

SFGH/SFDPH OCCUPATIONAL INFECTIOUS DISEASES PROGRAM  
MANAGEMENT OF NEEDLESTICK AND OTHER BODY FLUID EXPOSURES AT SFGH/SFDPH

HEALTH CARE WORKER FACT SHEET

Treatment for an accidental exposure to blood or body fluids:

- STEP 1. CLEAN/DECONTAMINATE: Wash wounds and contaminated skin with soap and water; rinse mouth, nose and eyes with water or saline.
- STEP 2. CALL THE OCCUPATIONAL INFECTIOUS DISEASE PROGRAM (OID) NEEDLESTICK HOTLINE 469-4411 AS SOON AS POSSIBLE: available 24 hours a day every day for expert assessment and advice regarding immediate treatment.
- STEP 3. INFORM YOUR SUPERVISOR: Complete the two Workers compensation forms (DWC-1 and Employer's First Report of Injury) and the Supervisor's Investigation of Incident report (SIIR) with you supervisor.
- STEP 4. FOLLOW-UP WITH THE OCCUPATIONAL HEALTH SERVICE (OHS) WORKERS' COMPENSATION CLINIC: Make an appointment for baseline visit by calling 206-5507; come to SFGH, Building 9, 2<sup>nd</sup> floor for confidential source patient evaluation, medical care and prophylaxis, counseling, testing, and workers' compensation documentation.

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POST-EXPOSURE PROPHYLAXIS (PEP) FOR HIV EXPOSURES

The average infection risk from injuries involving HIV-infected needles or other sharp instruments is 1 in 300, or 0.3%. However, the following exposures pose an increased risk: an exposure from a terminally ill AIDS patient; an exposure with a needle used in a blood vessel; an exposure from a visibly bloody device; and a deep puncture. The risk of infection from a bloody splash to mucous membranes or to open skin is very low – probably less than 1 in 1000. About 20% of the SFDPH source patients from the reported exposures in 1999 were HIV-infected. We very rarely identify HIV-infected source patients who are not already known to be infected at the time of the exposure, and those source patients whom we have diagnosed have all had identifiable risk factors for HIV.

There is now strong evidence to suggest that zidovudine (AZT) given as post-exposure treatment decreases the chances of getting HIV after an exposure to infected blood or other hazardous body fluid. A study by the CDC, published in the MMWR, December 1995, shows that the risk of HIV infection in health care workers who took zidovudine after needlestick exposures to HIV was 79% lower than those who did not take the treatment.

In the spring of 1996, we began using combination post-exposure prophylaxis treatment. The standard two-drug combination zidovudine (AZT) and lamivudine (3TC) is now used because of increasing resistance to zidovudine. Using both drugs increases the chance that at least one of these two drugs will be active against the HIV in the occupational exposure. When given together to HIV-infected patients, zidovudine and lamivudine work well together for several months, even when the virus initially was resistant to zidovudine. The alternate regimen didanosine (ddI) and stavudine (d4T) is used when the

source patient is currently taking zidovudine and lamivudine, or is believed to have virus resistant to this standard combination. We formulate each PEP regimen on the antiretroviral history and disease status of each HIV-infected source patient as well as the specifics of each exposure. Thus the PEP treatment plan may include a variety of antiretroviral drug combination.

In special cases of serious exposure when the treating clinician suspects exposure to drug-resistant HIV and/or the source patient is also infected with hepatitis C virus, a third drug, either a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor, may be added to the treatment plan. However, for most exposures, the addition of a third drug is not necessary.

Treatment should begin as soon as possible following the exposure, preferably within the first hour. The treatment course is 4 weeks (28 days). This is expected to protect the exposed health care worker from becoming infected by treating with anti-HIV drugs during the time before HIV infection is established. PEP is available on a 24-hour basis through the SFGH in-patient pharmacy and some other DPH sites when arranged by the Needlestick Hotline Clinician.

Decisions about taking prophylactic treatment after an occupational exposure that poses a potential risk of HIV infection are difficult because we do not fully understand the toxicity of the new drugs, or the long-term effects. THINKING ABOUT THIS ISSUE NOW, BEFORE AN ACCIDENT OCCURS, MIGHT MAKE YOUR DECISION EASIER.

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#### SFGH EMERGENCY DEPARTMENT SERVICES

The ED provides emergency care to HCWs with serious injuries requiring immediate treatment (e.g., lacerations needing suturing). ED registration is required for this type of service, and treatment will be recorded in your hospital chart.

The ED also provides emergency hepatitis B (HBIG) and tetanus prophylaxis to occupationally exposed health care workers on weekends and holidays when arranged by the Needlestick Hotline Clinician. ED registration is not required, and no identifying record of your exposure will be generated. Coded treatment records will be entered into your confidential exposure chart.

ALL HCWs MUST BE SEEN AT THE OCCUPATIONAL HEALTH WORKERS' COMPENSATION CLINIC AS SOON AS POSSIBLE FOLLOWING EXPOSURE, REGARDLESS OF ED TREATMENT RECEIVED, TO COMPLETE DOCUMENTATION AND TREATMENT.

