# Occupational Exposure for Oral Healthcare Workers

## Resources Supporting Policy and Procedures pertaining to a Bloodborne Pathogen Exposure for Dental Settings

**How to use this file:** Click on the second icon from the top to enable "bookmarks". An index of all the sections in the file will open in a separate window. Click on the section of interest to go to that location.

*The clinical recommendations in this toolkit are current as of 1/1/2018, but are subject to change. For the most up-to-date information go to: [http://www.hivguidelines.org/pep-for-hiv-prevention/occupational/](http://www.hivguidelines.org/pep-for-hiv-prevention/occupational/)*

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### Post-exposure prophylaxis following occupational exposures in the oral health setting

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### Exposure Control Plan for Bloodborne Pathogen Exposures in the Office Setting

| Consideration and Preparation for an exposure control plan |
| Care of the Exposed Oral Healthcare Worker |
| HIV Testing of the Source Patient |
| Follow-up for Oral Healthcare Workers |

### Employer Issues and Responsibilities for Post-Exposure Management

- **NYSDOH HIV Guidelines- PEP for Occupational Exposure - Employer responsibilities**
- **American Dental Association: Employer Obligations After Exposure Incidents OSHA**

### Additional References and Resources

- **New York State Department of Health HIV Clinical Guidelines**: This program provides state of the art clinical guidelines on a wide range of topics including [PEP for Occupational Exposure to HIV](http://www.hivguidelines.org/pep-for-hiv-prevention/occupational/).
- **OSHA’s Model Exposure Control Plan** [https://www.osha.gov/Publications/osha3186.pdf](https://www.osha.gov/Publications/osha3186.pdf)

### Appendix

- **Appendix A**: Developing an Exposure Control Plan for a Small Private Office
- **Appendix B**: Exposure Record - sample
- **Appendix C**: Source Patient Record Documentation - sample
- **Appendix D**: Information for the Exposed Worker
- **Appendix E**: Information for the Source Patient

### Additional Resources

- **HIV Clinical Education Initiative (CEI)**: provides comprehensive training resources on HIV care and treatment including on-line training on post-exposure prophylaxis related to occupational exposure and non-occupational exposure. Visit [www.ceitraining.org](http://www.ceitraining.org)

  - **Post-Exposure Prophylaxis Clinical Card**: This reference card provides clinically relevant information on recommended regimens, screening protocols, lab tests and monitoring, the CEI Line, as well as websites for further information. The card attaches to a name tag to provide easy access to information about PEP, including phone numbers to call for assistance. Copies may be ordered free of charge from CEI at [https://www.surveymonkey.com/r/BG38MH5](https://www.surveymonkey.com/r/BG38MH5).

  - **CEI offers an Occupational PEP Video**, which reviews NYS guidelines on oPEP

- **The toll-free CEI Line (886-637-2342)** connects NYS clinicians with specialists who can provide information on PEP, PrEP, HIV, HCV and STD management.

- **NYS Worker’s Compensation Board**: [http://www.wcb.ny.gov/](http://www.wcb.ny.gov/)
  - Worker benefits and information regarding how to file a claim: [http://www.wcb.ny.gov/content/main/Workers/Workers.jsp](http://www.wcb.ny.gov/content/main/Workers/Workers.jsp)
POST-EXPOSURE PROPHYLAXIS FOLLOWING OCCUPATIONAL EXPOSURES IN THE ORAL HEALTH SETTING

INTRODUCTION

The New York State Department of Health AIDS Institute (NYSDOH AI) has issued updated guidelines that address *HIV Prophylaxis Following Occupational Exposure (PEP).* Healthcare workers, including dental practitioners, are at risk for occupational exposure to bloodborne pathogens including HIV, hepatitis B virus (HBV), and hepatitis C virus (HCV).\(^{1,2}\) In dentistry, the risk of sharps injuries is increased because of a small operating field, frequent patient movement, and the variety of sharp instruments used in dental procedures\(^{3}\). This toolkit provides recommendations, guidelines, and management considerations for occupational PEP in oral healthcare settings.

Risk of HIV Transmission Following Occupational Exposure

The risk of transmission of HIV to healthcare workers following occupational needlestick exposure is estimated at 0.23% (2.3 of every 1,000 such injuries if untreated)\(^ {1}\) Factors that increase the risk of HIV transmission include deep intramuscular injury, blood exposure from patients with high viral load levels, injury with a sharp device with visible blood, and injury with hollow-bore needles. Episodes of HIV transmission after non-intact skin exposure have been documented,\(^ {2}\) but the average risk of transmission by this route is estimated to be <0.09%\(^ {3}\). Although the effect of viral load level has not been studied in the setting of occupational exposures, studies have shown that the probability of sexually transmitting HIV is correlated with HIV viral load.\(^ {4-6}\) The risk of transmission can be expected to be increased in settings where source patients have high HIV viral load levels.

