

January 2015

MANAGEMENT OF OCCUPATIONAL EXPOSURE TO BLOOD BORNE PATHOGENS

1. PURPOSE: To describe the actions to be taken when a medical center employee has percutaneous (e.g. needlestick or cut) or mucous membrane (e.g. splash to eye or mouth) exposure to blood or other potentially infectious material (OPIM) or has significant cutaneous exposure. Examples of OPIM and significant exposure are attached (Attachment A).

2. POLICY: VAMHCS Employees exposed to blood or other potentially infectious material will receive prompt evaluation and appropriate testing, offer of treatment, if necessary, counseling and follow-up care at VA expense. Infection incurred in the performance of duties is covered by the injury compensation provisions of 5 U.S.C., Chapter 81. Initial evaluation and treatment will be offered by the VAMHCS Occupational Health Services to University of Maryland affiliated residents and students with such exposures and any students, fellows or others that work at the VAMHCS that may have exposure. University of Maryland, Baltimore Office of Student affairs and Employee Health will provide follow up and treatment and others will be followed by their respective employers. All blood exposures will be monitored on a quarterly basis within the VAMHCS for compliance, with the Blood Borne Pathogen Occupational Safety and Health Administration (OSHA) regulation.

3. BACKGROUND: Inadvertent exposure to blood from patients infected with Human Immunodeficiency Virus (HIV), Hepatitis B, or Hepatitis C places employees at risk of becoming infected. Prevention of exposure is addressed in the facility exposure control plan, and includes identifying employees with potential exposure to blood so that they can be offered the Hepatitis B vaccine, as well as practices and equipment which prevent exposure. Treatment is available which can reduce the risk of an employee becoming infected after an inadvertent exposure, but this treatment must be started promptly (within two hours) for it to be effective.

4. RESPONSIBILITY:

a. **Employees** are responsible for immediately notifying their supervisors of occupational exposure to blood borne pathogens, seeking prompt evaluation in the Occupational Health Clinic or emergency/urgent care area, completing required paperwork, and for following up in Occupational Health as recommended.

b. **Supervisors** are responsible for ensuring prompt medical evaluation of the exposed employee and for completing required documentation.

c. **Evaluating Health Care Providers** (Occupational Health, Emergency Care Services Attending or Administrative Officer of the Day (AOD)/Medical Officer of the Day (MOD) are responsible for evaluating the employee's risk and providing treatment and follow-up.

d. **Primary Care Provider or Attending of the source patient** is responsible for ordering and procuring the appropriate laboratory tests, including obtaining informed consent of the patient for HIV testing and documenting consent in patient's chart unless this status is known to be positive.

e. **Clinical Laboratory** is responsible for providing the required laboratory test results in a timely manner to VAMHCS Occupational Health or Needlestick Hotline Advisor during non-administrative hours.

f. **Occupational Health Program Coordinator** is responsible for ensuring that the evaluation and treatment of exposed employees is timely and appropriate. Exposures are tracked and reported in ASISTS, Infection Control and Environment of Care Committees, to ensure mechanisms are in place for effective evaluation of sources of exposure and protection and/or processes are available to aid in prevention of such exposures.

g. **Hospital Epidemiologist** is responsible for collaborating with Occupational Health in exposure assessment, treatment recommendations, and tracking issues, when appropriate.

h. **Chief, Pharmacy** is responsible for maintaining a (1) week supply of anti-retroviral agents at each VAMHCS site, for weekends, and for holidays.

i. **The Site Pharmacy** is responsible for designating storage areas, accessible after regular hours, of post-exposure medications and their attached medication forms and informational pamphlets.

5. ACTIONS:

a. **The Exposed Employee:**

(1) Should immediately wash exposed skin with soap and water and flush/irrigate exposed mucous membranes (mouth, eye or other) with water.

(2) Will immediately report to the supervisor.

