



Blood-Borne Pathogens HIV/AIDS/OSHA

PROGRAM GUIDE FOR HEALTH CARE PROFESSIONALS

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Blood-borne Pathogens and the Healthcare Professional

As a health care provider, exposure to communicable diseases is always a risk. The best way to protect yourself from exposure is to increase your education and understanding of the disease process. The Occupational Safety and Health Administration (OSHA) and the Centers for Disease Control and Prevention (CDC) require initial education and the annual update for all health care workers on bloodborne pathogens.

This program will define HIV, AIDS, Hepatitis B and Hepatitis C, explain the transmission process and how to prevent and protect against exposure. In addition, diagnostic testing, early medical intervention and post exposure prophylaxis will also be discussed. Additional information on the antiretroviral agents used in the treatment of HIV will be explained in detail. *Video running time 30 minutes (2 contact hours).*

To meet OSHA guidelines, employers must ensure that all employees with potential for occupational exposure participate in a training program at no cost to the employee and during work hours. Employees must receive training at the following times:

- 1.) at the time of initial assignment to tasks where occupational exposure may occur
- 2.) at least annually after initial assignment
- 3.) when changes in the employee's job or tasks affect the employee's occupational exposure or potential for occupational exposure

When this program is completed, have on hand a COPY of OSHA's Bloodborne Pathogen Standards. Request a COPY from the nearest regional OSHA office.

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Objectives

At the end of this program the participant will:

1. Apply concepts of exposure control in analyzing the transmission of bloodborne pathogens and preventing their spread.
2. Explain the methods of HIV, hepatitis B and hepatitis C risk reduction.
3. Discuss available diagnostic testing for HIV, hepatitis B and hepatitis C and the importance of early medical intervention.
4. Explain PEP or post exposure prophylaxis for health care workers.
5. Describe standard precautions and when and where these precautions should be followed by health care workers.

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Supplemental Hand-Out for Nurses: The Nursing Process

The nursing process is a systematic method of problem solving. It is based on the scientific method. The nursing process is called "process" because it is ongoing. These are the steps of the nursing process:

Assessment: This is the systematic, ongoing collection of information from multiple sources. Assessment is done when a nurse interviews a patient and the patient's significant others. A physical assessment of the patient is also completed observing the following: laboratory data, daily patient actions, assessing the patient's ability to carry out daily activities, symptoms and the patient's response to treatment. In long-term care, resident assessment instruments are used to provide a comprehensive multi-disciplinary assessment.

Problem Identification or Nursing Diagnosis: Assessment data leads to identifying patient strengths and patient problems. These may be actual problems the patient currently experiences, or potential problems that may occur with that patient in the future. Problems are stated and related to a cause or influencing factor.

Planning: The systematic steps that the nurse will enact, with others, to assist the patient to meet the goals (or outcomes) that are set. For each problem, a measurable, specific goal is identified. The plan includes nursing actions, based on aspects of nursing theory, nursing science, other sciences, and research findings. The beliefs and values of the nursing profession as well as the values of the patient are taken into account.

Implementation: Carrying out the plan.

Evaluation: This is the systematic process of examining each patient goal-related outcome to determine if it were met and to revise the plan accordingly. Evaluation may also identify the resources needed for the patient or the health care provider in their continuing plan of care.

Professional Nursing Roles

As the nurse carries out the nursing process, the nurse enacts a variety of professional roles. These are:



These roles may overlap. In the clinician role, the nurse may provide direct "hands on" care, or may assess a patient's needs and direct others to provide services to meet those needs. The nurse may conduct patient and family teaching in a teaching role. The nurse may also teach other health professionals when a multidisciplinary team addresses the patient's needs. The nurse is a patient advocate when collaborating with the patient, finding resources for the patient, and acting on behalf of the patient. The nurse is a leader when planning and assigning the care of a patient to others, maintaining overall responsibility and accountability for that care, assisting other members of the health care team to set and meet goals or when providing resources to other health care providers.

