

## Washington: HIV/AIDS, 4 units

4 contact hours: \$25.00

**Authors:** JoAnn O'Toole, RN, BSN  
Lauren Robertson, BA, MPT  
Susan Schmid, PhD

**Course Summary:** Matches the outline of required topics for the 4-hour licensing in Washington State, containing Parts I, II, V, and VI of the KNOW curriculum. Topics include etiology, epidemiology, transmission, and infection control precautions for HIV. Clinical manifestations, treatment options, and psychosocial issues complete the course.

**COI/Commercial Support:** The planners and authors of this course have declared no conflict of interest and all information is provided fairly and without bias. We received no commercial support for this activity and do not approve or endorse any commercial products displayed.

**Off-Label Use:** No off-label uses were discussed or recommended in this course.

**Criteria for Successful Completion:** 80% or higher on the post test, a completed evaluation form, and payment where required. No partial credit will be awarded.

This course will be reviewed and updated or discontinued on March 1, 2013.

## Accreditation Information

### Nursing

ATrain Education, Inc. is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

### Physical Therapy

ATrain Education, Inc. is an approved reviewer and provider by the Physical Therapy Board of California and an approved provider by the New York State Board for Physical Therapy.

### Occupational Therapy

ATrain Education, Inc. is an approved provider by the American Occupational Therapy Association.

### Other Professions and Accreditations

See the ATrainCEU Accreditation page at <http://www.ATrainCeu.com/accreditation.php>.

## Instructions

1. Read the course material and then complete the following forms:
  - A. Answer Sheet
  - B. Evaluation Learning Activity
  - C. Registration Form
2. If you are not paying by credit card, prepare a check for the amount of the course made out to: *ATrain Education, Inc.*
3. Mail the completed forms and your payment to:  
ATrain Education, Inc  
5171 Ridgewood Rd  
Willits, CA 95490

When we receive your forms and payment, we will mail (or email, at your request) your completion certificate. If you have any questions, please call or email [Info@ATrainCEU.com](mailto:Info@ATrainCEU.com).

## Course Objectives

When you finish this course, you will be able to:

- Discuss the etiology and epidemiology of HIV in Washington State and the United States.
- Describe transmission and infection control precautions for prevention of HIV transmission.
- Identify the legal and ethical issues associated with HIV in Washington State.
- Discuss the main psychosocial issues facing HIV-infected persons and their caregivers.

## Part I: Etiology and Epidemiology of HIV/AIDS

The human immunodeficiency virus (HIV) has infected tens of millions of people around the globe in the past three decades, with devastating results. In its advanced stage—acquired immunodeficiency syndrome (AIDS)—the infected individual has no protection from diseases that may not even threaten people who have healthy immune systems. While medical treatment can delay the onset of AIDS, no cure is available.

### Definition of HIV and AIDS

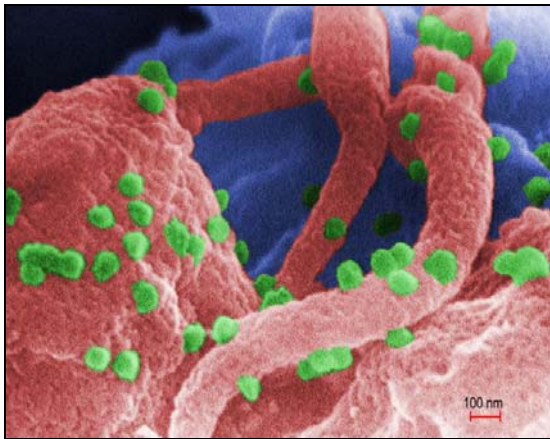
**The human immunodeficiency virus (HIV) kills or impairs the cells of the immune system and progressively destroys the body's ability to protect itself.** Over time, a person with a deficient immune system (immunodeficiency) may become vulnerable to infections by disease-causing organisms such as bacteria or viruses. These infections can become life-threatening.

The term **AIDS** stands for “acquired immunodeficiency syndrome,” and it refers to the most advanced stage of HIV infection. Medical treatment can delay the onset of AIDS, but HIV infection eventually results in a **syndrome** (combination) of symptoms, diseases, and infections. The diagnosis of AIDS requires evidence of HIV infection and the appearance of some specific conditions or diseases. Only a licensed medical provider can make an AIDS diagnosis. All people diagnosed with AIDS have HIV, but you may be infected with HIV and not yet have AIDS.

### HIV-Infection in the Body

HIV enters the bloodstream and seeks out **T-helper lymphocytes**, white blood cells essential to the functioning of the immune system. One of the functions of these cells is to regulate the immune response in the event of attack from disease-causing organisms such as bacteria or viruses. When the virus infects the T-helper lymphocyte, the cell sends signals to other cells, which produce antibodies. This T-helper lymphocyte cell may also be called the **T4** or the **CD4 cell**.

### Human Lymphocyte Showing HIV Infection



A scanning electron micrograph showing HIV-1 virions (in green) on the surface of a human lymphocyte. HIV was identified in 1983 as the pathogen responsible for AIDS. In the infected individual, the virus causes a depletion of T-cells, which leaves these patients susceptible to opportunistic infections and to certain malignancies. Source: Public Health Image Library, image #11279, CDC, 1989. From: CDC/ C. Goldsmith, P. Feorino, E. L. Palmer, W. R. McManus [PHIL Image ID#11279]

## HIV “Budding” Out of a T-Cell



Source: NIAID, courtesy of Dr. Tom Folks.

**Antibodies** (proteins made by the immune system in response to infection) are produced by the immune system to help get rid of specific foreign invaders that can cause disease. Producing antibodies is an essential function of our immune systems. The body makes a specific antibody for each disease. For example, if we are exposed to the measles virus, the immune system will develop antibodies specifically designed to attack that virus. Polio antibodies fight the polio virus.

When our immune system is working correctly, it protects against these foreign invaders. HIV infects and destroys the T-helper lymphocytes and damages their ability to signal for antibody production. This results in the eventual decline of the immune system.

### Primary HIV Infection

**Primary HIV infection** (acute HIV infection) is the first stage of HIV disease. It begins with initial infection and typically lasts only a week or two. During this time the virus is establishing itself in the body but **the body has not yet begun to produce antibodies**. Because of this, the infection cannot be discovered by any HIV tests.

This period of acute infection is characterized by a **high viral load** (large numbers of the virus) and a decline in CD4 cells. Perhaps half of infected patients experience mononucleosis-like symptoms (fever, swollen glands) during primary infection, but the symptoms are not life-threatening and may be misinterpreted as a minor illness.

During primary infection, newly infected people can infect partners because they do not yet know they have HIV. The primary infection period ends when the body begins to produce HIV-specific antibodies. The number of antibodies is still insufficient to be detectable by HIV testing.

## The Window Period

The **window period** is the period of time between initial infection with HIV and when the body produces **detectable** antibodies, which can vary from 2 to 12 weeks. During the window period a person is infectious, with a high viral load and a negative HIV antibody test. This means the infected person might get a negative result while actually having HIV.

The point when the HIV antibody test becomes positive is called the point of **seroconversion**.

## Asymptomatic Stage

After the acute stage of HIV infection, people infected with HIV continue to look and feel completely well for long periods, sometimes for many years. During this time, the virus is replicating and slowly destroying the immune system. This asymptomatic stage is sometimes referred to as clinical latency.

This means that, although a person looks and feels healthy, they can infect other people through unprotected anal, vaginal, or oral sex or through needle sharing—especially if they have not been tested and do not know that they are infected. The virus can also be passed from an infected woman to her baby during pregnancy, birth, or breastfeeding. Without antiretroviral therapy, it takes an average of 10 years between the time a person is infected with HIV and the onset of AIDS.

## The Origin of HIV

Since HIV was discovered in 1983, researchers have worked to pinpoint the origin of the virus. In 1999 an international team of researchers reported that they discovered the origins of HIV-1, the predominant strain of HIV in the developed world. A subspecies of chimpanzees native to west equatorial Africa was identified as the original source of the virus.

The researchers believe that HIV-1 was introduced into the human population when hunters became exposed to infected blood. The transmission of HIV is driven by changes in migration, housing, travel, sexual practices, drug use, war, and economics that affect both Africa and the entire world.

## HIV Strains and Subtypes

HIV has divided into two primary strains: **HIV-1** and **HIV-2**. Worldwide, the predominant virus is HIV-1, and generally when people refer to HIV without specifying the type of virus they are referring to HIV-1. The relatively uncommon HIV-2 type is concentrated in West Africa and is rarely found elsewhere.

HIV is a highly variable virus that mutates very readily. This means there are many different strains of HIV, even within the body of a single infected person. Based on genetic similarities, the numerous viral strains may be classified into types, groups, and subtypes.

Both HIV-1 and HIV-2 have several subtypes. It is virtually certain that more undiscovered subtypes are in existence now. It is also probable that more HIV subtypes will evolve in the future. As of 2001, blood testing in the United States can detect both strains and all known subtypes of HIV.

## Epidemiology of HIV and AIDS

**Epidemiology** is “the study of how disease is distributed in populations and of the factors that influence or determine this distribution.” Epidemiologists try to discover why a disease develops in some people and not in others. AIDS was first recognized in the United States in 1981. In Washington State, the first reported case of AIDS was in 1982. Since then, the number of AIDS cases has continued to increase both in the United States and other countries. In 1983 HIV was discovered to be the cause of AIDS.

People who are infected with HIV come from all races, countries, sexual orientations, genders, and income levels. Globally, most of the people who are infected with HIV have not been tested, and are unaware that they are living with the virus. The U.S. Centers for Disease Control and Prevention (CDC) estimates that in 2006, 21% of those in the United States who had HIV were unaware that they were living with the virus. This is a decline from the 25% measured in 2003 and is a positive sign because research shows that most individuals who know they are infected with HIV will reduce behaviors that could transmit the virus (CDC, 2010).

It is important to note that **the great majority of persons with HIV infection do not transmit HIV to others.** The CDC estimates that in 2006 there were 5 transmissions per 100 persons living with HIV infection. This means that at least 95% of those living with HIV infection did not transmit the virus to others that year. This represents an 89% decline in the estimated rate of transmission since the peak level of new infections in the mid-1980s. It is believed that the decline is due to effective prevention efforts and the availability of improved testing and treatments for HIV (CDC, 2010).

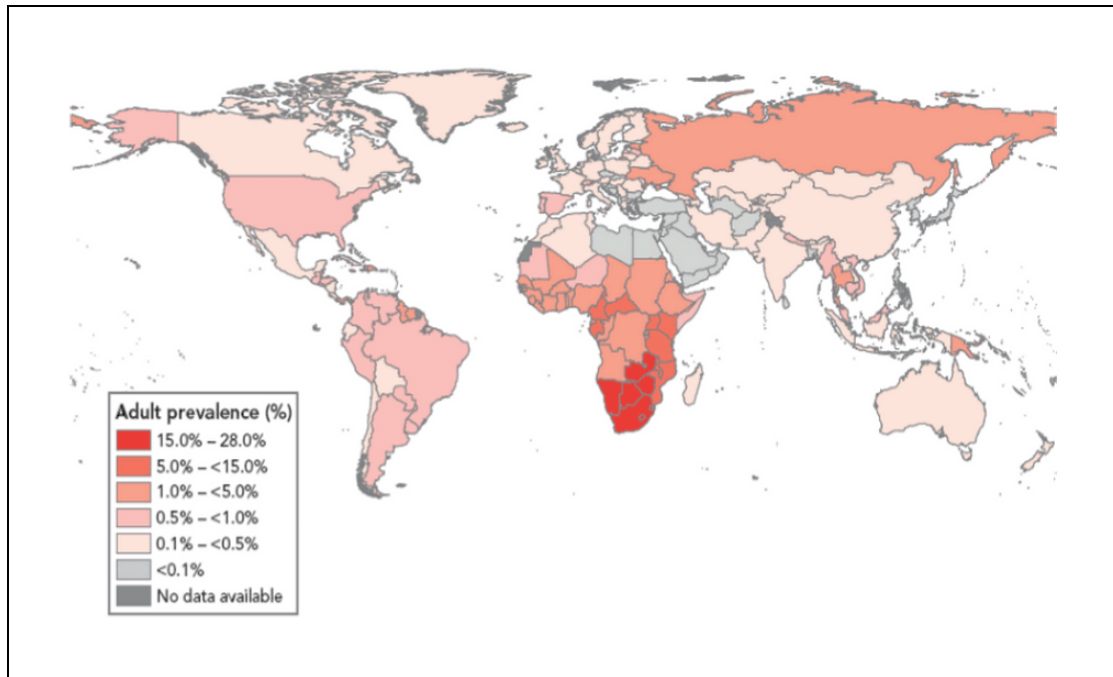
The CDC estimates that more than 1 million (1,106,400) adults and adolescents were living with HIV infection in the United States at the end of 2006. This is an 11% increase over the previous estimate in 2003. The increase may be due to a higher number of people with HIV knowing their status and seeking care and/or a higher number becoming infected with HIV than the number with HIV or AIDS who die each year. Despite this increase, the number of new infections has remained stable at about 56,000/year since the late 1990s (CDC, 2010).

Overall, more than 576,000 persons with an AIDS diagnosis in the United States have died from the beginning of the epidemic through 2007. From 2005 through 2007, deaths of persons with a diagnosis of HIV infection increased 17% and the estimated rate of deaths increased 14%. However, interpreting the data regarding deaths of persons with a diagnosis of HIV can be difficult because many factors can affect the data (CDC, 2010).

Worldwide, the number of HIV-infected people has stabilized but at what the Joint United Nations Programme on HIV/AIDS (UNAIDS) calls “an unacceptably high level.” UNAIDS estimates there were 33 million people in the world living with HIV or AIDS in 2007. Worldwide the annual number of new HIV infections declined from 3.0 million in 2001 to 2.7 million in 2007 (UNAIDS, 2008).

Young people between the ages of 15 and 24 account for 45% of new infections, and globally the percentage of women among those living with HIV/AIDS has remained constant at 50% for several years. After decades of increasing mortality, the annual number of AIDS deaths globally finally saw a two-year decline to just over 2 million people in 2007 (UNAIDS, 2008).

