

7 Hour Independent Study

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# HIV/AIDS

## Education & Awareness

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# COURSE SUMMARY

This course addresses Washington State requirements for licensed and non-licensed healthcare professionals required to complete HIV/AIDS Education & Awareness Training.

This course includes six components:

**CHAPTER 1: ETIOLOGY & EPIDEMIOLOGY OF HIV**

**CHAPTER II: TRANSMISSION & INFECTION CONTROL**

**CHAPTER III: TESTING & COUNSELING**

**CHAPTER IV: CLINICAL MANIFESTATIONS & TREATMENT**

**CHAPTER V: LEGAL & ETHICAL ISSUES**

**CHAPTER VI: PSYCHOSOCIAL ISSUES**

# COURSE SUMMARY



**COURSE COMPLETION CRITERIA:** 80% or greater on post-exam. A completed evaluation and payment required. No partial completion awarded.



**COURSE DESIGN**—This course is designed to be a self-study guide for healthcare professionals in the State of Washington. This course meets the state classroom-requirements.



**COURSE MODULES**—Unless otherwise specified, all of the following six topic areas must be covered for professions with seven-hour licensing requirements. Selection of topics may be made to meet specific licensing boards' requirements.



**EMBEDED LINKS**—The embedded video, and document links are provided as additional resources. PTS does NOT receive compensation for these. Participants are NOT required to view the videos as part of this training.

# USING THIS GUIDE



**DOWNLOAD ANSWER SHEET**—Before starting this program download the written examination answer sheet. The exam questions are throughout the presentation.



**STOP & START**—This course is designed to be a self-study guide. Stop and start as needed!



**Payment**—We now accept payment through our website. Payment is due before we issue an eCertificate. [We recommend paying when you submit your exam].



# COURSE CHAPTERS

Start and stop as needed! Use this page to navigate to the chapter you need.

**CHAPTER 1: ETIOLOGY & EPIDEMIOLOGY OF HIV**

**CHAPTER II: TRANSMISSION & INFECTION CONTROL**

**CHAPTER III: TESTING & COUNSELING**

**CHAPTER IV: CLINICAL MANIFESTATIONS & TREATMENT**

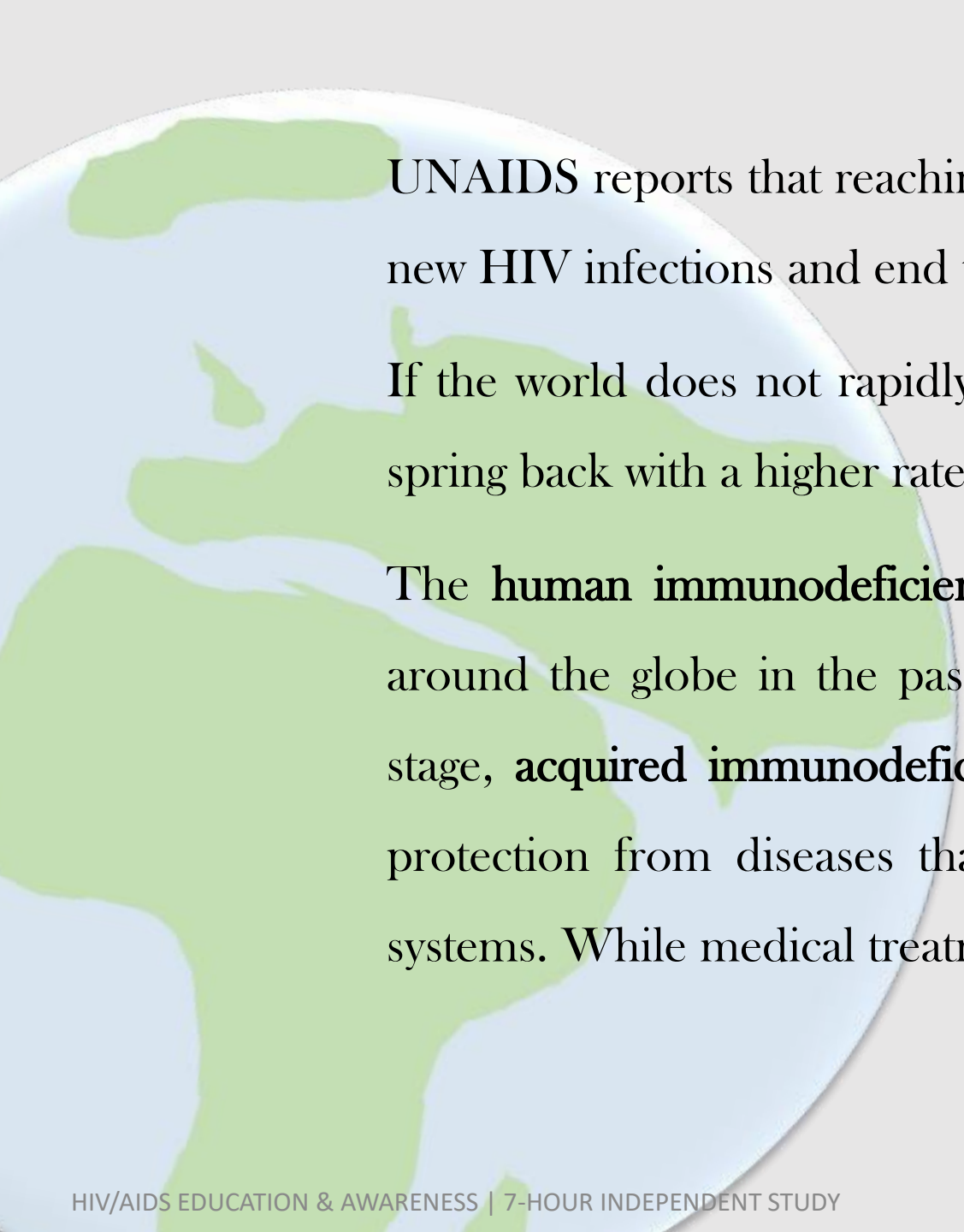
**CHAPTER V: LEGAL & ETHICAL ISSUES**

**CHAPTER VI: PSYCHOSOCIAL ISSUES**

# CHAPTER I:

# ETIOLOGY & EPIDEMIOLOGY

of HIV



UNAIDS reports that reaching so-called Fast-Track Targets will avert nearly 28 million new HIV infections and end the AIDS epidemic as a global health threat by 2030.

If the world does not rapidly scale up in the next five years, the epidemic is likely to spring back with a higher rate of new HIV infections than today (UNAIDS, 2014).

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 with healthy immune systems. While medical treatment can delay the onset of AIDS, no cure is available.

# DEFINING HIV

The **human immunodeficiency virus (HIV)** attacks the immune system and kills or impairs cells of the immune system, causing damage to the body's immune system. HIV affects the body's ability to fight diseases and infections by bacteria, other viruses and disease-causing organisms. Without a healthy immune system a person may become vulnerable to infections caused by bacteria, other viruses, and disease causing organisms. These infections may cause life threatening illnesses. These infections lead to **Acquired Immunodeficiency Syndrome (AIDS)**.



AIDS stands for Acquired Immunodeficiency Syndrome and refers to the most advanced stages of HIV infection. Medical treatment and medications can delay the onset of AIDS.

**ACQUIRED:** This disease is not hereditary. It is passed casually from one individual to another. HIV must enter the bloodstream in order to infect an individual.

**IMMUNO-DEFICIENCY:** The immune system is the body's defense against infections and diseases. When the immune system becomes impaired and loses its ability to defend infection diseases, it is called 'deficient'. This system deficiency can cause the body to become susceptible to infections by disease-causing organisms such as bacteria and viruses. These infections may lead to life-threatening illnesses.

**SYNDROME:** HIV infections cause a combination of symptoms, infections and diseases. This group of symptoms that tend to appear in conjunction with the others is called a syndrome.

# DEFINING AIDS

# STAGES OF HIV

## ACUTE INFECTION:

- ✚ Large amounts of the virus are being produced in your body.
- ✚ Persons are very contagious in this stage.
- ✚ Most people develop flu-like symptoms within 2-4 weeks; this is the body's natural defense.

## CLINICAL LATENCY:

- ✚ HIV reproduces at very low levels in the body and is still active.
- ✚ HIV is inactive/dormant.
- ✚ Symptoms may not be present. Provided proper HIV treatment, people may live with clinical latency for several decades. Without treatment this stage can last for an average of 10 years, but some people progress through this phase faster.

## AIDS:

When CD4 cell count falls below 200 cells/mm<sup>3</sup> this is considered AIDS.

Without treatment people typically only survive 3 years.

Persons with AIDS are susceptible to opportunistic illnesses.

# HIV

## IN THE BODY

**T-HELPER LYMPHOCYTE**—HIV enters the bloodstream and seeks the T-helper lymphocyte, these are white blood cells (lymphocytes) are essential to the function of the immune system. One of the functions of these cells is to regulate the immune response in the event of an 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.