None of the 58 cases of documented seroconversion following occupational HIV exposure that were reported to the CDC through 2013 occurred among oral healthcare workers (OHWs).\(^ {1}\) Although more recent data are not available, a 1997 summary review of occupational blood exposures among OHWs reported an approximate rate of two to three injuries/exposures per year.

The risk of HIV infection through occupational exposure for OHWs compared with other healthcare workers (HCWs) may be lower due to both the decreased amount of viral load in saliva and the anti-HIV activity of saliva. When bloodborne percutaneous exposures occur among OHWs, most injuries are not deep and most occur outside the patient’s mouth, which poses less risk for re-contact with patient tissues.\(^ {7,8}\) Percutaneous injuries involve small amounts of blood and are caused by burs, needles, laboratory knives, and other sharp instruments. Injuries among oral surgeons may occur more frequently during fracture reductions with the use of wires.\(^ {8-15}\) Experience, as measured by years in practice, does not appear to affect the risk of injury among general dentists or oral surgeons.\(^ {8,9,15}\)

**Table 1** shows the estimated per-act probability of acquiring HIV from a known HIV-infected source by exposure.
HCWs exposed to percutaneous injuries are also at risk for HBV and HCV infection. The risk of transmission of HBV and HCV from an occupational exposure is significantly greater than HIV transmission. HBV infection is vaccine preventable and immunization is strongly recommended to protect all HCWs. The incidence of HBV infection following a needlestick ranges from 1% to 30%, depending on the presence of hepatitis e antigen (see Table 2). Although the most efficient mode of HBV transmission is percutaneous exposure, HBV is transmissible through direct contact with mucous membranes and nonintact skin (e.g., psoriasis, eczema, burns, wounds, cuts, and scratches).16 Because most HBV-infected HCWs do not recall an overt percutaneous exposure, other routes of transmission may account for a large percentage of HBV infections among HCWs.16 The risk of HCV infection following a needlestick is 1.8% (see Table 2), and the risk of transmission of HCV from a single mucous membrane exposure is negligible. Refer to HIV Prophylaxis Following Occupational Exposure, for recommendations for post-exposure management for HBV and HCV.

### RISK OF VIRAL HEPATITIS INFECTIONS FOLLOWING OCCUPATIONAL EXPOSURE

<table>
<thead>
<tr>
<th>Type of Exposure</th>
<th>Risk per 10,000 Exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Parenteral</strong></td>
<td></td>
</tr>
<tr>
<td>Blood transfusion</td>
<td>9,000</td>
</tr>
<tr>
<td>Percutaneous (needlestick)</td>
<td>30</td>
</tr>
<tr>
<td><strong>Other</strong>b</td>
<td></td>
</tr>
<tr>
<td>Biting</td>
<td>Negligible</td>
</tr>
<tr>
<td>Spitting</td>
<td>Negligible</td>
</tr>
<tr>
<td>Throwing body fluids (including semen or saliva)</td>
<td>Negligible</td>
</tr>
</tbody>
</table>


a Factors that increase the risk of HIV transmission include early and late-stage HIV infection, and a high level of HIV in the blood. Factors that reduce the risk of HIV transmission include low level of HIV in the blood and the use of Antiretroviral Therapy.

b HIV transmission through these exposure routes is technically possible but extremely unlikely and cases are not well documented.

### TABLE 2

<table>
<thead>
<tr>
<th>Source</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV</td>
<td>HBeAg- 22.0% - 30.0%</td>
</tr>
<tr>
<td></td>
<td>HBeAg+ 1.0% - 6.0%</td>
</tr>
<tr>
<td>HCV</td>
<td>1.8%</td>
</tr>
<tr>
<td>HIV</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

Risk and Management of Blood-Borne Infections in Health Care Workers

[https://www.nebi.nlm.nih.gov PMC/articles/PMC88939/](https://www.nebi.nlm.nih.gov PMC/articles/PMC88939/)
**INDICATIONS FOR PEP**

