HCV can be acute or chronic (having short term versus long term symptoms, respectively).

Slide 13 – Hepatitis B virus
HBV targets our liver. The concentration or number of viruses in the blood can be high. This concentration provides for a higher risk of us becoming infected (up to a 30% chance from a needle stick). The virus can survive outside a host body for about seven (7) days. A vaccine for HBV is available.

Slide 14 – HBV transmission
HBV is known to be transmitted through anal and oral sexual contact, use of contaminated needles, and birth from an infected mother to child. Contact with blood or open sores of an infected person as well as the sharing of items such as razors or toothbrushes is also a known form of transmission.
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Slide 15 – HBV Symptoms
HBV symptoms include some flue like symptoms such as loss of appetite, nausea, vomiting, fever, stomach or joint pain as well as more severe symptoms such as extreme fatigue, jaundice (yellowing of the skin or eyes), and dark urine.
Many people with acute (short term) or chronic (long term) HBV have no symptoms.

Slide 16 – HBV Facts
The majority of adults who are exposed to HBV will fully recover within 6 months without medication, however about 5% will have HBV all their lives.
The rate of new infections continues to decline as a greater proportion of the population becomes vaccinated.

Slide 17 – Exposure control methods
Methods used to control BBP exposure at Miami University include
• Signs and labels
• A written exposure control plan or EPC
• Various engineering controls
• Appropriate personal protective equipment or PPEs
• Responding to first aid situations
• Proper waste disposal
• Contaminated laundry

Slide 18 – Signs and labels
A visual way to inform people of a possible infectious or biological hazard is by using appropriate signs and labels. The biohazard symbol is an international communications tool. It can be used in conjunction with more specific language like “medical waste”, “infectious waste”, “infectious”, of “biohazard”.

Slide 19 – Exposure control plan
Our written exposure control plan provides details—as they relate to BBP—on how to respond to a spill, housekeeping techniques, the hepatitis B vaccination program, proper waste disposal, choosing appropriate personal protection equipment, and safe work practices.
You may review a copy of this plan by contacting any BBP Trainer or the Environmental Health and Safety Offices.

Slide 20 – Engineering controls
Engineering controls are items or methods we can use to remove or reduce the threat of injury or contamination. For example, sharps containers and biohazard boxes contain waste in a safe and visible manner.
A readily available location to wash up is highly effective in reducing the risk of surface contamination to the skin. First aiders can use one-way valves and nose guards on resuscitation devices.

Slide 21 – Personal protective equipment
At minimum, water-proof gloves (e.g., vinyl or latex) and eye protection with side shields must be used when there is the risk of exposure. As appropriate, you should wear a face mask to protect mouth and nose, a gown or apron to avoid contaminating your street clothes, and disposable shoe covers.
It is important to know your equipment’s limitations. Vinyl gloves don’t protect against broken glass or needle sticks. Safety glasses with side shields are inappropriate when liquids may splash (use splash goggles). Face masks are not respirators.
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Slide 22 – First aid situations
While waiting for a designated first responder is recommended, you must decide your course of action based on your knowledge and experience and on the injury you are presented with. Encourage the injured party to administer self care if possible (e.g., direct pressure). Avoid contact with the victim's blood or OPIM. If you are a first aider or expect to administer first aid, you should know the location of personal protective equipment (e.g., gloves).

Slide 23 – Contaminated waste disposal
Waste contaminated with blood or OPIM is treated as an infectious waste unless otherwise specified. The waste is contained in red bags (or labeled as biohazard). Infectious waste is placed in labeled biohazard boxes for eventual removal by a contractor for incineration. The current drop-off sites are 117B Student Health Center, Maintenance Room at Goggin Ice Arena, 144 Yager Stadium, 124 Levey Hall (MUM), and 418 Mosler Hall (MUH). Contaminated sharps must be packaged in a puncture-resistant container and disposed as infectious waste unless otherwise instructed.

Slide 24 – Contaminated laundry
While soiled linen has been identified as a source of large numbers of pathogenic microorganisms, the risk of disease being transmitted from soiled linen is negligible. However, to further reduce the risk, wear gloves while handling soiled linen and wash your hands afterwards.

If your street clothes become contaminated, remove and wash the clothes as soon as you can following your detergent manufacturer's directions.

If you launder materials that typically or incidentally become contaminated, refer to the Exposure Control Plan.

Slide 25 – Exposure incidents
An occupational exposure incident has occurred if an employee experiences in the performance of their duties physical contact with their eye, nose, or mouth (mucous membranes) and blood or OPIM or when they are stuck, cut, or otherwise had their skin barrier compromised by a potentially contaminated sharp.

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 (e.g., cut, rash, etc.).

Slide 26 – Exposure incident examples
Examples of exposure incidents include:
Somebody's blood or OPIM getting on your recent cut or broken cuticles
Blood splashing into your eye
Being stuck by a hypodermic needle in a trash bag
While cleaning up a blood spill, you rub your eyes with your hand and remember you're wearing a contaminated glove.
Slide 27 – Pictures of incidents
Some of these pictures are exposure incidents and others are not. Can you identify them all?

Slide 28 – Post-exposure...follow-up
If you are involved in an occupational exposure incident, you can receive a confidential medical evaluation and blood testing at no cost to you.
Post-exposure evaluations and follow-up appointments are voluntary. Here is information to help you make an informed decision regarding this process.

Slide 29 – What is involved...?
If you have been involved in an exposure incident, you should report to the Student Health Center within 72 hours. Refer to the ECP for procedures when the Center is closed for extended periods.
Medical staff will document the details of the incident. You should provide the name of the source individual, if known.
You will be asked to consent to blood tests. This is all confidential and voluntary. Only you will receive the results.