## A Global View of HIV Infection, 2007



Thirty-three million people were living with HIV in 2007. Source: “A Global View of HIV Infection,” UNAIDS, 2008. Reprinted with permission.

The discovery of combination antiviral drug therapies in 1996 resulted in a dramatic decrease in the number of deaths due to AIDS among people given the drug therapies. Many people who have access to the therapies may not benefit from them, or may not be able to tolerate the side effects. The medications are expensive and require strict dosing schedules. In developing countries, many people with HIV have no access to the newer drug therapies.

### **HIV and AIDS Cases Are Reportable**

AIDS cases have been **reportable** (physicians must confidentially report any cases among their patients) to the CDC since 1984. AIDS and symptomatic HIV infections have been reportable to the Washington State Department of Health (DOH) since 1984 and 1993, respectively. HIV cases became reportable to the Washington State Department of Health in fall 1999.

## Part II: Transmission and Infection Control

### Necessary Conditions for HIV-Infection

HIV is a relatively fragile virus, which is not spread by casual contact. HIV is not easy to “catch”—it must be **acquired**. In order for HIV to be transmitted, three conditions must occur:

- There must be an **HIV source**.
- There must be a sufficient dose of virus.
- There must be access to the bloodstream of another person.

### Body Fluids That Can Transmit HIV

Anyone infected with the virus is potentially a source of HIV infection. Transmission occurs primarily through infected blood, semen, vaginal secretions, or breast milk. Sweat, tears, saliva, urine, and feces are not capable of transmitting HIV unless visibly contaminated with blood.

In settings such as hospital operating rooms, other fluids—cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, amniotic fluid—*may* be considered infectious if the source is HIV-positive. These fluids are generally not found outside the hospital setting. Therefore, **the most common body fluids considered potentially infectious for HIV are blood, semen, vaginal secretions, and breast milk.**

### Sufficient Dose

The concentration and amount of HIV necessary for infection to occur is called a **sufficient dose**.

### Blood

Access to another person's bloodstream involves behaviors or circumstances that place someone at risk for infectious fluid entering their bloodstream. The most common of the risk behaviors are **unprotected sexual intercourse (anal, vaginal, oral) with an infected person** and **use of contaminated injection equipment for use in injecting drugs**.

HIV transmission may occur during practices such as tattooing, blood-sharing activities such as “blood brother” rituals or any other type of ritualistic ceremonies where blood is exchanged, or when unsterilized equipment contaminated with blood is shared. HIV transmission may also occur in occupational settings, which will be discussed in more detail later in this section.

### HIV Transmission

People may become infected with HIV if they engage in specific risk behaviors or if they are exposed through needlestick injuries (usually in a healthcare setting). Other blood contact with mucous membranes or non-intact skin provides a possible, but not probable, chance of transmission.

## Means and Requirements for Transmission

HIV is transmitted through:

- Unprotected anal, vaginal, and oral intercourse
- Sharing needles or other injection equipment
- A mother passing the virus to her baby either before or during birth
- An infected woman breastfeeding her infant
- Accidental needlestick injuries, or infected body fluid coming into contact with the broken skin or mucous membranes of another person (as with healthcare workers)
- A transfusion prior to 1986 of HIV-infected blood or blood products

In extremely rare cases, HIV can be transmitted by sharing razors or toothbrushes, if infected blood from one person was deposited on the toothbrush or razor and the blood entered the bloodstream of another person.

The transmission of HIV depends upon:

- The **availability** of the infectious agent (HIV) in sufficient quantity
- The **viability** of the infectious agent (how strong it is)
- The **virulence** of the infectious agent (how infectious it is)
- The **ability** of the infectious agent to reach the bloodstream, mucous membranes, or broken skin of a potential host (ie, getting into another person's body)

One of the predictors of the infectious level of an HIV-positive person is **viral load**—how much HIV is present in the bloodstream. Studies show a clear connection between higher viral load in the blood and increased transmissibility of HIV.

### **Blood Transfusions**

Transmission by contaminated blood or blood products occurred in the United States before March 1985. Testing for HIV at blood banks and organ transplant centers began in 1985 and has almost completely eliminated the risks for transmission in developed countries. In 1999 about 1% of national AIDS cases were caused by transfusions or use of contaminated blood products. The majority of those cases were in people who received blood or blood products before 1985.

### **Sexual Intercourse**

HIV can enter the bloodstream through mucous membranes—breaks, sores, and cuts in the mouth, anus, vagina, or penis. Anal, vaginal, and oral intercourse (both receptive and penetrative) can transmit HIV from person to person.

#### **Anal Intercourse**

**Unprotected anal intercourse is considered to be the greatest sexual risk for transmitting HIV.** Anal intercourse frequently results in tears of mucous membranes, which makes it very easy for the virus to enter the bloodstream. The receptive (bottom) partner is considered to be at more risk of getting HIV if the virus is present. Risks vary for the insertive (top) partner.

### Vaginal Intercourse

Unprotected vaginal intercourse with the exchange of semen, pre-ejaculate fluid (pre-cum), menstrual blood or vaginal fluids is also a risk for HIV transmission. Studies have shown that women are more likely to become infected with HIV through vaginal sex than men. The larger amount of mucous membrane surface area of the vagina is a probable reason for women's greater rate of HIV infection from their male partners.

### Sharing Needles and Drug Injection Equipment

Sharing injection needles, syringes, and other drug paraphernalia with an HIV-infected person can put HIV directly into the user's bloodstream and is the behavior that most efficiently transmits HIV, hepatitis B (HBV), and hepatitis C (HCV).

**Indirect sharing** occurs when drug injectors share injection paraphernalia or divide a shared or jointly purchased drug while preparing and injecting it. The paraphernalia that carry the potential for transmission are the syringe, needle, "cooker," cotton, and rinse water. Sharing these items (sometimes called "the works") may transmit HIV—or other bacteria and viruses. Examples of indirect sharing are when a user squirts the drug back (from a dirty syringe) into the drug cooker or someone else's syringe or shares a common filter or rinse water.

### Probability of HIV Transmission from One HIV Exposure

Donor screening, blood testing, and other processing measures have reduced the risk of transfusion-caused HIV transmission in the United States to between 1 in 450,000 and 1 in 600,000 transfusions. Donating blood is always safe in the United States, because sterile needles and equipment are used. All used syringes, needles, and blood or body fluid spills should be considered potentially infectious, and should be treated using Standard Precautions (formerly known as Universal Precautions).

#### Probability of Infection Following One Exposure to HIV\*

Source of infection	HIV infection rate
Contaminated blood transfusion (prior to 1986)	95.0%
One intravenous syringe or needle exposure	0.67%
One percutaneous exposure (e.g. a needlestick)	0.4%
One episode of receptive anal sexual intercourse	0.1%–3%
One episode of receptive vaginal intercourse	0.1%–0.2%
One episode of insertive vaginal intercourse	0.03–0.09%

A 1% risk means 1 chance in 100 for infection to occur. An 0.10% risk means 1 chance in 1,000.

Source: CDC.

### HIV and Pregnancy

An HIV-infected woman may transmit the virus to her baby during pregnancy, during the birth process, or following pregnancy by breastfeeding. One of the predictors of how infectious the woman will be to her baby is her viral load (how much HIV is present in her bloodstream). Women with new or recent infections or people in later stages of AIDS tend to have higher viral loads and may be more infectious.

In 1994 researchers discovered that a course of the antiretroviral drug AZT (zidovudine) significantly reduced the transmission of HIV from woman to baby. In 2002 medications such as AZT and others were introduced during pregnancy and delivery to prevent transmission of HIV.

HIV is transmitted from an HIV-infected woman to her baby in about 25% of pregnancies if intervention with antiretroviral medications does not occur. The perinatal transmission rate has dropped dramatically in the United States due to the widespread use of AZT by HIV-infected pregnant women. When a woman's health is monitored closely and she receives a combination of antiretroviral therapies during pregnancy, the risk of HIV transmission to the newborn drops below 2%.

In some pregnancies, cesarean section (C-section) may be recommended to reduce the risk of transmission from woman to baby. Advice about medications and C-section should be given on an individual basis by a medical provider with experience in treating HIV-positive pregnant women. Washington State law requires pregnant women to be counseled regarding risks of HIV and offered voluntary HIV testing.

### Lifelong Infection

HIV infection is lifelong—once people become infected with HIV, their blood, semen, vaginal secretions, and breast milk will always be potentially infectious.

### Transmission of Multidrug-Resistant Forms of HIV

There is evidence of transmission of multidrug-resistant forms of HIV. People who have been infected with HIV and have used a number of the available antiretroviral medicines may transmit forms of HIV that are resistant to some of these available drug therapies. This reduces the treatments available for the newly HIV-infected person.

## Factors Affecting HIV Transmission

### The Presence of Other STDs

The presence of other **sexually transmitted diseases (STDs)** increases the risk for HIV transmission, because the infected person may have a much larger number of HIV-infected white blood cells present at the site of infection. The infected person's immune system may be less able to suppress or combat HIV infection. Lesions from STDs break down the protective surface of the skin or mucous membrane, which makes the infected person more vulnerable to other infections.

The presence of co-infection with other STDs increases the risk of HIV transmission because:

- STDs like syphilis and symptomatic herpes can cause breaks in the skin, which provide direct entry for HIV.
- Inflammation from STDs, such as chlamydia, makes it easier for HIV to enter and infect the body.
- HIV is often detected in the pus or other discharge from genital ulcers of HIV-infected men and women.
- Sores can bleed easily and come into contact with vaginal, cervical, oral, urethral, and rectal tissues during sex.
- Inflammation appears to increase HIV viral shedding and the viral load in genital secretions.

## Multiple Partner

Having multiple partners for drug injection or sexual intercourse increases the chances of being exposed to a person infected with HIV. Persons who have unprotected sex with multiple partners are considered to be at high risk for HIV infection. In some studies, the CDC defines **multiple partners** as six or more partners in a year. However, someone who has only one partner is still at risk if the person is HIV-positive and they have unprotected sex and/or share needles.

## Use of Non-Injecting Drugs

Use of other substances, including alcohol and non-injecting street drugs, can also put a person at risk for getting HIV. These substances impair judgment, increasing the likelihood that a person will take risks (have unprotected sex, share needles), or may place the person in unsafe situations. Additionally, some substances have physiologic and biologic effects on the body, including masking pain and producing sores on the mouth and genitals, which can create additional "openings" for HIV and other sexually transmitted diseases.

## Gender and Equality Issues

Lack of power (being subservient) in a relationship can affect a person's ability to insist on sexual protection, such as the use of condoms. Women are socially and economically dependent upon men in many societies. This sometimes results in their being unable to ask their partner to use condoms or to leave a relationship that puts them at risk.

In some cultures, females are not encouraged to learn about their bodies, sex, birth control, or other sexuality topics. Other cultures promote the value of the male having multiple sexual partners, while discouraging the same behavior in females.

## Casual Contact

HIV is not transmitted through the air or by sneezing, breathing, or coughing. Touching, hugging, and shaking hands do not transmit HIV. HIV transmission is not possible through restaurant food prepared or served by an HIV-infected employee.

HIV is not transmitted through casual contact in the workplace. No cases of HIV transmission have been linked to sharing computers, food, telephones, paper, water fountains, swimming pools, bathrooms, desks, office furniture, toilet seats, showers, tools, equipment, coffee pots, or eating facilities. However, personal items that may be contaminated with blood, including but not limited to razors, toothbrushes, and sex toys, should not be shared. There have been no cases of HIV transmission by children playing, eating, sleeping, kissing, and hugging.

## Unusual Cases of HIV Transmission

To date, less than a dozen known cases of HIV transmission have occurred in household settings in the United States and elsewhere. Reports of these cases have been thoroughly investigated by the CDC. The researchers determined that the transmissions were caused by sharing a razor contaminated with infected blood, exposure of infected blood to cuts and broken skin, and (possibly) deep kissing involving a couple who both had bleeding gums and poor dental hygiene. It is important to remember that these cases were extremely unusual. Sensible precautions with bleeding cuts and not sharing personal hygiene items would have prevented these cases of infection.

There are also isolated cases of transmission from healthcare workers to patients. To date, there were three instances where transmission of HIV could only be tracked to the HIV-infected clinician treating the patient. At least one of these cases occurred prior to the implementation of strict equipment disinfection.

### **Biting**

Biting poses very little risk of HIV transmission. The possibility only exists if the person who is biting and the person who is bitten have an exchange of blood (such as through bleeding gums or open sores in the mouth). Bites may transmit other infections, and should be treated immediately by thoroughly washing the bitten skin with soap and warm water and then disinfecting with antibiotic skin ointment.

### **Workplace Situations**

Workplace exposures generally occur through a needlestick injury but can occur through a splash of infectious blood or exposure to blood-contaminated material. (Occupational exposure is discussed later in the course.)

### **Risk Reduction Methods**

There are many effective methods for reducing the risk of sexual and drug-related transmission of HIV.

#### **Sexual Abstinence**

Sexual abstinence (not engaging in anal, vaginal, or oral intercourse or other sexual activities where blood, semen, or vaginal fluid can enter the body) is a completely safe and 100% effective method for preventing the sexual transmission of HIV.

#### **Non-Penetrative Sex**

Non-penetrative sex, where the penis does not enter the vagina or anus, and penetrative sex toys are not shared, is a safer sex method that greatly decreases your risk of getting infected with HIV. This practice will not transmit HIV, provided that there is no exchange of blood, semen, vaginal fluids, or breast milk in the sexual contact. Non-penetrative sexual intercourse, however, may still be a risk factor for the transmission of other sexually transmitted diseases.

#### **Monogamous Long-Term Relationships**

**Monogamy**—having sex with only one person who only has sex with you—is another choice to prevent/reduce the risk of HIV infection. If neither partner is infected with HIV or other STDs, and neither has other sexual or injection equipment—sharing contacts, then neither partner is at risk of exposure to HIV or other STDs. In order for monogamy to protect against HIV and STDs, both partners must be free of disease and both partners must remain monogamous.

#### **Limiting Partners**

The decision to limit the number of sexual or drug-injecting partners may reduce the risk of HIV transmission, but is not a guarantee of safety. The fewer the partners the greater the reduction of risk.