(3) Exposed employees of the Baltimore Rehabilitation and Extended Care Center (BRECC) or community-based outpatient clinics will be evaluated via coordination with the Needlestick Hotline Advisor (410-447-STIK) (Attachment C).

b. **The supervisor will:**

(1) Immediately refer the exposed employee to the Occupational Health Clinic. If the clinic is closed, the employee will be referred to the emergency/urgent care area for medical evaluation and treatment.

(2) Obtain from the employee a complete Report of Accident (2162 in ASISTS), as well as advise the exposed employee of their right to file workers compensation claim CA-1.

(3) Submit U.S. Department of Labor CA form-1 (Report of Occupational Injury) and Veterans Administration VA Form 2162 (Report of Accident) within the required time frame through Automated Safety Incident Surveillance & Tracking System (ASISTS).

c. The Evaluating Healthcare Provider will:

(1) Assessing the employee's risk of infection based on injury and source patient risk (Attachments A, B, and C) and may call the Needlestick hotline at (410-447-STIK) for direction in the assessment process.

(2) Follow procedures for evaluating risk, providing treatment, and ensuring follow-up.

(3) Document the risk assessment and interventions and advising employee to follow-up with Occupational Health on the next business day.

(4) Maintaining confidentiality as per regulations (Public Law 100-322, Section 121).

(5) Contact the attending or other Primary Care Provider caring for the source patient to request and consent for blood tests needed to assess risk (Attachment D).

(6) Document the blood borne exposure either in Computerized Patient Record System (CPRS) or Electronic Blood Borne Pathogen Exposure Note Template.

(7) Use the information gathered about the type of exposure and risk to the source patient to determine tests and treatment indicated, according to the attached algorithm (Attachment E) or consulting Needlestick Hotline (410-447-STIK).

(8) Review the Hepatitis B, Hepatitis C, and HIV status of the source patient, or contact the source patient's treating physician if status is not known.

(9) Request a Needlestick Target Panel (Hepatitis B antibody will only be done if employee has no documented antibody), Hepatitis C Antibody and Alanine Aminotransferase Activity (ALT) will only be done if source is positive for Hepatitis C, obtain informed consent for HIV testing. Verbal consent can be obtained for HIV testing and documented in CPRS in the order comment box in the lab order. Record whether employee accepted or declined testing.

(10) Prescribe Hepatitis B immune globulin, and/or Hepatitis B vaccine, and/or anti-retroviral drugs according to the attached algorithms (Attachment E) calling for expert advice if needed (Attachment C, Needlestick Hotline). The side effects and risks vs. benefits of anti-retroviral therapy should be discussed with any employee offered anti-retroviral treatment. The decision to prescribe anti-retroviral agents should be discussed with the Hospital Epidemiologist or by calling the Needlestick Hotline. HIV post-exposure prophylaxis (PEP) if indicated should be started within one to two hours of exposure whenever possible. Employees electing PEP must agree to initial evaluation (HIV, CBC with differential, renal and liver function tests, CPK and if female, pregnancy test,) and follow-up evaluations in Infectious Disease Clinic every two weeks while under treatment, and at the end of treatment. There is currently no effective Hepatitis C prophylaxis available.

(11) Administer the Tetanus Diphtheria Booster Intra-Muscular (IM) if last tetanus shot over ten years ago or unknown.

(12) Review measures the employee should take to prevent transmitting any acquired infection, and advise the employee to report to Occupational Health for follow-up the next business day.

(13) Give the employee a copy of the Center for Disease Control (CDC) pamphlet, "Exposure To Blood - What Health-Care Workers Need to Know" at website http://www.cdc.gov/ncidod/hip/Blood/exp_blood.htm.

d. Visitor exposed to blood or other potentially infectious material (OPIM) while on site will receive emergency evaluation and be offered treatment as outlined in C(1) through C(8). Documentation will be made on a Report of Contact, which will be forwarded to the Office of Risk Management. Visitors so exposed will be referred to their personal health care providers or the Health Department for further follow-up.

e. Follow-up:

(1) All employees with blood or OPIM exposure will be evaluated in Occupational Health within one week of exposure, preferably by the next business day. Employees may choose follow-up with their own health care provider.

