

Dear UCMC CEC Provider,

Enclosed, please discover the materials you will need to take care of your patient that has presented secondary to a Bloodborne Pathogen exposure. If at any time you require assistance, or have question, you may contact the Injury Hotline RN at 585-8000.

What is an exposure?

- A percutaneous injury (e.g. needlestick or cut with a sharp object) involving an object contaminated with blood, tissue, or other bodily fluids that are potentially infectious.
- Contact of mucous membrane or non-intact skin (e.g. exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other bodily fluids that are potentially infectious.

What are potentially infectious materials?

- Blood and bodily fluids containing visible blood.
- CSF, Synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid, amniotic fluid, semen, and vaginal secretions.
- Direct contact (lack of barrier protection) with concentrated virus in a laboratory setting
- Human Bites
 - Require clinical evaluation of the person bitten as well as the person who inflicted the bite
 - HIV and HBV transmission are rare. **Consider exposure to HIV and HBV if:**
 - For the person bitten: visible blood was seen in the person's mouth at the time of the bite
 - For the person inflicting the bite: the bite has caused bleeding
- If **NOT** contaminated with **blood**, the following fluids are **NOT** considered potentially infectious:
 - Feces, nasal secretions, saliva, sputum, sweat, tears, urine, and vomit.

Steps to follow in a patient with a suspected exposure to a bloodborne pathogen. Patients will fall into 1 of 3 categories:

1. Occupational Exposure

- a. **NO: Go to section II (non-occupational exposure)**
- b. **YES: call employee health (585-8000) if not already done. If employee health wants patient seen in ED, complete this section.**

Reasons to be registered in the Emergency Department (even for UCH and UCP employees) can include:

- Significant injury needing care
 - HIV positive source, or discovered to be HIV positive after initial testing
 - Source is unknown, has refused testing, or is not at UCMC
- i. Complete all appropriate paperwork included in the packet.
 - ii. Confirm Tetanus status up to date, and immunize if needed
 - iii. Draw exposed worker's labs (**Order: Needlestick II**)
 - Needlestick II includes
 - i. anti-HBs or HBsAb (Hepatitis B surface antibody)
 - ii. HBsAg (Hepatitis B surface antigen)
 - iii. anti-HBc or HBcAb (Hepatitis B core antibody)
 - iv. Hepatitis C antibody
 - v. HIV
 - Make sure to add CBC, BMP, and LFT if worker will receive PEP
 - iv. Draw source patient (if available) labs (**Order: Needlestick I**)
 - Needlestick I includes:
 - i. IgM antibody to hepatitis B core antigen (IgM anti-HBc)
 - ii. HBsAg (Hepatitis B surface antigen)
 - iii. Hepatitis C antibody
 - iv. HIV
 - ***The source's blood cannot be tested without consent. If the source is a patient at UCMC (either inpatient or ED patient), they have already signed a general consent, which **allows** testing for HIV.
 - If you are unable to obtain source consent, or the source refuses to provide consent, it is within your right in the State of Ohio (ORC 3701.242) to test any blood that you have already obtained regardless of the refusal.
 - If no blood is available and the patient refuses, offering post exposure prophylaxis to the exposed person may be indicated.
 - v. Determine the need for post-exposure prophylaxis for hepatitis B and HIV, and Provide PEP counseling. You can discuss the case with the Infectious Disease (ID) physician on-call if the exposure happened >72 hours ago or the exposed person is pregnant.
 - See the 3 tables in the Appendices:
 - Recommended post-exposure prophylaxis for exposure to hepatitis B virus (**Appendix A**)
 - Recommended HIV Post-exposure prophylaxis for percutaneous injuries (**Appendix B**)
 - Recommended HIV Post-exposure prophylaxis for mucous membrane exposures and nonintact skin* exposures (**Appendix C**)
 - vi. If PEP is indicated,
 - ***Provide 72 hours-worth of PEP medications (Contact Pharmacy to obtain)
 - i. Dolutegravir 50mg PO QD
 - ii. Emtricitabine/tenofovir PO Daily
 - iii. Consider prescribing Zofran for nausea
 - iv. Additional medications for 28 days of therapy
 1. If employee is a UCH/UCP employee, have the patient follow up the next business day with UC Employee Health to get the rest of the 28 days of medication.
 2. If the employee is a non-UCH/UCP occupational exposure. Have the patient go to Hoxworth or to a pharmacy of their choice on the next business day.