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Identify the following information about your facility's Exposure Control Plan:

1. How your employees obtain a copy of it
2. Who to contact in your facility when there is an emergency involving blood or other potentially infectious materials, and what actions to take
3. Who to contact and what procedure to follow if employees have an occupational exposure to blood or other potentially infectious materials
4. The medical follow-up that is available following exposure to blood or other potentially infectious materials
5. Information on the post-evaluation, exposure evaluation and follow up that your facility provides after an exposure incident
6. The signs, labels or other color coding you use in your facility to identify regulated wastes and their containers

NOTE: OSHA REQUIRES THAT YOU MUST INCLUDE THE OPPORTUNITY FOR AN INTERACTIVE QUESTION / ANSWER PERIOD DURING THIS TRAINING SESSION.

OSHA also requires that your facility maintain training records that include the date and contents or summary of the training session, and the names and qualifications of persons conducting the training. All names and job titles of employees who complete the training must be recorded. These training records must be maintained for 3 years following the training date. Copies must be available upon request to employees, employee representatives, and representatives of the U.S. Department of Health and Human Services and the National Institute of Safety and Health.

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ATTENTION FACILITATORS:

Please COPY Glossary of Key Terms and hand out at the beginning of the program.

AIDS: ACQUIRED IMMUNE DEFICIENCY SYNDROME

A diagnosis based on the level of certain white blood cells or diagnosis of opportunistic infection. These white blood cells are called T lymphocytes or T helper cells. AIDS is diagnosed when the absolute number of T lymphocytes that carry a "CD4" marker drops below 200 per micro liter of blood, or the relative number of T lymphocytes is less than 14 percent. This indicates that the body's ability to fight infection is impaired. Someone can be diagnosed with AIDS even before they show symptoms of severe infection. The Human Immunodeficiency Virus (HIV) causes AIDS.

ANTIRETROVIRAL AGENTS

Any substance which fights a retrovirus.

ART

Antiretroviral Therapy: A combination of drugs used to fight a retrovirus

BIOHAZARDOUS WASTE

Liquid or semi-liquid blood or other potentially infectious materials, or contaminated items that can release potentially infectious materials during handling.

BLOOD-BORNE: (ALSO SPELLED BLOODBORNE)

Carried in blood or body fluids containing blood.

BLOOD-BORNE EXPOSURE

Contact with blood or fluids that have the potential to be infectious through a needle stick, broken or non-intact skin, through the mucous membranes of the nose, mouth or eyes.

CD4

Protein embedded in the cell surface of T-helper (lymphocyte) cells; HIV invades cells by first attacking the CD4 receptors.

CLEANING

Removing all foreign materials, such as soil and organic debris, from objects, including inner channels and accessory parts. There is manual cleaning, done by hand, and cleaning with a mechanical device.

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CONFIDENTIALITY

Information the health care team obtains from or about a patient or client that is considered to be privileged and cannot be disclosed to a third party without the consent of the patient or client.

CONSENT

Granting of permission by the patient or client for the performance of a surgical, therapeutic or experimental procedure in the health care setting.

DECONTAMINATION

The use of physical or chemical means to remove, inactivate or destroy blood borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling; decontaminating reusable equipment, such as a broom heavily soiled that was used to clean up a spill. This may require some pre-washing before proceeding with decontamination. *Note: Check your Infection Control Manual for the correct procedure for your facility or agency.*

DISINFECTANT

A chemical that destroys disease agents, for example, liquid chlorine bleach can be used to clean needles and syringes (accomplished by drawing bleach into the needle and syringe three times and shaking the bleach each time, then drawing water into the syringe three times to rinse out the bleach).

EIAs

Enzyme Immunoassays: Method in which either an antibody or an antigen can be coupled to an enzyme; this laboratory technique is commonly employed in the diagnosis of HIV infections.