(2) During follow-up visit, the source patient risk factors and employee immunity will be reviewed.

(a) If source patient test(s) was (were) not ordered, the Occupational Health Provider will contact the treating health care provider to again request need to order screening lab tests.

(b) If the source patient was negative for HIV, Hepatitis B and Hepatitis C, and is deemed low risk, no further testing of the employee is needed. Testing may be performed at the employee's request.

(c) If the employee is immune to Hepatitis B, no further Hepatitis B testing is required.

(d) Follow-up test(s) will be ordered according to the follow-up protocol (Attachment B).

(e) Continuation of prescription for anti-retroviral agents will be according to current CDC recommendations, and including co-signature of the Occupational Health Physician, the Hospital Epidemiologist or a member of the Infectious Diseases staff.

6. REFERENCES: Update: Provisional Public Health Service Recommendations for Chemoprophylaxis after Occupational Exposure to HIV. MMWR, 45 (No. 22)

VHA Directive 96-024, subject: Compliance with OSHA Standards on Occupational Exposure to Bloodborne Pathogens.

VHA Directive 10-95-105, subject: Employee Health Follow-up for Human Immunodeficiency Virus (HIV) and Hepatitis B Virus (HBV) after an Accidental Occupational Exposure Incident Involving Blood and Other Potentially Infections Material (OPIM)

VHA Directive 10-95-038, subject: Hepatitis B Vaccine. IL-10-96-018, subject: Undersecretary for Health's Information Letter. Provisional Recommendations for Prophylactic Treatment Following Occupational Exposure to Blood and Body Fluids and HIV Infection.

Occupational Safety and Health Administration Occupational Exposure to Bloodborne Pathogens. Federal Register Vol. 56, No. 235

Case-Control Study of HIV Seroconversion in Health-Care Workers After Percutaneous Exposure to HIV-Infected Blood-France, United Kingdom, and United States, MMWR 44 (No. 50)

Prevention, Management & Chemoprophylaxis of Occupational Exposure to HIV. Ippolito G, International Health care Worker Safety Center, University of Virginia

Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV and HIV and Recommendations for Post exposure Prophylaxis. MMWR, Recommendations and Reports; 50(RR11); 1-42

VAMHCS Policy 512-101/MC-024, subject: Occupational Health Program

The CDC recommendations for HIV PEP have been modified [MMWR 2005:54(RR09)1-17].

7. RESPONSIBLE OFFICE: The Managed Care Office (101/MC) is responsible for the contents of this memorandum.

8. RESCISSIONS: VAMHCS Policy Memorandum 512-101/MC-005, subject: Management of Occupational Exposure to Bloodborne Pathogens, dated March 2014.

9. RECERTIFICATION: This document is scheduled for recertification on/before the last working day of January 2018.

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ATTACHMENTS: A – Management of Occupational Exposure to Bloodborne Pathogens
B – Occupation Occupational Health Clinic Employee Needlestick Hotline
C – Needlestick Hotline
E – Post-exposure Prophylaxis Algorithm
G – Hepatitis B Prophylaxis

**MANAGEMENT OF OCCUPATIONAL EXPOSURE TO
BLOODBORNE PATHOGENS**

1. Potentially Infectious Materials:

Blood

Blood-tinged body fluid

Peritoneal fluid

Pleural fluid

Amniotic fluid

Semen

Vaginal secretions

Cerebrospinal fluid

Synovial fluid

Saliva in dental procedures

Any unidentifiable body fluid

Unfixed human tissue

Note: Urine, feces, saliva, sweat are not considered potentially infectious unless blood-tinged.