HIV PEP is recommended for individuals exposed to blood or visibly bloody fluid or other potentially infectious material (e.g., semen; vaginal secretions; breast milk; and cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids) that are associated with potential HIV transmission and in any of the exposure situations outlined in Table 3.2

| TABLE 3
<table>
<thead>
<tr>
<th>EXPOSURES FOR WHICH PEP IS INDICATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Break in the skin by a sharp object (including hollow-bore, solid-bore, and cutting needles or broken glassware) that is contaminated with blood, visibly bloody fluid, or other potentially infectious material, or has been in the source patient’s blood vessel</td>
</tr>
<tr>
<td>• Bite from a patient with visible bleeding in the mouth that causes bleeding in the OHW</td>
</tr>
<tr>
<td>• Splash of blood, visibly bloody fluid, or other potentially infectious material to a mucosal surface (mouth, nose, or eyes)</td>
</tr>
<tr>
<td>• Nonintact skin (e.g., dermatitis, chapped skin, abrasion, or open wound) exposure to blood, visibly bloody fluid, or other potentially infectious material</td>
</tr>
</tbody>
</table>

If it has been determined that PEP is indicated, procedures outlined in the Exposure Control Plan should be followed immediately.

**EXPOSURE CONTROL FOR BLOODBORNE PATHOGEN EXPOSURE IN THE OFFICE SETTING**

Oral healthcare facilities and private employers subject to Occupational Safety and Health Administration (OSHA) regulations must conform to the OSHA Bloodborne Pathogen Standard (OSHA Bloodborne Pathogen Standard 29CR CFR, Part 1910.1030, and Compliance Directive CPL 02-02-069, 11/27/01, Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens). This regulation requires a written exposure control plan (see Table 4)17 that must be reviewed and updated at least annually. The plan should include use of commercially-available devices shown to reduce the risk of occupational exposure.18,19 Employees must receive the exposure control plan during their orientation and review the plan annually. The plan must be easily accessible to all employees.

| TABLE 4
<table>
<thead>
<tr>
<th>ELEMENTS OF AN EXPOSURE CONTROL PLAN</th>
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<tbody>
<tr>
<td>The exposure control plan should address:</td>
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<tr>
<td>• Determination of employee exposure</td>
</tr>
<tr>
<td>• Implementation of various methods of exposure control, including:</td>
</tr>
<tr>
<td>o Standard precautions</td>
</tr>
<tr>
<td>o Engineering and work practice controls</td>
</tr>
<tr>
<td>o Personal protective equipment</td>
</tr>
<tr>
<td>o Housekeeping</td>
</tr>
<tr>
<td>• Hepatitis B vaccination</td>
</tr>
<tr>
<td>• Post-exposure evaluation and follow-up</td>
</tr>
<tr>
<td>• Communication of hazards to employees and employee training</td>
</tr>
<tr>
<td>• Record-keeping</td>
</tr>
<tr>
<td>• Procedures for evaluating circumstances related to exposure incidents</td>
</tr>
</tbody>
</table>

Other resources for developing an exposure control plan are: The NYSDOH HIV Occupational Exposure Guideline includes a section entitled *Post-Exposure Management: Employer Issues and Responsibilities* which is available at: [https://www.hivguidelines.org/pep-for-hiv-prevention/occupational/#tab_3_0](https://www.hivguidelines.org/pep-for-hiv-prevention/occupational/#tab_3_0) and appendices to this document:

- *Creating an Exposure Control Plan* – for small private practices
- *Exposure Record* – documents the exposure details and steps taken immediately after an OHW has experienced an exposure
- *Source Patient Record* – documents HIV testing of the source patient
- *Source Patient Information Sheet*
- *Sample paperwork the exposed worker can bring for immediate post-exposure care*

**CONSIDERATIONS FOR AN EXPOSURE CONTROL PLAN**

Oral healthcare employers (OHE) in New York State (NYS) should follow the NYS DOH AI guidelines for *HIV Prophylaxis Following Occupational Exposure* when any significant-risk occupational exposure has occurred.

OHE covered by OSHA’s Bloodborne Pathogen Standard are required to ensure that post-exposure care, including prophylaxis, is provided at no cost to the employee. The employer may subsequently attempt to obtain reimbursement from Workers’ Compensation.

OHEs should ensure that immediate access to post-exposure services is always available to any employee who sustains an occupational exposure. Such services include:

- Risk assessment for exposure to bloodborne pathogens (HIV, HBV, and HCV)
- Determination of whether PEP is indicated
- Follow-up care for the exposed individual

Antiretroviral medications for PEP should be readily available to OHWs who sustain a potential occupational exposure to HIV. When establishing plans for providing PEP, employers should determine the following:

- Who will perform the post-exposure evaluation
- Who will provide counseling to the OHW regarding the exposure and indications for PEP (for off-hour exposures as well)
- How PEP will be made available within 2 hours of an exposure
- How a 3- to 5-day supply of PEP will be made available for urgent use
- Who will be given authority for releasing drugs for this purpose
- How the OHW will obtain a continuous supply of PEP drugs to complete the 28-day regimen
CARE OF THE EXPOSED WORKER