## Safer Sexual Practices

### *Did you know. . .*

Not all condoms and lubricants provide effective protection against the transmission of HIV and other STDs.

### **Latex condoms**

When used correctly and consistently during sexual intercourse, (anal, vaginal, and oral) latex condoms are highly effective in preventing the transmission of HIV. To prevent tearing of latex condoms, only water-based lubricants should be used. Oil-based lubricants like petroleum jelly or cooking oils should not be used because the oil in these products breaks down the latex condom.

### **Polyurethane Condoms**

For the male, polyurethane condoms are made of a soft plastic. They look like latex condoms but are thinner. Lab tests show that sperm and viruses (like HIV) cannot pass through polyurethane.

Female condoms are insertive (fit inside the vagina or anus). They are made of polyurethane, which blocks sperm and viruses (like HIV). These condoms may be inserted several hours before intercourse.

### **Dental Dams**

**Dental dams**, large pieces of new, unused, clear, non-microwaveable plastic wrap, and latex condoms may be used to provide a barrier to reduce the risk of HIV transmission during oral intercourse on a female. The latex condom can be cut into a square for use as a dental dam. Simply cut off the tip and then down one side, and open it into a square. Water-based lubricant may be used with the dental dams, plastic wrap, or cut-open condoms to enhance sensitivity and reduce friction.

### **Natural Membrane Condoms**

Natural membrane condoms (“skins”) **do not provide protection from HIV, HBV, and some other STDs.** (They can help prevent pregnancies and some STDs, such as syphilis.)

### **When Both Partners are HIV-Positive**

If two people are infected with HIV, do they still need to have protected sex? Some people think it is safe for HIV-infected people to have unprotected sex with each other, but latex condoms are advised when both partners are HIV-positive. Each additional exposure to the virus may further weaken an immune system already damaged by HIV. Other STDs are transmitted through unprotected sex. Any additional viral or bacterial infection stresses the immune system and should be avoided.

### **Avoidance of Injection Drug Use**

Not injecting drugs is another way to avoid transmission of HIV. If abstaining from using injecting drugs is not possible, then use a clean needle each time and do not share injection equipment. This includes people who use needles to inject insulin, vitamins, steroids, or prescription or non-prescription drugs.

## Syringe Exchange

Syringe exchange, or needle exchange, is a disease prevention program for people who use illegal drugs. It provides new sterile syringes in exchange for used ones. People who trade in their used syringes/needles for clean ones at needle exchanges significantly reduce their risk for becoming infected with HIV or hepatitis through sharing needles.

Syringe exchanges are also referral sources for drug treatment. Participants may be able to secure drug treatment through the intervention of the syringe exchange staff. Public support for syringe exchange has grown in recent years. Many local health departments in Washington State, some in conjunction with other organizations, operate syringe exchanges in their communities. For more information, contact your local/district HIV/AIDS program.

It is safest always to use new, sterile needles and syringes, as well as other "works" (which can all become contaminated with blood). If someone cannot avoid sharing syringes, rinsing out the syringe/needle with full-strength bleach and clean water helps clean the syringe/needle and kill any HIV inside it.

There is high prevalence of HBV and HCV infection among injecting drug users; these viruses are stronger than HIV and are not likely to be killed by short contact with bleach. Cleaning the syringe with bleach and water is not likely to prevent transmission of HBV or HCV. There is no substitute for a new syringe. If there is no possible way to obtain new needles, the directions for using bleach to clean syringes/needles are:

1. Fill the syringe completely with water.
2. Tap it with your finger to loosen any traces of blood.
3. Shake the syringe and shoot out the bloody water.
4. Repeat these steps until you can't see any blood. Then:
5. Fill the syringe completely with fresh bleach.
6. Keep the bleach inside the syringe for at least 30 seconds.
7. Shoot out the used bleach.
8. Rinse out the syringe with **new, clean** water.
9. Shake the syringe and squirt out the water.

It is important to follow these steps exactly, because inadequate cleaning can result in the possibility of HIV infection. Always do the final rinse with water!

## HIV Prevention Through Behavioral Change

[The Global HIV Prevention Working Group granted permission for the use of the information in the following section. More information is available from: [www.GlobalHIVPrevention.org](http://www.GlobalHIVPrevention.org).]

Behavioral HIV prevention programs that target individuals, families, communities, entire societies, or a combination of all these have been shown to significantly reduce the rate of new HIV infections. Prevention programs build skills needed to use prevention tools properly and, to the extent feasible, help those at risk to avoid or effectively negotiate risky situations. Countries in diverse regions and of different income levels have significantly lowered the rate of new HIV infections because of major shifts in human behavior (Global HIV Prevention Working Group, 2008).

Behavioral HIV prevention programs emphasize direct and indirect interventions. **Direct** interventions introduce prevention tools into a particular environment. For example:

- Mandating condom use in brothels
- Influencing the physical environment (improving street lighting to reduce the likelihood of rape)
- Expanding clinical services (ensuring access to drug substitution therapy for chemical dependence)
- Creating more supportive legal and policy norms (legalizing same-sex relations) (PWG, 2008).

**Indirect** social or structural interventions can improve overall protection by promoting human rights, reducing income inequality, and addressing gender inequities.

HIV prevention is one of the world's most important priorities and behavior change remains the driving force for national success against HIV. As the HIV epidemic continues to expand, treatment alone will not reverse the incidence of new infections. In most countries prevention efforts should focus on populations at highest risk of infection (men who have sex with men, sex workers, injection drug users, prisoners, mobile populations, and other vulnerable groups.) (PWG, 2008).

## Globally Successful Behavioral Programs

### **Australia**

In the early 1980s Australia mounted a national AIDS response that included broad public-awareness campaigns, specific behavioral interventions for gay men, public-sector support for needle and syringe exchange, and voluntary HIV counseling and testing. Dramatic declines were recorded in unprotected anal intercourse and the sharing of needles for drug use.

Because of Australia's early, comprehensive response, focused largely on behavior change, annual HIV incidence peaked in 1985 and declined through the end of the 1990s. Between 1990 and 2000, the annual number of new HIV diagnoses fell by half.

### **Brazil**

Brazil has encouraged open discussion of HIV, supporting frank public-awareness campaigns, condom promotion, focused behavioral interventions, syringe and needle exchange, school-based HIV education, prevention services in prisons, and voluntary HIV counseling and testing. Especially noteworthy is Brazil's success in reversing a serious epidemic among injection drug users. Condom use increased by almost 50 percent among sexually active adults between 1998 and 2005, and focused behavior change prevention programs also maintained HIV prevalence at low levels among sex workers. Although the World Bank had predicted in 1990 that 1.2 million Brazilians would be infected by 2000, fewer than 600,000 were living with HIV in 2002.

### **Thailand**

In response to an increase in infections in the late 1980s, Thailand initiated an innovative national program that has served as a model for other countries. The country's 100 percent condom-usage program promoted condom use in brothels and national leaders encouraged discussion of the HIV threat and the fair treatment of those who were infected.

Annual HIV incidence declined from 143,000 in 1991 to 19,000 in 2003, helping reverse what was once one of the world's fastest-growing epidemics. Had Thailand not brought comprehensive HIV prevention to scale, it would now have 7.7 million HIV infections, rather than the estimated 580,000 residents currently living with HIV.

### **Uganda**

Uganda moved in the mid-1980s to address the rapid spread of HIV, implementing public-awareness campaigns that encouraged young people to delay initiation of sex and urged sexually active adults to reduce the number of sex partners. In the 1990s, the country supplemented these early measures with condom promotion and programs for voluntary counseling and testing.

The results of these efforts were remarkable. The percentage of young people who were sexually active fell by more than half between 1989 and 1995, and Ugandans were significantly less likely to have multiple sex partners than people living in neighboring countries. Increases in condom use in the 1990s helped preserve and accelerate early prevention gains. By the late 1990s, infection levels in capital city Kampala had fallen by two-thirds, and national HIV prevalence had been cut in half.

In 2010 the Global HIV Prevention Working Group issued a report that indicated that although great strides have been made with antiretroviral treatment, the world is currently doing a poor job of implementing sound, evidence-based, well-planned HIV prevention programs (PWG, 2010). Overall findings indicate:

- Prevention efforts remain inadequate in light of the continuing challenges posed by the epidemic.
- The rate of new HIV infections is substantially outpacing the scale-up of HIV treatment programs.
- Spending on HIV prevention is grossly inadequate.
- Inadequate political commitment has focused on the urgent necessity of slowing the rate of new HIV infections.
- Too few people at risk of HIV infection receive the prevention services they need.
- The populations most at risk of HIV infection are especially neglected in HIV prevention efforts.
- In planning HIV prevention strategies, many countries are aiming in the dark, lacking basic information about the dynamics of their national epidemics.
- Prevention efforts appear poorly matched with documented needs.
- Current prevention efforts exhibit severe gaps, with key strategies often receiving little, if any, support.
- Laws and policies often impede effective HIV prevention by exacerbating stigma, increasing social marginalization, and deterring individuals from seeking prevention services.
- Stakeholders of all kinds lack basic information.
- Robust support for HIV prevention research remains critical to strengthen long-term prospects for slowing the rate of new HIV infections (PWG, 2010).

## Occupational Exposure to Bloodborne Pathogens

The following requirements are mandated by Washington Administrative Code (WAC) 296-823, Occupational Exposure to Bloodborne Pathogens. They are enforced by the Department of Labor and Industries Division of Occupational Safety and Health (DOSH). Please check with your agencies to make sure you are in compliance with the requirements of this rule. Failure to comply may result in citations or penalties.

This is a brief summary, and is not meant to provide direction on compliance with WAC 296-823. The compliance directive of the federal Occupational Safety and Health Administration (OSHA) on occupational exposure to bloodborne pathogens, CPL 2-2.69, may be consulted for additional direction. For more information or assistance, contact a Department of Labor and Industries (L&I) consultant in your area. Check the blue government section of the phone book for the office nearest you, or call L&I's 24-hour toll-free line at 1-800-4-BE-SAFE, or visit the L&I website at: <http://www.lni.wa.gov>.

### Rule Scope

WAC 296-823, Occupational Exposure to Bloodborne Pathogens, provides requirements to protect employees from exposure to blood or **other potentially infectious materials (OPIM)** that may contain bloodborne pathogens. This section applies to employers who have employees with occupational exposure to blood or OPIM, even if no actual exposure incidents have occurred.

Protection by employers of occupational exposure to bloodborne pathogens refers to *reasonably anticipated* skin, eye, mucous membrane, or parenteral contact with blood or OPIM that may result from the performance of an employee's duties.

**Exposure incident** means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM that results from the performance of an employee's duties. Examples of non-intact skin include skin with dermatitis, hangnails, cuts, abrasions, chafing, or acne.

Occupational groups that have been widely recognized as having potential exposure to HBV/HCV/HIV include, but are not limited to, healthcare employees, law enforcement, fire, ambulance, and other emergency response and public service employees.

### Bloodborne Pathogens

While HBV and HIV are specifically identified in the standard, **bloodborne pathogens** include **any human pathogen present in human blood or OPIM**. Bloodborne pathogens may also include HCV, hepatitis D, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, adult T-cell leukemia/lymphoma (caused by HTLV-I), HTLV-I-associated myelopathy, diseases associated with HTLV-II, and viral hemorrhagic fever. According to the CDC, hepatitis C (HCV) infection is the most common chronic bloodborne infection in the United States. Hepatitis C is a viral infection of the liver transmitted primarily by exposure to blood.

## Blood and Other Potentially Infectious Materials (OPIM)

Bodily fluids that have been recognized as linked to the transmission of HIV, HBV, and HCV, and to which Standard Precautions apply, are:

- Blood
- Blood products
- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Synovial (joint) fluid
- Pleural (lung) fluid
- Peritoneal (gut) fluid
- Pericardial (heart) fluid
- Amniotic (fluid surrounding the fetus) fluid
- Saliva in dental procedures
- Specimens with concentrated HIV, HBV and HCV viruses

Body fluids such as urine, feces, and vomitus are not considered OPIM unless visibly contaminated by blood. Wastewater (sewage) has **not** been implicated in the transmission of HIV, HBV, and HCV and is not considered to be either OPIM or regulated waste. However, plumbers working in healthcare facilities or who are exposed to sewage originating directly from healthcare facilities carry a theoretical risk of occupational exposure to bloodborne pathogens.

Employers should consider this risk when preparing their written “exposure determination.” Plumbers or wastewater workers working elsewhere are probably not at risk for exposure to bloodborne pathogens. Wastewater contains many other health hazards and workers should use appropriate personal protective equipment (PPE) and maintain personal hygiene standards when working.

## Exposure Control Plan (ECP)

Each employer covered under WAC 296-823 must develop an Exposure Control Plan (ECP). The ECP shall contain at least the following elements:

- A written “exposure determination” that includes those job classifications and positions in which employees have the potential for occupational exposures. The exposure determination shall have been made without taking into consideration the use of personal protective clothing or equipment. It is important to include those employees who are required or expected to administer first aid.
- The procedure for evaluating the circumstances surrounding exposure incidents, including maintenance of a “sharps injury log.”
- The infection control system used in your workplace.
- Documentation of consideration and implementation of appropriate, commercially available safer medical devices designed to eliminate or minimize occupational exposure.
- The ECP must be updated at least annually and whenever changes occur that affect occupational exposure.

## Bloodborne Pathogens Training

All new employees or employees being transferred into jobs involving tasks or activities with potential exposure to blood/OPIIM shall receive training in accordance with WAC 296-823-120 prior to assignment to tasks where occupational exposure may occur.

Training will include information on the hazards associated with blood/OPIIM, the protective measures to be taken to minimize the risk of occupational exposure, and information on the appropriate actions to take if an exposure occurs.

Retraining is required annually, or when changes in procedures or tasks affecting occupational exposure occur. Employees must be provided access to a qualified trainer during the training session to ask and have answered questions as questions arise.