EXPOSURE:

To come into contact with; an exposure to an infectious organism may or may not lead to infection and sickness.

HIGH RISK BEHAVIOR

Term used to describe certain activities that increase the risk of transmitting HIV, hepatitis B and hepatitis C, including anal and vaginal intercourse without a latex or polyurethane condom and other intimate contact; sharing injecting drug works, drug abuse and alcohol abuse.

IMMUNE SYSTEM

The group of organs, vessels, and cells that protect the body against infection and harm.

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INCUBATION PERIOD	The time period between infection with a certain virus and when symptoms first appear
INFORMED CONSENT	Consent given by an individual after receipt of the following: a) Purpose of the procedure or treatment b) Expected outcome c) Risks d) Alternatives and any supporting information e) Effects of no procedures or treatment f) Instructions for unsuccessful or positive results Informed consent does promote autonomy, patient protection, and avoidance of duress and does encourage introspection by the health care professional.
INJECTING DRUG USE (IDU)	Injecting drugs by needle directly into a vein or muscle or subcutaneous; also tattooing and skin-popping.
NON-INTACT SKIN	Exposed skin that is chapped, abraded or afflicted with dermatitis
PEP	Post-exposure Prophylaxis
PERCUTANEOUS INJURY	Needle-stick or cut with a sharp object
PROFESSIONAL STANDARDS OF CARE	Criterion, rule or statement of actions consistent with the minimum safe professional conduct as determined professional by peer organizations, such as the AMA, ANA, etc.
RISK REDUCTION BEHAVIORS	Abstinence from sexual activity; Remaining in a long-term, mutually monogamous relationship with an uninfected partner; barrier protection with latex condoms or polyurethane condoms (also made for females) The use of bleach to clean syringes and needles for injecting drug users who share needles reduces transmission but is not 100% effective.
SEROCONVERSION:	Change from HIV negative to positive.
SYNDROME	A progression or group of illnesses that are related to a specific disease.
VIRUS	A disease causing agent that usually has only DNA or RNA (complex proteins) but not both and is smaller than bacteria; viruses need cells in which to replicate.

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Pre Test

Circle **T** if the statements are true. Circle **F** if the statement is false.

- T F** 1. The immune system is the body's defense system for fighting infection.
- T F** 2. AIDS stands for acquired immune deficiency syndrome and is caused by the HIV viruses.
- T F** 3. A person can be HIV infected, remain infectious to others through intimate contact but not have AIDS for many years.
- T F** 4. Blood to blood contact will **NOT** cause transmission of HIV.
- T F** 5. There is a test available for HIV that does **NOT** require blood testing but detects antibodies to HIV in the urine.
- T F** 6. Maternal transmission of HIV can **NOT** occur in utero or the birth process.
- T F** 7. Drug treatment programs do not always work because of the individual's inability or lack of desire to stop drug use.
- T F** 8. There is **NO** cure for HIV/AIDS but the prevention of new infections is the goal.
- T F** 9. Once a person becomes HIV infected, the rate of disease progression is very rapid.
- T F** 10. All Hepatitis B (HBV) infections will resolve untreated after a four to eight week illness.
- T F** 11. To disinfect linens from contamination by biohazardous wastes, it is recommended to use a 10% solution of bleach to detergent.
- T F** 12. As long as you wash your hands, you do not need to wear gloves when handling urine containers, soiled laundry or emesis basins.
- T F** 13. You must change gloves before and after each patient contact.
- T F** 14. Always be sure needles are not re-capped and placed in a puncture resistant container.
- T F** 15. It is best to always clean soiled equipment under running warm water.

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Post Test

Choose the response that most accurately answers the following questions.