# HIV

## IN THE BODY

**HIV ANTIBODIES**—Antibodies 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 measles virus, the immune system will develop antibodies specifically designed to attack the measles virus. Polio antibodies fight poliovirus.

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.



# HIV

## IN THE BODY

**PRIMARY OR ACUTE HIV INFECTION**— is the first stage of HIV disease—typically lasting only a week or two—when the virus first establishes itself in the body. This is the period of time between first infection and when the body begins to produce antibodies. It is highly infectious but not detectable by any tests.

**WINDOW PERIOD**—The window period is the period of time between first infection with HIV and when the body is able to produce detectable antibodies to HIV. It may take between 2 weeks and 3 months for antibodies to develop, although most people develop antibodies by 6 to 12 weeks. During this time, people are infectious, meaning they can pass the virus to someone else, and will remain infectious throughout life.

During the window period a person may not produce sufficient antibodies to be detectable on an HIV antibody test. This means they might get a negative result on an antibody test, while actually having HIV. This is why a newly infected person can infect a partner before antibodies develop, when high amounts of virus in the blood are present, and the newly infected person does not yet know they have HIV. The point at which the infected person first shows antibodies by testing is known as seroconversion.

# HIV

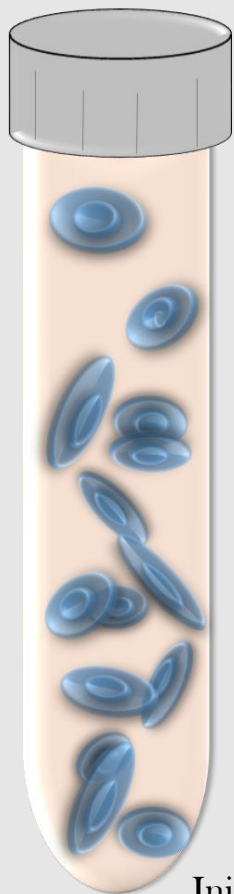
## IN THE BODY

**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 T4 cells and the immune system.

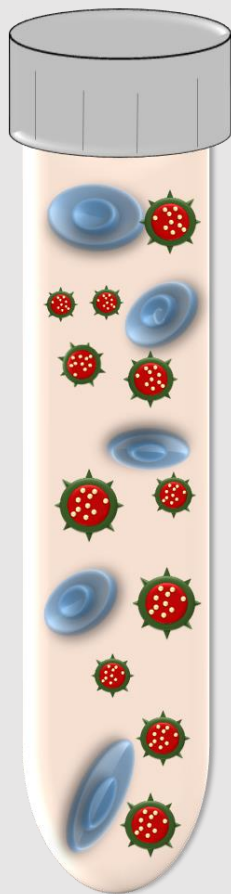
This means that, although a person looks and feels healthy, they can infect other people through unprotected anal, vaginal, or oral sex or through needle sharing—especially if they have not been tested and do not know they are infected. The virus can also be passed from an infected woman to her baby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

# PROGRESSION OF HIV

Before HIV  
Infection



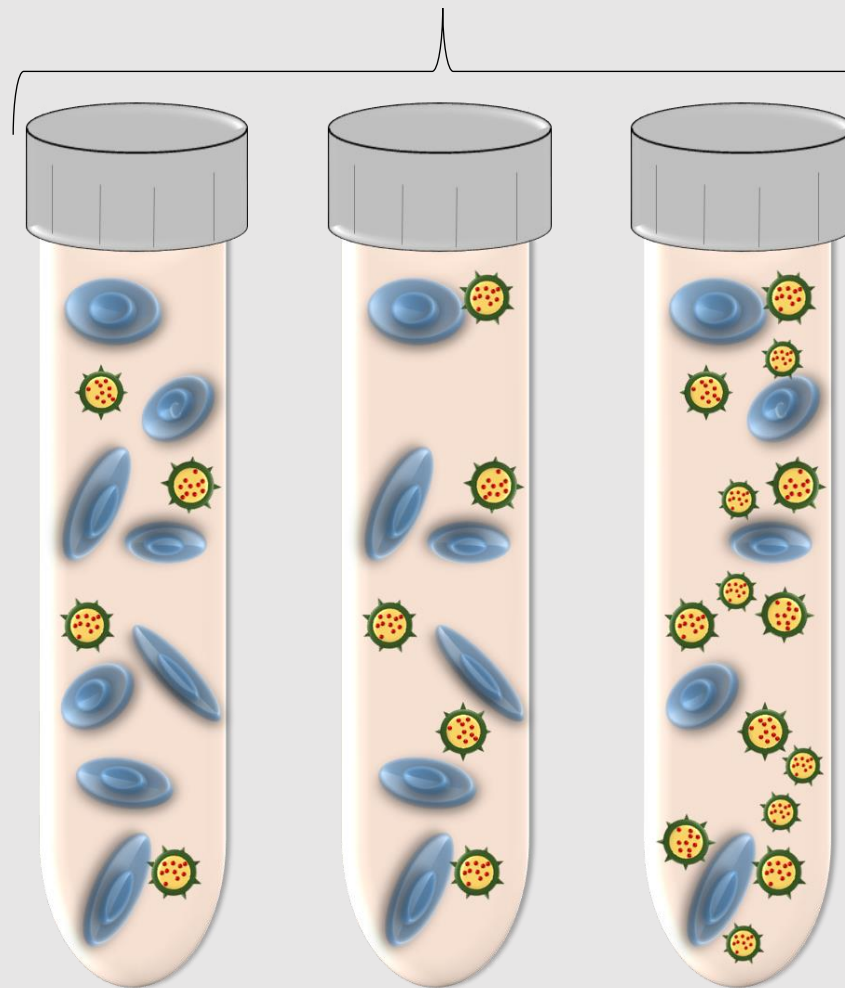
Acute HIV  
Infection



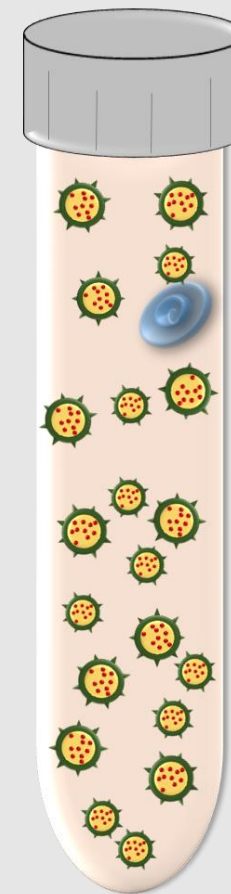
Initial Infection

Weeks to Months

Chronic HIV Infection



AIDS



Years

# ORIGINS OF HIV

The origin of HIV has been a topic of study and speculation for decades. Theories have been proposed and rejected. It was through much research from scientists worldwide that the evidence traced the start of the disease to monkeys in West Africa.

These monkeys, red-capped mangabeys and mustached guenons, are hunted by a subspecies of chimpanzees in West Equatorial Africa. Different viruses were passed from these monkeys to the chimpanzees that ate them. These viruses combined into simian immunodeficiency virus (SIV) in the chimpanzees.

In 1921 hunters in West Africa came in contact with chimpanzee blood. Consequently, many humans became infected with HIV-1 and HIV-2 strains.

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.



# TIMELINE

**1981**—CDC publishes report of young gay men dying from infections caused by immune deficiency. That year 270 cases of severe immune deficiency and 121 deaths reported.  
The first case of HIV is Washington State is reported

**1986** The virus that causes AIDS is named Human Immunodeficiency Virus (HIV)

**1987** The US FDA approves AZT, the first antiretroviral drug for fighting AIDS

**2011** The National Institutes of Health reports that taking antiretroviral drugs at the onset of HIV leads to dramatic reduction in HIV transmissions to uninfected heterosexual partners.

**2014** Dr. Joep Lange, an AIDS researcher, dies when Malaysia Flight 17 is shot down over Ukraine. He aimed to improve HIV/AIDS therapy in developing countries.

**1982-3** -- The spread of HIV to heterosexual people in Africa is confirmed. Luc Montagnier and Françoise Barré-Sinoussi discover a virus that is linked to AIDS. Initially named lymphadenopathy-associated virus (LAV).

**1985** Ryan White, diagnosed with AIDS, is barred from Kokomo, Indiana middle school

**1995** The FDA approves the first protease inhibitor. These keep the AIDS virus from multiplying. This begins highly active antiretroviral therapy (HAART). By the next year AIDS deaths have declined in the US by 40 percent.

**2012** Truvada becomes the first drug to be approved by the FDA specifically for the use of preventing HIV transmission

**1990** Ryan White, dies at the age of 18 at Riley Hospital for Children. Congress approves the Ryan White Comprehensive AIDS Resources Emergency (CARE) Act to provide funds for treatment services and community based care.