2. Consider exposed if:

Percutaneous exposure

Mucous membrane exposure (eye, mouth or other mucous membrane)

Non-intact skin exposure to blood (especially at risk if prolonged exposure)

**EMPLOYEE HEALTH CLINIC
EMPLOYEE NEEDLESTICK/EXPOSURE FOLLOW-UP**

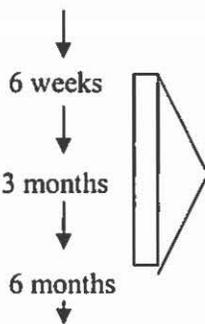
SOURCE PATIENT

Known Hepatitis B (or Hep B S Ag + on testing)
OR
Known Hepatitis C (or Hep C Ab + on testing)
OR
Known HIV (or HIV + on testing)
IV Drug Use
OR
Sexual Risk Factors

Yes

No

- 1.) Make sure employee has had post-exposure baseline evaluation and counseling.
- 2.) Make sure employee was offered appropriate prophylaxis (including Hep B vaccine if not immune.)
- 3.) Give employee written notification of risk, follow-up dates and hand-out about preventing transmission.
- 4.) Remind employee to return for evaluation if any flu-like symptoms develop during the following 6 months.
- 5.) Place incident in ASISTS.
- 6.) Complete VA-required paperwork.
- 7.) Schedule follow-up HIV (with consent) and needlestick panel tests as follows:



End of six months, if all test negative, Employee has completed testing

- 1. Inform employee that further testing is not indicated.
- 2. Remind employee to return for evaluation if any flu-like symptoms during the following year.
- 3. Give employee notification of risk and hand-out.
- 4. Complete VA-required paperwork.
- 5. If employee chooses to be tested.

If at any point markers become positive, treat as an occupational illness; continue testing for other viruses until end of six months.

STUCK

IN THE SAME OLD JOB

?