1. The term PEP (post exposure prophylaxis) involves:
 - a. treatment for a health care worker after exposure to HIV in the work place
 - b. extensive hand washing
 - c. all new employees
 - d. only the individual's doctor
2. An exposure site should be cleaned with:
 - a. a strong antiseptic solution
 - b. a 1:4 bleach solution
 - c. soap and water
 - d. a dilute antibiotic solution
3. If the source of HIV exposure is known to be positive, what additional information needs to be obtained?
 - a. CD4 count
 - b. results of recent viral loading testing
 - c. current and previous antiretroviral therapy
 - d. all of the above
4. Personal protective equipment should be worn if there is danger of exposure to blood or body fluids; face coverings and eye protection should be worn:
 - a. when irrigating a wound
 - b. suctioning a congested/moist patient
 - c. pouring specimens/fluids from one container to another
 - d. all of the above
5. The health care provider should always wash his or her hands:
 - a. after changing a sterile dressing
 - b. before putting on gloves
 - c. after taking off gloves
 - d. all of the above
6. Antiretroviral medications inhibit or interrupt the replication of HIV in:
 - a. urine
 - b. the protease inhibitors (PIs)
 - c. CD4 cells
 - d. the antigens

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Post Test
(continued)

7. Disposal of biohazardous waste requires the health care worker to know and follow:
 - a. OSHA guidelines
 - b. State and CDC guidelines
 - c. the policy and procedures of your agency or facility
 - d. all of the above
8. Separation of regulated or biohazardous waste from general waste requires:
 - a. red bags
 - b. a red, rigid, puncture resistant container
 - c. a collection container with an orange universal biohazardous sign
 - d. all of the above
9. _____ is 100 times more infectious than HIV:
 - a. Hepatitis B virus
 - b. AIDS
 - c. Hepatitis C virus
 - d. Liver cirrhosis
10. If you, the health care worker, suffer an exposure and consent to testing for HIV, HBV or HCV, your record should include:
 - a. whether Hepatitis B vaccination is indicated and if it was given
 - b. that you have been informed about any medical conditions resulting from exposure
 - c. that you have been informed about the results of the evaluation of the source of exposure
 - d. all of the above
11. HIV (human immunodeficiency virus) is a virus found in humans that can:
 - a. attack the immune system
 - b. create a deficiency in how the immune system functions
 - c. both a & b
 - d. b only
12. AIDS (acquired immune deficiency syndrome) can be a combination of different diseases:
 - a. true
 - b. false
13. Symptoms of HCV infection include:
 - a. fatigue
 - b. poor appetite
 - c. jaundice
 - d. all of the above

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Post Test
(continued)

14. The most common means of HIV transmission in both the U.S. and the world is through:
 - a. injecting drugs and sharing needles
 - b. sexual contact
 - c. contaminated blood transfusion
 - d. childbirth
15. Health care workers can reduce risk factors to blood-borne pathogens through:
 - a. observing standard precautions at all times
 - b. good hand washing techniques
 - c. safe handling of sharps and sharps containers
 - d. all of the above
16. Testing sights for HIV screening are available:
 - a. at hospitals
 - b. at county health departments
 - c. at drug treatment clinics
 - d. all of the above
17. In cases of mucous membrane or non-intact skin exposure to HIV when the source is shown to be HIV negative, post-exposure prophylaxis (PEP) would include:
 - a. A basic two drug PEP
 - b. An expanded three drug PEP
 - c. None. PEP is not justified in this situation.
 - d. The drugs Zidovudine (AZT) and 3TC (Lamuvudine)
18. Technologies available in HIV testing include:
 - a. Third generation Enzyme Immunoassays (EIAs)
 - b. Fourth generation EIAs
 - c. Nucleic acid based testing
 - d. All of the above
19. Antiretroviral therapy (ART) is a widely acceptable treatment for HIV. ART involves:
 - a. A requirement of nearly perfect adherence to the drug regimen
 - b. treatment of HIV, not a cure
 - c. is a combination of drugs from the (5) classes of antiretroviral agents
 - d. all of the above

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Discussion Questions

1. What is the difference between HIV and AIDS?
2. What are your feelings about caring for a patient/resident/client who has AIDS?
3. What does confidentiality mean to you and what does it mean to the individuals you may care for?
4. Discuss Hepatitis B infectivity. How infective is it? What are the modes of transmission?
5. What does the term universal precautions mean to you as a health care worker?
6. What are the necessary components of an exposure report?
7. What is post-exposure prophylaxis (PEP)? Describe the basic components of PEP for both HIV and HBV.