**2003** US President George W. Bush announces a \$15 billion President's Emergency Plan for AIDS Relief. This effort provided funds for HIV/AIDS treatment to fifteen nations.

## STRAINS & SUBTYPES

# HIV

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 virus 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. By 2001, blood testing in the United States can detect both strains and all known subtypes of HIV.

# EPIDEMIOLOGY OF HIV & 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. Clinically, **AIDS** was first recognized in the United States in 1981. In Washington State, the first case of **AIDS** also appeared in 1981. But it wasn't until 1983 that the virus was identified as the cause of the new disease. Since then, the number of **AIDS** cases has continued to increase, both in the United States and in other countries.

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.



- According to a report released by the US Center for Disease Control & Prevention (CDC) indicating that 37,832 people received an HIV diagnosis in 2018. This report includes the US and dependent areas (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, the Republic of Palau, and the US Virgin Islands). This new diagnosis decreased by 9% from 2010 to 2016.
- How many people have HIV in the US? The CDC estimates that 1.1 million people in the US (50 states and District of Columbia) had HIV. Of those, 14% (1 in 7 people) did not know they had HIV.

Additional statistics can be found here:

<https://www.cdc.gov/hiv/basics/statistics.html>



# EPIDEMIOLOGY OF HIV & AIDS

- ✚ The U.S. Centers for Disease Control and Prevention (CDC) estimates that 1.2 million people aged 13 years and older are living with HIV infection, including 168,000 (14%) who are unaware of their infection. This is a decline from 25% in 2003 and 20% in 2012, and is a positive sign because studies have shown that many people with HIV who know that they are infected avoid behaviors that spread infection to others, and they can get medical care and take antiviral medications that may reduce HIV spread by as much as 96% (CDC, 2014; 2014b).
- ✚ CDC estimates that that there are only 4 transmissions per year for every 100 people living with HIV in the United States, which means that the vast majority (at least 95%) of people living with HIV do not transmit the virus to anyone else. This represents an 89% decline in the transmission rate since the mid-1980s, reflecting the combined impact of testing, prevention counseling, and treatment efforts targeted to those living with HIV infection (UNAIDS, 2013).

# EPIDEMIOLOGY OF HIV & AIDS

- ✚ The estimated incidence of HIV has remained stable overall in recent years, at about 50,000 new HIV infections per year (CDC, 2014b). While this is still too high a level, stabilization is in itself a sign of progress. With continued increases in the number of people living with HIV thanks to effective HIV medications, there are more opportunities for HIV transmission than ever before. Yet, the annual number of new infections has not increased (UNAIDS, 2013).
- ✚ Worldwide, there were about 2.1 million new cases of HIV in 2013, and about 35 million people are living with HIV around the world. Of those, 3.2 million are children, 2.1 million are adolescents, and 4.2 million are people over age 50. In 2013 new HIV infections worldwide were 2.1 million, but new infections have fallen 38% since 2001 and new infections among children have fallen by 58% in the same period (CDC, 2014a; UNAIDS, 2014).

# EPIDEMIOLOGY OF HIV & AIDS

- ✚ Up to 2011 the cumulative estimated number of deaths of people with diagnosed HIV infection ever classified as stage 3 (AIDS) in the United States was 648,459 (deaths may be due to any cause, which can make data interpretation complex). Nearly 39 million people with AIDS have died worldwide since the epidemic began (CDC, 2014a).
- ✚ Globally, AIDS-related deaths, which peaked in 2005 at 2.4 million, have declined steadily ever since, and were estimated at 1.5 million in 2013 (UNAIDS, 2014). Even though Sub-Saharan Africa bears the biggest burden of HIV/AIDS, countries in South and Southeast Asia, Eastern Europe and Central Asia, and those in Latin America are significantly affected by HIV and AIDS (CDC, 2014a; UNAIDS, 2014).

# EPIDEMIOLOGY OF HIV & AIDS

- ✚ 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.
- ✚ In Washington State records show that from 1996 through 2013, more than 19,000 people had been diagnosed with **HIV** and over 6,000 have died as a result. The number of new cases in the state has recently seen a small decrease. Between 2009 and 2013 new cases have average 517 per year. At the end of 2013 more than 12,000 people across the state were living with **HIV**, and the majority of them (55%) lived in King County (WDOH, 2014).

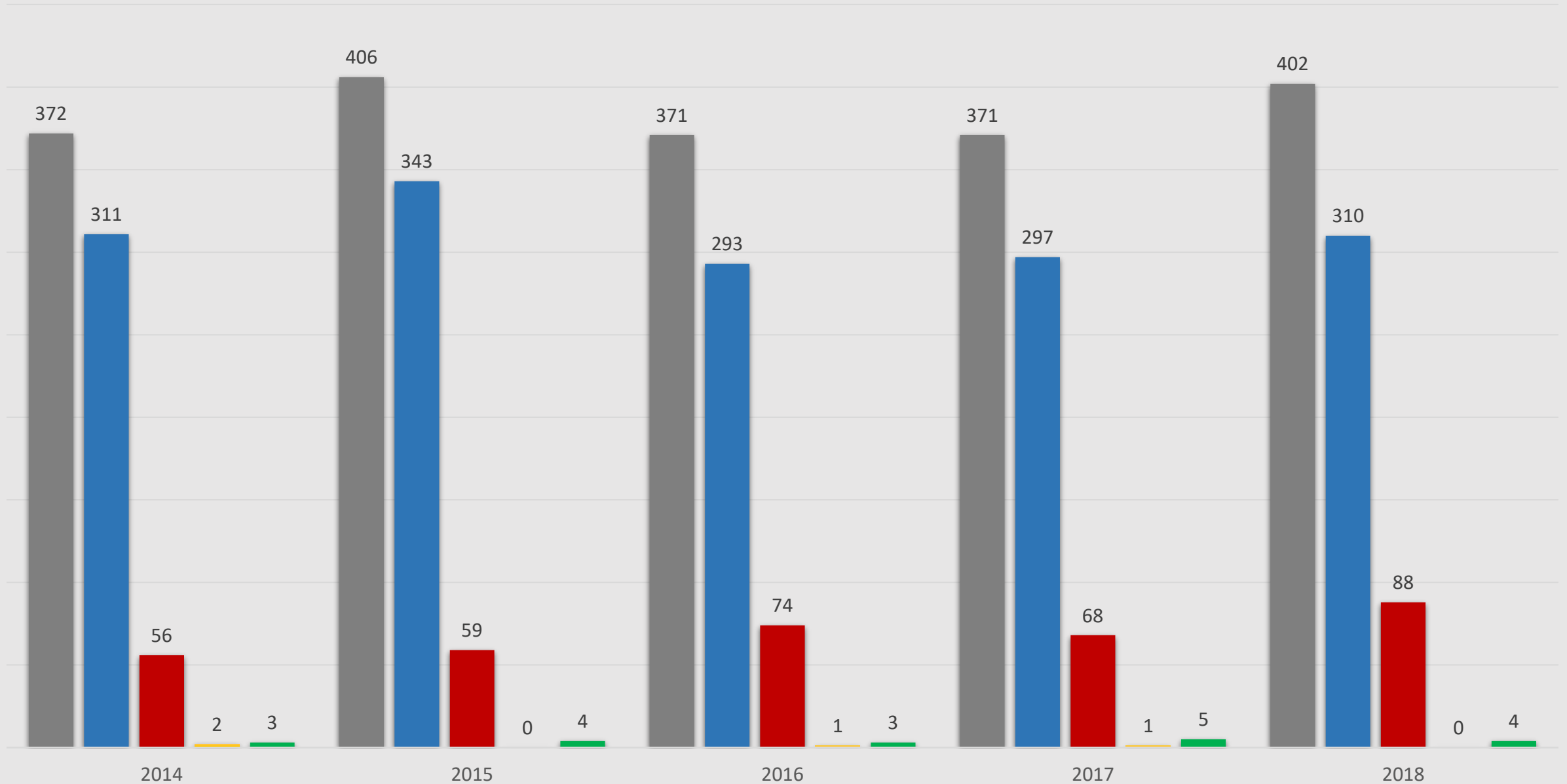
# EPIDEMIOLOGY OF HIV & AIDS

- ✚ Healthcare Professionals can review updated HIV & AIDS cases in Washington state and should do so annually.
- ✚ Review the latest Washington State HIV Surveillance Reports here:  
<https://www.doh.wa.gov/DataandStatisticalReports/DiseasesandChronicConditions/HIVData/SurveillanceReports>

Statistics on HIV & AIDS Cases in WA	2018	2017	2016
New HIV Cases Reported	402	445	440
New AIDS Cases Reported	193	184	170
Late HIV Diagnosis	104	107	111
Initial Linkage to HIV Care	331	372	365



# New HIV Cases by Gender & Gender Identity



■ Total No. ■ Male ■ Female ■ Transgender Male ■ Transgender Female

# EPIDEMIOLOGY OF HIV & AIDS

- ✚ During the period 2008-2013, men accounted for 85% of the new cases and women for 15%. Fifty-seven percent were white, 17% black, 16% Hispanic, and 5% Asian. The remaining 5% included native Hawaiians, American Indians, and those of multiple race. Children under 13 accounted for 2% of the new cases, while those age 13 to 24 were another 14%. The majority of cases (57%) were among adults 35 to 54, and the remaining 28% were age 54 and older (WDOH, 2014).

