

HARBOR-UCLA MEDICAL CENTER

SUBJECT: EXPOSURE TO BLOOD BORNE PATHOGENS  
HBV, HCV AND HIV

POLICY NO. 206

**PURPOSE:**

To ensure all workforce members with occupational exposure to blood or other infectious material receive appropriate evaluation and treatment.

**POLICY:**

Any employee, trainee, or volunteer of Harbor-UCLA Medical Center who is exposed to needles or other sharp devices, blood products, or bodily secretions from patients should be counseled regarding risk of exposure and any necessary post-exposure prophylaxis. In the event of such exposures, the employee should be counseled regarding risk of hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV) and given necessary post-exposure prophylaxis (PEP). The degree of risk and relevant prophylaxis will depend upon an assessment of the type of exposure and the degree of employee susceptibility. The evaluation may require laboratory testing of employee and patient blood/sera.

**PROCEDURE:**

**I. KNOWN OR SUSPECT EXPOSURE**

Any employee who sustains a skin puncture by a needle or sharp device previously used on a patient, or whose non-intact skin or mucous membrane(s) is exposed to blood, blood products or bodily fluid from a patient, will be considered to be at risk. The patient's blood or blood products may be contaminated with potentially transmissible blood-borne viruses, specifically hepatitis B, hepatitis C, and HIV.

The employee will report to Employee Health on weekdays from 7:00 a.m. – 15:30 p.m., excluding weekends and holidays, and the Employee Health Nurse will make the determination to treat and/or seek expert consultation as necessary. The Employee Health Nurse will coordinate the laboratory testing per protocol and determine the need for follow-up. During non-business hours, the employee will report to the Adult Emergency Department and ask to see the charge nurse because of an occupational exposure. The employee will be seen immediately in the Emergency Department, where any relevant treatment will be initiated; the employee **must** report to EHS for follow-up on the

EFFECTIVE DATE: 1/83

SUPERSEDES:

REVISED: 6/85, 7/86, 2/91, 4/92, 10/92, 8/95, 3/99, 03/05, 07/06, 01/10, 04/14, 04/17

REVIEWED: 7/86, 9/89, 10/92, 8/95, 3/99, 2/02, 07/06, 01/10, 04/14, 04/17

REVIEW COMMITTEE: N/A

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following work day. If the following day is a weekend or holiday, the employee must report on the next possible business day.

**A. Procedure for Employee**

1. Wash exposed area.
2. Notify supervisor.
3. Collect information about source patient if possible, from medical record or from patient (h/o Hepatitis B, C, or HIV).
4. Obtain Industrial Accident Report Form HH147 from supervisor or Industrial Accident Clerk/Human Resources.
5. Go as soon as possible, ideally within one hour of the exposure, to Employee Health, during weekdays between 7:00 a.m. and 15:30 p.m. Monday through Friday. If the exposure occurs after 15:30 p.m. or before 7:00 a.m. on weekdays, or on weekends and holidays, report to the Charge Nurse in the Emergency Department.

**B. Procedures for Employee Health Nurse or Emergency Department Physician**

Assess the employee/volunteer/student with needle stick or other exposure to body fluids, and if indicated (if the exposure is deemed significant, and could lead to transmission of a pathogen), instruct employee that appropriate baseline blood samples i.e., anti-HBs antibody, anti-HCV antibody, ALT, and HIV will be drawn in Employee Health after appropriate consent.

1. Obtain name of source patient, ward, room number, hospital number and circumstances involving exposure. Details should indicate type of needle, gauge, presence of blood in needle, type of body fluid, depth of needle stick, or any other information pertinent to the exposure. For each exposure, the Employee Health nurse or the Emergency Department physician evaluating the employee should follow the occupational exposure protocol to determine the risk of exposure, need for rapid HIV testing of source patient, etc.
2. HIV testing should be done as a stat test, via opt out testing. Hep B and C do not require consent from the source. In California, unless the source is unknown or if consent is not required by law, the exposed Employee Health or Emergency Department provider must make a reasonable attempt to notify the source patient's Harbor physician at time of incident to request information on whether the source patient has tested positive or negative for a communicable disease and the availability of blood or other patient samples. If contacting the source patient's physician is unsuccessful, or the source refuses to consent, and the source patient's blood is available, it may be tested. Results and attempts to contact must be documented, accordingly.
3. If the source patient is unable to participate in an opt-out discussion (sedated, altered, etc.), or if the source patient refuses, according to California law a rapid HIV test can be ordered on an available blood sample, but only in the context of a clinically meaningful exposure.