## Hepatitis B Vaccination

All employees with occupational exposure to blood or OPIIM must be offered hepatitis B vaccination after receiving required training and within 10 days of initial assignment. The vaccine must be provided free of charge. Serologic testing after vaccination (to ensure that the shots were effective) is recommended for all persons with ongoing exposure to sharp medical devices. The provision of employer-supplied hepatitis B vaccination may be delayed until after probable exposure for employees whose sole exposure risk is the provision of first aid (see WAC 296-823-130).

## Infection Control Systems

Universal Precautions was a system designed to prevent transmission of bloodborne pathogens in healthcare and other settings. Under Universal Precautions, blood/OPIIM of all patients should always be considered potentially infectious for HIV and other pathogens. **Standard Precautions** is the preferred, newer system because it considers all body fluids except sweat to be potentially infectious.

Standard Precautions (and Universal Precautions) involve the use of protective barriers—defined in the following section—to reduce the risk of exposure of the employee's skin or mucous membranes to OPIIM. It is also recommended that all healthcare workers take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices. Both Standard and Universal Precautions apply to blood and OPIIM (listed above).

## Personal Protective Equipment (PPE)

Gloves, masks, protective eyewear and chin-length plastic face shields are examples of personal protective equipment (PPE). PPE shall be provided and worn by employees in all instances where they will or may come into contact with blood or OPIIM. This includes but is not limited to dentistry, phlebotomy, or processing of any bodily fluid specimen, and postmortem (after death) procedures.

Traditionally, latex gloves have been advised for use when dealing with blood or OPIIM. However, some people are allergic to latex. In most circumstances, nitrile, vinyl, and other glove alternatives meet the definition of “appropriate” gloves and may be used in place of latex gloves. Employers are required to provide non-latex alternatives to employees with latex and other sensitivities. Reusable PPE must be cleaned and decontaminated, or laundered, by the employer.

Lab coats and scrubs are generally considered to be worn as uniforms or personal clothing. When contamination is reasonably likely, protective gowns should be worn. If lab coats or scrubs are worn as PPE, they must be removed as soon as practical and laundered by the employer.

### Safer Medical Devices

Safer medical devices and work practices are preferable to personal protective equipment to minimize or eliminate employee exposure. There are now many safer medical devices available. Employers must include employees in ongoing evaluation of safer medical devices and implement these devices whenever feasible. Evaluation and implementation of these devices must be documented in the ECP. Safer medical device lists can be accessed through websites maintained by the California Division of Occupational Safety and Health SHARP program, the National Association for the Primary Prevention of Sharps Injuries, and the International Health Care Worker Safety Center.

### Hand Hygiene

Hand hygiene (soap-and-water washing or use of a waterless alcohol-based hand rub) must be performed:

- After removal of gloves or other protective equipment.
- Immediately after hand contact with blood or other infectious materials.
- Upon leaving the work area.

It is also strongly recommended that hand hygiene be performed before and after patient contact and after using restroom facilities. Soap-and-water hand washing must be performed whenever hands are visibly contaminated or there is a reasonable likelihood of contamination. Proper soap-and-water hand washing technique involves the following:

- Using soap, warm (almost hot) water, and good friction, scrub the top, back, and all sides of the fingers.
- Lather well and rinse for at least 10 seconds. When rinsing, begin at the fingertips, so that the dirty water runs down and off the hands from the wrists. It is preferable to use a pump-type of liquid soap instead of bar hand soap.
- Dry hands on paper towels. Use the dry paper towels to turn off the faucets (don't touch with clean hands).

It is advisable to keep fingernails short, and to wear a minimum of jewelry. Additional information on hand hygiene can be found in the *CDC Guideline for Hand Hygiene in Healthcare Settings*, 2002. If you are working with children to learn and practice good hand hygiene, you may find this short [video](#) prepared by healthcare workers at Seattle Children's helpful. If your workplace is considering a monitoring study, consult The Joint Commission's [guidelines](#).

### Did you know. . .

Adherence to hand hygiene has been measured at rates as low as 5% in some healthcare settings. How does your workplace measure up? At your next staff meeting see how many of your coworkers can correctly identify the three steps of hand hygiene listed above.

## Housekeeping

The work area is to be maintained in a clean and sanitary condition. The employer is required to determine and implement a written schedule for cleaning and disinfection based on the location within the facility, type of surface to be cleaned, type of soil present and tasks or procedures being performed. All equipment and environmental and working surfaces must be properly cleaned and disinfected after contact with blood or OPIM.

Contaminated broken glassware must be removed using mechanical means, like a brush and dustpan or vacuum cleaner.

## Disinfectants

Chemical germicides and disinfectants used at recommended dilutions must be used to decontaminate environmental surfaces. Consult the Environmental Protection Agency (EPA) lists of registered sterilants, tuberculocidal disinfectants, and antimicrobials with HIV/HBV efficacy claims for verification that the disinfectant used is appropriate.

## Specimen Handling

Specimens of blood or OPIM must be placed in a closeable, labeled or color-coded, leakproof container prior to being stored or transported.

## Laundry

Laundry that is or may be soiled with blood or OPIM, or may contain contaminated sharps, must be treated as though contaminated. Contaminated laundry must be bagged at the location where it was used, and shall not be sorted or rinsed in patient-care areas. It must be placed and transported in bags that are labeled or color-coded (red-bagged).

Laundry workers must wear protective gloves and other appropriate personal protective clothing when handling potentially contaminated laundry. All contaminated laundry must be cleaned or laundered so that any infectious agents are destroyed.

Guidance regarding laundry handling and washing procedures in the health care setting can be found in the *CDC Guidelines for Environmental Infection Control in Health-Care Facilities, 2003*.

## Regulated Waste Disposal

All regulated waste must be placed in closeable, leakproof containers or bags that are color-coded (red-bagged) or labeled as required by WAC 296-823-14060 to prevent leakage during handling, storage and transport. Disposal of waste shall be in accordance with federal, state, and local regulations.\* WAC 296-823 defines "regulated waste" as any of the following:

- Liquid or semi-liquid blood or other potentially infectious materials (OPIM)
- Contaminated items that would release blood or OPIM in a liquid or semi-liquid state, if compressed
- Items that are caked with dried blood or OPIM and are capable of releasing these materials during handling
- Contaminated sharps
- Pathological and microbiological wastes containing blood or OPIM

\*Note: RCW 70.95K addresses "biomedical waste management." Individual county or health jurisdiction waste management regulations may need to be consulted.

## Sharps Disposal

Needles are **NOT** to be recapped, purposely bent or broken, removed, or otherwise manipulated by hand. After they are used, disposable syringes and needles, scalpel blades, and other sharp items are to be immediately placed in puncture-resistant, labeled containers for disposal.

Phlebotomy needles must not be removed from holders unless required by a medical procedure. The intact phlebotomy needle/holder must be placed directly into an appropriate sharps container.

## Sharps Container



Image courtesy of Joe Mabel, photographer via Wikimedia Commons. Published under the terms of GNU Free Documentation License (GFDL). "Copyleft" granted by the photographer.

## Tags/Labels

Tags or labels must be used to protect employees from exposure to potentially hazardous biological agents in accordance to the requirements contained in WACs 296-823-14025, 296-823-14050, and 296-800-11045. All required tags must have the following:

- Tags must contain a signal word or symbol and a major message. The signal word shall be BIOHAZARD, or the biological hazard symbol. The major message must indicate the specific hazardous condition or the instruction to be communicated to the employee.
- The signal word must be readable at a minimum of five feet or such greater distance as warranted by the hazard.
- The tag's major message must be presented in either pictographs, written text, or both.
- The signal word and the major message must be understandable to all employees who may be exposed to the identified hazard.
- All employees will be informed as to the meaning of the various tags used throughout the workplace and what special precautions are necessary.

## Biohazard Symbol



## Personal Activities

Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas that carry occupational exposure. Food and drink must not be stored in refrigerators, freezers, or cabinets where blood or OPIM are stored, or in other areas.

## Post-Exposure Management

Employers must make a confidential post-exposure medical evaluation available to employees who report an exposure incident. The post-exposure medical evaluation must be:

- Made immediately available
- Kept confidential
- Provided at no cost to the employee
- Provided according to current U.S. Public Health Service recommendations

The employer is also responsible for arranging source individual testing in accordance with WAC 296-823-160. Additional requirements for HIV/HBV research laboratories and production facilities can be found in WAC 296-823-180.

## Managing Occupational Exposure to HIV/HBV/HCV and Other BBPs

An **occupational exposure** to a bloodborne pathogen is defined as a percutaneous injury (eg, a needlestick or cut with a sharp object) or contact of mucous membrane or non-intact skin (eg, exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or OPIM.

The CDC states that the risk of infection varies case by case. Factors influencing the risk of infection include: whether the exposure was from a hollow-bore needle or other sharp instrument; to non-intact skin or mucus membranes (such as the eyes, nose, and/or mouth); the amount of blood that was involved, and the amount of virus present in the source's blood.

## Risk of HIV Transmission

The risk of HIV infection to a healthcare worker through a needlestick is less than 1%. Approximately 1 in 300 exposures through a needle or sharp instrument result in infection. The risks of HIV infection through splashes of blood to the eyes, nose, or mouth is even smaller—approximately 1 in 1,000. There have been no reports of HIV transmission from blood contact with intact skin. There is a theoretical risk of blood contact to an area of skin that is damaged, or from a large area of skin covered in blood for a long period of time. Through December 2002, the CDC reports 57 documented cases and 139 possible cases of occupational exposure to HIV since reporting started in 1985.

## Risk of Hepatitis B and C Transmission

The risk of getting HBV from a needlestick is 22% to 31% if the source person tests positive for hepatitis B surface antigen (HBsAg) and hepatitis B e antigen (HBeAg). If the source person is HBsAg-positive and HBeAg-negative there is a 1% to 6% risk of getting HBV unless the person exposed has been vaccinated.

The risk of getting HCV from a needlestick is 1.8%. The risk of getting HBV or HCV from a blood splash to the eyes, nose, or mouth is possible but believed to be very small. As of 1999, about 800 healthcare workers a year are reported to be infected with HBV following occupational exposure. There are no exact estimates on how many healthcare workers contract HCV from an occupational exposure, but the risk is considered low.

## Treatment After a Potential Exposure

**Follow the protocol of your employer.** As soon as safely possible, wash the affected area(s) with soap and water. Application of antiseptics should not be a substitute for washing. It is recommended that any potentially contaminated clothing be removed as soon as possible. It is also recommended that you familiarize yourself with existing protocols and the location of emergency eyewash or showers and other stations within your facility.

## Mucous Membrane Exposure

If there is exposure to the eyes, nose, or mouth, flush thoroughly with water, saline, or sterile irrigants. The risk of contracting HIV through this type of exposure is estimated to be 0.09%.

## Sharps Injuries

Wash the exposed area with soap and water. Do not "milk" or squeeze the wound. There is no evidence that shows using antiseptics (like hydrogen peroxide) will reduce the risk of transmission for any bloodborne pathogens; however, the use of antiseptics is not contraindicated. In the event that the wound needs suturing, emergency treatment should be obtained. The risk of contracting HIV from this type of exposure is estimated to be 0.3%.

## Bite or Scratch Wounds

Exposure to saliva is **not** considered substantial unless there is visible contamination with blood or the saliva emanates from a dental procedure. Wash the area with soap and water, and cover with a sterile dressing as appropriate. All bites should be evaluated by a healthcare professional.

## Did you know. . .

For human bites, the clinical evaluation must include the possibility that both the person bitten and the person who inflicted the bite were exposed to bloodborne pathogens.

## Exposure to Urine, Vomitus, or Feces

Exposure to urine, feces, vomitus, or sputum is **not** considered a potential bloodborne pathogens exposure unless the fluid is visibly contaminated with blood. Follow your employer's procedures for cleaning these fluids.

## Reporting the Exposure

**Follow the protocol of your employer.** After cleaning the exposed area as recommended above, report the exposure to the department or individual at your workplace that is responsible for managing exposure.

Obtain medical evaluation as soon as possible. Discuss with a healthcare professional the extent of the exposure, treatment, follow-up care, personal prevention measures, the need for a tetanus shot or other care.

Your employer is required to provide an appropriate post-exposure management referral at no cost to you. In addition, your employer must provide the following information to the evaluating health care professional:

- A copy of WAC 296–823–160
- A description of the job duties the exposed employee was performing when exposed
- Documentation of the routes of exposure and circumstances under which exposure occurred
- Results of the source person's blood testing, if available
- All medical records that you are responsible to maintain, including vaccination status, relevant to the appropriate treatment of the employee.

Remember that HIV and hepatitis infection are **notifiable conditions** under WAC 246-101.

### Post-Exposure Prophylaxis

**Post-exposure prophylaxis (PEP)** provides anti-HIV medications to someone who has had a substantial exposure, usually to blood. PEP has been the standard of care for occupationally exposed healthcare workers with substantial exposures since 1996. Animal models suggest that cellular HIV infection happens within 2 days of exposure to HIV and the virus in blood is detectable within 5 days. Therefore, PEP should be started as soon as possible, within hours not days, after exposure and continued for 28 days. However, PEP for HIV does not provide prevention of other bloodborne diseases like HBV or HCV.

Hepatitis B PEP for susceptible persons would include administration of hepatitis B immune globulin and HBV vaccine. This should occur as soon as possible and no later than 7 days post-exposure.

The benefit of the use of antiviral agents to prevent HCV infection is unknown and antivirals are not currently FDA-approved for prophylaxis. Because of the frequent advances in treatment, doses and medications are not listed here. Post-exposure prophylaxis can only be obtained from a licensed healthcare provider. Your facility may have recommendations and a chain of command in place for you to obtain PEP. After evaluation of the exposure route and other risk factors, certain anti-HIV medications may be prescribed. The national bloodborne pathogen hotline provides 24-hour consultation for clinicians who have been exposed on the job. Call 1-888-448-4911 for the latest information on prophylaxis for HIV, hepatitis, and other pathogens.

PEP is not as simple as swallowing one pill. The medications must be started as soon as possible, and continued for 28 days. Many people experience significant medication side effects. It is very important to report occupational exposure to the department at your workplace that is responsible for managing exposure. If post-exposure treatment is recommended, it should be started as soon as possible. In rural areas, police, firefighters, and other at-risk emergency providers should identify a 24-hour source for PEP.