Emergent Care for Oral Healthcare Workers (OHWs):
If an OHW has experienced an exposure to blood or body fluids, the exposed person should take the following steps as soon as possible:

- wash needlestick injuries, wounds and skin sites that have been in contact with blood or body fluids with soap and water
- avoid “milking” or squeezing out needlestick injuries or wounds.
- if blood gets on the skin, irrespective of whether there are cuts or abrasions, wash well with soap and water
- if eyes are contaminated, rinse while they are open, gently but thoroughly (for at least 30 seconds) with water or normal saline
- exposed mucous membranes should be flushed with water.
- the application of strong solutions (for example, alcohol, hydrogen peroxide, betadine or other chemical cleaners) to wounds or skin sites is not recommended.
- for human bites, the clinical evaluation should include the possibility that both the person bitten and the person who inflicted the bite were exposed to bloodborne pathogens.

When a potential occupational exposure to HIV occurs, every effort should be made to initiate PEP as soon as possible, ideally within 2 hours. A first dose of PEP should be offered to the OHW while the medical evaluation is underway. In addition, PEP should not be delayed while awaiting information about the source or results of the exposed individual’s baseline HIV test. Decisions regarding initiation of PEP beyond 36 hours post exposure should be made on a case-by-case basis with the understanding of diminished efficacy when timing of initiation is prolonged.

The OHW should be assessed and receive appropriate post-exposure management for HIV, HCV and HBV exposures, including testing for HCV and assessment for HBV vaccination. Confidential baseline HIV testing of the OHW should be obtained at the time the occupational exposure is reported or within 3 days of the exposure. For a detailed discussion regarding HCV and HBV post-exposure management, see *HIV Prophylaxis Following Occupational Exposure, Occupational Exposures to Hepatitis B and C*.

FOLLOW-UP CARE FOR ORAL HEALTHCARE WORKERS (OHWs)

All OHWs receiving PEP should be reevaluated within 3 days of the exposure to assess for side effects of treatment, treatment adherence and physical and emotional status.

The OHW should be evaluated weekly, by telephone or in-person consultation, while receiving PEP to assess treatment adherence, side effects of treatment, interval physical complaints, and emotional status. Longitudinal care of the OHW during PEP treatment and the follow-up period should be provided by an occupational health provider familiar with PEP or directly by or in consultation with a clinician experienced in managing PEP. Providers who do not have access to a clinician experienced in PEP should use the CEI (Clinical Education Initiative) Line at 1-866-637-2342 for phone consultation.

HIV TESTING OF THE SOURCE PATIENT

The OHE is responsible for covering the costs related to source patient testing. The source patient’s HIV infection status, HIV exposure history, and other HIV-related information are
critical factors to consider when deciding whether to initiate PEP after occupational exposure. **However, if the result from testing the source patient is not immediately available or a complete evaluation of the exposure is unable to be made within 2 hours of the exposure, PEP should be initiated for the OHW while source testing and further evaluation are underway.**

Fourth-generation HIV tests can yield a positive result 7 to 14 days sooner than other rapid tests. These tests detect both HIV-1/HIV-2 antibodies and HIV-1 p24 antigens and will detect infection beginning in the acute phase before antibodies are produced and throughout seroconversion and chronic infection. The FDA has approved a rapid 4th-generation antigen/antibody combination assay (the Alere Determine HIV-1/2 Ag/Ab Combo) for point-of-care use. If the test results are not immediately available, the initiation of PEP for the OHW should not be delayed pending the test result.

**Source Patient is Known to be HIV Positive**
If the source patient is known to be HIV-infected, information about his/her viral load, antiretroviral therapy history, and history of antiretroviral drug resistance should be obtained when possible to assist in the selection of a PEP regimen; however, administration of the first dose of PEP should not be delayed while awaiting this information. Refer to the HIV Clinical Guidelines on PEP for HIV Prevention’s section on ART for oPEP for the recommended PEP regimen.

**HIV Status of Source Patient is Unknown**
If the HIV status of the patient is not known, consent for voluntary HIV testing of the source patient should be sought as soon as possible after the exposure. In NYS, when the source patient has the capacity to consent to HIV testing, the individual should be informed that HIV testing will be performed unless he or she objects to being tested. Key points about HIV should be provided. If the patient objects to the test, HIV testing cannot be performed.

**Patient is Unable to Consent:** Situations may occur where a source patient is unable to provide consent for HIV testing, for example, if he or she is unconscious, comatose or otherwise incapable of consent. The Family Health Care Decisions Act (FHCDA) stipulates who can consent for care. In these cases, clinicians should follow institutional policies related to the FHCDA for obtaining consent for the source patient’s HIV test.