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4. If the source patient is HIV+ by history, or is found to be HIV+ during the hospitalization, or via rapid HIV testing following the exposure, the Employee Health nurse should contact HIV fellow (Pager 310-501-4260) **immediately** to discuss possible HIV post-exposure prophylaxis. Antiretroviral agents are available for PEP 24 hours/day, seven days/week through the hospital pharmacy in the basement, with appropriate selection and approval by the HIV fellow, in concert with discussion with Dr. Witt or Dr. Daar in the Division of HIV Medicine. In the event that neither Dr. Witt nor Dr. Daar is available, the Post-Exposure /PEpline should be contacted at 888-4484-4911.
5. Review employee's health records to determine status of hepatitis B immunity and tetanus prophylaxis.
6. Any and all blood draws on employees **MUST** be done through Employee Health; the ED physician evaluating an employee for an occupational exposure should refer the employee for blood draw to Employee Health the next working day. Employee's blood should **NOT** be submitted for testing through the ED.
7. Obtain blood test results on employee and patient's hepatitis B and C screening within 48 hours if possible.
8. Employee Health will be in communication with employee for blood test results.
9. If the source patient is known to have hepatitis or to be at risk for such infection, and a significant exposure has occurred, hepatitis B immune globulin (HBIG) should be administered before results of blood test are available or within 24 hours of exposure (MMWR June 29, 2001/50RR11;20-21. Employee Health Nurse will coordinate necessary paperwork and follow-up testing.
10. Notify employee to return to Employee Health for follow-up, and follow recommendations outlined below:
  - If the source patient is HBsAg positive, and the exposed employee has:
    - Negative anti-HBc and anti-HBs: give HBIG 0.06ml/kg body weight (max 5 ml) within 72 hours (utility beyond 7 days in unclear), and strongly encourage employee to begin hepatitis B vaccine series within 7 days following the exposure.  
Employees choosing not to receive hepatitis B vaccine should be given a second dose of HBIG in one month.
    - Had 1 or 2 hepatitis B vaccine injections and negative anti-HBs and anti-HBc: give one injection of hepatitis B vaccine.
    - Documented positive anti-HBs or anti-HBc: no treatment necessary.
  - If the source patient is negative for HBsAg, no treatment is required; however, employee is strongly encouraged to begin hepatitis B vaccine series, if not immune to hepatitis B virus.
  - If significant exposure and the source patient is positive for HCV antibody, the following tests should be ordered:
    - i. On the source patient: HCV RNA
    - ii. On the employee:
      - Anti-HCV antibody and ALT immediately

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- Anti-HCV antibody and ALT 4-6 months after the exposure (if previous tests were negative)
  - HCV RNA can be considered at the 4-6 week follow-up
  - If the employee is HCV antibody positive at baseline, the employee should be referred to his/her physician for further care.
11. With appropriate consent, Employee Health will order a baseline HIV test on all employees who have had a needle stick or blood exposure. The source patient's HIV status cannot be legally assessed if the exposed employee declines baseline HIV blood test.
- If the employee is HIV antibody positive at baseline, the employee should be referred to a specialist for further care.

**C. Procedure for Laboratory Service**

All blood specimens will be drawn in the outpatient PCDC laboratory

- Blood testing for anti-HBs antibody will be done in the serology laboratory for exposed employee within 48 hours when received Monday through Friday (noon).
- Testing is **not** performed on weekends or holidays, but the next business day.
- Employee Health Nurse will obtain results in a timely manner to provide follow-up treatment for the employee.

**II. UNKNOWN SOURCE EXPOSURE**

In the event that an employee is injured by a needle from an unknown source, the following guidelines apply:

- If the needle is presumed to be sterile, then no action other than an industrial accident report is necessary.
- If the needle had been used but from an unknown source, and the employee has not been vaccinated against hepatitis B, s/he should be given the first dose of hepatitis B vaccine within 7 days of exposure and vaccination series completed as recommended. If the employee does not demonstrate immunity upon testing, or if immune status is unknown, HBIG should be considered.
- A baseline HIV test should be obtained on the employee through Employee Health, with follow-up HIV testing in Employee Health, at 6 weeks, and 4 months). As noted, if the employee declines HIV testing, the source patient cannot be tested for HIV.
- Evaluate tetanus status and give booster injection, if needed.
- Counseling regarding risk of HIV exposure or need for testing and prophylaxis can be obtained by contacting the HIV fellow (Pager 310-501-4260), In general, exposures to a needle from an unknown source does not require prophylaxis, except in unusual circumstances.

**III. EXPOSURE TO PATIENTS WITH HIV INFECTION**

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- For an employee with a needle stick or exposure to contaminated body fluids from a patient with known HIV infection, HIV testing should be obtained on the employee at baseline and repeated in 6 weeks, and 4 months. Extended HIV follow-up (12 months) is recommended for the HCW who becomes infected with HCV after the exposure to a source co-infected with HIV and HCV. HIV testing is to be ordered by Employee Health with appropriate consent of the employee.
- The HIV service should be contacted immediately (Pager 310-501-4260) when exposure to an HIV+ source patient has occurred, to provide advice on the need for post-exposure prophylaxis (PEP). If PEP is indicated, appropriate treatment recommendations (most commonly Truvada plus an integrase inhibitor will be prescribed for a total of 4 weeks) will be made by the HIV service fellow, in consultation with Dr. Witt or Dr. Daar. The importance of completing the prescribed regimen will be emphasized, and side effect management will be provided in consultation with the HIV service to support completion of regimen. Treatment recommendations follow the current USPHS guidelines for managing occupational exposures to HIV (see reference).
- If PEP is warranted, medications will be available 24 hours/day, 7 days/week through the hospital pharmacy in the basement. PEP should be initiated as quickly as possible following the exposure. A 2 week supply of medications will be provided, with a second 2 week supply provided at the 2 week follow up visit in Employee Health.
- Employees initiating PEP will be followed closely through employee health, in close consultation with the HIV service to monitor for tolerability and toxicities. Laboratory monitoring for toxicities will be performed at baseline and 2 weeks after starting PEP only as indicated.
- Evaluation of the exposed HCW should include obtaining a history of underlying medical conditions that may affect choice of PEP regimens, including pregnancy, possibility of pregnancy, breast feeding, or renal or hepatic disease. If the employee thinks she may be pregnant, we will request a pregnancy test prior to prescribing PEP, so that appropriate counseling may be provided.
- In the setting of an occupational exposure from a known or suspected HIV-positive source, the HCW will be advised to avoid blood or tissue donation, breastfeeding, or pregnancy for at least 12 weeks following the exposure.
- Consider reevaluation of the exposed HCW 72 hours post-exposure, especially after additional information about the exposure or source becomes available.

**REFERENCES:**

Updated US Public Health Service Guidelines for the Management of Occupational Exposures to Human Immunodeficiency Virus and Recommendations for Post-exposure Prophylaxis. Infection Control and Hospital Epidemiology.2013;34(9):875-892.