In addition, Washington State workers have a right to file a workers' compensation claim for exposure to bloodborne pathogens. Industrial insurance covers the cost of post-exposure prophylaxis and follow-up for the injured worker.

## HIV/HBV/HCV Testing Post Exposure

All occupational exposures should be evaluated by a healthcare professional. Evaluation should include follow-up counseling, post-exposure testing, and medical evaluation regardless of whether PEP is indicated. Antibody testing for HIV, HBV, and HCV should be conducted for >6 months after occupational exposure. After baseline testing at the time of exposure, follow-up testing is recommended to be performed at 6 weeks, 12 weeks, and 6 months after exposure. Extended HIV follow-up (eg, for 12 months) is recommended for those who become infected with HCV after exposure to a source co-infected with HIV. Extended follow-up in other circumstances (eg, for those persons with an impaired ability to mount an antibody response to infection) may also be considered.

## Source Testing

WAC 296-823-16010 requires the employer to arrange to test the **source individual**—someone whose blood or OPIM an employee was exposed to—for HIV, HBV, and HCV as soon as feasible after getting their consent. If the employer does not get consent the employer must document such and inform the employee.

## Mandatory Source Testing

Because of an increased risk for HIV exposure, the Revised Code of Washington 70.24.340 provides for HIV antibody testing of a "source" when a law enforcement officer, firefighter, healthcare provider, or healthcare facility staff, and certain other professions experience an occupational exposure. If you experience an occupational substantial exposure to another person's blood or OPIM, you can request HIV testing of the source individual through your employer or local health officer.

Before health officers issue an order for HIV testing of the source individual, they will first determine whether a substantial exposure occurred and if the exposure occurred on the job. Depending on the type of exposure and risks involved, the health officer may make the determination that source testing is unnecessary.

In the case of occupationally exposed healthcare workers, if the employer is unable to obtain permission of the source individual, the employer may request assistance from the local health officer provided the request is made within 7 days of the occurrence.

Source testing does not eliminate the need for baseline testing of the exposed individual for HIV, HBV, HCV, and liver enzymes. Provision of PEP should also not be contingent upon the results of a source's test. Current wisdom indicates immediate provision of PEP in certain circumstances, with discontinuation of treatment based upon the source's test results.

If your doctor has questions, he or she can call PEPLine, at 1-888-448-4911 (1-888-HIV-4911). This is the National Clinicians' Post-exposure Prophylaxis Hotline, which provides 24-hour advice regarding management of healthcare worker HIV exposure. (This is **not** a hotline for answering basic questions about HIV.)

## Non-Occupational Exposure to HIV

Post-exposure prophylaxis for occupational exposure is standard, and its effectiveness has been documented. For sexual exposure (assault or consenting) or for needle-sharing, PEP is not standard medical practice in many communities. Depending on your location in Washington State, providers may not even be familiar with the idea of providing PEP to people who have post-sexual exposure to HIV. The University of California at San Francisco (UCSF) has operated a PEP clinic for non-occupational exposure since 1997 and offers PEP information on their website.

Good places to start PEP include your local emergency room. In Seattle and Western Washington there are clinics that specifically treat HIV-positive people. You can get more information through Public Health Seattle-King County's website. Other areas also offer PEP services and may be a source of useful information, including the San Francisco City Clinic PEP program (415-487-5538 or at their website).

Post-exposure prophylaxis (PEP) should never be used for primary prevention of HIV. Unlike emergency contraception to prevent pregnancy, there are no good studies to show that PEP works for post-sexual exposure. It is a complicated combination of medicines that sometimes have serious side effects.

## Procedures for Homes and Home-like Settings

People who live or work in homes and home-like settings should practice good hygiene techniques in preparing food, handling body fluids, and medical equipment. Cuts, accidents, or other circumstances can result in spills of blood/OPIM. These spills may be deposited upon carpeting, vinyl flooring, clothing, a person's skin, or other surfaces. It is important that everyone, even young children, have a basic understanding that they should not put their bare hands in, or on, another person's blood. This section outlines practices for some commonly encountered situations.

### Gloves

Gloves are available in latex, nitrile, or vinyl. Some people have allergies to latex.

- Gloves should be worn when caretakers anticipate direct contact with any body substances (blood or OPIM) or non-intact skin.
- When you are through, carefully pull the gloves off, inside-out, one at a time, so that the contaminated surfaces are inside and you avoid contact with any potentially infectious material.
- Gloves should be changed and hands washed as soon as possible between children, patients, and others.
- Never rub the eyes, mouth or face while wearing gloves. Latex gloves should never be washed and reused.

## Handwashing Technique

Correct handwashing is extremely important. The steps to follow for good handwashing technique include:

- Use soap, warm (almost hot) water, and good friction, making sure to scrub the top, back, and all sides of the fingers.
- Lather well and rinse for at least 10 seconds. When rinsing, begin at the fingertips, so that the dirty water runs down and off the hands from the wrists. It is preferable to use a pump-type of liquid soap instead of bar hand soap.
- Dry hands on paper towels. Use the dry paper towels to turn off the faucets (don't touch with clean hands).

A waterless handwashing product should be made available for immediate use if a suitable sink is not readily available in the home or work setting. This product does not replace proper handwashing with soap and water. Refer to the manufacturer's directions for use. People who have been exposed to body fluids should wash their hands **before**, as well as after, using the toilet. The paper towel that was used to dry the hands may also be used to open the bathroom door, if necessary, before disposing of the towel.

## Precautions with Personal Hygiene Items

People should not share razors, toothbrushes, personal towels or washcloths, dental hygiene tools, vibrators, enema equipment, or other personal care items.

## Cleaning Blood/OPIM

Wear appropriate gloves. Use sterile gauze or other bandages, and follow normal first-aid techniques to stop the bleeding. After applying the bandage, remove the gloves slowly, so that fluid particles do not splatter or become aerosolized. Hands should be washed using good technique as soon as possible.

## Cleaning Body Fluid Spills on Vinyl Floors

Any broken glass should be swept up using a broom and dustpan (never bare hands!). Empty the dustpan in a well-marked plastic bag or heavy-duty container. The body fluid spill may be pretreated with full-strength liquid disinfectant or detergent. Next, wipe up the body fluid spill with either a mop and hot soapy water or appropriate gloves and paper towels. Dispose of the paper towels in the plastic bag. Use a good disinfectant (eg, household bleach 5.25% mixed fresh with water 1:10) to disinfect the area that the spill occurred. If a mop was used for the cleaning, soak it in a bucket of hot water and disinfectant for the recommended time. Empty the mop bucket water in the toilet, rather than a sink. Sponges and mops used to clean up body fluid spills should not be rinsed out in the kitchen sink, or in a location where food is prepared.

## Cleaning Body Fluid Spills on Carpeting

Pour dry kitty litter or other absorbent material on the spill to absorb the body fluid. Then pour full-strength liquid detergent on the carpet, which helps to disinfect the area. If there are pieces of broken glass present, the broom-and-dustpan method can be used next to sweep up the kitty litter and visible broken glass. Use carpet-safe liquid disinfectant instead of diluted bleach on the carpeting. Pour this carefully on the entire contaminated area; let it remain there for the time recommended by the manufacturer. Follow this by absorbing the spill with paper towels and sturdy rubber gloves. Vacuum normally afterwards.

Any debris, paper towels, or soiled kitty litter should be disposed of in a sealed plastic bag that has been placed inside another plastic garbage bag. Twist and seal the top of the second bag as well.

### **Cleaning Laundry in Home Settings**

Clothes, washable uniforms, towels, or other laundry that have been stained with blood/OPIM should be cleaned and disinfected before further use. If possible, have the person remove the clothing, or use appropriate gloves to assist with removing the clothes. If it is a distance to the washing machine, transport the soiled clothing items in a sturdy plastic bag. Next, place the items in the washing machine, and soak or wash the items in cold, soapy water to remove any blood from the fabric. Hot water permanently sets blood stains. Use hot soapy water for the next washing cycle, and include sufficient detergent, which will act as a disinfectant, in the water. Dry the items using a clothes dryer. Wool clothing or uniforms may be rinsed with cold soapy water and then dry cleaned to remove and disinfect the stain.

### **Diaper Changes**

Care providers should use a new pair of appropriate gloves to change diapers. Gloves should be removed carefully and discarded in the appropriate receptacle. Hands should be washed immediately after changing the diaper. Disinfect the diapering surface afterwards. Cloth diapers should be washed in very hot water with detergent and a cup of bleach, and dried in a hot clothes dryer.

### **Cleaning Sponges and Mops**

Sponges and mops that are used in a kitchen should not be used to clean body fluid spills or bathrooms. All sponges and mops should be disinfected routinely with a fresh bleach solution or another similar disinfectant.

### **Toilet/Bedpan Safety**

It is safe to share toilets/toilet seats without special cleaning, unless the surface becomes contaminated with blood/OPIM. If this occurs, disinfect the surface by spraying on a solution of 1:10 bleach. Wearing gloves, wipe this away with disposable paper towels. Persons with open sores on their legs, thighs, or genitals should disinfect the toilet seat after each use. Urinals and bedpans should not be shared between family members unless they are thoroughly disinfected beforehand.

### **Thermometers**

Electronic thermometers with disposable covers do not need to be cleaned between users, unless they are visibly soiled. Wipe the surface with a disinfectant solution if necessary. Glass thermometers should be washed with soap and warm water before and after each use. If it will be shared between family members, the thermometer should be soaked in 70% and 90% ethyl alcohol for 30 minutes, then rinsed under a stream of warm water between each use.

### **Pet Care Precautions**

Certain animals may be health hazards for people with compromised immune systems. These animals include turtles, reptiles, birds, puppies and kittens under the age of 8 months, wild animals, pets without current immunizations, and pets with illnesses of unknown origin.

### **Did you know. . .**

HIV cannot be spread to, from, or by cats, dogs, birds, or other pets.

Pet cages and cat litter boxes can harbor infectious, sometimes aerosolized organisms. These pet items should be cared for only by someone who is not immuno-compromised. If this is not possible, a mask with a sealable nose clip, and disposable latex gloves should be worn each time pet care is done. Follow all pet care with thorough handwashing.

Animals may carry a variety of diseases harmful to people with weakened immune systems. Some of these diseases may be passed by the animal licking their person's face or open wounds. Wash hands after stroking or other contact with pets. Keep cats' and dogs' nails trimmed. Wear latex gloves to clean up a pet's urine, feces, or vomitus. The soiled area should be cleaned with a fresh solution of 1:10 bleach.

Pet food and water bowls should be regularly washed in warm, soapy water, and then rinsed. Cat litter boxes should be emptied out regularly and washed at least monthly. Fish tanks should be kept clean. It is possible to order disposable latex "calf-birthing" gloves from a veterinarian for immunocompromised individuals. These gloves should offer protection from the organisms that are present in the fish tank.

Do not let your pet drink from the toilet, eat other animal's feces, or eat any type of dead animal or garbage. It is best to restrict cats to the indoors only. Dogs should be kept indoors or on a leash. Many communities have volunteer groups and veterinarians that will assist people with HIV take care of their pets, if needed. Do not hesitate to consult your veterinarian with your questions.

The CDC website provides a detailed brochure called *Preventing Infections from Pets* along with useful links to related information.

### **Kitchen Safety and Proper Food Preparation**

Wash hands thoroughly before preparing food and use care when tasting food. Use a clean spoon and wash the spoon after using it once. Persons with HIV infection should avoid unpasteurized milk, raw eggs or products that contain raw eggs, raw fish, and cracked or non-intact eggs. Cook all meat, eggs, and fish thoroughly to kill any organisms that may be present in them. Wash fruits and vegetables thoroughly before eating.

Disinfect countertops, stoves, sinks, refrigerators, door handles, and floors regularly. Use window screens to prevent insects from entering the room. Discard food that has expired or is past a safe storage date, shows signs of mold, or smells bad.

Use separate cutting boards for meat and for fruits and vegetables. Disinfect cutting boards frequently. Avoid wooden cutting boards if possible. Kitchen garbage should be contained in a leakproof, washable receptacle that is lined with a plastic bag. Seal the garbage liner bags and remove the garbage frequently.

### **Safe and Legal Disposal of Sharps**

Disposal of syringes, needles, and lancets is regulated. These items are called sharps. They can carry hepatitis, HIV and other germs that cause disease. Throwing them in the trash or flushing them down the toilet can pose health risks for others. Regulations governing disposal of sharps protect garbage and other utility workers and the general public from needlesticks and illness. There are different rules and disposal options for different circumstances. Contact your local health department to determine which option applies to your situation.

## Found Syringes in Public Locations

Syringes that are found in parks, along roadsides, in laundromats, or in other public locations present potential risk for accidental needlesticks. Risks for infection from a found syringe depends on a variety of factors, including the amount of time the syringe was left out, the presence of blood, and the type of injury (scratch versus puncture). The risk of HIV infection to a healthcare worker from a needlestick containing HIV-positive blood is about 1 in 300, according to CDC data.

Anyone with an accidental needlestick requires an assessment by a medical professional. Clinicians should make certain that the injured person had been vaccinated against hepatitis B and tetanus and may also recommend testing for HIV, HCV, and HBV. If a found syringe is handled, but no needlestick occurred, testing for HIV is not necessary. Handling a syringe is not a risk for HIV transmission.

## Safe Disposal of Found Syringes

Found used syringes or needles present a risk for HIV, HBV, HCV, and other pathogens. Parents and other caregivers should make sure children understand they should never touch a found needle or syringe, but instead should immediately ask a responsible adult for help. For safe disposal of found syringes:

- **If you find a syringe or needle, do not pick it up with your bare hands.** Use a gloves and tongs, shovel or broom and dustpan to pick it up. Hold the needle away from your body.
- **Do not break the needle off from the syringe.** Needles can carry HIV, hepatitis, and other germs. Do not flush needles or syringes down the toilet!
- Place used sharps and syringes in a safe container: one with at least a 1-inch opening and a lid that will seal tightly. An empty plastic laundry detergent, shampoo, pickle, oil, or similar bottle or jar will work. If a glass jar is used, place it into a larger plastic bucket or container that has a tight-fitting lid. Soda cans are not good containers to use because people often try to recycle discarded cans.
- Carefully place the needle or syringe into the bottle or jar and seal the lid tightly. Tape it shut for added safety, and label it with the warning: **Sharps, Do Not Recycle.** The sealed container should not be placed where children might open it.
- Call your local health department to determine what disposal sites are available to you.