**No Surrogate is Immediately Available to Consent on the Patient’s Behalf:** A clinician may order an anonymous test only when an occupational exposure involves a source patient who is comatose or otherwise unable to consent, and there is no surrogate immediately available. The medical benefit of knowing the source person’s test result must be documented in the exposed person’s medical record. **When anonymous testing is performed, the results of the test cannot be disclosed to the source person or placed in the source person’s medical record.**

If the source patient consents to HIV testing and an office-based point-of-care HIV rapid test is reactive, this preliminary result should be used in decision-making regarding PEP for the OHW. When the preliminary reactive result is provided to the source patient (in all cases unless anonymously tested), a blood specimen should be collected and submitted as soon as possible to a clinical laboratory for 4th generation HIV testing according to the **Recommended HIV Diagnostic Testing Algorithm.**
Source patients who are in the “window period” prior to HIV seroconversion may not be identified. When the source patient’s screening test result is negative and the clinician has ascertained that the source patient could have been exposed to HIV in the previous 6 weeks or when the source patient’s screening result is reactive but antibodies to HIV were not confirmed, then a plasma HIV-1 RNA assay should be obtained to determine the source patient’s HIV status. In these situations, PEP should be initiated and continued for the OHW until results of the plasma HIV RNA assay are available.

FOR CONSULTATION:

Dentists who have responsibility for providing PEP may discuss questions or concerns with a clinical expert through the CEI Line at 1-866-637-2342.
REFERENCES


DEVELOPING AN EXPOSURE CONTROL PLAN FOR A SMALL PRIVATE OFFICE

To be completed before exposure occurs

1. Develop an exposure control plan that meets OSHA regulations.

2. Educate staff about prevention of exposures and first aid
   A. Communicate to staff their role in prevention of occupational exposures, include them in creation of exposure plan, and ensure that all new employees read the protocol as part of new employee orientation and then annually.
   B. Advise staff that immediately after exposure they must administer first aid. Wash any puncture wound/cut with soap and water. Flush mucous membranes with water until body fluid is not visible. Do NOT squeeze injury. The application of strong solutions (for example, alcohol, hydrogen peroxide, betadine or other chemical cleaners) to wounds or skin sites is not recommended.
   C. Determine local medical resources for post-exposure care of oral healthcare worker (OHW) and source patient. Contact the medical director at the closest emergency department or urgent care center that your employees will go to for urgent care. Emergency rooms are recommended because they can perform the required tests, provide the medications immediately as well as a 3- to 5-day supply, administer any needed vaccines, and assess for comorbidities.
   
   Let them know in advance that you will be sending your employees there in the event of an occupational exposure. Follow up with a letter. (This is a courtesy, not a requirement.)
   
   D. Some employers create a form letter that an employee can bring with them to the emergency department. The letter should include:
      - Name and address of your practice
      - Type of injury, fluid exposed to, type of first aid administered
      - Whether source patient has consented be tested
      - What the emergency department needs to do
      - What your practice will do
      - Name of the HIV clinician to refer your employee to for follow-up care
      - Workers’ Compensation information

3. Locate a facility that can provide 4th generation HIV testing for source patient if patient is not known to be living with HIV.
   A. 4th generation rapid testing is available at local laboratories, hospitals, or may be offered in your office.
      - To offer rapid HIV testing in your practice:
        - Visit the NYSDOH website for details on how to provide rapid testing in your office: https://www.health.ny.gov/diseases/aids/providers/testing/rapid/article28guidance.htm
Appendix A (continued)

- To arrange source patient testing for HIV, hepatitis B virus and hepatitis C virus in a local hospital or laboratory
  - Contact the facility and make sure they provide 4th generation rapid HIV testing as well as any indicated viral hepatitis testing for source patients.
  - Provide source patient with points of information about HIV testing, inform the source patient that an HIV test will be performed, order the HIV test, and document that the source patient received HIV testing notification on the occupational exposure record.
  - If the source patient declines HIV testing, the employer should document that consent cannot be obtained and testing cannot be performed.
  - If the source patient’s hepatitis B and/or hepatitis C status is unknown, inform the source patient that screening tests will be drawn at the same time as HIV test, order the tests as recommended in the NYS HIV guidelines for PEP following occupational exposure.
  - Discuss the urgency of the HIV test and the need for results within 1-2 hours if possible. Discuss billing procedures.

4. It is recommended that follow-up care be provided by an occupational health provider familiar with PEP or directly by, or in consultation with, a clinician experienced in managing PEP. When developing your Occupational Exposure Plan, establish a relationship with an occupational health provider familiar with PEP or a clinician experienced in managing PEP.