The Washington State Department of Health collects surveillance data and publishes a report twice a year. The data reflects a broad range of useful categories and is accompanied by relevant explanations and updates. These reports are available on the [Department's website](#).

# HIV & AIDS IMPACT

The US has been hit harder by HIV and AIDS than Europe.

Three possible reasons:

1. HIV arrived earlier in the United States, when little was known about the disease at the time.

2. Epidemiologists believe that high-risk populations were concentrated in certain cities in the United States, particularly San Francisco. This helped the disease spread quickly among those populations.

3. Americans had a higher incidence of high-risk behavior, especially intravenous drug use, even before HIV arrived. In 1984, the rate of HIV infection among intravenous drug users was 50% in New York City and Edinburgh, Scotland. And 30% in Amsterdam, the Netherlands. In Europe, the governments responded quickly to needle exchange programs and free syringe distribution.

HIV cases became reportable to the U.S. Department of Health in the fall of 1999. AIDS cases have been reportable (physicians must confidentially report any cases among their patients) to the CDC since 1984, when the existence of the syndrome that follows HIV infection was clearly established. AIDS and symptomatic HIV infections have been reportable to the Washington State Department of Health (WDOH) since 1984 and 1993, respectively. HIV cases became reportable to the Washington State Department of Health in fall 1999.

## REPORTING HIV/AIDS

Collect information about people who are infected in order to understand how to create programs that will prevent disease.

Assure that people who are infected are referred to medical care.

Identify people who are infected and try to stop the spread of infection.

## REPORTING HIV/AIDS



# REPORTING HIV/AIDS

According to the Washington State Department of Health, the following health facilities/departments must report information to the authorities:

HIV/AIDS REPORTING REQUIREMENTS			
Reporting	Item to Report	Timeline	Agency
Health care providers	HIV or AIDS diagnosis	3 Working Days	Local health department
Health care facilities	HIV or AIDS diagnosis	3 Working Days	HIV to local health department AIDS to state health department
Laboratories	Any test result that indicates HIV infection (including a positive Western blot)	2 Working Days	Inside King Co.: Public Health-- Seattle & King Co. (PHSKC) Outside King Co.: State Health department
Laboratories	All CD4 results (absolute and %; all HIV viral load results)	Monthly	Inside King Co.: Public Health-- (PHSKC) Outside King Co.: State Health department
Local health Departments	HIV and AIDS	Within 7 days of completion or 21 days of notification	State health department
Source: Washington State HIV Surveillance Semiannual Report, June 2014			

# TIMELINE

**1982** First AIDS case reported in King County by name. Washington made AIDS reportable by emergency rule in 1984

**2002-2005** WA participated in Evaluation of HIV Infection Reporting project funded by CDC. The project demonstrated that WA name-to-code HIV data meet rigorous quality standards.

**2005** CDC recommended that all states report and maintain HIV cases by name. This recommendation is tied to future Ryan White CARE funding, threatening the loss of \$5 million locally if WA does not change its name-to-code system to name only.

**2006** WA implemented expanded laboratory reporting as of September 1. Labs are required to report all CD4 results and all HIV viral load results.

**1987** WA required reporting of symptomatic HIV (B1/B2) cases by name.

**1999** Name-to-code reporting system implemented Sept 1 for asymptomatic HIV infection. Names are removed within 90 days. Approximately 5,800 cases have already been reported by name.

**2004** After surveying local health care providers, King County began using case reports to routinely offering Partner Counseling & Referral Services for all new diagnoses of HIV infection.

**2006** WA implemented standard HIV reporting (retaining names) to comply with the 2005 CDC recommendation. An agency rule is approved in March, with the final rule effective Sept 1. King County staff work with local health care providers to re-asertain names on 99% of previously reported HIV cases.

# CONFIDENTIALITY

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State laws protect the identity of persons reported with HIV or AIDS. The penalty for unauthorized disclosure of Sexually Transmitted Infections (including HIV/AIDS report data is \$5,000, or imprisonment of not more than year, or both (RCW 70.24.080); this is considered a misdemeanor. The DOH must report annually to the Board of Health any incidents of unauthorized disclosure by the department, local health departments, or their employees and recommend methods of preventing future unauthorized disclosure and improving the system on confidentiality of reported information (RCW 70.24.450).

Records related to HIV infection have a higher level of protection than other health records. Apart from providers of HIV medical care, only persons authorized to use the information for a specific public health purpose have access to these records. The records are protected by physical and electronic means to prevent them being improperly disclosed and those with access to them receive special training annually on how they should be safeguarded.

# CONFIDENTIALITY

The identity of tested individuals for sexually transmitted disease, including HIV, may not be disclosed except as authorized. The exchange of medical information among health care providers and within healthcare facilities in order to provide healthcare services to the patient as permitted. Additional parties listed below who may receive this information must be advised: “this information has been disclosed to you from records whose confidentiality is protected by state law. State law prohibits you from making any further disclosure of it without the specific written consent of the authorized person to whom it pertains, or as otherwise permitted by state law. A general authorization for the release of medical or other information is NOT sufficient for this purpose” (RCW 24.105). The permitted recipients are limited to:

The subject of the test

A person with a release of information from the tested person

Health officials in accordance with reporting requirements for diagnosed sexually transmitted diseases/infections

Facilities that collect blood, tissue or semen

Health officials, first responders, or victims of sexual assault who petition the court to order testing (RCW 70.24.024, 70.24.340).

A person allowed access to information by a court order

Local law enforcement if health officers have exhausted procedures to stop behaviors that present a danger to the health of the public

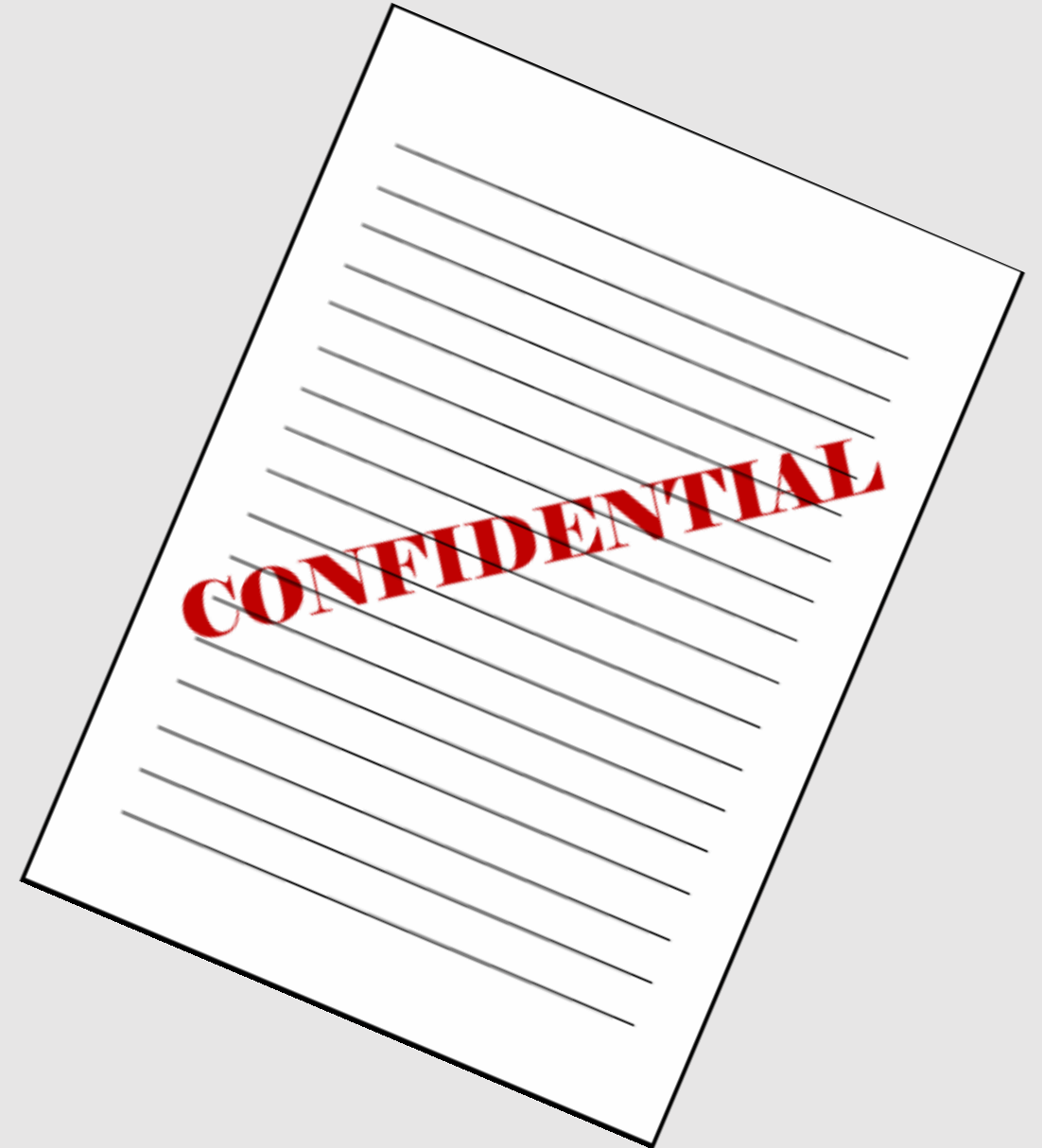
Exposed persons who are notified because releasing the identity of the infected person is necessary

