



Additional Resources
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Selected Websites

- Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Post Exposure Prophylaxis.
www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm
- HIV and the Law– HIV at Work
www.hivatwork.org/law/osha.htm
- Occupational Safety and Health Administration
www.osha.gov
- CDC HIV/AIDS Guidelines and Recommendations
www.cdc.gov/hiv/resources/guidelines
- CDC Nine and a Half Minutes– Act Against AIDS
www.cdc.gov/nineandahalfminutes.com
- National AIDS Education and Training Center

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First Responders & HIV

A Guide for First Responders on HIV and Occupational Exposure

HIV and First Responders



HIV infection is not an emergent condition but it is essential for first responders to learn about HIV along with its occupational exposure and post exposure prophylaxis. However, there are a few things that first responders should remember:

- First Responders should know about HIV to protect themselves from occupational exposure.
- Secondly, First Responders see patients that “fall through the cracks” of the system.
 - Knowledge about HIV will enable them to help HIV patient to get linked with HIV treatment and care

HIV : The Basics

HIV is a virus that causes HIV infection and if not treated can lead to lethal disease called AIDS

- AIDS stands for Acquired Immunodeficiency Syndrome
 - Presents as state of loss of immune function in the body
 - Leads to numerous opportunistic infections causing death
- HIV is primarily found in the blood, semen, or vaginal fluid of an infected person
- HIV is transmitted in 3 main ways
 - Having unprotected sex (anal, vaginal, or oral) with someone infected with HIV
 - Sharing needles and syringes with someone infected with HIV
 - Being exposed (fetus or infant) to HIV before or during birth or through breast feeding
- HIV also can be transmitted through blood infected with HIV.
 - Since 1985, all donated blood in the United States has been tested for HIV.
 - Therefore, the risk for HIV infection through blood transfusion or blood products is extremely low.



- HIV is a fragile virus. It cannot live for long outside the body. As a result, the virus is not transmitted through daily activities such as shaking hands, hugging, or casual kiss. You cannot become infected from a toilet seat, water fountain, doorknob, dishes, drinking glasses, food or pets. You also cannot get HIV from mosquitoes.

- Proven methods of preventing HIV transmission include
 - Having protected sex by using condoms, both male or female, 
 - Not sharing IV needles 
 - HIV treatment of HIV positive mother prior to and during childbirth
 - Routine screening of blood and blood products for HIV
 - Standard precautions by all health care personnel



- Reports from the Center of Disease Control and Prevention (CDC) shows that new HIV infections increased in late 1990s, followed by a leveling off since 2000 at about 55,000 per year. Estimated 56,300 new HIV infections took place in the year 2006.

- There is no cure for HIV at present, however, advances in HIV treatment and care have transformed lethal HIV disease into a chronic disease. Hence, AIDS cases began to fall dramatically after 1996.

- Today, more people than ever before are living with HIV/AIDS. CDC estimates that about 1million people in the United States are living with HIV or AIDS

- In fact, 25% of the HIV-infected persons in the United States do not know that they are infected. Not knowing their HIV status puts them and others at risk.

- Symptoms of HIV Infection:
 - Many people who are infected with HIV do not have symptoms for many years.
 - The only way to know whether someone is infected is to be tested for HIV.
 - Someone can look and feel healthy but can still be infected.



Occupational Exposure to HIV

- HIV is transmitted by direct contact with infected blood, semen, or vaginal secretions.
 - There is no scientific documentation that HIV is transmitted by the contact with sweat, saliva, tears, sputum, urine, feces, vomitus, or nasal secretions unless these fluids contain visible signs of blood
- Occupational Exposure can take place in the following ways:
 - The patient's blood is splashed or sprayed into eyes, nose, mouth or into an open sore or cut
 - Health care professionals can have blood from the infected patient on their hands and then touch their own eyes, nose, mouth or an open sore or cut.
 - A needle used to inject the patient can break the skin of healthcare professional
 - Broken glass at a motor vehicle crash or other incident that is covered with blood from an infected patient can penetrate the glove and skin
- Definition of "HIV Exposure" is :
 - Must involve exposure to blood, semen, vaginal secretions, tissue or the following body fluids: cerebrospinal, amniotic, peritoneal, pleural fluid
 - Contact with mucous membranes, non-intact skin or vascular system eg. needlestick injury, open wound, splash to eyes, nose, mouth
 - The exposure occurred in performance of employment or professional duties (includes emergency medical responders)
- Risk of occupational exposure of HIV after a needlestick or cut exposure to HIV-infected blood is 0.3%(about 3 in 1000).
- Risk of HIV exposure after HIV-infected blood splash to the eye, nose or mouth is estimated to be 0.1% (1 in 1000).
- Risk exposure of non-intact skin is less than 0.1%.
- There are no documented cases of HIV transmission due to small amount of blood on intact skin.

- As of December 2001, CDC had received reports of 57 documented cases and 138 possible cases of occupationally acquired HIV infection among health care professionals in the United States since the reporting began in 1985

Protection for First Responders

- Always follow Standard Precautions while managing a patient.
 - Under standard precautions, blood, semen or vaginal secretions of all the patients are considered potentially infectious for HIV
- Wear eye & face protection during potential contact with vomit or aerosolized saliva
- Decontaminate the work area and equipment frequently during your shift
- Practice safe sharps!
 - Use needles with engineered safeties
 - Always safeguard the sharps and dispose them immediately
 - Account for your sharps after the call
 - Use needleless systems when possible



In the Event of Occupational Exposure

- Immediately following an exposure to blood
 - Wash needlesticks and cuts with soap and water
 - Flush splashes to the nose, mouth or skin with water
 - Irrigate eyes with clean water, saline or sterile irrigants
- No scientific evidence shows that using antiseptics or squeezing the wound will reduce the risk of transmission of bloodborne pathogen

- Using a caustic agent such as bleach is not recommended
- Consult emergency room in the nearby hospital. Discuss the possible risks of acquiring HIV and other blood borne pathogens and the need for HIV post exposure prophylaxis
- Report the exposure to the department (e.g. occupational health, infection control) responsible for managing exposures
- Prompt reporting is essential because in some cases, post exposure treatment may be recommended and it should be started as soon as possible

Treatment of HIV Occupational Exposure

- Studies suggest the use of antiretroviral drugs after occupational exposure known as Post Exposure Prophylaxis (PEP), may reduce the chance of HIV transmission
- Post exposure prophylaxis is recommended only for exposures that pose a risk of transmission and should be started as soon as possible, within hours as opposed to days, after the exposure
- Drugs which are used to prevent HIV infection may have serious side effects
 - Should be discussed with the health care provider before starting post exposure prophylaxis for HIV.
- The U.S. Public Health Service recommends a 4 week course of a combination of antiretroviral drugs.
- Pregnant health care professionals should not be ruled out for the HIV post exposure prophylaxis when it is warranted.
 - They should discuss with their healthcare provider about safety and risks of individual drugs used.



Exposures for Which PEP Is Indicated

- Break in the skin by a sharp object (including both hollow bore and cutting needles or broken glassware) that is contaminated with blood, visibly bloody fluid, or other potentially infectious material, or that has been in the source patient's blood vessel
- Bite from an HIV-infected patient with visible bleeding in the mouth that causes bleeding in the healthcare professional
- Splash of blood, visibly bloody fluid, or other potentially infectious material to a mucosal surface (mouth, nose, or eyes)
- A non-intact skin (e.g., dermatitis, chapped skin, abrasion, or open wound) exposure to blood, visibly bloody fluid, or other potentially infectious material.

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