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Discussion Questions
(continued)

8. Recall the feelings and behaviors of your patients or clients who have been diagnosed with HIV/ AIDS and share these feelings and behaviors with your professional colleagues.
9. What kind of PPE (personal protective equipment) is available for your use?
10. When caring for an individual with HIV, HBV or HCV, how do you change negative feelings, concerns and behaviors into ethically, positive behaviors that comply with your standards of practice?

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Answer Sheet

Pre Test

1. T
2. T
3. T
4. F
5. F
6. F
7. T
8. T
9. F
10. F

11. T
12. F
13. T
14. T
15. T

POST TEST

1. a
2. c
3. d
4. d
5. d
6. c
7. d
8. d
9. a
10. d

11. c
12. a
13. d
14. b
15. d
16. d
17. c
18. d
19. d

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Important Guidelines for PEP

(Post-Exposure Prophylaxis)

(Handout)

Occupational exposure to HIV or Hepatitis B requires initiating PEP or post-exposure prophylaxis. Occupational exposure by a healthcare worker includes:

1. a needle stick or cut with a sharp object
2. Contact with mucous membrane or non-intact skin (this is skin that is chapped, abraded or with dermatitis).
3. contact with intact skin for several minutes or more
4. involves contact of extensive area with blood; tissue or other body fluids
5. direct contact, without protection, to concentrated HIV in research lab or production facility

PEP is most effective if initiated as soon after exposure as possible.

An exposure report needs to be recorded in the healthcare worker's **confidential** file and this information needs to include:

- a. date and time of exposure
- b. details of the procedure performed (*where and how the exposure occurred*)
- c. details of the exposure (*type and amount of fluid or material and the severity of the exposure*)
- d. details about the source of the exposure
- e. details about counseling, post exposure management and the follow up

HIV Post-Exposure Prophylaxis

Percutaneous Exposure

The Centers for Disease Control and Prevention (CDC) has issued specific guidelines regarding selection of HIV PEP for exposed healthcare workers with a percutaneous injury.

If a percutaneous exposure is less severe, the exposed employee should undergo a basic two drug PEP if:

- The source has asymptomatic HIV infection (with a viral load of less than 1500 ribonucleic acid copies/ mL)
- The source has an unknown HIV status but has risk factors for HIV
- The source is unknown and the exposure occurred in a setting in which exposure to HIV-infected persons is likely

If a percutaneous exposure is more severe and the source is HIV positive, the exposed worker should undergo an expanded three drug PEP (regardless of the source's viral load).

If a percutaneous exposure is more severe, but the HIV status of the source is unknown or the source is unknown, a basic two drug PEP should be considered if:

- The source demonstrates risk factors for HIV
- The exposure occurred in a setting in which exposure the persons with HIV is likely

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In all percutaneous exposure situations, no PEP is warranted if the source is shown to be HIV negative.

Mucous Membrane or Non-Intact Skin Exposure

The CDC has also set recommendations for HIV PEP for exposed healthcare workers with a mucous membrane or non-intact skin exposure.

If a mucous membrane or non-intact skin exposure is less severe, the exposed employee should undergo a basic two drug PEP if:

- The source is HIV-positive
- The source has an unknown HIV status but has risk factors for HIV
- The source is unknown or the exposure occurred in a setting in which exposure to HIV-infected persons is likely

If a mucous membrane or non-intact skin exposure is more severe, the exposed worker should undergo a basic two drug PEP if:

- The source has asymptomatic HIV infection (with a viral load of less than 1500 ribonucleic acid copies/ mL)
- The HIV status of the source is unknown or the source is unknown
- The source demonstrates risk factors for HIV
- The exposure occurred in a setting in which exposure to persons with HIV is likely

An expanded three drug PEP is recommended if the source is HIV positive and is symptomatic or has a high viral load

In all cases of mucous membrane or non-intact skin exposure, no PEP is justified if the source is shown to be HIV negative.