Payers of health claims

Agencies or guardians responsible for children under age 14 with a STD

# FORMS

Case Report forms are available on the health department's disease reporting webpage.





# HIV CASE REPORTING & PARTNER NOTIFICATION

Reporting of HIV infections strengthens our ability to describe and monitor the epidemic, but can also facilitate HIV-infection and entry into medical care, and lead to earlier diagnosis of exposed partners. The intent of contacting persons reported with HIV infection to assist infected persons in notifying spouses and sex and needle-sharing partners that they may be infected, and to provider referral for care and other services. Public health staff elicit partner information, then work with the infected person to determine which he/she will reach and which public health will contact (without disclosing the case's identity). Exposed partners are then offered counseling and testing to learn of their status, hasten their entry into care if positive, and prevent further transmission to others.

Public health officials will contact the principle health care provider to determine the best means of contacting the HIV-infected person to conduct partner notification. The health care provider who recommends the health officer not meet with the HIV-infected individual, must inform the HIV-infected individual of the necessity to notify partners, assist in notifying partners, and inform health officials of the identity of certain partners.

Health officers shall use identifying information only for contacting the HIV-infected individual to provide post-test counseling, to assure health services are being accessed, to contact partners, or to investigate partners that endanger the public health. The information linking HIV-infected persons and their partners generally must be destroyed within 3 months (WAC 246-100-072).

## CHAPTER I:

# EXAM QUESTIONS

Use the exam answer sheet to answer the following questions (continue to next slide).

There is **NOT** more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.



# EXAM QUESTION

The CDC estimates that there are only \_\_\_ transmissions per year to every 100 people living with HIV in the United States:

- a. 24
- b. 80
- c. 40
- d. 4



# EXAM QUESTION

Which cells attack HIV in the blood stream?

- a) F9 cell
- b) B cell
- c) T4 cell
- d) T8 cell





# EXAM QUESTION

HIV is the virus that causes AIDS.

T) TRUE

F) FALSE





# EXAM QUESTION

When a person is in the clinical latency they may appear completely healthy, but can still infect other people.

T) TRUE

F) FALSE



# EXAM QUESTION

AIDS cases were first recognized in Washington State in:

- a. 1943
- b. 1981
- c. 1991
- d. 2001



# EXAM QUESTION

According to Washington State records, from 1996-2013, \_\_\_\_\_ people had been diagnosed with HIV:

- a. More than 19,000
- b. More than 20,000
- c. More than 40,000
- d. None of the above





# EXAM QUESTION

Laboratories are required to report findings of HIV to the Washington Department of Health within \_\_\_\_:

- a. They are not required to report HIV findings to the State, only King County
- b. 1 Working Days
- c. 2 Working Days
- d. 3 Working Days



# EXAM QUESTION

According to WA State records, which gender group has the most reported cases of HIV from 2014-2018 (Hint: use the graph on page 26 of this guide):

- a. Transgender Males
- b. Females
- c. Transgender Females
- d. Males



# EXAM QUESTION

According to a 2018 report released by the CDC, \_\_\_\_\_ million people are estimated to be living with HIV infection:

- a. 1.1 million
- b. 4 million
- c. 120,546
- d. 1.9 million





# EXAM QUESTION

HIV cases are reportable to the US Department of Health.

T) TRUE

F) FALSE



# EXAM QUESTION

How many strains of HIV have been identified?

- a. 1
- b. 3
- c. 0
- d. 2

## CHAPTER II:

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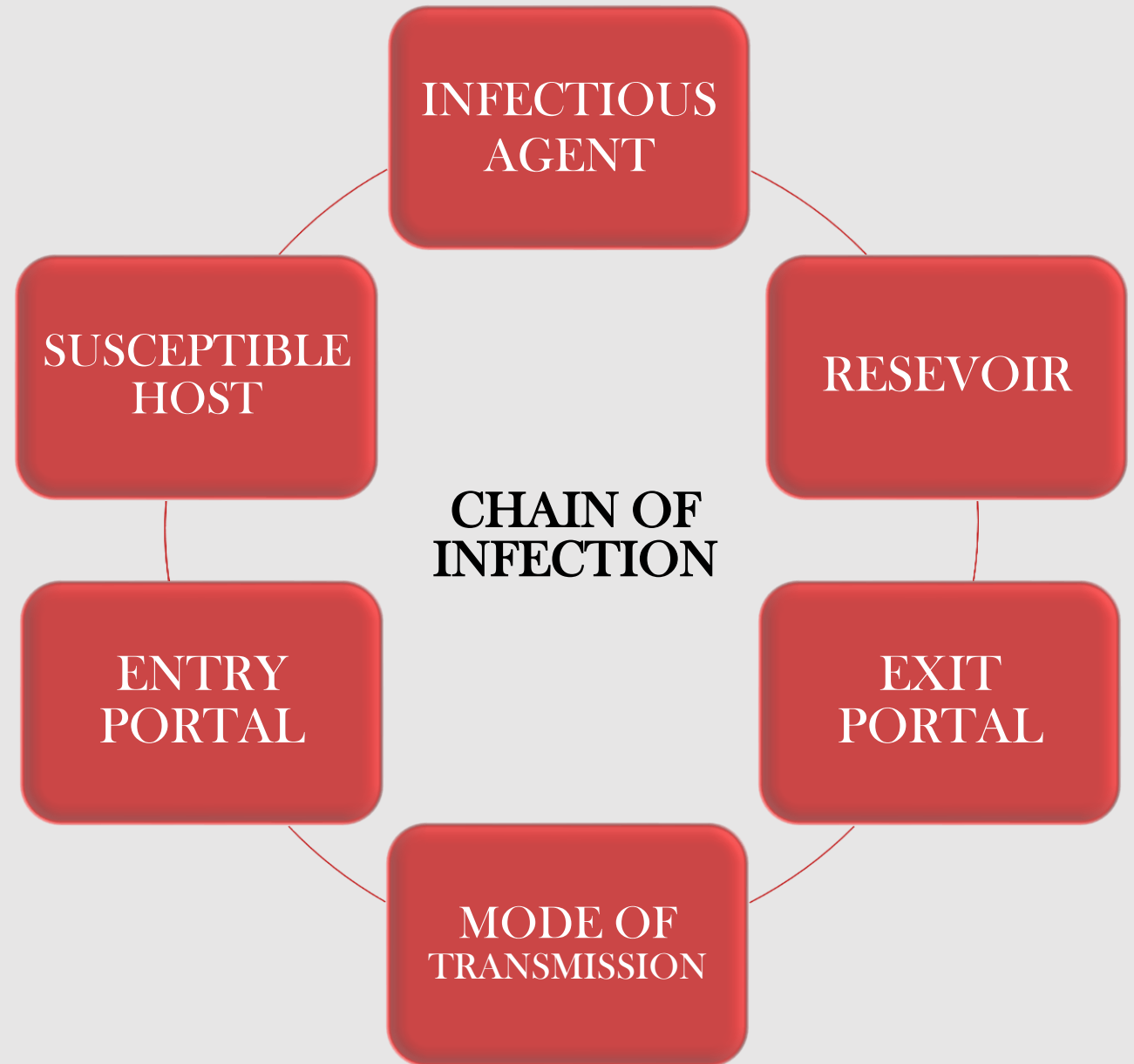
# TRANSMISSION & INFECTION CONTROL

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# INFECTION WITH HIV

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, four conditions must occur:

- 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 blood stream, mucous membranes or broken skin of a potential host (i.e., getting into another person's body)