- v. **Emphasize to the patient that it does no good to just take medication for a few days. They must take medications for one month**
- vii. Follow-up:
 - If this was an occupational exposure in a UC/UCP employee, instruct the patient to follow up with UC Health employee health.
 - If this was an occupational exposure in a non-UC Health/UCP employee (and not a Medical Student, Firefighter, Paramedic, Police, and any Agency Staff), instruct the patient to follow up with their employee health.
 - Confirm exposed person's phone number is correct in EPIC.

2. Non-occupation exposure

- a. **NO: Go to section I (occupational exposure)**
- b. **YES: Sign patient into the ED to be seen.**
 - i. Complete all appropriate paperwork included in the packet.
 - ii. Confirm Tetanus status up to date, and immunize if needed
 - iii. Draw exposed person's labs (**Order: Needlestick II**)
 - a. Needlestick II includes
 - i. anti-HBs or HBsAb (Hepatitis B surface antibody)
 - ii. HBsAg (Hepatitis B surface antigen)
 - iii. anti-HBc or HBcAb (Hepatitis B core antibody)
 - iv. Hepatitis C antibody
 - v. HIV
 - b. Make sure to add CBC, BMP, and LFT if patient will receive PEP
 - iv. If, in the unlikely scenario that the source patient is present, order labs (**Order: Needlestick I**)
 - a. Needlestick I includes:
 - i. IgM antibody to hepatitis B core antigen (IgM anti-HBc)
 - ii. HBsAg (Hepatitis B surface antigen)
 - iii. Hepatitis C antibody
 - iv. HIV
 - *****The source's blood cannot be tested without consent. If the source is a patient at UCMC (either inpatient or ED patient), they have already signed a general consent, which **allows** testing for HIV.**
 - If you are unable to obtain source consent, or the source refuses to provide consent, it is within your right in the State of Ohio (ORC 3701.242) to test any blood that you have already obtained regardless of the refusal.
 - If no blood is available and the patient refuses, offering post exposure prophylaxis to the exposed person may be indicated.
 - v. Determine the need for post-exposure prophylaxis for hepatitis B and HIV, and Provide PEP counseling. You can discuss the case with the Infectious Disease (ID) physician on-call if the exposure happened >72 hours ago or the exposed person is pregnant.
 - See the 4 tables in the Appendices:
 - Recommended post-exposure prophylaxis for exposure to hepatitis B virus (**Appendix A**)
 - Recommended HIV Post-exposure prophylaxis for percutaneous injuries (**Appendix B**)
 - Recommended HIV Post-exposure prophylaxis for mucous membrane exposures and nonintact skin* exposures (**Appendix C**)
 - Recommended HIV Post-exposure prophylaxis for sexual intercourse, sexual assault, and IV Drug Users (**Appendix D**)
 - vi. If PEP is indicated,
 - *****Give the patient prescriptions for the following medications.**
 - Dolutegravir 50mg PO QD
 - Emtricitabine/tenofovir PO Daily
 - Consider prescribing Zofran for nausea
 - Have the patient go to Hoxworth or to a pharmacy of their choice on the next business day. Frequently, insurance may require a prior authorization completed.