## Part V: Legal and Ethical Issues

### HIV and AIDS Are Reportable Conditions

As noted earlier, AIDS and HIV are reportable conditions in Washington State, by statute WAC 246-101. AIDS (medically diagnosed) and symptomatic HIV infection have been reportable conditions in Washington since 1984 and 1993 respectively. In 1999, asymptomatic HIV infection also became reportable.

Reporting of HIV and AIDS cases assists local and state officials in tracking the epidemic. It also allows for effective planning and intervention to be provided in the effort to reduce the transmission of HIV to other people.

#### *Did you know. . .*

In the case of HIV or AIDS, **reportable** means that providers who diagnose a person must submit a confidential case report to the local health jurisdiction within 3 days.

### Anonymous Tests and Reporting

Positive HIV results obtained through anonymous testing are **not** reportable. However, once a patient with positive results seeks medical care for conditions related to HIV or AIDS, the provider is required to report the case to the local health department.

### Spousal Notification

Federal Public Law 104-146 (1996) requires that states take action to require that a "good faith effort" be made to notify all spouses of HIV-infected persons. A **spouse** is defined as anyone who is or has been the marriage partner of an HIV-infected individual within 10 years prior to the HIV diagnosis.

**Notification** means that individuals testing positive will be counseled about the importance of notifying spouses and partners and will be given the choice to notify, to allow the healthcare provider to notify, or to refer to the local health jurisdiction for assistance in notifying the spouse.

### Confidentiality

All medical records are confidential and must be maintained in a manner that protects that confidentiality. Special requirements regarding HIV and AIDS are found in WAC 246-101 and RCW 70.24.105. **Confidentiality** of medical information means that a person's medical information (including HIV testing and HIV results) may not be disclosed to anyone unless the individual signs a release-of-information form. However, there are exceptions to this. Medical information can be disclosed under certain circumstances, including:

- When it is given from one healthcare provider to another healthcare provider for related ongoing medical care of the patient
- In a life or death emergency
- To a third-party payer (insurance provider)
- In reporting notifiable conditions to the local health jurisdiction or the DOH

Violation of the above-mentioned laws is a misdemeanor and may result in civil liability actions for reckless or intentional disclosure up to \$10,000 or actual damages, whichever is greater. It is the responsibility of the county's health officer to investigate potential breaches of confidentiality of HIV identifying information and report them to the DOH.

### **Additional Confidentiality Protections**

Some areas of the medical record have additional confidentiality requirements because disclosure of the information to the wrong person or agency could mean additional harm to the patient. It has been determined that there exists a level of prejudice, fear, and discrimination directed at people with these medical conditions. Therefore, there is a balance between civil protection and information access.

### **Disability and Discrimination**

People with AIDS and HIV are also protected by federal law under Title II of the Americans with Disability Act of 1990 (ADA) and Section 504 of the Federal Rehabilitation Act of 1973, as amended. In Washington State, the Washington Law Against Discrimination (WLAD) regulates "disabled" status and explicitly prohibits discrimination on the basis of HIV and hepatitis C infection. The WLAD is enforced by the Washington State Human Rights Commission (see RCW 49.60.174).

### **Discrimination**

Persons with HIV infection and/or AIDS who feel discriminated against on the basis of their disease may file a complaint with the Office for Civil Rights (OCR) of the U.S. Department of Health and Human Services, or the Washington State Human Rights Commission (WSHRC).

WSHRC jurisdiction information can be found on its website at <http://www.hum.wa.gov>. The WSHRC does not investigate anonymous complaints, and may have to release a complaint under the state's Public Disclosure Act. In certain circumstances, OCR will not disclose a complainant's identity.

### **Disability**

HIV infection and AIDS are medical conditions that are considered disabilities under the Washington State Law Against Discrimination (RCW 49.60) and the federal Americans with Disability Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973.

These laws mean that it is illegal to discriminate against people who have AIDS or are HIV infected, on the basis of their medical condition. It is also illegal to discriminate against someone who is "believed" to have AIDS or HIV infection, even though that person is not, in fact, infected. The areas covered in the law are:

- Employment
- Rental, purchase or sale of apartment, house, or real estate
- Places of public accommodation (restaurants, theaters)
- Healthcare, legal services, home repairs, and other personal services available to the general public
- Applying for a loan or credit card, or other credit transaction
- Certain insurance transactions

**Did you know. . .**

Federal and state jurisdictions differ in approaches to disability.

The laws also protect HIV-infected and AIDS-diagnosed people from employment discrimination. Employers may not discriminate against persons with HIV infections or AIDS in:

- Employment
- Recruitment
- Hiring
- Transfers
- Layoffs
- Terminations
- Rate of pay
- Job assignments
- Leaves of absence, sick leave, any other leave or fringe benefits available by virtue of employment

**Did you know. . .**

State and federal laws do not cover all employers. For example, state law does not cover employers with fewer than eight employees, religiously controlled non-profits, and Indian tribes.

**Discrimination-Free Environment**

Employers are required to provide and maintain a working environment free of discrimination. They must assure that no harassment, intimidation, or adverse action or personnel distinction is made in terms and conditions of employment based on HIV status.

If a worksite situation develops that poses the threat of discrimination, it is best practice for the employer to provide education and supervision to employees in order to end harassment, the use of slurs, or intimidation. An employer should promptly investigate allegations of discrimination, take appropriate action, and **not** retaliate against the person who complained.

If someone is in a situation in which they feel they are being discriminated against, they should first document the discrimination, speak with their supervisor, and follow the entity's internal process to file a discrimination charge. However, it is not necessary to follow an internal grievance process. If these remedies do not work, a person should contact the Office for Civil Rights or the Washington State Human Rights Commission. An aggrieved person can also file directly in state court. A complaint must be filed within 180 days of the alleged discriminatory incident.

**Reasonable Accommodation**

Employers are responsible for providing reasonable worksite accommodations that will enable a qualified disabled employee or job applicant to perform the essential tasks of the particular job.

**Reasonable accommodation** means modifications to a worksite or job, in the context of the entire employer's operation, such as:

- Providing special equipment
- Altering the work environment
- Allowing flex-time
- Providing frequent rest breaks
- Allowing the person to work at home (telecommute)
- Restructuring the job

An employee with a disability must self-identify and request a reasonable accommodation. The employer must engage in an interactive process with the requestor. The reasonable accommodation grant may not be exactly the same one as requested by the employee, but one that is equally effective. The employer does not have to change the essential nature of its work, or engage in undue hardship or heavy administrative burdens. The essential functions of the job must be accomplished, with or without reasonable accommodations.

### **Potentially Prejudicial Information**

When a person goes for a job interview or is hired, it is best practice for an employer to refrain from asking questions directed at the perception or presence of HIV infection or AIDS unless the employer has obtained a "bona fide occupational qualification" (BFOQ) from the Washington State Human Rights Commission (RCW 49.60.172 and WAC 246-100-204).

It is best practice for an employer to refrain from asking "lifestyle" questions, such as inquiring about an applicant's religion, living arrangements, sexual orientation, or gender identity.

**Note:** Chapter 49.60 RCW, the Washington Law Against Discrimination, prohibits discrimination based on age, creed, religion, race, color, national origin, sex, sexual orientation and gender identity, HIV and hepatitis C status, whistleblower retaliation, marital status (housing and employment), families with children (housing), or the presence of any sensory, mental, or physical disability or the use of a trained dog guide or service.

Exceptions to the above are applicants for the U.S. military, the Peace Corps, the Job Corps, and persons applying for U.S. citizenship under federal law, which supersedes state law.

### **Behaviors Endangering the Public Health**

Washington State law (RCW 70.24) and rules (WAC 246-100 and 246-101) give state and local health officers the authority and responsibility to carry out certain measures to protect the public health from the spread of STDs, including HIV.

## Authorities and Responsibilities of Health Officers

The local health officer is the physician hired to direct the operations of the local county's health department or health district. Included in the broad responsibilities of the health officer is the authority to:

- Interview persons infected with an STD.
- Notify sexual or needle-sharing partners of exposure to disease.
- Order persons suspected of being infected to receive examination, testing, counseling, or treatment.
- Issue orders to cease and desist from specific conduct that endangers the public health of others.

Court enforcement of these orders can be sought. State law delineates the standards that must be met before action by the health officer may be taken. For HIV, Washington state law permits an additional step—the detention of an HIV-infected person who continues to endanger the health of others. After all less-restrictive measures have been exhausted, the law allows for a person to be detained for periods up to 90 days after appropriate hearings and rulings by a court. This detention must include counseling.

## Reporting Non-Compliance

By state law and rule, healthcare providers are required to provide instruction on infection control measures to the patient who is diagnosed with a communicable disease. They are also required to report certain information to the local health officer where there are either impediments to or refusal to comply with prescribed infection control measures.

When a healthcare provider has knowledge that a specific patient is failing to comply with prescribed infection control measures (eg, acquisition of a new STD, sex without disclosure of HIV status to sexual partners, failure to disclose HIV status to needle-sharing partners, donating or selling HIV-infected blood) they should contact the local public health officer to discuss the circumstances of the case and to determine if the name of the person should be reported for investigation and follow-up.

## Case Investigation

The health officer or other authorized representative will investigate the case if credible evidence exists that an HIV-infected person is engaging in conduct endangering the public health. Other laws and regulations concern endangering behaviors as well as occupational exposures. These may be specific to professions and to the jurisdictions of public health officers. For more specific information, talk with public health officials in your area, call the Washington State Hotline at 1-800-272-2437, or ask a knowledgeable person to provide the information to your group.

## Part VI: Psychosocial Issues

Washington State has a system to link people with HIV infection and AIDS to care and support services. Case managers in the HIV/AIDS programs are the primary contact people for services. They can usually be found by contacting the local health department or health district. HIV-infected or -affected persons can be linked with medical care, insurance programs, volunteer groups, hospice, and other types of care and support services that may be needed during the course of living with HIV. To find a case manager, contact the HIV/AIDS program in your county's health department or district, or call the Washington State DOH at 1-877-376-9316.

### Difficult Realities

Persons with HIV and their families and friends face a multitude of difficult realities.

- Even with the advent of antiretroviral (ARV) drugs, persons with AIDS still die prematurely.
- Men who have sex with men and injecting drug users—who may already be stigmatized and subjected to social and job-related discrimination—may encounter even more societal pressure and stress with a diagnosis of HIV or AIDS.
- Ninety percent of all adults with AIDS are in the prime of life and may not be prepared to deal with death and dying.
- The infections and malignancies that accompany AIDS—along with certain medications—can diminish and disfigure the body.
- People who are living with HIV face the need to practice "safer sex" and take medications for the remainder of their lives.

One thing that characterizes the grief around AIDS is the repetition of deaths that one person may experience. Many people working with or living with AIDS for years have gone to countless funerals and have seen a succession of their friends pass away. This is sometimes termed **chronic grief**. Chronic grief intensifies when an individual realizes that before the grieving process for one death is complete many more people may have died.

The idea of cumulative multiple loss or grief saturation is not new. The emotions felt by long-term survivors of HIV and their HIV-negative friends and families are similar to the emotions of the survivors of the Holocaust, survivors of natural disasters (earthquakes, tornadoes), and to battle fatigue described by soldiers.

### Losses

HIV produces many losses, including loss of:

- Physical strength and abilities
- Mental abilities/confusion
- Income and savings
- Health insurance
- Job/work
- Housing, personal possessions, including pets
- Emotional support from family, friends, co-workers, religious and social institutions
- Self-sufficiency and privacy
- Social contacts and roles
- Self esteem

People experiencing multiple losses may feel:

- Guilt
- Grief
- Helplessness
- Rage
- Numbness

Physical weakness and pain can diminish a person's ability to cope with psychological and social stresses.

### **Psychological Suffering**

Infection with HIV causes distress for those who have HIV and for their caregivers, family, lovers, and friends. Grief can manifest itself in physical symptoms, including clinical depression, hypochondria, anxiety, insomnia, and the inability to get pleasure from normal daily activities. Dealing with these issues may lead to self-destructive behaviors such as alcohol or drug abuse.

Disbelief, numbness, and inability to face facts occur for some. The fear of the unknown, the onset of infections, swollen lymph nodes, loss of weight (or unusual weight gain) can be accompanied by fear of developing AIDS, or of getting sicker. People infected with HIV/AIDS are often rejected by family, friends, or co-workers. In some cases, guilt develops about the disease, about past behaviors, or about the possibility of having unwittingly infected someone else.

People living with HIV may feel as though their "normal" lives have completely ended as they plan detailed medication schedules and medical appointments. The cost of the medications for HIV may result in financial hardship, even if the person has medical coverage. Call the Washington State DOH at 1-877-376-9316 if you or someone you know needs help paying for HIV care and medications.

Sadness, hopelessness, helplessness, withdrawal, and isolation are often present. Anger is common: at the virus, at the effects of the medications or the failure of some of the medications, at the prospect of illness or death, and at the discrimination that often encountered. Some people with HIV consider suicide or attempt suicide, and some may actually kill themselves. Call the crisis hotline listed in your phone book, or call the national suicide hotline at 1-800-784-2433 or 1-800-273-8255.

### **Caregivers**

Often feelings experienced by the caregiver will mirror those of the patient; these can include a sense of vulnerability and helplessness. Caregivers may experience the same isolation as the person with HIV infection. Finding a support system, including a qualified counselor, can be just as important for the caregiver as for the person who has HIV disease. Support from co-workers can be especially important.

## Stages of Grief

Grief has been described in a variety of forms. It may be best understood as a process that doesn't involve a straight line. People do not move predictably step-by-step through the various stages of their grieving, but progress at their own speed. There seem to be discreet phases of grief, including:

- Shock and numbing
- Yearning and searching
- Disorganization and despair
- Some degree of reorganization

The length of time it takes to move between these stages is determined by individuals and their values and cultural norms. In **uncomplicated grief**, an individual is able to move through these stages and come out of the grieving process.