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#### OCCUPATIONAL HEALTH SERVICES WORKERS' COMPENSATION CLINIC

Services are available on weekdays. All exposure baseline and follow-up appointments are scheduled by calling the OHS OID program at 206-5507. You may call the Workers' comp clinic front desk at 206-8998 for information, but appointments will be made only by calling 206-5507. All efforts will be made to see HCW's on the day of their exposure, or the next working day. Health care workers who take PEP must be seen for their baseline visit within 3 days of starting PEP. It is important to complete the baseline testing within two (2) weeks of any exposure if PEP is not prescribed.

Exposure Assessment, Treatment, and Counseling:

A detailed description of your accident will be obtained and recorded in a confidential Workers' Compensation record, which is kept separate from your employee health chart. An assessment of your risk for acquiring Hepatitis B, hepatitis C, HIV, and other infections will be made, and appropriate treatment and follow-up will be provided. Education regarding occupational transmission of bloodborne pathogens, as well as personal and occupational risk reduction is included in this visit. All services related to occupational exposures are free of charge.

Blood may be requested to test for hepatitis B, hepatitis C, and HIV. HIV testing will only be done with your express written consent. The purpose of baseline testing is to document your status at the time of the accident should you become infected in the future. In addition, you may be asked to have serum stored for more testing or other research projects.

Discussions with a licensed professional counselor to provide information and assistance in making decisions about follow-up testing, and coping with concerns regarding your exposure are available.

Source Patient Evaluation:

The Needlestick Hotline clinicians will obtain information from you about the source patient involved in you exposure. Trained counselors of the HIV Assessment and Prevention Service (HAPS) of the EPI Center provide source patient assessment and testing services at San Francisco General Hospital. Designated trained staff at other DPH sites are responsible for source patient testing. Occupationally exposed HCWs should not initiate or participate in source patient testing!

Confidentiality Procedures:

Protecting your confidentiality is an essential part of this service. All OHS exposure records including medical history, treatment, test results, counseling and workers' compensation documentation are maintained in numeric coded chart that is kept separate from your regular employee health record. The contents of this chart will only be available to clinicians involved in your care. Summary results without identifying information will be evaluated and used to evaluate occupational exposures at SFGH/SFDPH. Blood specimens and lab requests will be labeled only with your number code. Contents of your coded exposure record will not be released to any agency outside of OHS without your written consent.

Workers' Compensation and other Benefits:

Current regulations in California require filing a Worker's Claim for Benefits, an Employer's First Report of Injury and a Doctor's First Report of Injury with the workers' compensation carrier for all persons sustaining occupational injuries, illnesses, and some exposures. The purpose of these reports is to ensure adequate documentation so that you can claim benefits in the future, should you need them. These forms will be completed by your supervisors and the OHS Workers' Compensation Clinic.

Services directly related to occupational exposure treatment and follow-up are available without charge. In the event you become ill, are unable to work, or require additional medical care as a consequence of your exposure, you may be eligible to file a claim for workers' compensation benefits. OHS clinicians are available to assist you in this process.

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HEPATITIS B EXPOSURES

The average risk of occupational infection from injuries involving HBV-infectious (hepatitis B antigenemic source patients) needlesticks or other sharp instruments is as high as 40%. Fortunately, only 6% of the SFDPH source patients tested during 1999 were infectious (antigenemic) with HBV.

All HCW's not already immune to hepatitis B virus are strongly advised to receive the HBV vaccine series through Employee Health. UCSF/Gladstone workers must go to UCSF Employee Health. Exposed HCW's who are not immune to hepatitis B virus are encouraged to start the HBV vaccine series at the time of their OHS baseline visit. The best time to get immunized is BEFORE AN ACCIDENT OCCURS.

In cases of significant exposure where an exposed health care worker has not been immunized against HBV and/or does not have documented immunity to HBV AND the source patient is known to be an HBV carrier or is at high risk for HBV, we may recommend injection of HBV hyper-immune globulin (HBIG). Prophylactic treatment within 72 hours after parenteral exposure may be recommended.

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## HEPATITIS C EXPOSURES

We are concerned about the risks of hepatitis C virus (HCV) because it is the most prevalent bloodborne pathogen currently detected in our source patients. During 1999, more than one-third (39%) of the source patients tested for HCV were infected. All source patients with positive HCV antibody have supplemental testing with HCV PCR; only those patients with positive HCV PCR have been documented to transmit the infection.

We know that the risk from a needlestick or other sharps injury from an HCV-infected patient is higher than the risk of HIV; it is lower than the risk of HBV. But we still have much to learn about the occupational risk of HCV. At this time, we believe the risk from a percutaneous exposure to be between one and seven percent.

There is currently no prophylaxis or vaccine available for HCV infection. Hepatitis C antibody testing is routinely done on source patients. It is important to complete serial testing at 3, 6 and 12 months after exposure to an HCV-infected source patient.

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## PREVENTION IS PRIMARY

Our highest priority is to prevent exposures. Many percutaneous exposures (needlesticks and other sharps injuries) may be prevented by using medical devices with safety features designed to prevent injuries; examples of these devices include resheathing syringes and needles, resheathing butterfly needles for phlebotomy, needles with hinged, one-handed recappers, retractable needles, self-retracting lancets, safety IV catheters and needle IV systems. It is important that you learn how to use these safety devices properly, and that you activate the safety feature each and every time you use one. Many mucocutaneous (eyes, nose, mouth, and non-intact skin) exposures may be prevented by using appropriate barrier protection such as gloves, masks, eye protection and gowns which should be used whenever contact with blood or other hazardous body fluids may be expected.