- Emphasize to the patient that it does no good to just take medication for a few days. They must take medications for one month
- vii. Follow-up
- If you are starting PEP, call the ID clinic and ask for urgent appointment for PEP (**M-F 9-5**), or send EPIC message to **Tammy Miller-Wohlto** arrange follow up.
 - If you are NOT starting PEP, have the patient follow up with their PCP, or utilize the Community Health Worker

Appendix A: Recommended post-exposure prophylaxis for exposure to hepatitis B virus			
Vaccination and antibody response status of exposed person	Treatment		
	Source HBsAg positive	Source HBsAg negative	Source Unknown or Unavailable for testing
Unvaccinated	HBIG x1 and Initiate HB vaccine series	Initiate HB vaccine series	Initiate HB vaccine series
Previously vaccinated Known responder	No treatment		
Previously vaccinated Known non-responder	HBIG x1 and Initiate HB vaccine series or HBIG x 2	No treatment	If known high risk source, treat as if source were HBsAg positive
Previously vaccinated Unknown if responded	Test exposed person for anti-HBs <ol style="list-style-type: none"> 1. If adequate (anti-HBs \geq 10IU/ml) no treatment is necessary 2. IF inadequate (anti-HBs \leq 10IU/ml), administer HBIG x 1 and vaccine booster 	No treatment	Test exposed person for anti-HBs <ol style="list-style-type: none"> 1. If adequate (anti-HBs \geq 10IU/ml) no treatment is necessary 2. IF inadequate (anti-HBs \leq 10IU/ml), administer HBIG x 1 and vaccine booster

Appendix B: Recommended HIV Post-exposure prophylaxis for percutaneous injuries					
Exposure type	Infection status of source				
	HIV Positive Class 1 (asymptomatic HIV or known low viral load (<1500 RNA copies))	HIV Positive Class 2 (symptomatic HIV infection, AIDS, acute seroconversion or known high viral load)	Source of unknown HIV status	Unknown source	Source known to be HIV-Negative
Less severe (e.g. solid needle and superficial injury)	Expanded 3-drug PEP	Expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP for source with HIV risk factors	Generally, no PEP warranted; however, consider basic 2-drug PEP in settings where exposure to HIV-infected persons is likely	No PEP warranted
More severe (large-bore hollow needle, deep puncture, visible blood on device, or needle used in patient's artery or vein)	Expanded 3-drug PEP	Expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP for source with HIV risk factors	Generally, no PEP warranted; however, consider basic 2-drug PEP in settings where exposure to HIV-infected persons is likely	No PEP warranted

Appendix C: Recommended HIV Post-exposure prophylaxis for mucous membrane exposures and nonintact skin* exposures (*non-intact means evidence of compromised skin integrity (e.g. dermatitis, abrasion, or open wound))					
Exposure type	Infection status of source				
	HIV Positive Class 1 (asymptomatic HIV or known low viral load (<1500 RNA copies))	HIV Positive Class 2 (symptomatic HIV infection, AIDS, acute seroconversion or known high viral load)	Source of unknown HIV status	Unknown source	Source known to be HIV-Negative
Small volume (few drops)	Consider Expanded 3-drug PEP	Expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP for source with HIV risk factors	Generally, no PEP warranted; however, consider basic 2-drug PEP in settings where exposure to HIV-infected persons is likely	No PEP warranted
Large volume (major blood splash)	Expanded 3-drug PEP	Expanded 3-drug PEP	Generally, no PEP warranted; however, consider basic 2-drug PEP for source with HIV risk factors	Generally, no PEP warranted; however, consider basic 2-drug PEP in settings where exposure to HIV-infected persons is likely	No PEP warranted

Appendix D: Recommended HIV Post-exposure prophylaxis for sexual intercourse, sexual assault, and IV Drug Users.			
	Source		
Type of Exposure	Men sex with Men; Source is known HIV positive or Source was an IV drug user)	Anonymous or known partner but with unknown HIV status and positive risk factor history	Shared needles or drug preparation equipment
Consensual sex (Men sex with Men; Source is known HIV positive or source was an IV drug user)	Expanded 3-drug PEP	Consider	N/A
Sexual Assault	Expanded 3-drug PEP	Consider	N/A
Shared needles or drug preparation equipment	N/A	N/A	Expanded 3-drug PEP