Slide 30 – Post-exposure testing
If you choose to have blood tests following an exposure incident, remember they are voluntary and be advised that:
• HIV procedure requires several tests over a period of time
• You will be offered the HBV vaccine if determined necessary by the medical staff
• The medical records created from post-exposure testing are confidential and between you and your physician.

Slide 31 – HBV vaccine
A few details regarding the hepatitis B vaccine. It is:
• Noninfectious
• Produced in yeast cells
• Not made with human blood or blood products
• Offered to individuals with a high risk of exposure to build their immunity to infection from HBV.

Slide 32 – HBV program at Miami...
If it has been determined that your work offers a reasonably anticipated high risk of exposure to blood or OPIM, you are eligible to participate in the University's hepatitis B vaccination program.
Vaccinations are administered through the Student Health Center. If you consent, it is your responsibility to report to Student Health with your signed Consent/Declination form and to stay on schedule with the three shot series.
[If applicable, refer to and review the details of the Consent/Declination form].

Slide 33 – Pre- vs. post...vaccination
Pre-exposure vaccinations are encouraged when offered. They are preventative in nature and protect an individual against an exposure.
If post-exposure vaccinations are offered, they are most effective if started within 48 hours from initial exposure. However, the vaccination series should not be delayed more than seven (7) days after exposure.
The conversion rate—post-exposure versus pre-exposure effectiveness—is about 88 percent.
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Slide 34 – Side effects
The side effects you might experience from the hepatitis B vaccination are similar to the vaccinations you received as a child. There are no known harmful effects to those who have had hepatitis B or currently test positively for the virus antibody.

Slide 35 - Contraindications
The administering medical staff may not offer you the vaccination based on your medical history. You may not be vaccinated if:

• You are allergic to yeast
• You have had a serious allergic reaction to a prior dose of the HBV vaccine
• You have had a serious allergic reaction to a component of the HBV vaccine

Slide 36 - Efficacy
The effectiveness of the hepatitis B vaccine is quite high. Most people completing the three-part series (greater than 95%) are immune and is project to last indefinitely. While you are immune, you are protected against the variety of ways the disease can be transmitted. You can even donate blood if the vaccine was received as a measure of protection.

Slide 37 – Spill cleanup
Although it is referred to as a “spill”, Miami University typically experiences blood on a walking or working surface as a result of a minor injury. This portion of the training addresses the materials, precautions, and decontamination and clean-up procedures when you respond to a blood or OPIM spill.

Slide 38 – Spill cleanup kits
If you are responsible for cleaning up blood or OPIM, or if you supervise staff that do, it is important to know:

• Where kits are located and be sure they are assessable on all shifts;
• What is in the kit and how to use the materials contained it; and
• Cleanup procedures including what personal protection equipment is in the kit and when to wear them.

[Departments may choose a spill kit that best serves their needs.]

Slide 39 - Decontamination
You have three readily available options for a decontaminate and contact time:

• A 10 percent solution of household bleach for 15 minutes. This solution loses its effectiveness over time and should be used within 24 hours of mixing.
• Undiluted household bleach for 30 seconds
• Any EPA-registered disinfectant that is labeled a tuberculocidal. If the label only indicates “HIV-Effective”, the product may not be effective against hepatitis.

Slide 40 – Spill cleanup precautions
Except in first aid cases, addressing a blood or OPIM spill is a controlled response. That means you can barricade and address the spill at your pace and without the chance of someone else exposing you unnecessarily. Remember:

• Don’t spread the spill.
• Avoid splashing or spraying by using brushes or brooms.
• Approach sharps with caution and dispose of them in a puncture-resistant container.
• When your gloves are on, always presume they are contaminated.

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Slide 41 – Spill cleanup procedure
Control the area and keep others away. Inspect and don you personal protection equipment.
Open the red disposal bag and roll the lip outward so you can drop waste in without contaminating outside of bag.
Pour or spray your decontaminant to cover the spill. You may then cover the spill area with paper towels and allow to sit for the necessary contact time.

Slide 42 - Spill...procedure (continued)
Clean walls or other non-level surfaces with your decontaminant solution and allow to air dry.
If there are sharps that require disposal, remember to place them in a puncture-resistant container first. When secured place the container in the bag.
All other materials from the cleanup should be put in the bag.
When the area has been cleared of cleanup materials, spray decontaminant over the affected area again and allow to air dry.

Slide 43 – Spill...procedure (continued)
Remove your personal protection equipment and place in the bag.
Remember, you can decontaminated and reuse non-disposable equipment.
Close and secure the bag. Only touch the uncontaminated outside of the bag.
Dispose of bag as infectious waste.
Wash you hands with soap and water.

Slide 44 – Credits and revision date
[Be sure to end with the next slide and allow it to remain up until everyone has had the opportunity to read the information available to them.]

At this time, employees in job classifications determined to have a high risk of exposure must be offered participation in the Hepatitis B Vaccination Program. Each of these employees must read and sign the Consent/Declination form indicating their decision to either agree or decline to receive the three-part vaccination series. Remember to inform them that should they decline, they may change their minds at any time and consent to receive the series.

READ THE FORMS CAREFULLY
—
COLLECT ATTENDANCE FORMS
—
MAINTAIN FORMS IN DEPARTMENTAL TRAINING RECORDS FOR THREE (3) YEARS

Slide 45 - Information
If you have any questions or would like additional information regarding this program or the materials covered in this training session, please ask. You can contact Environmental Safety & Risk Management at any time.