Blood Borne Pathogens Review for Care Mountain Personnel

Table of Contents

s

Remember that after completing this review you must do the quiz:

You must complete the Blood Borne Pathogen quiz from the link: https://forms.gle/ck1ex6NmcbxZykNKA

What are Blood Borne Pathogens

Bloodborne Pathogens are microorganisms (such as viruses) that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV).

Microorganisms may cause a number of other diseases, including the hepatitis C virus (HCV) infection which is the most common chronic blood borne infection in the U.S. according to the Centers for Disease Control and Prevention

How Are Bloodborne Pathogens and Infections Spread?

The Chain of Infection

For disease to be spread, it requires that all of the following conditions be present:

- An adequate number of pathogens, or disease-causing organisms.
- A reservoir or source that allows the pathogen to survive and multiply (e.g., blood).
- A mode of transmission from the source to the host
- An entrance through which the pathogen may enter the host.
- A susceptible host (i.e., one who is not immune).

Effective infection control strategies prevent disease transmission by interrupting one or more links in the chain of infection.

Modes of Transmission

Direct contact occurs when microorganisms are transferred from one infected person directly to another person. For example, infected blood from one person enters a care giver's body through an open cut.

Indirect contact involves the transfer of an infectious agent through a contaminated object or person. For example, a caregiver doesn't wash hands in between caring for someone with infected body fluids and other patients. For Example, Parenteral contact with a needle stick.

Airborne transmission occurs when droplets or small particles contain infectious agents that remain effective over time and distance in the air. Tuberculosis is a common disease spread this way. Bloodborne pathogens are not typically spread this way.

How Are Bloodborne Pathogens Spread?

Bodily fluids, especially those visibly contaminated with blood, have the potential to transmit disease. Sexual contact is one of the main modes of transmission for Bloodborne Pathogens, however the risk of exposure does exist while providing medical or first aid care. Other ways bloodborne pathogens spread include: when a contaminated sharp object cuts or punctures the skin. (like needle stick) OR when an infected body fluid gets into an open cut inside eyes, nose or other openings OR when a contaminated object touches inflamed skin, acne, or skin abrasion.

The symptoms, incubation period, and mode of transportation for AIDS, HBV and HCV are set forth below:

AIDS (Acquired Immunodeficiency Syndrome)

- Symptoms: Between one and six weeks after infection, victims often develop symptoms similar to infection with acute mononucleosis: fever, night sweats, and loss of appetite, sore throat, upset stomach, diarrhoea, swollen lymph nodes, and a general bad feeling. A long period (up to 10 years) may then pass before damage to the patient's immune system is revealed through the various infections and cancers that characterize the later stages of AIDS.
- Incubation Period: The time frame from HIV infection to the presence of detectable antibodies is generally one to three months. The time frame from infection to diagnosis of AIDS can range from 1 month to more than 10 years.
- Modes of Transmission: HIV is transmitted through sexual exposure and exposure to blood and bodily tissue. On occasion, the virus has been found in saliva, tears, urine, and bronchial secretions. However, infection after contact with these transmissions is generally unconfirmed. Routine social or community contact with an HIV-infected person carries no appreciable risk of exposure.

Hepatitis B Virus (HBV)

- Symptoms: Hepatitis B is a virus that attacks the liver. Symptoms include Nausea, loss of appetite, abdominal pain, rashes, and vomiting that often progress to a yellowing of the skin and eyes (called jaundice). Infection with HBV can also cause severe liver damage, including cirrhosis, in which tissues become hard and fibrous.
- Incubation Period: The average period is 60 to 90 days, but it may range from as short as two weeks to as long as 9 months.
- Modes of Transmission: While HBV can be found in virtually all bodily secretions and excretions, only blood, saliva, semen, and vaginal fluids have been shown to be infectious. Transmission modes include blood exposure, needle sticks, needle sharing, and contact between sexual and household partners.

Hepatitis C Virus (HCV)

- Symptoms: According to the Centers for Disease Control and Prevention (CDC), in 60% - 70% of cases, HCV infection causes a yellowing of the skin and tissues (jaundice). In 10% - 20% of cases, victims have nonspecific pains and problems, such as loss of appetite, stomach pain, confusion, depression, diarrhea, fatigue, joint and muscle pain, night sweats, and vomiting. After what may be years or even decades, approximately

10% - 20% of those who have been infected with HCV develop tissue destruction (cirrhosis) of the liver. Alcohol may speed up tissue destruction in persons with chronic HCV infection. Chronic HCV infection also raises the risk of liver cancer.