   A. The following resources are available to help identify an appropriate provider:
      - The New York State Designated AIDS Centers (DACs), which provide outpatient and inpatient medical care for people infected with HIV.
      - The New York State PrEP(pre-exposure prophylaxis)/PEP Provider Voluntary Directory, which lists names and contact information for NYS providers who prescribe PrEP/PEP.

   B. Once identified, contact the provider and let them know you would like to have your employees receive their follow-up care there.

   C. Some employers create a form letter that an employee can bring with them to the HIV experienced provider. The letter should include:
      - Name and address of your practice
      - Type of injury, fluid exposed to, type of first aid administered
      - Whether source patient has consented be tested and results
      - What the emergency department has done
      - What your practice will do
      - What the HIV experienced provider will do
      - Workers’ Compensation information
EXPOSURE RECORD

Name of employee: ______________________________________________________

Date of employee exposure: ____________________ Time: ________________

Procedure being performed: ____________________________________________

Protective equipment in use: _____________________________________________

_____________________________________________________________________

Details of exposure (type, severity, amount of fluid to which Oral Healthcare Worker
exposed)

Type of exposure (puncture, cut, splash): ___________________________________

_____________________________________________________________________

Quantity of infectious fluid and type: _______________________________________

_____________________________________________________________________

Site of exposure: _______________________________________________________

_____________________________________________________________________

First aid administered: ___________________________________________________

_____________________________________________________________________

Immediately wash wound and skin sites with soap and water or flush mucous membranes with
water. Do NOT squeeze injury.

Name of employee: _____________________________________________________

Date of exposure: _______________________________________________________

IMMEDIATE CARE

Immediate care for the OHW may be managed with one of two strategies:
   1. Referral to emergency department
   2. Referral to urgent care center

Referred to___________________ Date: _______________ Time: _______________
The exposed OHW should be evaluated for both hepatitis B and hepatitis C. Refer to *HIV Prophylaxis Following Occupational Exposure*, for recommendations for post-exposure management for HBV and HCV.

**PEP DETERMINATION**

Whenever an OHW has been exposed to potentially HIV-infected blood, visibly bloody fluids, or other potentially infectious material through the percutaneous or mucocutaneous routes or through non-intact skin, PEP is indicated. For these exposures, prompt initiation of PEP followed by telephone or in-person consultation with a clinician experienced in HIV PEP is recommended. The NYSDOH HIV Guidelines Decision Tree for PEP Following Occupational Exposure provides a general guide.

PEP treatment received as soon as possible and no later than 36 hours after exposure:

___________________________________________________________________________

___________________________________________________________________________

PEP treatment determination and reason (see “PEP Following Occupational Exposure”):

___________________________________________________________________________

___________________________________________________________________________

**PRESCRIBED HIV PEP REGIMEN***

___________________________________________________________________________

___________________________________________________________________________

* See *HIV Prophylaxis Following Occupational Exposure*, for PEP medication options and dosing information.

Provider of immediate care needs to provide a 3- to 5-day supply of PEP medications.

Employee given starter supply (3 to 5 days) of PEP medications:

Date: _______________________________ by: _______________________________
PAYMENT FOR PEP

If provided by the employer:

Purchased by: _____________________ for employee: _____________________________

After the employee receives a starter supply of PEP medications (3 to 5 days), the employer must arrange for the remaining 23 to 25 days of PEP medication to be provided. NYS employers of personnel covered by the Bloodborne Pathogen Standard are required to ensure that post-exposure care, including prophylaxis, is provided at no cost to the employee. The employer may subsequently attempt to obtain reimbursement from Workers’ Compensation.

FOLLOW-UP CARE

First visit for follow-up care should be within 3 days of PEP initiation.

Referral to experienced clinician provided and visit scheduled for:

______________________________
Clinician: ________________________________________________________________
Clinician’s address: _______________________________________________________

Longitudinal care of the exposed worker during PEP treatment and the follow-up period should be provided by an HIV clinician familiar with PEP or directly by, or in consultation with, a clinician experienced in managing PEP. The OHW should be evaluated weekly, by telephone or in-person consultation, over the first month to assess PEP adherence, adverse effects of the PEP medications, physical complaints, and emotional status. Providers who do not have access to a clinician experienced in PEP should use the Clinical Education Initiative CEI Line at 1-866-637-2342 for phone consultation.
SOURCE PATIENT RECORD DOCUMENTATION* (sample)

Name of employee: _______________________ Date of exposure: _________________

Source patient known to be HIV-infected:

If source is known to be HIV-infected, consult with a clinician experienced in HIV Post Exposure Prophylaxis. (PEP) Clinicians who do not have access to experienced HIV clinicians should call the Clinical Education Initiative CEI Line at 1-866-637-2342.