**Complicated grief** is described as an exaggeration or distortion of the normal process of grieving. People experiencing multiple losses are more at risk for complications. If an individual has been impacted by multiple deaths, it may be difficult for them to reorganize (move on) with the process.

## Caregiver Issues

Caregivers may find it necessary to acknowledge their own experiences and feelings when dealing with all aspects of this disease. Good self-care for the caregiver is important.

### Things to Do

- **Do** meet with a support person, group, or counselor on a regular basis to discuss your experiences and feelings.
- **Do** set limits in caregiving time and responsibility, and stick to those limits.
- **Do** allow yourself to have questions. Let "not knowing" be OK.
- **Do** get the information and support you deserve and need.
- **Do** discuss with your employer ways to reduce stress and burnout.
- **Do** remember that Standard Precautions are for the patient's health and welfare, as well as your own.

### Things to Avoid

- **Don't** isolate yourself.
- **Don't** try to be all things to all people.
- **Don't** expect to have all the answers.
- **Don't** deny your own fears about AIDS or dying.
- **Don't** continue to work in an area where you can't cope.
- **Don't** dismiss Standard Precautions because you know the patient.

There are other issues for people who share a home with, or provide home care for, persons with HIV or AIDS. Please look again at the section on Transmission and Infection Control for guidelines around safe home care.

## Special Populations

Although HIV infection affects people from all ethnic groups, genders, ages, and income levels, some groups have been significantly affected by the AIDS epidemic. These groups include men who have sex with men, injecting drug users, people with hemophilia, women, and people of color. The following information details how these different populations may be uniquely affected by the AIDS epidemic.

### Men Who Have Sex with Men

American society has issues with homosexuality. Grief may not be validated when relationships are viewed through prejudice and considered unacceptable. An example of this may be the reaction of churches to those who are living with, or have families living with, AIDS. Many congregants report that they do not get the support they need from their church families because of the stigma attached to HIV, AIDS, and homosexuality. Self-esteem issues and psychological issues, including depression, anxiety, diagnosed mental illness and risk-taking behaviors, may also complicate the lives of these men.

Additionally, there are the issues with HIV-negative men who have sex with men. Most of the attention, resources, and services are focused on HIV-positive gay men. As with any behavior change, people can become "tired" of safer sex messages, and may make choices that place them at risk. Some may feel that HIV infection is inevitable (although it is not) and purposely engage in unprotected sex.

Men who have sex with both men and women (who do not exclusively self-identify as gay) face additional challenges. It is more difficult to reach men who do not identify as being gay with HIV prevention efforts and activities. Bisexual men face many similar challenges as gay men but may not have the social and community resources they need.

### Injecting Drug Users

American society also has issues with illegal drug use and with marginalized individuals such as those in poverty and the homeless. People who continue to use injecting drugs, despite warnings and information about risks, may be viewed by some as "deserving" their infection.

Harm reduction measures like syringe exchange programs, have been proven to reduce the transmission of bloodborne pathogens like HIV, HBV, and HCV. These programs are controversial because some people believe that providing clean needles and a place to exchange used needles constitutes "approval" of injection drug use.

In addition, poverty, self-esteem issues, and psychological issues (including depression, anxiety, diagnosed mental illness, and risk-taking behaviors) may also complicate the lives of injecting drug users. The desire to stop using illegal drugs may be very far apart from the ability to stop. The reality about inpatient treatment facilities is that while there is a large demand for spaces very few are available. Many substance abusers are placed on waiting lists when they want treatment, and by the time there is a place for them, they may be lost to follow-up.

### People with Hemophilia

Hemophiliacs lack the ability to produce certain blood clotting factors. Before the advent of anti-hemophilic factor concentrates ("factor VIII" or "factor IX," which are clotting material pooled out of donated blood plasma), hemophiliacs could bleed to death. These concentrates allowed hemophiliacs to receive injections of the clotting factors that they lacked, which in turn allowed them to lead relatively normal lives.

Unfortunately, because the raw materials for these concentrates came from donated blood, many hemophiliacs were infected with HIV prior to the advent of blood testing. During the 1980s, 90% of severe hemophiliacs contracted HIV or HCV through use of these products. There is anger within this community because there is evidence to show that the companies manufacturing the concentrates knew their products might be contaminated but continued to distribute them anyway.

Some people considered hemophiliacs to be innocent victims of HIV, but there has been discrimination against them. The Ryan White Care Act, funding HIV services, and the Ricky Ray Act, which provides compensation to hemophiliacs infected with HIV, were both named after HIV-positive hemophiliacs who suffered significant discrimination (arson, refusal of admittance to grade school) in their home towns.

### **Women with HIV**

Women in the United States and worldwide are becoming infected with HIV at higher rates than any other group of people. This is particularly true of women of color. Women who are infected with HIV, or who have family members who have HIV, face some unique challenges.

Women may become infected with HIV from a partner who either used injecting drugs or had other sexual partners. Many of these women assumed that the relationship was monogamous, or that they "knew" their partner's history. Many others are unable to discuss or implement safer sex practices because they lack the skills or because domestic violence is present in their relationship.

Women may postpone taking medication, or going to medical appointments, in order to care for their children or other family members. Women (and also men) may fear disclosing their HIV status to others, fearing loss of their jobs, housing, or other forms of discrimination. Single parents with HIV may feel particularly fearful because of their lack of support.

Many women have problems with lack of transportation, lack of health insurance, limited education, and low income. They may have childcare problems that prevent them from going to medical appointments.

Many women who are infected with HIV do not consider this to be their worst problem. Their symptoms may be mild and manageable for many years. Meanwhile, they may have more pressing concerns, such as their lack of income, housing, access to medical care, possible abusive relationships, and concerns about their children.

### **People of Color**

African Americans and Hispanics have disproportionately higher rates of AIDS in the United States, despite the fact that there are no biological reasons for the disparities. African American and Hispanic women make up less than 25% of the total U.S. population, but account for 77% of all reported AIDS cases in women. African Americans make up about 12% of the population, but account for 37% of all AIDS cases in the United States. Hispanics make up about 13% of the population, but account for 20% of the AIDS cases in the United States. In some areas, disparities also exist in the number of AIDS cases in Native Americans.

There is no single reason that stands out as to why the disparities exist. One factor is health disparities, which are linked to socioeconomic conditions. Another factor is distrust of the healthcare system. Both legacies of the past and current issues of race mean that many people of color do not trust "the system" for a variety of reasons. Thus, even when income is not a barrier, access to early intervention and treatment may be limited. And HIV may be only one of a list of problems that also includes adequate housing, food, and employment.

Another factor may be the diversities within these populations. Diversity is evident in immigrant status, religion, languages, and geographic locations, as well as socioeconomic conditions. Providing targeted information to these diverse populations is challenging.

A significant amount of denial about HIV risk continues to exist in these communities. As with other groups, there may also be fear and stigmatization of those who have HIV. Prevention messages must be tailored and presented in a culturally and linguistically appropriate manner. The messages must be carried through channels that are appropriate for the individual community. These channels may include religious institutions or respected elders in the community. Ironically, it may be these institutions or elders who, in the past, have contributed to the misinformation and stigma associated with HIV.

Many HIV prevention programs are recognizing the importance of working with diverse communities. Input from these communities must be included in planning, delivering, and evaluating HIV prevention activities.

(Continued on next page)

## Resources

### Global Resources

Joint United Nations Programme on HIV/AIDS (UNAIDS)  
<http://www.unaids.org/en/>

### KNOW Curriculum Sources

Washington State Department of Health  
HIV Prevention and Education Services  
<http://www.doh.wa.gov/cfh/hiv.htm>

### Washington State HIV Hotline

1-800-272-2437

### Washington State Department of Labor and Industries

<http://www.lni.wa.gov>  
1-800-423-7233

### Centers for Disease Control and Prevention

[www.cdc.gov](http://www.cdc.gov)  
1-404-639-3311

### National HIV/AIDS and STD Information

[cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)  
(English and Spanish, 24 hours)  
1-800-CDC-INFO (1-800-232-4636)  
TTY: 1-888-232-6348

### National AIDS Information Clearinghouse

1-800-458-5231

### FDA approved test kit list:

<http://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/LicensedProductsBLAs/BloodDonorScreening/InfectiousDisease/UCM080466>

(Resources continued on next page)

**Washington State Regional AIDS Service Networks (AIDSNETs)**

Since 1988, the AIDSNETs have served as local lead agencies for the planning and coordination of HIV services in Washington. Currently, the most populous county in each region serves as the lead county and coordinates with local health jurisdictions within the region to distribute HIV resources.

Engrossed House Bill (EHB) 2360, which went into effect on January 1, 2011, eliminates the six regional AIDS service networks and directs the Department of Health (DOH) to fund HIV services directly—including testing and case management. For more information contact the DOH or visit the HIV Prevention section of the Washington State Department of Health website.

Prior to January 2011, AIDSNETs resources and community-based organizations were listed by region:

<p><b>Region 1</b> Spokane Regional Health District West 1101 College Ave Spokane, WA 99201-2095 1-509-324-1551</p>	<p><b>Region 2</b> Yakima Health District 1210 Ahtanum Ridge Dr Union Gap, WA 98903-1813 1-509-249-6503</p>	<p><b>Region 3</b> Snohomish Health District 3020 Rucker Ave, Ste 206 Everett, WA 98201 1-425-339-5211</p>
<p><b>Region 4</b> Public Health, Seattle and King County 400 Yesler Way, Ste 300 Seattle, WA 98104 1-206-296-4854</p>	<p><b>Region 5</b> Tacoma-Pierce County Health Department 3629 South D St, MS: 062 Tacoma, WA 98418-6813 1-253-798-4791</p>	<p><b>Region 6</b> Clark County Public Health 1601 Fourth Plain Blvd PO Box 9825 Vancouver, WA 98666 1-360-397-8086</p>

(References on next page)

## References

Centers for Disease Control & Prevention (CDC). (2010). HIV in the United States: An Overview, CDC HIV/AIDS Facts, June 2010. Retrieved July 12, 2010 from [http://cdc.gov/hiv/topics/surveillance/resources/factsheets/pdf/us\\_overview.pdf](http://cdc.gov/hiv/topics/surveillance/resources/factsheets/pdf/us_overview.pdf).

Centers for Disease Control & Prevention (CDC). (2008, September 5). Revised Surveillance Case Definitions for HIV Infection Among Adults, Adolescents, and Children Aged <18 Months and for HIV Infection and AIDS Among Children Aged 18 Months to <13 Years — United States, 2008. *MMWR* 57, RR-10. Retrieved July 14, 2010 from <http://www.cdc.gov/mmwr/PDF/rr/rr5710.pdf>.

Conway S, Bartlett JG. (2003). Graph found in PowerPoint presentation titled “Window Period: Untreated Clinical Course,” p. 40. Adapted. Retrieved August 4, 2010. To download presentation, go to [http://www.google.com/search?hl=en&source=hp&q=%22HIV+Pathogenesis+and+Natural+Course+of+the+Disease%22&btnG=Google+Search&aq=f&aqi=&aql=&oq=&gs\\_rfai=](http://www.google.com/search?hl=en&source=hp&q=%22HIV+Pathogenesis+and+Natural+Course+of+the+Disease%22&btnG=Google+Search&aq=f&aqi=&aql=&oq=&gs_rfai=) and click on the top item.

DeNoon DJ. (2010.) HIV Vaccine Secret Found in ‘Elite Controllers’: Genetic Mutation Allows Some People to Never Get AIDS. *WebMD Health News*. Retrieved June 17, 2010 from <http://www.webmd.com/hiv-aids/news/20100507/hiv-vaccine-secret-found-in-elite-controllers>.

Global HIV Prevention Working Group. (2010). *Global HIV Prevention Progress Report Card, Executive Summary*. Retrieved August 2, 2010 from <http://www.globalhivprevention.org/pdfs/FINAL%20Executive%20Summary.pdf>.

Global HIV Prevention Working Group. (2008). Behavior Change and HIV Prevention: (Re)Considerations for the 21st Century. Available from [http://www.globalhivprevention.org/pdfs/PWG\\_behavior%20report\\_FINAL.pdf](http://www.globalhivprevention.org/pdfs/PWG_behavior%20report_FINAL.pdf). Also available in CE format from ATrain Education at <http://www.ATrainceu.com>.

The Joint Commission. (2009). Measuring Hand Hygiene Adherence: Overcoming the Challenges. Retrieved July 14, 2010 from [http://www.jointcommission.org/PatientSafety/InfectionControl/hh\\_monograph.htm](http://www.jointcommission.org/PatientSafety/InfectionControl/hh_monograph.htm).

Joint United Nations Programme on HIV/AIDS (UNAIDS). (2010.) International HIV Vaccine Day Message from UNAIDS Executive Director Mr. Michel Sidibé, May 18, 2010. Retrieved July 15, 2010 from [http://www.unaids.org/en/KnowledgeCentre/Resources/PressCentre/PressReleases/2010/20100518\\_PS\\_IntVaccineDay.asp](http://www.unaids.org/en/KnowledgeCentre/Resources/PressCentre/PressReleases/2010/20100518_PS_IntVaccineDay.asp).

Joint United Nations Programme on HIV/AIDS (UNAIDS). (2008). Report on the global AIDS epidemic 2008. Executive Summary. Retrieved June 17, 2010 from [http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008\\_Global\\_report.asp](http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp).

Ledford, H. (2010). Souped-up antibody fends off HIV: Targeted search yields proteins that neutralize nearly all HIV strains. *Nature News*. Retrieved July 15, 2010 from <http://www.nature.com/news/2010/100708/full/news.2010.341.html#B1>.

Washington State Department of Health. (2007). *KNOW HIV Prevention Education, 2007 Revised Edition: An HIV and AIDS Curriculum Manual for Healthcare Facility Employees*. Retrieved June 7, 2010 from [http://www.doh.wa.gov/CFH/HIV\\_AIDS/Prev\\_Edu/training\\_curriculum/KNOW\\_2007.pdf](http://www.doh.wa.gov/CFH/HIV_AIDS/Prev_Edu/training_curriculum/KNOW_2007.pdf).