Important HIV Exposure Notes

- Healthcare personnel with an occupational exposure to HIV should receive follow up counseling, post exposure testing and medical evaluation.
- When PEP is started, baseline monitoring is established and then again in 2 weeks after starting PEP. This testing should include a complete blood count, as well as renal and liver function tests.
- It is important that a post-exposure prophylaxis regimen is completed as prescribed. All people undergoing post-exposure prophylaxis should complete a four-week regimen. Many antiretroviral medications have significant side effects. Additionally, many antiretroviral medications have significant drug interactions (including supplements and over-the-counter medications). Anecdotal evidence suggests that antiretroviral medications are more poorly tolerated among exposed healthcare personnel than among HIV-infected patients. To ensure compliance, careful consideration should be made when deciding upon a particular PEP regimen.

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- If the healthcare worker fails to complete the PEP regimen, most likely it is because of the side effects. Medications can be given to control side effects or the dose of the drug can be lowered and given more frequently throughout the day. The exposed healthcare worker should receive behavioral counseling (*specifically regarding sexual abstinence, condom use, and refraining from donating blood or breastfeeding*). The exposed healthcare worker should seek early medical intervention for acute illness.

Hepatitis B Post-Exposure Prophylaxis

PEP guidelines for healthcare personnel exposed to hepatitis b have also been released by the CDC. The most effective component of hepatitis B PEP is early administration of an initial dose of the hepatitis B vaccine. This vaccine must be administered as soon as possible. Additionally, hepatitis B immune globulin (HBIG) should also be administered within twenty-four hours of exposure. HBIG and the hepatitis B vaccine may be given at the same time, but at different injection sites. This method has been proven to be highly effective in preventing HBV infection after an exposure.

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Standards of Care

Managing Attitudes, Ethical and Legal Behaviors

HIV/AIDS has had a profound impact on how care is provided to patients and clients and this raises both practice and ethical concerns.

Most states have enacted laws preventing the disclosure of a patient's HIV status without his/her specific consent. The Supreme Court has ruled that those infected with HIV, asymptomatic or not, are protected against discrimination under the Americans with Disabilities Act.

When nursing professionals allow their personal beliefs to interfere with their care, they defy the first tenet of the ANA'S Code for Nurses which states that nursing care must be provided unrestricted by considerations of social or economic status, personal attributes or the nature of health problems.

The struggles that health care providers and clients/patients with AIDS continue to deal with include the suffering, loss, grief and fear of transmission. The actual care giving experience with the AIDS' client or patient provides recognition of the sociocultural values to a more equalitarian perspective and enables the care givers to realize the intrinsic value and worth of all human beings despite their differences and diseases.

It is important for health care providers to provide a supportive, caring and safe environment that will maximize the potentials of the health care providers to deliver a holistic approach to clients/patients with AIDS. This should allow the health care provider to grow personally and professionally to accept diversity, learn to live with uncertainty and find strength in the client's or patient's values and identity.

The AIDS epidemic will continue to be a challenge into the twenty first century, but the compassion and concern of health care providers will hopefully be shown to the patient or client and his/her family. Health care professionals are moving beyond the negativity of AIDS care and understand their ethical responsibilities. Modern health care professionals realize that the disease is not easily transmissible and is now focus on their patients' health care needs and a concern for their quality of life.

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American with Disabilities ACT (ADA)

Gives Federal Civil Rights protection to individuals with disabilities similar to those provided to individuals on the basis of race, color, sex, national origin, age and religion. It guarantees equal opportunity in public accommodations, employment, transportation, state and local government services and telecommunications.