The clinician providing follow-up care will need to know the source patient’s:
- viral load
- CD4 count
- current medications
- past medications
- results from resistance testing, if testing performed

Do not delay initiation of PEP if this information is not immediately available.

An alternative regimen for PEP may be considered based on the source patient’s information. See HIV Prophylaxis Following Occupational Exposure, for more dosing information.

Source patient’s HIV status unknown†:

Fourth generation rapid test performed:

Date: _________________________________ Time: _________________________________
Type of test: ___________________________
Results: Reactive: _________________________ Nonreactive: _________________________

If the rapid test is reactive, confirmatory testing must be performed within 36 hours.

Results of confirmatory tests of source patient:

Date: _________________________________ Time: _________________________________
Type of test: ___________________________
Laboratory: ____________________________________________________________________
Results: _____________________________________________________________________

Results provided to source patient:

Post-test counseling provided: Date: _________________ by: ___________________________

* This is sample documentation for the employer’s records only.
† Source patient should also be evaluated for hepatitis B and hepatitis C.
Appendix C (continued)

Results of the source individual’s HIV testing should be made available to the exposed worker’s provider.

Result provided to: ___________________________ Date: _______________

By: ___________________________

If the result from testing the source patient is not immediately available, the need for PEP should be evaluated based on exposure risk assessment. If the likelihood of potential exposure is high, the initiation of PEP should not be delayed pending the test result.

Source patient’s hepatitis B and/or hepatitis C status unknown:

Hepatitis tests drawn: Date: _______________ Time: ________________________________

Results:
Hepatitis B antigen: Positive: _________________________ Negative: _________________________

Hepatitis e antigen: Positive: _________________________ Negative: _________________________

Hepatitis C antibody: Reactive: _______________ Nonreactive: _________________________

IF HEPATITIS C ANTIBODY IS REACTIVE, RESULTS OF VIRAL LOAD TEST: ____________ IU/L
**Appendix D**

**Bloodborne Pathogen Information for the Exposed Health Care Worker**

**What are bloodborne pathogens?**

Bloodborne pathogens are pathogenic microorganisms (e.g. viruses) that can be transmitted through contact with blood and other body fluids. The most important viruses affecting health care workers exposed to blood and body fluids are human immunodeficiency virus (HIV), hepatitis B, and hepatitis C.

**HIV** is a virus that can be acquired by sharing blood or by sexual contact with infected people. The initial symptoms of infection with HIV may be minimal, but may include fever, enlarged lymph nodes, sore throat, or a rash. The virus remains in the body and multiplies, causing damage to the immune system, the body’s defense system against infection. At this time there is no vaccine to protect against HIV infection.

**Hepatitis B** virus causes a hepatitis, or inflammation of the liver. It is spread in the same way as HIV, blood and sexual contact. The usual symptoms are jaundice (yellowing of the skin or eyes), fatigue, nausea, and stomach pain. Often the disease will be so mild that people may not know they have had the illness. Rarely, the disease is severe enough to cause liver failure and death. About 10% of people who get the disease will become chronic carriers of the virus. They can develop chronic liver disease such as cirrhosis and they can infect other people by sharing blood through sexual contact. There is a vaccine that can protect people from getting this disease; this vaccine is safe and very effective.

**Hepatitis C** is an inflammation of the liver caused by the Hepatitis C virus. It is spread mainly through blood contact, although there is a small chance of infection with sexual contact. Like other forms of hepatitis, the symptoms range from none at all to jaundice (yellow skin), fatigue, loss of appetite, and stomach pain. The initial infection with Hepatitis C may cause very mild symptoms; the risk of the disease becoming chronic is much greater than with Hepatitis B. Up to 50% of people with Hepatitis C will have chronic disease that may lead to cirrhosis. There is currently no vaccine against Hepatitis C.

The risk of becoming infected with bloodborne pathogens depends on:

- The type of exposure (transfusion, needle stick, splash)
- How much virus is in the blood or body fluid of the source
- The ability of that particular virus to cause infection

For example, a transfusion with a pint of blood would carry much more risk than a stick from a needle used to draw blood. A splash to mucous membranes, such as eyes or lips is generally less of a risk than a needle stick. The source may be more infectious if (s)he has a lot of the virus in the blood. For example, “hepatitis B virus” is much more infectious than either “hepatitis C virus” or HIV. A health care worker cannot be infected with any bloodborne pathogen if the source of the exposure does not carry the virus. Most of the occupational exposures that occur do not carry the risk of infection by any of the viruses mentioned.