WELL, THIS WON'T HELP

BUT,

IF YOU HAVE BEEN

STUCK WITH A NEEDLE OR OTHER SHARPS,
OR

HAVE BEEN OTHERWISE

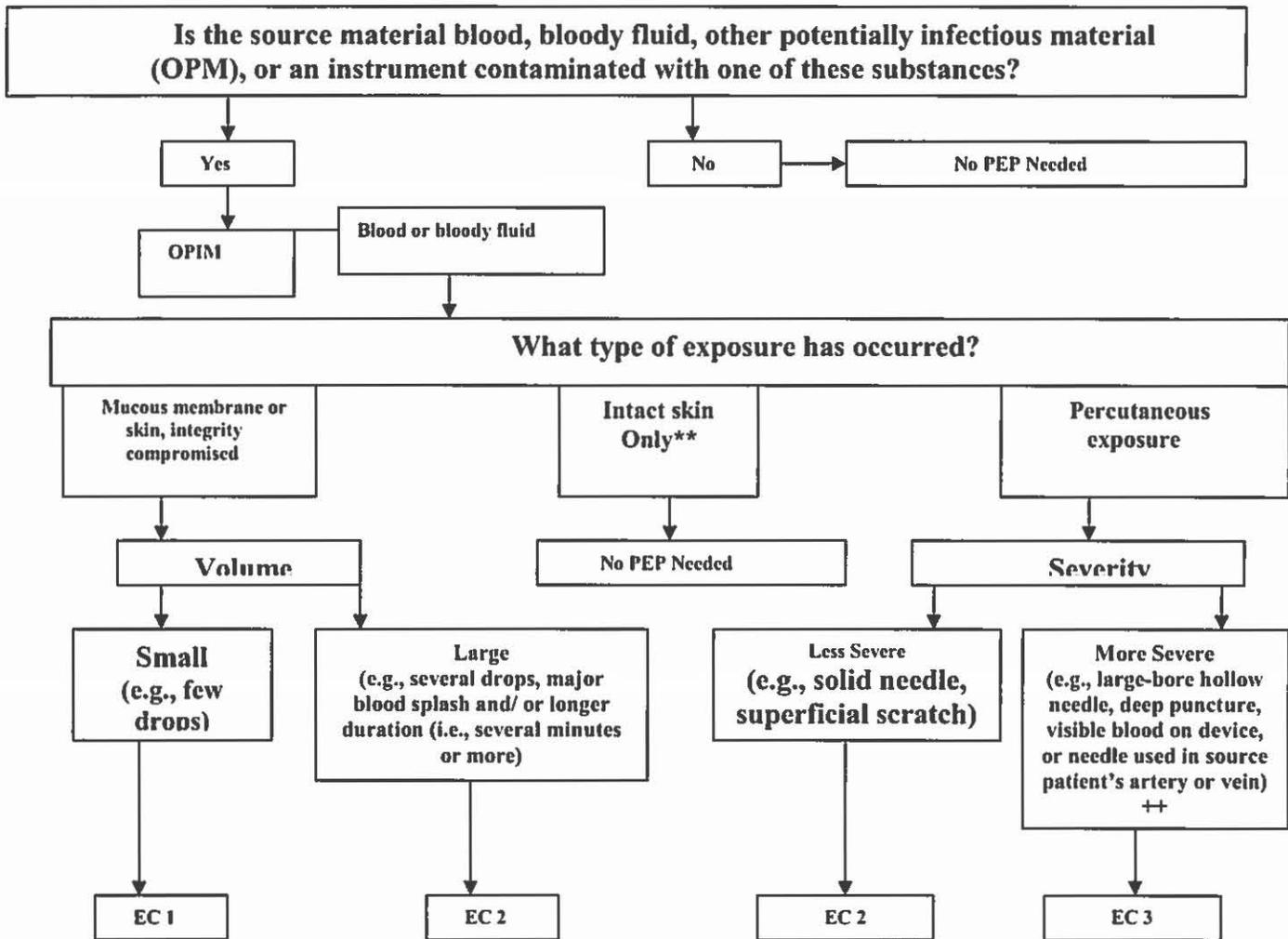
EXPOSED TO BLOOD

PAGE THE NEW NEEDLESTICK HOTLINE AT:

410-447-STIK

Post-exposure Prophylaxis Algorithm

STEP 1: Determine the Exposure Code (EC)



* This algorithm is intended to guide initial decisions about PEP and should be used in conjunction with other guidance provided in this report.

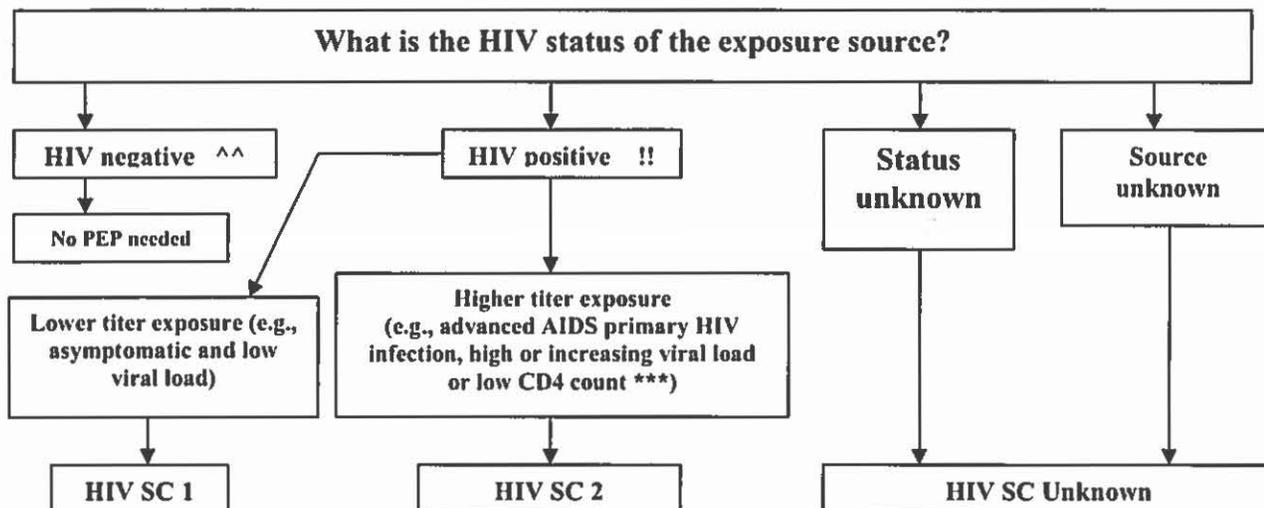
Semen or vaginal secretions; cerebrospinal, synovial, pleural, peritoneal, pericardial, or amniotic fluids; or tissue. Exposures to OPIM must be evaluated on a case-by-case basis. In general, these body substances are considered a low risk for transmission in health-care settings. Any unprotected contact to concentrated HIV in a research laboratory or production facility is considered an occupational exposure that requires clinical evaluation to determine the need for PEP.