- Incubation Period: The general range is from two weeks to six months, most often six to eight weeks. According to the CDC, antibodies indicating the presence of the disease appear in 80% of patients within 15 weeks of exposure and in 97% of patients within 6 months of exposure. However, the time frame from infection to diagnosis is often many years. Victims of HCV infection often appear healthy and display no apparent symptoms, even though specific antibodies for HCV are detectable in their blood.
- Modes of Transmission: According to the CDC, nearly 60% of reported cases of HCV infection involve intravenous drug users. Approximately 20% involve sexual contact with an infected person, but sexual transmission appears considerably less common than with HBV or HIV. In 10% of cases, there is another suspected factor (e.g., dialysis, transmission between mother and fetus, household contact), and in 10% of cases, the cause is completely unknown. One study found that needle stick injuries were the only occupational risk factor independently associated with HCV infection. In some countries, HCV infection has also been associated with body piercing and tattooing, although this link has not been established in the United States.

Other Diseases

Any of the following diseases may also be contracted through exposure to blood borne pathogens. However, the risk generally is extremely small compared to HBV, HCV or HIV infection:

Babesiosis: A parasitic infection generally transmitted by the bite of an infected deer tick. It most severely affects the elderly and those with weak immune systems. The disease can cause fever, fatigue, anemia, and (in severe cases) acute respiratory distress. It may take from four weeks to one year for symptoms to appear.

Brucellosis: A bacterial infection most commonly found in people who work with livestock. Symptoms may include headaches, weakness, generalized aching, and extensive sweating. Symptoms usually appear within 5 to 30 days from exposure. The bacterium is most frequently seen in unpasteurized milk from diseased cows and infected cattle, goats, and sheep.

Leptospirosis: A disease that most often affects farmers, sewer workers, and others who have contact with animals, especially rats. It is generally spread through the urine of infected animals. Symptoms of the disease may include headache, fever, nausea, vomiting, jaundice, and anemia and usually result in the hospitalization of the victim. Symptoms generally appear within 4 to 10 days from exposure.

Malaria: A disease caused by blood parasites carried by mosquitoes. It is very common in tropical and subtropical areas and rare in the United States. It may also be transmitted by transfusion of blood from infected people or by the use of contaminated needles or syringes. Symptoms may include chills, fever, and sweating, and generally appear in 12 to 30 days,

although one strain of the disease may take from 8 to 10 months to produce symptoms. Malaria may result in kidney or liver failure.

Syphilis: A bacterial infection that is primarily transmitted through sexual contact. The first sign of syphilis is a painless sore that appears at the site of initial contact. If the disease is not quickly treated with antibiotics, it may cause fever, tiredness, sore throat, headaches, and destruction of bones and the nervous system. Symptoms generally appear within 3 to 4 weeks after a person becomes infected, although the full range is anytime from 10 to 90 days.

Blood Borne Pathogens Prevention and Control Measures

Basic Safety Approach: Universal Precautions

All Care Mountain personnel must use special engineering controls, work practices, and personal protective equipment (PPE) to avoid being infected by blood borne pathogens. According to Universal Precaution, you must assume that all human blood and other potentially infectious materials (OPIM) to which they are exposed are infected with blood borne pathogens. If the exact identity of a bodily fluid is uncertain, you must assume it contains blood or OPIM.

Legal rights of confidentiality and limited scientific information prevent us from knowing exactly who is and is not infected with a disease. The use of universal precautions enables us to nevertheless minimize the risk of infection by treating everyone as if we know that they are indeed infected.

Some examples include:

- Make sure you use gloves and CPR face shield or masks when working with clients
- Do not eat, drink, smoke, apply cosmetics or handle contact lenses in areas where there is the possibility of exposure to BBP.
- When emptying trash containers, do not use your hands to compress the trash in the bag.
- Lift and carry the trash bag away from your body.
- Keep contaminated laundry separate from other laundry.

Engineering Controls

Engineering controls eliminate hazards at their source. Examples of engineering controls include the use needleless systems and special containers for used sharps. Engineering controls must be checked and maintained on a regular schedule to keep them in good working order.

Sharps, Needles & Syringes

Do not bend, shear, break, remove, or recap any used needle or sharp.

Dispose of used sharps in the proper containers. Reusable containers must not be opened, emptied, or cleaned in a way.

While we do not use (or administer medication using) needles, syringes and other sharps, you may assist families in disposing of these items. The U.S. Environmental Protection Agency offers these suggestions for disposing of sharps:

- Place needles, syringes and other sharp items into hard plastic or metal containers. The container should have a secure lid.
- A plastic detergent bottle with a screw-on lid is an example.
- Tape the lid in place with heavy tape.
- Keep the sharps container out of reach of children and pets.
- Label the sharps container with a "NOT FOR RECYCLING" label.
- Reusable containers must not be opened, emptied, or cleaned in a way.

At a Facility: All sharps must be disposed of in special containers. Containers for sharps must:

- be labeled with the universal biohazard symbol and the word "biohazard";
- be puncture resistant;
- have leak-proof sides and bottom;
- be maintained upright throughout use;
- be replaced routinely; and
- be filled only to capacity (not be allowed to be overfilled).

Hazardous Disposal

Dispose off in a properly labelled biohazard container: either a red bag or container labelled in orange or orange-red with the Bio-Hazard symbol.

Work Practice Controls

Although engineering controls are the preferred method of preventing exposure to blood borne pathogens, work practice controls are also used. Work practice controls reduce the likelihood of exposure by altering the way a task is performed. These are procedures to minimize the hazards from blood and other potentially infectious materials (OPIM). Examples of work practice controls include:

- frequent hands washing,
- regular cleaning and decontamination of work area,
- minimizing spraying or splashing of blood
- preventing needle sticks, and
- wearing personal protective equipment (PPE) like disposable gloves.

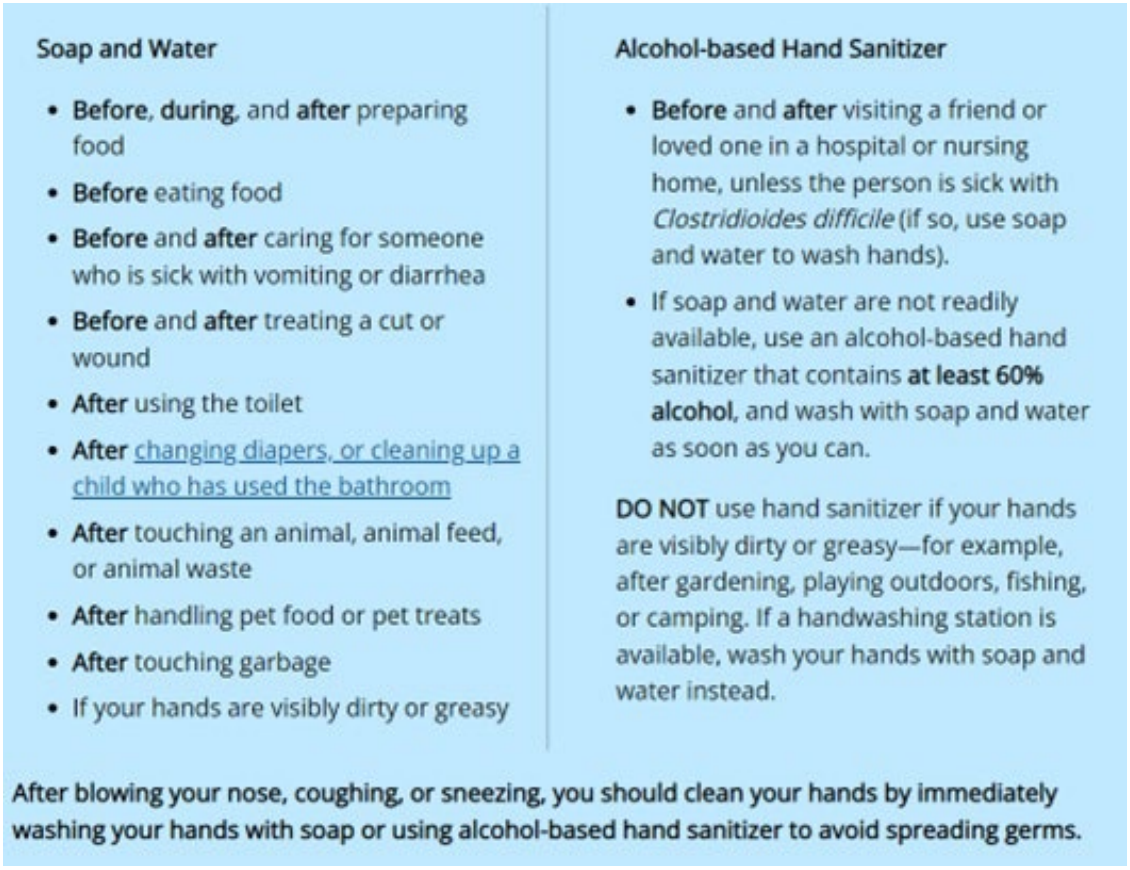
Work practice controls must be strictly followed.

After any hand contact with blood or OPIM, immediately remove your gloves or other protective equipment and wash your hands. If soap and running water are unavailable, antiseptic cleansers must be provided. When antiseptic cleansers are used, you must still wash with soap and water as soon as possible.

Hand Hygiene

Hand hygiene must be done

- Before and after contact with a client
- After contact with objects and surfaces in the clients environment and common areas
- After removing PPE such as gloves, gown or facemask.



Hand Washing Instruction

- Wet your hands and apply liquid, bar, or powder soap.
- Rub hands together vigorously to make a lather and scrub all surfaces.
- Continue for 20-30 seconds! It takes that long for the soap and scrubbing action to dislodge and remove stubborn germs.
- Rinse hands well under running water.
- Dry your hands using a paper towel or air dryer.
- If possible, use your paper towel to turn off the faucet.

Other Work Practice Controls

Other work practice controls to observe include the following:

- Do not eat, drink, apply cosmetics or lip balm, or handle contact lenses in areas where there is a potential for exposure.
- Do not store food or drink in refrigerators, freezers, shelves, or cabinets or on countertops where blood is stored or where blood or OPIM may be present.
- Remove any contaminated clothing before leaving a work area. This is to minimize any possible spread of contamination.

- If you have an open sore on your body, make sure you cover it with bandage to prevent the spread of infection.
- Always handle blood and OPIM in a way that keeps spraying or splashing to a minimum.
- Place blood or fluid specimens in containers that do not leak during handling, storage, or shipping.

To avoid occupational exposure to blood borne pathogens, the following housekeeping rules must be followed:

- Use a solution of 1 part household bleach mixed with 9 parts water (a 1:10 solution). After pouring this solution, wait at least 15 minutes before wiping it up. A shorter period may not accomplish the decontamination.
- Other commercial disinfectants registered with the EPA as effective against HIV/HBV may be used. Check the label.
- Clean and decontaminate equipment and work areas as soon as possible after contact with any blood or other potentially infectious materials.
    - Use Personal Protective Equipment (PPE).
    - If a Body Fluid Spill Kit is available, use according to manufacture's directions.
    - Remove visible material with absorbent towels.
    - If any sharp object or broken glass is visible, remove with tongs or dust pan and place in a ridged sealable container. Never use bare hands.
    - Spray disinfectant on contaminated area and let stand for several minutes.
    - Once the area has been disinfected, dry area with absorbent towels and dispose of towels in regular trash.
- Adhere to the cleaning schedule that provides for decontamination and proper disposal of used sharps.
- Remove and replace protective coverings:
    - when visibly contaminated; and
    - at the end of each shift (if there is a possibility of contamination during the shift)
- Handle contaminated laundry as little as possible. Contaminated laundry must be bagged.
- Place any wet laundry in leak-proof bags.
- Wear gloves when handling contaminated laundry.
- Place regulated waste in containers that are:
    - closable;
    - constructed to contain all contents and to prevent leakage during handling or shipping;
    - properly labeled and color-coded; and
    - closed before removal to prevent spillage or protrusion during handling, storage, transport, or shipping.

Use a secondary container that is leak-proof, color-coded, and closable if the primary container leaks.

Personal Protective Equipment (PPE)

Sometimes engineering controls and work practices are inadequate to protect personnels from the hazards of blood borne pathogens; then personal protective equipment (PPE) must be used to reduce occupational exposure to the greatest extent possible. However, use PPE if the hazard cannot first be eliminated by engineering controls and work practices. Personal Protective Equipment (PPE)

Gloves Removal

- Grip one glove near the cuff and peel it down until it comes off inside out. Cup it in the palm of your gloved hand.
- Place two fingers of your bare hand inside the cuff of the remaining glove.
- Peel that glove down so that it also comes off inside out and over the first glove.
- Properly dispose of the gloves.

Housekeeping Techniques

- Use a solution of 1 part household bleach mixed with 9 parts water (a 1:10 solution).
- Other commercial disinfectants registered with the EPA as effective against HIV/HBV may be used. Check the label.
- Use Personal Protective Equipment.
- If a Body Fluid Spill Kit is available, use according to manufacture's directions
- First, put on Personal Protective Equipment
- Remove visible material with absorbent towels
- If any sharp object or broken glass is visible, remove with tongs or dust pan and place in a ridged sealable container. Never use bare hands.
- Spray disinfectant on contaminated area and let stand for several minutes
- Once the area has been disinfected, dry area with absorbent towels and dispose of towels in regular trash
-

Emergency Procedures

In the event of emergencies involving exposure to blood or other potentially infectious materials (OPIM), you must follow "universal precautions" and treat the blood or other bodily fluids as if they definitely contain blood borne pathogens. Potentially infectious materials that may be present in a first aid emergency include blood, urine, vomit, and other bodily fluids. Try not to panic. If conditions are safe, it is generally best to remain at the site of the injury and to call for help.

Exposure Incident Reporting

An "exposure incident" involves mucous membrane (e.g., eye, mouth), broken skin, or other hazardous contact with blood or other potentially infectious materials (OPIM).

It is critical that any exposure incident be reported to the Office. Modern technology can often help prevent HBV or HIV infection if personnel are referred for medical treatment as

soon as possible after an exposure incident. However, there is currently no effective method for post-exposure prevention of HCV infection.

Q: What should you do if you believe you have had an exposure incident to blood borne pathogens? A: Decontaminate, report incident to office manager, and receive medical evaluation immediately.

Care Mountain office manager will document and report all conditions (if they are in Texas Notifiable Conditions list) to the local health authority. The date condition was disclosed to Care Mountain, name of personnel disclosing condition, name of client with condition and his/her treatment will all be reported.

Medical Evaluation

When an exposure incident is reported, the office will arrange for an immediate and confidential medical evaluation. The medical evaluation must:

- document how the exposure occurred;
- identify and test the source individual (if feasible);
- test the exposed person's blood (if consent is obtained);
- provide counseling; and
- evaluate any reported illness.

The medical professional doing the exposure assessment must be provided with all data needed to complete the evaluation.

Post-Exposure Follow-Up

For every exposure incident, Care Mountain shall identify and document the source individual (the person whose blood or other potentially infectious materials were involved) unless:

- identification is not feasible; or
- identification is prohibited under state or local law

In addition, Care Mountain shall test the source individual's blood to determine the presence of HIV or HBV if:

- the source individual is available; and
- consent either is given (if required by state law) or is not legally necessary.

After an exposure incident, the Care Mountain personnel who suffered the occupational exposure shall have the option to receive all of the following:

- testing of his or her blood for HIV or HBV infection (provided that the personnel consents to such collection and testing)
- post-exposure counseling (regardless of the personnel's decision to accept blood testing)
- post-exposure medical evaluation by a health care professional

The health care professional's written opinion for hepatitis B must be limited to whether the hepatitis B vaccination is needed and whether the personnel received the vaccination. All other findings or diagnoses must be kept confidential and not included in the report. Within 15 days of completion of the evaluation, Care Mountain shall obtain and provide a copy of the health care professional's written report to the personnel.

APPENDIX: A

Universal Precautions, PPE Protocol

These procedures were adapted from CDC.gov website.