Healthcare workers who have received Hepatitis B vaccine and developed immunity to the virus are at virtually no risk for infection. For a susceptible person, the risk from a single needlestick or cut exposure to HBV-infected blood ranges from 6-30%. For Hepatitis C, the average risk for infection after a needlestick or cut exposure to HCV-infected blood is approximately 1.8%. The risk following a blood exposure to the eye, nose or mouth is
unknown, but is believed to be very small; however, HCV infection from a blood splash to the eye has been reported. **For HIV, the average risk of HIV infection after a needlestick or cut exposure to HIV-infected blood is 0.3% (about 1 in 300).** The risk after an exposure of the eye, nose or mouth to HIV-infected blood is estimated to be on average, 0.1% (about 1 in 1000).

The most important thing to remember is that the risk of getting HIV or hepatitis C from a needlestick or other exposure is quite small. As an example, there were 57 documented cases and 138 possible cases of occupationally acquired HIV infection among healthcare personnel in the United States since reporting began in 1985. No new documented cases of occupationally-acquired HIV/AIDS have been reported since December 2001.

**What if the source patient’s blood tests are negative?**

If your exposure was very low risk, based on the source’s blood work and the type of exposure, you may choose not to complete follow up blood work. If your exposure was high risk for a bloodborne pathogen, your medical provider will counsel you regarding appropriate follow up.

Any acute illness with fever, sore throat, rash, enlarged lymph nodes, or jaundice that occurs within six months after an exposure should be reported to your health care provider.

**HIV Post-Exposure Risk-reduction:**

- use condoms to prevent potential sexual transmission
- avoid pregnancy and breastfeeding
- avoid needle-sharing
- refrain from donating blood, plasma, organs, tissue, or semen

**Hepatitis B Post-Exposure Risk-Reduction:**

- HBV vaccination is advised for all non-HBV-immune persons.
- household, sex, and needle-sharing contacts of HBsAg-positive individuals should be identified and vaccinated according to the guidelines for patients exposed to known HBsAg-positive individuals
- refrain from donating blood, plasma, organs, tissue or semen.
- avoid alcohol and, if possible, medications that may be toxic to the liver

**Hepatitis C Post-Exposure Risk Reduction:** Currently, no effective prophylaxis for hepatitis C virus infection has been identified. However, if you are infected or become infected with hepatitis C, the virus can often be treated successfully by taking medication.

- avoid blood-to-blood contact, including sharing personal care items that may come in contact with another person’s blood, such as razors or toothbrushes and sharing needles, syringes, or other equipment to inject drugs
- refrain from donating blood, plasma, organs, tissue or semen
- there may be risk of transmission with sexual activity
Appendix E

Source Patient Information: Testing for hepatitis B, hepatitis C & HIV

An incident has occurred in which another person has been exposed to your blood or body fluid. Because of the nature of the exposure, there is a need to carry out a blood test to check if you have certain viruses that can be transmitted if present in your blood. These viruses are hepatitis B, hepatitis C and human immunodeficiency virus (HIV). Negative test results will reduce the other person’s anxiety and eliminate the need for them to undergo unnecessary treatment.

Testing for the viruses
Blood tests will be done to determine whether you already have any of these viruses. The results of these tests are confidential and only used for the purposes of confirming your infection status at the time of the incident. If any of the tests are positive and this was previously unknown to you, the results can be sent confidentially to your own healthcare provider. The results of your blood tests will be disclosed to the health care provider who is treating the person who was exposed to your blood or body fluid.

What do the blood tests involve?
Before the tests, you will be provided with information regarding the tests that will be conducted. The blood tests are similar to testing that you may have had before. It should only take a few minutes and you will be advised when to expect the results. You have the right to refuse to be tested. If you choose not to be tested, your care will not be affected.

What happens if the blood tests are negative?
This means that you tested negative for the viruses and no further testing will be required.

What happens if the blood test is positive?
If the blood test is positive for one of these viruses and this was previously unknown to you, you will be referred to a specialist for follow-up.

Are there any implications of a positive test?
- If the test is positive for any of these bloodborne viruses, you will be referred to a specialist for follow up assessment and management.
- You should inform your sexual or injection drug using partners so they have the chance to be tested and get any treatment needed.
- If you want help with informing a partner, the NYS Department of Health Partner Services staff can talk with you about your options, and help you to set up a plan for those partners who need to be notified, offered testing and if necessary, treatment for their exposure. For information about partner services go to: www.health.ny.gov/diseases/communicable/std/partner_services/accessing_partner_services.htm
- You should not share shaving blades or razors, toothbrushes and needles.
- You should get advice about pregnancy and breast feeding from your health care provider.
- Hepatitis B, hepatitis C and HIV are notifiable diseases and positive results will be reported confidentially to the NYS Department of Health

For more information: