

# UNIVERSITY OF NORTH TEXAS HEALTH SCIENCE CENTER

## Student/Employee Health

Date effective – 3/96

Last revision – 12/01

**SUBJECT:** Management of Occupational Exposures to the Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV)

### **POLICY:**

- Students who experience an exposure to human blood, non-human primate blood or other potentially infectious material (OPIM), or become contaminated with a concentrated source HIV, HBV, or HCV in a research setting, will receive medical follow up by the Student/Employee Health Services.
- There will be appropriate protocols available for the management of HIV, HBV, and HCV exposure. The protocols will be reviewed annually and revised when necessary by Student/Employee Health.

### **PURPOSE:**

- To provide management of occupational/education-related exposures to HIV, HBV, and HCV.
- To comply with federal, state and local regulatory agency requirements for the management of occupational exposures to HIV, HBV and HVC.

### **DEFINITIONS:**

1. AIDS: acquired immunodeficiency syndrome.
2. Anti-HBs: surface antibody for the hepatitis B virus. Indicates past infection with HBV or immunity provided by the hepatitis B vaccine.
3. Anti-HCV: antibody for the hepatitis C virus. Indicates past, current, or chronic infection with the hepatitis C virus.
4. Exposure: accidental percutaneous (needlestick, laceration, or bite), per mucosal (ocular or mucous membrane), contact with an open wound, or nonintact (e.g., chapped, abraded, weeping, dermatitic) skin contact with blood or OPIM indicated in the transmission of bloodborne pathogens such as HBV, HCV and HIV.
5. HbsAg: hepatitis B surface antigen. Indicates the presence of hepatitis B virus.
6. HBV: hepatitis B virus.
7. HCV: hepatitis C virus.
8. HIV: human immunodeficiency virus (the virus that causes AIDS).  
OPIM: other potentially infectious material. In addition to blood, this includes: amniotic fluid, synovial fluid, cerebrospinal fluid, semen, vaginal secretions, or any body fluid visibly contaminated with blood. Saliva is included in dental settings.
9. PEP: post exposure prophylaxis. Antiretroviral medications that may help prevent infection by the HIV.

## PROCEDURE:

Following an exposure to blood or OPIM.

- A. Report the incident to your supervisor **immediately**.
- B. Clean wound with soap and water or, in the case of ocular or other mucous membrane exposure, flush area with copious amounts of clear water or saline (fifteen minutes is the recommended length of time to flush).
- C. Report the exposure **immediately** to the Student/Employee Health Services **817-735-2228**. If after working hours, page **817-216-3786**. *Expediency is important and directly affects postexposure prophylaxis (PEP)*. Obtain consent for testing from the patient involved in the exposure.

From the patient:

- Draw 2 tiger top tubes.
  - Label with patient name.
  - Mark UNTHSC lab requisition for HIV-1 antibody, hepatitis C antibody, and hepatitis B surface antigen.
  - Note on requisition that specimen is for student/employee *exposure follow-up*.
- D. Review patient history for risk factors (appendix A) or evidence (lab/exam/history) of infection with HIV, HBV, or HCV.

**If patient has a history of infection with HIV, HBV, or HCV or has risk factors for the diseases, collect specimens from student:**

- Draw 2 tiger top tubes.
- Label with student name.
- Mark UNTHSC lab requisition for HIV-1 antibody, hepatitis C antibody, and hepatitis B antibody.
- Indicate on requisition for *exposure follow-up*.

*Even in the presence of a negative history and negative risk factors the student/employee may request to have base line testing done.*

- E. Complete an accident report form and send to the Safety office. Students use employee form. Include in the report:
  - the date and time of the incident,
  - type of exposure e.g., needlestick, splash, etc.,
  - amount and type of fluid involved,
  - severity (depth of injection, duration of contact, etc.)
  - type of PPE used.

The accident report form may be found at [www.hsc.unt.edu/Departments/Hrs/wcpacket.cfm](http://www.hsc.unt.edu/Departments/Hrs/wcpacket.cfm)

- F. Counseling and follow-up will be done by Student/Employee Health.
- G. If the student has not had the hepatitis B vaccine or has not completed the series and the patient/source is HbsAg positive, HBIG will be recommended and start/completion of the vaccine series.

H. A tetanus/diphtheria (Td) vaccination will be provided if a puncture wound has been sustained and it has been more than ten (10) years since last vaccination.

**OFF-CAMPUS LOCATIONS:**

Follow above policy/procedure. For billing information call 817-735-2228 from 8-5 Monday – Friday.

**PREVENTION:**

For prevention of exposures see the UNTHSC [Bloodborne Pathogen Exposure Control Plan](#)

**DOCUMENTATION:**

- Medical management and treatment will be documented in the student medical record, which is maintained by Student/Employee Health.
- Treatment obtained outside of Student/Employee Health is discouraged, but if necessary i.e., off-campus rotation, copies of the treatment record and lab results should be forwarded to Student/Employee Health for follow-up and filing in the medical record.

**FOLLOW-UP:**

- Review/revise policy annually.
- All exposures shall be reported to the Infection Control Committee quarterly by Student/Employee Health.

**RESPONSIBILITY:**

Clinics/Labs/Departments/Student Affairs/Student/Employee Health

**REVIEW PANEL:**

Infection Control Committee/Student Advisory Committee

**REFERENCES:**

APIC (1996). [Infection Control and Applied Epidemiology: Principles and Practice.](#)

Centers for Disease Control and Prevention (1989). Guidelines for the prevention of transmission of human immunodeficiency virus and hepatitis B virus to health-care and public-safety workers. [Morbidity and Mortality Weekly Report.](#) Vol. 38, No. S-6.

Centers for Disease Control and Prevention (2001). Updated U.S. Public Health Services guidelines for management of occupational exposures to HBV, HCV, and HIV and recommendations for postexposure prophylaxis. [Morbidity and Mortality Weekly Report,](#) 50, No. RR-11. [www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5011a1.htm)

Federal Register (1991). Bloodborne pathogen rules and regulations. 29 CFR part 1910.1030. Vol. 56, No. 235. [www.osha-slc.gov/OshStd\\_data/1910\\_1030.html](http://www.osha-slc.gov/OshStd_data/1910_1030.html)

Morbidity and Mortality Weekly Report (1997). Immunization of health-care workers: recommendation of the advisory committee on immunization practices (ACIP) and hospital infection control practices advisory committee (HICPAC). Vol. 46 (RR-18), 1-42.

Occupational Safety and Health Administration (1999). CPL 2-2.44D- Enforcement procedures for the occupational exposure to bloodborne pathogens. [www.osha-slc.gov/OshDoc/Directive\\_data/CPL\\_2-2.69.html](http://www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2.69.html)

UNTHSC Human Resources Policy - 5.10 (2000).

## APPENDIX A: RISK CATEGORY FOR HIV, HBV, AND HCV

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### POPULATION GROUP

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#### **HIGH RISK FOR HIV**

IV/intranasal drug users  
Male to male sexual activity  
Female to female orogenital contact  
Heterosexual activity with multiple partners  
Infants of HIV positive mothers  
Healthcare workers with frequent blood/OPIM contact  
Mother to infant during breast-feeding

#### **HIGH RISK FOR HBV**

Immigrants/refugees from areas of high HBV endemicity  
Clients in institutions for the mentally retarded  
Users of illicit parenteral/intranasal drugs  
Male to male sexual activity  
Female to female orogenital contact  
Patients of hemodialysis units  
Acute or chronic liver disease  
Heterosexual active with multiple partners  
Healthcare workers with frequent blood/OPIM contact  
Prisoners  
Staff of institutions for the mentally retarded  
Infants of HbsAG (hepatitis B surface antigen) positive mothers

#### **HIGH RISK FOR HCV (still under investigation)**

Users of illicit parenteral/intranasal drugs  
Sexual contacts  
Household contacts  
Healthcare workers with frequent blood/OPIM contact  
History of blood transfusions  
Acute or chronic liver disease  
Infants of anti-HCV positive mothers

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**APPENDIX B: RECOMMENDATIONS FOR HEPATITIS B PROPHYLAXIS**

EXPOSED PERSON (student/employee)	TREATMENT WHEN SOURCE IS FOUND TO BE:		
	HBsAg-Positive	HbsAg-Negative	Source not Tested or Unknown
<u>Unvaccinated</u>	HBIG x 1* and initiate HBV vaccine	Initiate HBV vaccine	Initiate HBV vaccine
<u>Vaccinated</u> Not completed vaccine	HBIG x 1 and complete vaccine on schedule	Complete vaccine on schedule	Complete vaccine on schedule
<u>Previously Vaccinated</u> Known responder	Test for quantitative anti-HBs: If adequate+, no treatment If inadequate, HB vaccine booster dose Consider HBIG on a case-by-case basis.	Test for quantitative anti-HBs: If adequate, no treatment If inadequate, HB vaccine booster dose	Test for quantitative anti-HBs: If adequate, no treatment If inadequate, HB vaccine booster dose
Known non-responder	HBIG x 2 or HBIG x 1 plus 1 dose HB vaccine	No treatment	If known high-risk source, may treat as if source were HBsAg-positive
Response unknown	Test for quantitative anti-HBs: If inadequate, HBIG x 1 plus HB vaccine booster dose If adequate, no treatment	Test for quantitative anti-HBs: If inadequate, HB vaccine booster dose If adequate, no treatment	Test for quantitative anti-HBs: If inadequate+, HB vaccine booster dose If adequate, no treatment

\* HBIG dose 0.06 ml/kg IM (deltoid in adults). Should be given as soon as possible following an exposure and within 24 hours, if possible. May be given simultaneously with the HBV vaccine.

+ Adequate Anti-HBs is greater than or equal to 10 SRU by RIA or positive by EIA, or equivalent test, and demonstrated within the last 24 months.