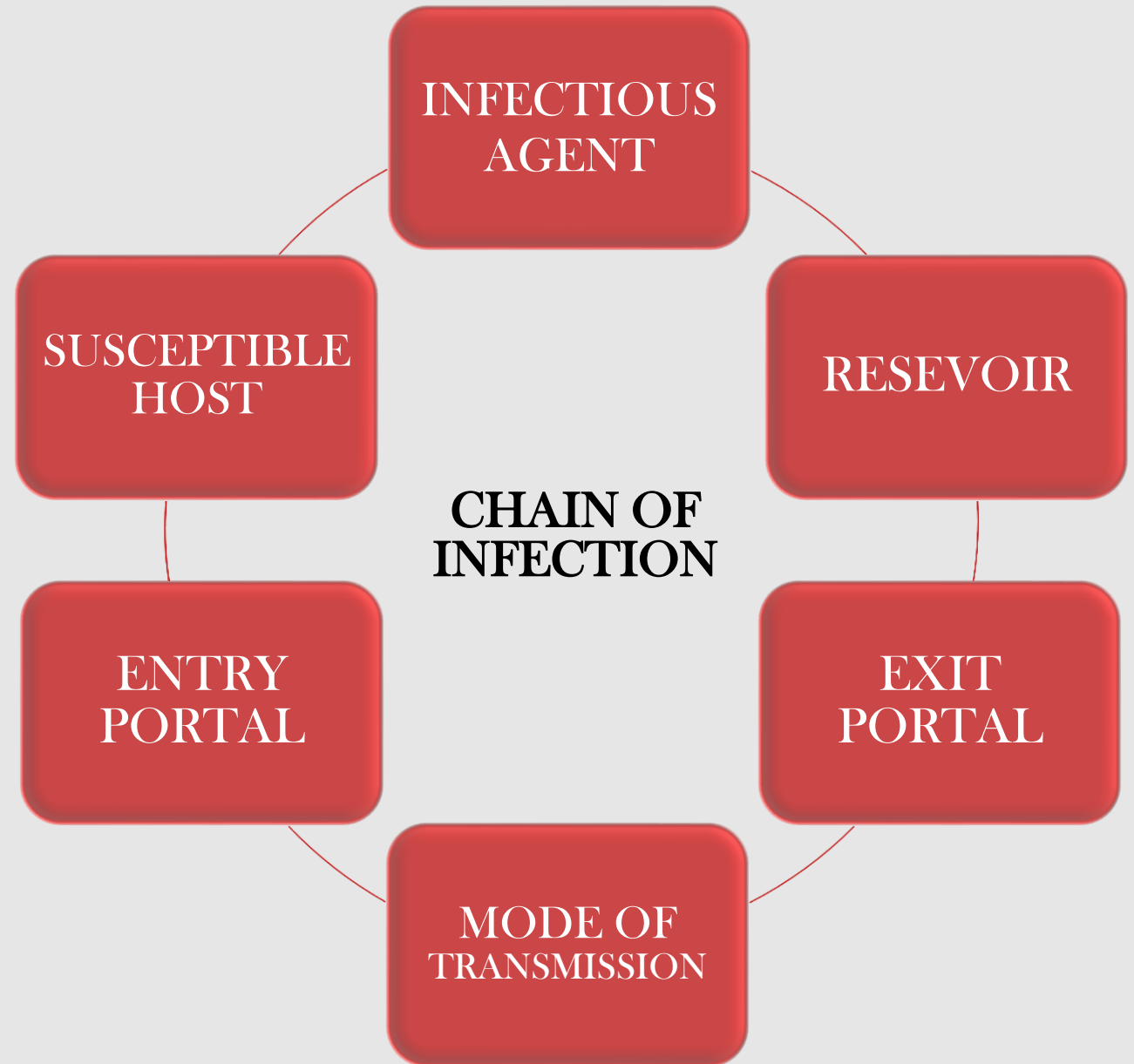




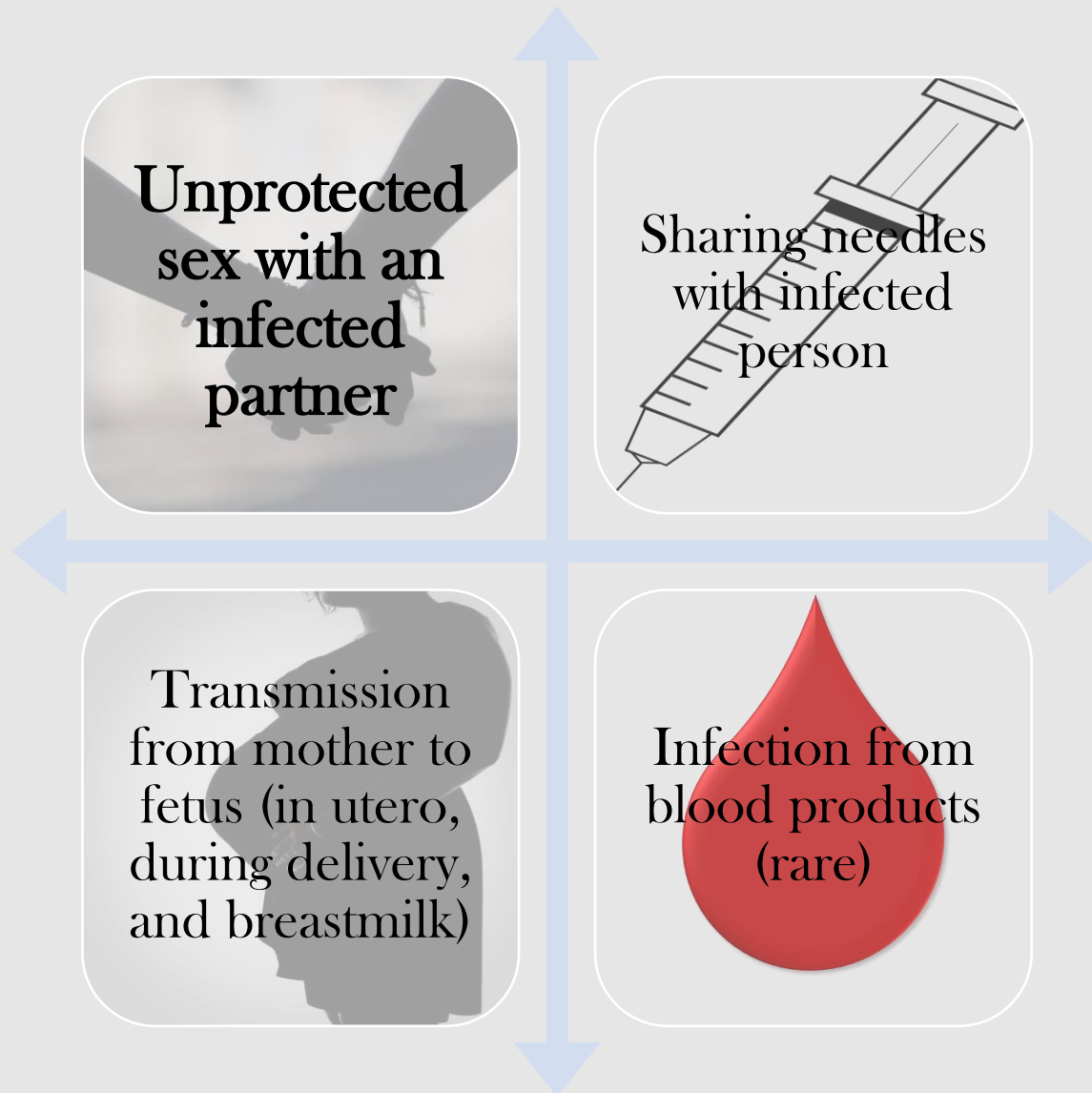
# INFECTION WITH HIV

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

Studies have also found that having a low viral load greatly decreases the risk of transmission of HIV through sexual contact; however, having a low viral load does not guarantee that HIV will not be transmitted. Even when the viral load in the blood stream is undetectable, HIV can still exist in semen, vaginal and rectal fluids, breast milk and other parts of the body.



# MOST COMMON METHODS OF TRANSMISSION OF HIV ARE:



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.