1 Skin integrity is considered compromised if there is evidence of chapped skin, dermatitis, abrasion, or open wound.

** Contact with intact skin is not normally considered a risk for HIV transmission. However, if the exposure was to blood, and the circumstances suggests a higher volume exposure (e.g., an extensive area of skin was exposed or there was prolonged contact with blood), the risk for HIV transmission should be considered.

++ The combination of these severity factors (e.g., large-bore hollow needle and deep puncture) contribute to an elevated risk for transmission if the source person is HIV-positive.

STEP 2: Determine the HIV Status Code (HIV SC)



^^ A source is considered negative for HIV infection if there is laboratory documentation of a negative HIV antibody, HIV polymerase chain reaction (PCR), or HIV p24 antigen test result from a specimen collected at or near the time of exposure and there is no clinical evidence of recent retroviral-like illness.

!! A source is considered infected with HIV (HIV positive) if there has been a positive laboratory result for HIV antibody, HIV PCR, or HIV p24 antigen or physician-diagnosed AIDS.

***Examples are used as surrogates to estimate the HIV titer in an exposure source for purposes of considering PEP regimens and do not reflect all clinical situations that may be observed. Although a high HIV titer (HIV SC 2) in an exposure source has been associated with an increased risk for transmission, the possibility of transmission from a source with a low HIV titer also must be considered.

STEP 3: Determine the PEP Recommendation

EC HIV SC PEP recommendation

1 1 PEP may not be warranted. Exposure type does not pose a known risk for HIV transmission. Whether the risk for drug toxicity outweighs the benefit of PEP should be decided by the exposed HCW and treating clinician.

1 2 Consider PEP.***Exposure type poses a negligible risk for HIV transmission. A high HIV titer in the source may justify consideration of PEP. Whether the risk for drug toxicity outweighs the benefit of PEP should be decided by the exposed HCW and treating clinician.

2 or 3 1 or 2 PEP Recommended. Most HIV exposures are in this category: Some risk for HIV transmission may exist and use of PEP is appropriate.

Unknown If the source or, in the case of an unknown source, the setting where the exposure occurred suggests a possible risk for HIV exposure and the EC is 2 or 3, consider PEP

PEP regimen: Truvada (emtricitibine/tenofovir) and Isentress (raltegravir) every day.

HEPATITIS B PROPHYLAXIS

1. If source patient is Hepatitis B Surface Antigen Positive AND

a. If the employee was vaccinated with positive post-vaccine titer.

(1) No treatment is indicated until baseline titer results are back.
Review status on follow-up in Employee Health.

b. If the employee was never vaccinated:

(1) Give one dose of HBIG

(2) Initiate vaccine series (other arm).

c. If the employee had vaccine but was antibody-negative on post-vaccine titer.

(1) Give one dose of HBIG (second dose in Employee Health in one month initiate re-immunization attempt with vaccine (other arm)).

2. Follow-up

a. If employee was vaccinated in past but immune status was not checked, treat based on results of baseline Hepatitis B Surface Antibody. If negative, give one dose of HBV IG. Give booster dose of vaccine and retest titer one month. If employee was positive for Hepatitis B Surface Antibody they should be considered immune and need no further treatment.