A disability is considered if the individual has a physical or mental impairment that substantially limits one or more major life activities. Persons with HIV disease, both symptomatic and asymptomatic, have physical impairments that substantially limit one or more major life activities.

The ADA also protects persons who are discriminated against because they have a known association or relationship with an individual who is HIV – positive.

The ADA also prohibits discrimination in all employment practices. This includes the following: hiring and firing, job assignment, training, promotions, wages, benefits, leave and all other employment-related activities.

An employer cannot ***NOT*** choose to hire a qualified person because they fear the worker will become too ill to work in the future. The hiring decision must be based on how well the individual can perform now.

Transmission of the HIV rarely will be a legitimate direct threat issue. It has been medically established that HIV can only be transmitted by sexual contact with an infected person, exposure to infected blood or blood products or perinatally from an infected mother to her infant during pregnancy, birth or breast-feeding. **HIV is not transmitted by casual contact.**

If an employee discloses his or her HIV status, the ADA requires this information to be kept confidential.

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Resource Advisor

Chris Dunn, BS is an experienced health educator and sports medicine clinician. She received Bachelor of Science degrees in sports medicine, exercise science and education from the University of Nebraska at Omaha. She has prior experience working with continuing education providers as the Professional Development Manager for the Board of Certification for athletic trainers.

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CDC HIV/AIDS HOTLINE (800) 342-2437

CDC HIV/AIDS Web Site – <http://www.cdc.gov/hiv/stats/hasrlink.htm>

While NEVCO® strives to remain current with federal and state regulatory requirements; the information contained in this program is always subject to governmental amendment. Therefore, we suggest that you contact your state and federal authorities for any possible revisions to regulatory requirement.

NATIONAL EDUCATIONAL VIDEO, INC. TM
HIV/AIDS 8

Participant Evaluation of Objectives

Please evaluate this program by circling the number that best represents how well this program met the following objectives:

	<u>4=Excellent</u>	<u>3=Good</u>	<u>2=Average</u>	<u>1=Poor</u>
1. Apply concepts of exposure control in analyzing the transmission of blood borne pathogens (HIV, Hepatitis B and C) and preventing their spread.	4	3	2	1
2. Explain the methods of HIV, Hepatitis B and Hepatitis C risk reduction.	4	3	2	1
3. Discuss available diagnostic testing for HIV, Hepatitis B and Hepatitis C and the importance of early medical intervention.	4	3	2	1
4. Explain PEP or post exposure prophylaxis for health care workers.	4	3	2	1
5. Describe standard precautions and when and where these precautions should be followed by health care workers.	4	3	2	1

Do you feel you met your personal objectives? _____

Time required to complete this program? _____ Minutes

COMMENTS: _____

Return this form to the facilitator who distributed the learning materials.
Thank you

OSHA[®] FactSheet

OSHA's Bloodborne Pathogens Standard

Bloodborne pathogens are infectious microorganisms present in blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV), the virus that causes AIDS. Workers exposed to bloodborne pathogens are at risk for serious or life-threatening illnesses.

Protections Provided by OSHA's Bloodborne Pathogens Standard

All of the requirements of OSHA's Bloodborne Pathogens standard can be found in Title 29 of the Code of Federal Regulations at 29 CFR 1910.1030. The standard's requirements state what employers must do to protect workers who are occupationally exposed to blood or other potentially infectious materials (OPIM), as defined in the standard. That is, the standard protects workers who can reasonably be anticipated to come into contact with blood or OPIM as a result of doing their job duties.