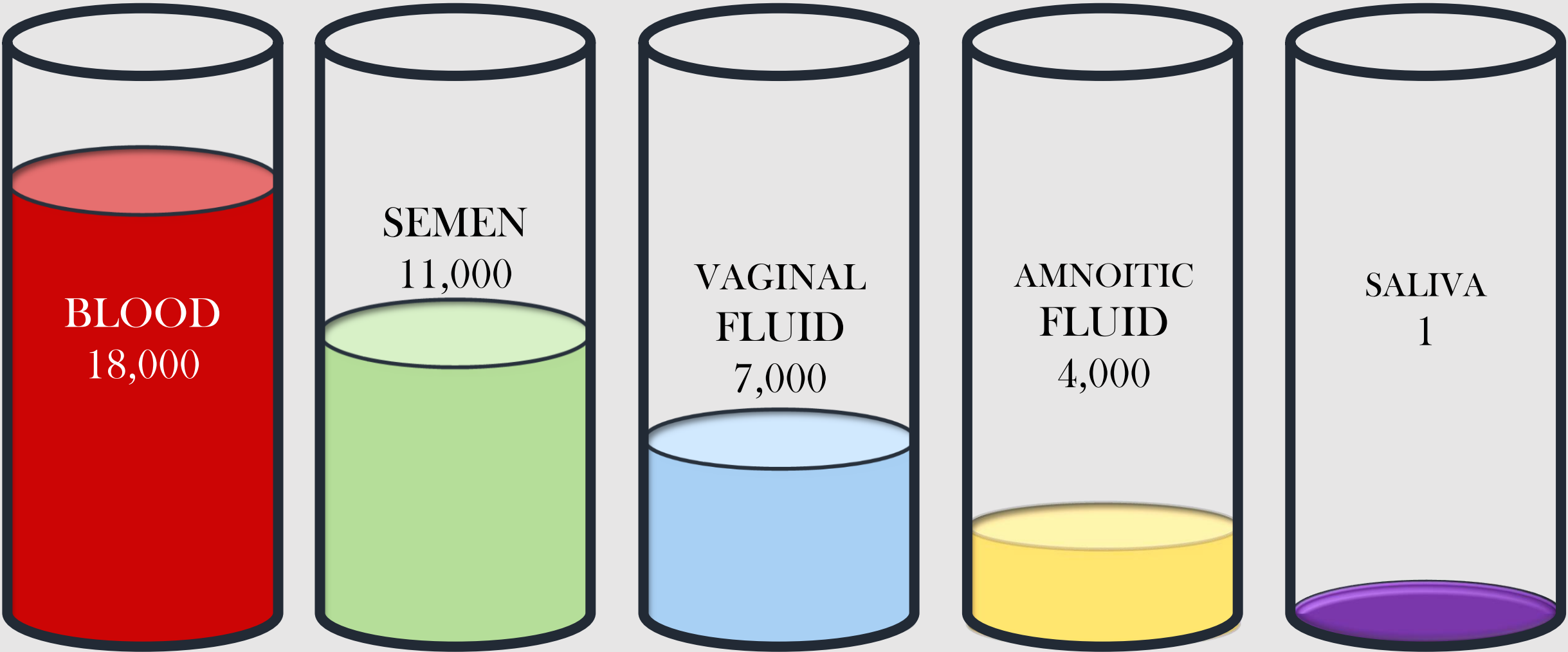
# HIV INFECTIONS

## SUFFICIENT DOSE

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

People may become infected with HIV if they engage in specific risk behaviors or if they are exposed through needle stick 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.

# HIV IN BODY FLUIDS



Average number of HIV particles in 1 milliliter of these body fluids

# HIV INFECTIONS

## 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 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.

# HIV INFECTIONS

## HIV TRANSMISSION

People may become infected with HIV if they engage in specific risk behaviors or if they are exposed through needle stick 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.

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 needle stick injuries, or infected body fluid coming into contact with the broken skin or mucous membranes of another person (as with healthcare workers)

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.

# HIV INFECTIONS

## HIV TRANSMISSION REQUIREMENTS

The transmission of HIV depends upon the **availability** of the infectious agent (HIV) in sufficient quantity and the **viability** of the infectious agent (how strong it is). It also depends upon the **virulence** of the infectious agent (how infectious it is) and the ability of the infectious agent to reach the bloodstream, mucous membranes, or broken skin of a potential host.

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.

# HIV INFECTIONS

## 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.



# HIV INFECTIONS

## 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).

# TRANSMISSION HIV/AIDS

TRANSMISSION FROM ONE HIV EXPOSURE	
Exposure	HIV Infection Rate
Contaminated blood transfusion (prior to 1986)	95%
One intravenous syringe or needle exposure	0.67%
One percutaneous exposure (e.g. a needle stick)	0.40%
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%
Source: Washington State HIV KNOW Manual; December 2014	

*A 1% risk means 1 chance in 100 for infection to occur. A .10% risk means 1 chance in 1,000.*

## HIV VS HEPATITIS VIABILITY

HIV is a virus that quickly becomes inactive when exposed to air. Hepatitis B (HBV) and C (HCV) are both "stronger" viruses that can remain infectious for a longer period of time outside the body. When these viruses are outside the human body, much depends on environmental factors (heat, cold, exposure to oxygen, etc.). HBV and HCV will be discussed later in this manual.

All used syringes, needles, blood or body fluid spills should be considered potentially infectious, and should be treated using standard precautions, also commonly known as universal precautions.

## BEHAVIORS THAT INCREASE THE RISK OF HIV TRANSMISSION

**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. Sharing sex toys can also transmit HIV.

**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 partner ("bottom") is considered to be at more risk of getting HIV (if the virus is present.) Risks may 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.

## BEHAVIORS THAT INCREASE THE RISK OF HIV TRANSMISSION

**SHARING NEEDLES & DRUG INJECTION EQUIPMENT**—Sharing injection needles, syringes, etc. with an HIV-infected person can put HIV directly into the user's bloodstream and is the behavior which most efficiently transmits HIV, HBV and HCV.

**“INDIRECT SHARING”** -Indirect sharing occurs when drug injectors share injection paraphernalia and/or divide a shared or jointly purchased drug while preparing and injecting it. The paraphernalia that carries the potential for transmission are the syringe, needle, "cooker", cotton, and/or rinse water. Sharing these items (sometimes called "works") may transmit HIV or other bacteria and viruses. Examples of indirect sharing:

- Squirting the drug back (from a used syringe) into the drug cooker and/or someone else's syringe
- Sharing a common filter and/or rinse water

# HIV

## & PREGNANCY

An HIV-infected woman may transmit the virus to her baby during pregnancy, during the birth process, and/or following pregnancy by breastfeeding. Again, 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. Today there are other antiretroviral drugs that can protect babies from becoming infected with HIV. These drugs nearly eliminate the chance of mother to child transmission when they are used correctly.

HIV is transmitted from an HIV-infected woman to her baby in about 25% of pregnancies if there is no intervention with antiretroviral medications. The perinatal transmission rate has dropped dramatically in the U.S. due to the widespread use of antiviral medication by HIV-infected pregnant women. When a woman's health care is monitored closely and she receives antiretroviral therapies during pregnancy the risk of HIV transmission to the newborn drops below 2 percent.



# HIV

## & PREGNANCY

In some pregnancies, caesarian 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 a case-by-case basis by a medical provider with experience in treating HIV+ pregnant women.

Washington state law requires pregnant women to be counseled regarding risks around HIV and offered voluntary HIV testing as part of their prenatal medical care.

### **LIFELONG INFECTION**

HIV infection is lifelong. Once a person becomes infected with HIV, their blood, semen, vaginal secretions and/or breast milk will always be potentially infectious.

### **TRANSMISSION OF MULTI-DRUG RESISTANT FORMS OF HIV**

There is evidence of transmission of multi-drug resistant forms of HIV. People who have been infected with HIV and have incorrectly used antiretroviral medicines may transmit forms of HIV that are resistant to some of these drugs. When a person is exposed to a resistant form of HIV it reduces the treatments that will be available to them if they become infected with HIV.

# FACTORS AFFECTING TRANSMISSION

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## HIV & OTHER SEXUALLY TRANSMITTED INFECTIONS

The presence of other sexually transmitted infections (STIs) increases the risk for HIV transmission, because the breaks in skin and mucous membranes that occur as a result of STIs offer an easy route for HIV to enter the body of an uninfected person, and because people with HIV who also have an STI have a higher concentration of HIV virus in the parts of their bodies affected by the STI.

# FACTORS AFFECTING TRANSMISSION

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## HIV & OTHER SEXUALLY TRANSMITTED INFECTIONS

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## PRESENCE OF OTHER STIs

The infected person's immune system may be less able to suppress or combat HIV infection. Sores or lesions from STIs break down the protective surface of the skin or mucous membrane, which makes the infected person more vulnerable to other infections.

# FACTORS AFFECTING TRANSMISSION

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The presence of infection with other STIs increases the risk of HIV transmission because:

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

# FACTORS AFFECTING TRANSMISSION

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## MULTIPLE PARTNERS

Having "multiple partners" for drug injection and/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 one year. However, someone who has only one partner is still be 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-injected "street drugs," can also put a person at risk for getting HIV. These substances can impair judgment and increase the chance that a person will take risks (having unprotected sex, sharing needles) or may place the person in unsafe situations. Additionally, some substances have physiological and biological effects on the body, including masking of pain and the creation of sores on the mouth and genitals, which can create additional "openings" for HIV and other sexually transmitted diseases.