Handwashing and Hand Hygiene Methods

1. CDC recommends using Alcohol Based Hand Rubs (ABHR) with greater than 60% ethanol or 70% isopropanol in healthcare settings. Unless hands are visibly soiled, an alcohol-based hand rub is preferred over soap and water in most clinical situations due to evidence of better compliance compared to soap and water. Hand rubs are generally less irritating to hands and are effective in the absence of a sink.
2. Hands should be washed with soap and water for at least 20 seconds when visibly soiled, before eating, and after using the restroom, and as often as possible when in any public setting.
3. Gloves should be worn for all personal care involving potential for contact with bodily fluids. Change gloves between tasks. Remove gloves by using the inside cuff that is touching the wrist of Hand A and pulling the glove inside out. Then hold that glove in Hand B and pull the second glove off using the inside cuff that is touching the wrist of Hand B. Discard in the trash and wash your hands or use ABHR immediately, before donning a clean set of gloves.
4. Hand Hygiene means cleaning your hands by using either handwashing (washing hands with soap and water), antiseptic hand wash, antiseptic hand rub (i.e. alcohol-based hand sanitizer including foam or gel), or surgical hand antisepsis.
5. Cleaning your hands reduces:
    - 5.1 The spread of potentially deadly germs to patients
    - 5.2 The risk of healthcare provider colonization or infection caused by germs acquired from the patient
6. Alcohol-based hand sanitizers are the most effective products for reducing the number of germs on the hands of healthcare providers. Alcohol-based hand sanitizers are the preferred method for cleaning your hands in most clinical situations.
7. Wash your hands with soap and water whenever they are visibly dirty, before eating, and after using the restroom.
8. During Routine Patient Care:
    - 8.1 Use an Alcohol-Based Hand Sanitizer any time a hand-washing station is not available
    - 8.2 Wash with Soap and Water

8.3 Immediately before touching a patient

8.4 When hands are visibly soiled

8.5 Before performing an aseptic task (e.g., placing an indwelling device) or handling invasive medical devices

8.6 After caring for a person with known or suspected infectious diarrhea

8.7 Before moving from work on a soiled body site to a clean body site on the same patient

8.8 After known or suspected exposure to spores (e.g. B. anthracis, C difficile outbreaks)

8.9 After touching a patient or the patient's immediate environment

8.10 After contact with blood, body fluids or contaminated surfaces

8.11 Immediately after glove removal

PPE (Personal Protective Equipment)

1. Consists of gloves, face mask, gown, face shield.
2. See CDC Recommended procedures for donning and doffing PPE
3. Wear a face mask at all times when providing personal care and when within 6 feet of client.
4. If a client or a member of their household has tested COVID-19 positive, or is under investigation for COVID-19, personnel must wear "Full PPE" to include mask, gloves, gown (Face shield as available) at all times when providing care in the client's home.
5. PPE must be disposed of immediately if it has been soiled, damaged or contaminated.
6. Do not tough face mask while wearing it. If this happens perform handwashing immediately.

Other Universal Precautions Protocols

1. Handling Trash
   1.1 Wear disposable gloves when handling trash.
   1.2 Place any wet trash or trash bag in an outside garbage container.
   1.3 Never reach inside a trash container as it may contain sharps and needles.
2. Linen
   2.1 Bag linens at the bedside and transport them to the washing machine.
   2.2 Wear gloves when handling wet or soiled linens.
   2.3 Use a stain remover to remove stains from urine, feces, or secretions.

2.4 Wash soiled linens as quickly as possible.

2.5 Start with a coldwater rinse.

2.6 Continue washing in hot or warm water.

3. Disposal of Sharps and Needles

3.1 While we do not use (or administer medication using) needles, syringes and other sharps, Caregivers may assist families in disposing of these items. The U.S. Environmental Protection Agency offers these suggestions for disposing of sharps:

3.1.1 Place needles, syringes and other sharp items into hard plastic or metal containers. The container should have a secure lid.

3.1.2 A plastic detergent bottle with a screw-on lid is an example.

3.1.3 Tape the lid in place with heavy tape.

3.1.4 Keep the sharps container out of reach of children and pets.

3.1.5 Label the sharps container with a "NOT FOR RECYCLING" label.

Once a year, all Care Mountain personnel are required to do a Blood Borne Pathogen Review (via document, google forms and/or webinar) and Quiz (via google forms). The review and the quiz is mandatory for all Care Mountain personnel.

NEXT STEPS:

1. Complete the Blood Borne Pathogen quiz from the link: https://forms.gle/ck1ex6NmcbxZykNKA
2. We need your signed confirmation that you completed the review and quiz. The office can send you an e-form **OR** you can print the next page, fill, sign and send us a picture.

BLOOD BORNE PATHOGENS REVIEW COMPLETION FORM

I, _____, confirm the following:

- I have reviewed the Blood borne pathogen information shared.
- I have answered all quiz questions correctly.
- I have also reviewed exposure incident reporting procedure for Care Mountain.
    - I understand that in case of an exposure incident, I am to decontaminate, and report incident to office manager immediately who will make arrangements for prompt medical evaluation and possible treatment according to the Care Mountain Bloodborne Pathogen Exposure Control Plan.

Signature and Date: _____