

Texas A&M HSC College of Medicine

Needle Stick Policy for Medical Students

The purpose of this document is to establish Texas A&M Health Science Center College of Medicine policy for the initiation of prophylaxis after exposure to the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV).

A bloodborne pathogen exposure potentially occurs when there is:

- percutaneous injury (e.g., needlestick; laceration or puncture with a sharp object),
- contact with mucous membranes or ocular membranes, or
- contact with non-intact skin (e.g., skin that is chapped, abraded)

with blood or other potentially infectious fluid: semen, vaginal secretions, cerebrospinal, synovial, pleural, peritoneal, pericardial and amniotic fluids, or bloody body fluids and unfixed tissues.

Risk of HIV infection: The average risk of HIV infection due to all types of reported percutaneous exposures to HIV-infected blood is 0.3%. A percutaneous exposure is defined as a needlestick or laceration/ puncture with a sharp object. The risk appears to be greater than 0.3% for exposure to HIV positive patients involving deep injury, visible blood on the device causing the injury, a device previously placed in the source patient's vein or artery, or the source patient dying of AIDS within 60 days post-exposure.

Initiation of prophylaxis is recommended for high risk exposure to HIV. Examples include: when source is known to have HIV or rates of HIV infection in the patient population are high (e.g., IV drug users, men who have sex with men, Haitians); large bore hollow needle or deep injury; visible blood on the injury device; or injury with a needle that had been placed in a source patient's artery or vein.

Risk of Hepatitis B infection: The average risk of Hepatitis B virus (HBV) infection in susceptible persons after percutaneous exposure to HBV-infected blood is 6-30%. Hepatitis B vaccine will protect you if you have developed antibodies.

Risk of Hepatitis C infection: HCV is most efficiently transmitted through large or repeated percutaneous exposure to infected blood (e.g., through transfusion of blood from unscreened donors or through use of injecting drugs). There is no vaccine against HCV and no treatment after an exposure that will prevent infection. Neither immune globulin nor antiviral therapy is recommended after exposure.

Precautions to take during the period after the exposure incident for a known HIV positive case or high risk exposure:

- Do not share a toothbrush or a razor.
- Avoid pregnancy until HIV infection is ruled out.
- Use safe sex practices with condoms for barrier protection until HIV infection has been ruled out.
- Do not donate blood, plasma, organs, tissue, or semen during the follow up period.
- Seek medical evaluation of any acute illness that occurs during the follow up period.

Students will be treated as an employee for initial management of a needle stick by our clinical affiliates in terms of exposure evaluation, potential initiation of prophylaxis, and incident follow-up (on the initial lab tests), however students are not eligible for workers' compensation insurance. If the hospital or clinic will not cover the cost but will accept the students insurance, then the College of Medicine will cover the cost of the insurance co-pay and deductible.

CHECKLIST:

- Wash exposed area immediately.
- Notify each of the following as soon as possible:
 - Your Faculty Supervisor—request time off for immediate post-exposure care
 - Your Clerkship Director
 - Student Affairs Office (through the Student Coordinator for your campus) and fill out the Student Accident and Injury Report.
- Seek post-exposure care:
 - While you are on your clinical rotations, needle stick injuries will be initially addressed at the facility where the injury occurs. For most hospitals, you should contact the nursing supervisor or charge nurse for specific instructions, and go to the ER for exposure management within 2 hours. You will be assisted with filling out the proper paperwork.
 - Prophylactic treatment should ideally be started within two (2) hours for high risk HIV exposure** (but may be initiated up to 72 hours post exposure). The most up-to-date procedure, recommended by the Centers for Disease Control and Prevention (CDC), should be followed for management of this exposure.¹

Normally this is a 28-day course of anti-retroviral medications, with an initial prescription for 3 to 5 days while source blood is tested. Be sure to mention if you have a sulfa allergy, have intolerance to certain antivirals previously administered, or might be pregnant. Pregnant women should reserve prophylaxis for high risk exposures and seek clearance from their obstetrician to take the medications.
- After an exposure, your blood should be collected for testing for HIV, HBV and HCV serological status.
- HBV vaccine should be offered if source is known to be positive for hepatitis B or is high risk for hepatitis B, and student has not been vaccinated against HBV. Student should be offered HBIG if they did not develop antibodies after prior HBV vaccination.
- Tetanus/diphtheria booster for percutaneous injury if none within last 10 years.
- A follow-up visit should be scheduled to review the results of baseline testing (if rapid tests are not used), provide additional counseling and support, assess medication side effects and adherence, and provide additional medication if appropriate (with an altered regimen if indicated by side effects or laboratory test results). If the source-patient HIV status is determined to be **negative**, prophylaxis will be discontinued and no follow up lab for HIV is necessary.
- Additional follow up visits are determined by the results of the initial baseline lab work drawn on the source of the occupational exposure. Any additional testing cost is borne by the student.
 - Source is known HIV positive: obtain HIV antibody at 6 weeks, 3 months, and 6 months
 - Source is known HCV positive: obtain HCV antibody at 6 wks, 3 months, and 6 months
 - Unknown source: obtain HIV and HCV antibody at 3 months and 6 months

¹ Antiretroviral Postexposure Prophylaxis After Sexual, Injection-Drug Use, or Other Non-occupational Exposure to HIV in the United States--Recommendations from the U.S. Department of Health and Human Services. January 21, 2005 / 54(RR02);1-20.