Washington State Department of Health (DOH). (2009). *World TB Day: March 24, 2009: A Glance at Washington’s Tuberculosis Epidemic*. Retrieved July 15, 2010 from <http://www.doh.wa.gov/cfh/TB/publications/WorldTBDay2009.pdf>.

(Post test begins on next page)

## Post Test

Use the Answer Sheet following the test to record your answers.

1. HIV:
  - a. Causes the body's immune system to attack body organs.
  - b. Destroys the body's ability to fight infection and disease.
  - c. Is the same as AIDS.
  - d. Is a hereditary disease.
2. AIDS:
  - a. Refers to the beginning stages of the disease.
  - b. Cannot be delayed by treatment.
  - c. Is a term that refers to the most advanced stages of HIV infection.
  - d. Causes an increase in the body's ability to fight infection and disease.
3. HIV:
  - a. Is a virus that attacks T-helper lymphocytes that regulate the body's immune response.
  - b. Can be transmitted by casual contact.
  - c. Attacks the body's red blood cells resulting in a decline in the immune system.
  - d. Increases antibody production by T-helper lymphocytes.
4. Acute HIV infection is:
  - a. The period just preceding full-blown AIDS.
  - b. The first week or two after infection when the virus is still undetectable..
  - c. Referred to as the window period.
  - d. The time when antibodies are first detected.
5. The window period:
  - a. Is the time between infection with HIV and the body's production of detectable antibodies.
  - b. Typically lasts only a week or two.
  - c. Refers to the stage of disease when the newly infected person is not yet contagious.
  - d. Is the first stage of HIV disease.
6. During the asymptomatic stage of HIV infection:
  - a. The virus can be passed through unprotected sex, but cannot be passed to a baby through breastfeeding.
  - b. The virus is in the dormant stage and is not replicating.
  - c. People infected with HIV experience frequent illnesses.
  - d. An untreated person can look and feel healthy for an average of 10 years before the start of AIDS symptoms.
7. The HIV virus originated in chimpanzees native to west equatorial Africa and spread to humans by hunters exposed to infected blood.
  - a. True
  - b. False
8. Antiviral "combination" drug therapies:
  - a. Have dramatically decreased the number of new HIV infections.
  - b. Are relatively inexpensive and easy to use.
  - c. Have resulted in a dramatic decrease in AIDS deaths.
  - d. Are widely available in developing countries.

9. AIDS and symptomatic HIV infections have been reportable to the Washington State Department of Health since 1984 and 1993, respectively. However, reporting of new HIV diagnoses is not required.
  - a. True
  - b. False
10. Conditions for the transmission of HIV include:
  - a. Access to the bloodstream of another person, sufficient dose of virus, and an HIV source.
  - b. Only casual contact with an infected person.
  - c. A genetic predisposition to HIV and a compromised immune system.
  - d. Dispersal of droplets from an infected person with cough.
11. Transmission of HIV can occur through:
  - a. Oral sex and breastfeeding.
  - b. Sharing of needles and infusion of currently used blood products.
  - c. Tattooing and use of antiviral drugs.
  - d. Donating blood in the United States.
12. Viral load is:
  - a. The concentration and amount of HIV necessary for infection.
  - b. The amount of HIV that is present in the bloodstream.
  - c. Not a predictor of how infectious an HIV-positive person is.
  - d. Decreased during the asymptomatic stage of infection.
13. The behavior associated with the highest risk of HIV transmission is:
  - a. Unprotected vaginal intercourse.
  - b. Breastfeeding.
  - c. Unprotected anal intercourse.
  - d. Indirect sharing of drug paraphernalia.
14. During pregnancy:
  - a. An HIV-infected woman rarely passes the infection to the baby.
  - b. C-sections actually increase the risk of infecting the baby with HIV.
  - c. The HIV transmission rate to the baby drops with the use of AZT.
  - d. HIV counseling is voluntary in the state of Washington.
15. The presence of HIV infection with other STDs does not increase the risk of HIV transmission.
  - a. True
  - b. False
16. There have been some cases of HIV transmission:
  - a. Through the air by sneezing, breathing, or coughing.
  - b. Through sharing of computers, telephones, or swimming pools.
  - c. From healthcare worker to patient.
  - d. Eating food in a restaurant prepared or served by an HIV-infected employee.
17. Behaviors that can reduce the risk of HIV infection include:
  - a. Use of natural-membrane condoms.
  - b. Use of latex condoms.
  - c. Use of oil lubricants like petroleum jelly or cooking oils.
  - d. Washing used needles with soap and water.

18. Occupational exposure means:
  - a. Exposure to food served by an HIV-infected employee of a restaurant.
  - b. Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM that may result from the performance of an employee's duties.
  - c. A specific eye, mouth, or other mucous membrane contact with blood or OPIM that results from the performance of an employee's duties.
  - d. Caring for a patient who has HIV.
19. According to the CDC, the most common bloodborne infection in the United States is:
  - a. HIV
  - b. Creutzfeldt-Jakob disease
  - c. Hepatitis D
  - d. HCV
20. Body fluids linked to transmission of HIV, HBV, and HCV and that require Standard Precautions include:
  - a. Blood products and sweat.
  - b. Cerebral spinal fluid and urine without visible blood.
  - c. Pericardial fluid and vomitus not visibly contaminated with blood.
  - d. Vaginal secretions and amniotic fluid.
21. Urine, feces and vomitus are not considered OPIM unless visibly contaminated by blood.
  - a. True
  - b. False
22. An Exposure Control Plan must include:
  - a. Mandatory hepatitis B vaccinations for all employees with potential for occupational exposures.
  - b. A syringe exchange program.
  - c. The procedure for evaluating the circumstances surrounding exposure incidents.
  - d. A biannual update of the plan.
23. Bloodborne pathogens training:
  - a. Must occur for all employees with potential exposure to blood/OPIM within a year of assignment to tasks where exposure may occur.
  - b. Is required prior to job assignment and every 5 years thereafter.
  - c. Includes protective measure to minimize the risk and what to do if exposure occurs.
  - d. Is not required for nurses working in Washington State.
24. Standard Precautions:
  - a. Are not implemented unless a patient has been diagnosed with AIDS or hepatitis C.
  - b. Must include the use of latex gloves.
  - c. Include PPEs such as masks, gloves, protective eyewear, and face shields.
  - d. Consider all body fluids, including sweat, to be potentially infectious.
25. Hand hygiene:
  - a. Is required only after contact with blood or other infectious materials.
  - b. Is not required after removing gloves.
  - c. Includes the use of lotion to prevent dry skin.
  - d. Is required after removal of gloves or other PPEs and upon leaving the work area.

26. Regulated waste:
- Must be flushed down toilets in specified areas.
  - Must be red-bagged or labeled in leakproof containers to prevent leakage during handling and transport.
  - Includes chemical germicides and disinfectants.
  - Does not include items on which blood has dried.
27. Biohazard labels:
- Must be written in the three major languages of the workers employed in that area.
  - Can only be presented in pictographs.
  - Are used to protect employees from hazardous biological exposure.
  - Need not be understood by housekeeping staff.
28. An example of an occupational exposure is:
- Carrying a red-bagged urine specimen to the lab.
  - Taking the temperature of an HIV-infected patient using Standard Precautions.
  - A needlestick from a patient who does not have HIV.
  - Assisting an HIV-infected patient to walk in the hallway using Standard Precautions.
29. HIV transmission to healthcare workers:
- Is most likely through a blood splash to the eyes, nose, or mouth.
  - Is approximately 22%–31% from a needlestick from an infected patient.
  - Has never been caused by blood contact with intact skin.
  - Does not depend on the amount of blood or virus present in the exposure.
30. Treatment after a potential exposure includes all of the following except:
- Washing the affected area with soap and water.
  - Flushing exposed eyes, nose, or mouth with water, saline, or sterile irrigants.
  - Removal of potentially contaminated clothing.
  - Application of antiseptics in place of washing.
31. Sharps injuries:
- Should be "milked" or squeezed to extract potential infectants.
  - Must not be treated with antiseptics.
  - Should be washed with soap and water.
  - Are not considered an occupational exposure.
32. Following HIV exposure, employees must:
- Call their personal physician to set up an appointment.
  - Report the incident to the person responsible for managing exposure immediately after cleansing exposed area.
  - Be assigned to another department until the incident is fully investigated.
  - "Milk" the wound if it is a needlestick.
33. The source individual:
- Should be treated with PEP within 24 hours of exposure.
  - Must be tested as soon as feasible with or without their consent.
  - May be ordered by a local health officer to have HIV testing if exposure occurred on the job and if substantial exposure occurred.
  - Is a law enforcement officer, firefighter, or healthcare provider with an occupational exposure.

34. When caring for an HIV-infected person at home:
- It is not necessary to take precautions with blood or OPIM.
  - Clothes or towels that are contaminated with blood or OPIM should be cleaned and disinfected before further use.
  - Urinals and bedpans should be disposed of after each use.
  - Hands should be washed before contact with pets to prevent transmission of HIV to the animals.
35. Positive HIV test results are not reportable to the health department unless that person seeks medical care for conditions related to HIV or AIDS.
- True
  - False
36. HIV testing and results may be disclosed:
- By providers who diagnose HIV infections who must submit a confidential case report to the local health jurisdiction within 3 days.
  - Using "a good faith effort" to notify all spouses with or without the consent of the infected person.
  - Only to the manager of an HIV infected person in the workplace.
  - When positive HIV results are obtained through anonymous testing.
37. According to Washington State law, HIV infected people.
- Do not have to be granted "reasonable accommodations" in the workplace unless ordered by a health officer.
  - Can be detained by a health officer if they engage in activities that endanger the health of others.
  - Are not covered by the Americans with Disabilities Act.
  - Must be isolated from their co-workers.
38. Chronic grief:
- Is caused by "the fear of the unknown" that many HIV sufferers encounter.
  - Allows the individual to move through the stages of grief and come out of the grieving process.
  - Is one of the psychological symptoms of AIDS that is caused by brain infection.
  - Is caused by "cumulative" multiple loss or grief saturation.
39. The group with the highest rate of new HIV infection in the United States and worldwide is:
- Hispanic children
  - Gay men
  - American Indians
  - Women

(Answer sheet on next page)

## Answer Sheet

### Washington: HIV/AIDS, 4 units

**Name** (Please print your name): \_\_\_\_\_

**Date:** \_\_\_\_\_

Passing score is 80%

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_

31. \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

34. \_\_\_\_\_

35. \_\_\_\_\_

36. \_\_\_\_\_

37. \_\_\_\_\_

38. \_\_\_\_\_

39. \_\_\_\_\_

## Course Evaluation

Please use this scale for your course evaluation. Items with asterisks (\*) are required.

- 5 = Strongly agree
- 4 = Agree
- 3 = Neutral
- 2 = Disagree
- 1 = Strongly disagree

\*1. Upon completion of the course, I was able to:

a. Discuss the etiology and epidemiology of HIV in Washington State and the United States.

5  4  3  2  1

b. Describe transmission and infection control precautions for prevention of HIV transmission.

5  4  3  2  1

c. Identify the legal and ethical issues associated with HIV in Washington State.

5  4  3  2  1

d. Discuss the main psychosocial issues facing HIV-infected persons and their caregivers.

5  4  3  2  1

\*2. The course was written in a way that facilitated my learning.

5  4  3  2  1

\*3. This course was free from commercial bias.

5  4  3  2  1

\*4. The course met my continuing education needs.

5  4  3  2  1

\*5. The material presented was supported by evidence.

5  4  3  2  1

\*6. The author avoided the use of anecdotal information as the main source of material.

5  4  3  2  1

\*7. The course was free of product promotion.

Yes  No\*\*

\*\* If you answered no, please answer #8.

8. Was product promotion the sole purpose of the presentation?

Yes  No

\*9. It took me 60 minutes per contact hour to complete the course, test, and evaluation.

Yes  No\*\*

\*\* If your answer was no, how long did it take? \_\_\_\_\_

10. My professional educational level is (check one):

**Nursing**

Nurse Aide  LVN/LPN  RN (diploma)  RN (AD)  BSN  MSN

Nurse Practitioner/Advanced Practice Nurse  PhD/DNSc

**Therapy**

OT Aide  COTA  OT  MOT  OTD

PT Aide  PTA  PT  MPT  MSPT  DPT  PhD

**Other** (please specify): \_\_\_\_\_

11. I heard about ATrain Education from:

Search engine

Advertisement

Government or Board website

I am a returning customer

Friend

Publication (Magazine, etc.)

Other \_\_\_\_\_

12. I found the ATrainCEU.com website easy to use:

Yes  No

13. Comments or suggestions (optional):

---

---

---

---

(Registration on next page)

## Registration Information

Please answer all of the following questions (\*required).

\* Name: \_\_\_\_\_

\* Address: \_\_\_\_\_

\* City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

\* Phone: \_\_\_\_\_

\* Professional Designation: \_\_\_\_\_

\* License Number and State: \_\_\_\_\_

Please email my certificate:  Yes  No

Email (required if you want your certificate sent by email): \_\_\_\_\_

(Note: If you request an email certificate, we will not send a copy of your certificate by US Mail.)

### Payment Options

You may pay by credit card or by check.

Fill out this section only if you are **paying by credit card**.

4.0 contact hours - \$25

### Credit card information:

Name \_\_\_\_\_

Address (if different from above): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Card type:  Visa  MC  American Express  Discover

Card number \_\_\_\_\_ CVS # \_\_\_\_\_

Expiration date \_\_\_\_\_

### Test Completion and Mailing Instructions

1. Complete all forms:

- Answer Sheet
- Course Evaluation
- Registration Form (this page)

2. If you are **paying by check**, prepare a check for \$25 made out to ATrain Education, Inc.

3. Mail the completed forms and your payment to:

ATrain Education, Inc  
5171 Ridgewood Rd  
Willits, CA 95490

When we receive your forms and payment, we will mail (or email, if you request it) your certificate of completion. If you have any questions or concerns, please call or contact us at [Sharon@ATrainCEU.com](mailto:Sharon@ATrainCEU.com). Thanks for taking the ATrain!