In general, the standard requires employers to:

- **Establish an exposure control plan.** This is a written plan to eliminate or minimize occupational exposures. The employer must prepare an exposure determination that contains a list of job classifications in which all workers have occupational exposure and a list of job classifications in which some workers have occupational exposure, along with a list of the tasks and procedures performed by those workers that result in their exposure.
- **Employers must update the plan annually** to reflect changes in tasks, procedures, and positions that affect occupational exposure, and also technological changes that eliminate or reduce occupational exposure. In addition, employers must annually document in the plan that they have considered and begun using appropriate, commercially-available effective safer medical devices designed to eliminate or minimize occupational exposure. Employers must also document that they have solicited input from frontline workers in identifying, evaluating, and selecting effective engineering and work practice controls.
- **Implement the use of universal precautions** (treating all human blood and OPIM as if known to be infectious for bloodborne pathogens).
- **Identify and use engineering controls.** These are devices that isolate or remove the bloodborne pathogens hazard from the workplace. They include sharps disposal containers, self-sheathing needles, and safer medical devices, such as sharps with engineered sharps-injury protection and needleless systems.
- **Identify and ensure the use of work practice controls.** These are practices that reduce the possibility of exposure by changing the way a task is performed, such as appropriate practices for handling and disposing of contaminated sharps, handling specimens, handling laundry, and cleaning contaminated surfaces and items.
- **Provide personal protective equipment (PPE), such as gloves, gowns, eye protection, and masks.** Employers must clean, repair, and replace this equipment as needed. Provision, maintenance, repair and replacement are at no cost to the worker.
- **Make available hepatitis B vaccinations to all workers with occupational exposure.** This vaccination must be offered after the worker has received the required bloodborne pathogens training and within 10 days of initial assignment to a job with occupational exposure.
- **Make available post-exposure evaluation and follow-up to any occupationally exposed worker who experiences an exposure incident.** An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM. This evaluation and follow-up must be at no cost to the worker and includes documenting the route(s) of exposure and the circumstances

under which the exposure incident occurred; identifying and testing the source individual for HBV and HIV infectivity, if the source individual consents or the law does not require consent; collecting and testing the exposed worker's blood, if the worker consents; offering post-exposure prophylaxis; offering counseling; and evaluating reported illnesses. The healthcare professional will provide a limited written opinion to the employer and all diagnoses must remain confidential.

- **Use labels and signs to communicate hazards.** Warning labels must be affixed to containers of regulated waste; containers of contaminated reusable sharps; refrigerators and freezers containing blood or OPIM; other containers used to store, transport, or ship blood or OPIM; contaminated equipment that is being shipped or serviced; and bags or containers of contaminated laundry, except as provided in the standard. Facilities may use red bags or red containers instead of labels. In HIV and HBV research laboratories and production facilities, signs must be posted at all access doors when OPIM or infected animals are present in the work area or containment module.
- **Provide information and training to workers.** Employers must ensure that their workers receive regular training that covers all elements of the standard including, but not limited to: information on bloodborne pathogens and diseases, methods used to control occupational

exposure, hepatitis B vaccine, and medical evaluation and post-exposure follow-up procedures. Employers must offer this training on initial assignment, at least annually thereafter, and when new or modified tasks or procedures affect a worker's occupational exposure. Also, HIV and HBV laboratory and production facility workers must receive specialized initial training, in addition to the training provided to all workers with occupational exposure. Workers must have the opportunity to ask the trainer questions. Also, training must be presented at an educational level and in a language that workers understand.

- **Maintain worker medical and training records.** The employer also must maintain a sharps injury log, unless it is exempt under Part 1904 -- Recording and Reporting Occupational Injuries and Illnesses, in Title 29 of the Code of Federal Regulations.

Additional Information

For more information, go to OSHA's Bloodborne Pathogens and Needlestick Prevention Safety and Health Topics web page at: <https://www.osha.gov/SLTC/bloodbornepathogens/index.html>.

To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the "U.S. Department of Labor" listing in your phone book, or call us toll-free at (800) 321-OSHA (6742).

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; the teletypewriter (TTY) number is (877) 889-5627.

For assistance, contact us. We can help. It's confidential.