# FACTORS AFFECTING TRANSMISSION

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## GENDER & EQUALITY ISSUES

Lack of power in a relationship can affect a person's ability to insist on sexual protection, such as the use of condoms. Power differentials may arise from differences in age, wealth and gender, such as being a transgendered person negotiating sexual relationships within a societal context of discrimination and prejudice. Women may also be subject to power differentials. Women are socially and economically dependent upon men in many countries. They may feel unable to ask their partner to use condoms or to leave a relationship that puts them at risk.

Domestic violence is another determinant of power relationships in sexual relationships. In the United States women experience domestic violence or sexual violence, but this can also be a factor in relationships between people of all genders. Victims of domestic violence are often unable to insist on safer sex practices or take other actions that may be needed to maintain health.

# FACTORS AFFECTING TRANSMISSION

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## CASUAL CONTACT

HIV is not transmitted through the air. Sneezing, breathing and coughing do not transmit HIV. Touching, hugging and shaking hands do not transmit HIV. HIV transmission is not possible from food in a restaurant that is 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. Items that may be contaminated with blood, should not be shared in any setting.

## CHILDREN

There have been no cases of HIV transmission by children playing with, eating with, sleeping with, kissing, or hugging other children.

# FACTORS AFFECTING TRANSMISSION

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## UNUSUAL CASES OF HIV TRANSMISSION

To date, there have been less than a dozen known cases of HIV transmission that have occurred in household settings in the U.S. and other countries. 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, the 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 wounds and cuts and not sharing personal hygiene items would have prevented these cases of infection.

There have been isolated cases of transmission from health care workers to patients. At least one of these cases occurred prior to the implementation of strict equipment disinfection. Others occurred when appropriate infection control measures were not followed by healthcare workers and facilities.

# FACTORS AFFECTING TRANSMISSION

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## 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 disinfecting with antibiotic skin ointment.

## WORKPLACE SITUATIONS

Workplace exposures occur through accidental needle stick injury or potentially through a splash with potentially infectious blood or blood-contaminated material.



# REDUCING RISK

Methods for reducing the risk of sexual and drug-related transmission of HIV include:

SEXUAL ABSTINENCE

MONOGAMOUS RELATIONSHIPS

LIMITING PARTNERS

SAFER SEXUAL PRACTICES



# REDUCING RISK

**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, where the penis does not enter the mouth, vagina or anus, and no penetrative sex toys are 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 may still be a risk factor for the transmission of other sexually transmitted diseases.

**MONOGAMOUS RELATIONSHIPS**—Monogamous long-term relationships (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 STIs, and neither has other sexual or injection equipment-sharing contacts, then neither partner is at risk of exposure to HIV or other STIs. In order for monogamy to protect against HIV and STIs both partners must be free of disease and both partners must remain monogamous.





# REDUCING RISK

**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. Having less partners reduces but does not eliminate the chances of exposure to HIV.

**SAFER SEXUAL PRACTICES**—Latex condoms, when used correctly and consistently during sexual intercourse, (anal, vaginal and oral) are highly effective in preventing the transmission of HIV.

Only water-based lubricants should be used to prevent tearing of latex condoms. Oil-based lubricants like petroleum jelly or cooking oils should not be used because the oil in these products breaks down the condom. Other safer sexual measures include:

## Polyurethane condoms

*Male* - These 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 or insertive* - The female/insertive condom fits inside the vagina or anus. It is made of polyurethane, which blocks sperm and viruses (like HIV). These condoms may be inserted several hours before intercourse.

# PrEP

## **PRE-EXPOSURE PROPHYLAXIS (Prep)—*What is PrEP?***

Pre-Exposure Prophylaxis or PrEP is a way for HIV negative people to prevent getting infected with HIV by taking a pill every day. The pill contains two medicines that are also used to treat HIV. If a person is taking PrEP and is exposed to HIV through sex or injection drug use, the medicines can work to keep the virus from taking hold and infecting the body. Coupled with other prevention methods like condoms, PrEP offers protection against HIV if taken properly. PrEP can only be prescribed by a health care provider and must be taken as directed to work. When taken as directed PrEP can lower the risk of getting HIV infection up to 92%.

# PrEP

*Who Can Take PrEP?* The CDC recommends PrEP be considered for people who are HIV negative and at high risk for HIV infection. This includes anyone who:

- Is in an ongoing relationship with an HIV-infected partner
- Is not in a mutually monogamous relationship with a partner who recently tested HIV-negative and is a:
  - Gay or bisexual man who has had sex without a condom or been diagnosed with a sexually transmitted infection with the past six months
  - Heterosexual man or woman who does not regularly use condoms when having sex with partners known to be at risk for HIV (e.g. injecting drug users, or bisexual male partners of unknown HIV status)
- Has, within the past six months, injected illicit drugs shared equipment or been in a treatment program for injection drug use.

# LIVING WITH HIV

**TREATMENT WITH HIV MEDICATIONS**—People who are infected with HIV can reduce their chance of transmitting the virus to others by receiving appropriate medical treatment which includes properly using antiviral medications. People living with HIV who consistently take antiviral medications as directed by a healthcare provider are likely to be *virally suppressed*. This means that lab tests show no, or very small amounts, of virus in their blood. The greatly reduced presence of HIV in bodily fluids that can transmit HIV means that these fluids become much less infectious. Consistent and correct use of antiviral medications can reduce the chance that a person with HIV will infect another by more than 90%.

# LIVING WITH HIV

**TWO INFECTED PEOPLE WITH HIV PROTECTION**—Some people think it's safe for HIV-infected people to have unprotected sex with each other. 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 if the partners transmit different strains. Other STIs are transmitted through unprotected sex. Any additional viral or bacterial infection stresses the immune system and should be avoided.

# LIVING WITH HIV

**AVOIDANCE OF INJECTING DRUG USE**—If abstaining from using injecting drugs is not possible, using a clean needle each time not sharing injection equipment reduces the risk of HIV transmission. This includes people who use needles to inject insulin, vitamins, steroids or prescription or non-prescription drugs. Persons who use injection drugs may be helped to stop or reduce their use of these drugs if they receive substance abuse treatment.



# LIVING WITH HIV

**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 sharing needles and becoming infected with HIV or hepatitis. Syringe exchanges are also referral sources for drug treatment. Participants may be able to access drug treatment through the intervention of the syringe exchange staff.

Public support for syringe exchange has grown in recent years. Some local health departments in Washington State, operate or support syringe exchanges in their communities. For more information, contact your local health department/district's HIV/AIDS Program.

# BLOODBORNE PATHOGENS

## OCCUPATIONAL EXPOSURE TO BLOODBORNE PATHOGENS

Certain requirements are mandated by Washington Administrative Code (WAC) 296-823, Occupational Exposure to Blood-borne Pathogens. They are enforced by the Department of Labor and Industries (L&I) Division of Occupational Safety and Health (DOSH). Please check with your organization to make sure that it complies 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 federal Occupational Safety and Health Administration's compliance directive on occupational exposure to blood-borne pathogens, CPL 2-2.69, may be referenced for additional direction. For more information or assistance, contact an 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 1-800-4-BE-SAFE. For Internet access, go to [www.lni.wa.gov](http://www.lni.wa.gov).

# BLOODBORNE PATHOGENS

**BLOODBORNE PATHOGENS**—While HBV and HIV are specifically identified in the standard, "Blood-borne Pathogens" regulations, they include any human pathogens present in human blood or other potentially infectious materials (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, HCV infection is the most common chronic blood-borne infection in the United States. HCV is a viral infection of the liver transmitted primarily by exposure to blood.

# BLOODBORNE PATHOGENS

**BLOODBORNE & 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 and Universal 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, and 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, or HCV and is not considered to be either OPIM or regulated waste. However, plumbers working in health care facilities or who are exposed to sewage originating directly from health care facilities carry a theoretical risk of occupational exposure to blood-borne 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 blood-borne pathogens. Wastewater contains many other health hazards and workers should use appropriate personal protective equipment and maintain personal hygiene standards when working.

# BLOODBORNE PATHOGENS

**BLOODBORNE PATHOGENS TRAINING**—All new employees or employees being transferred into jobs involving tasks or activities with potential exposure to blood/OPIM must receive training in accordance with WAC 296-823-120 prior to assignment to tasks where occupational exposure may occur.

Training must include information on the hazards associated with blood/OPIM, 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.

# BLOODBORNE PATHOGENS

**HEPATITIS B VACCINATION**—All employees with occupational exposure to blood or OPIM 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).



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**INFECTION CONTROL SYSTEMS**—"Universal precautions," is a system designed to prevent transmission of blood-borne pathogens in health care and other settings. Under universal precautions, blood/OPIM of all patients should always be considered potentially infectious for HIV and other pathogens.

"Standard Precautions" is a newer system that considers all body fluids, except sweat, should be considered to be potentially infectious.

Universal and Standard Precautions involve the use of protective barriers, defined below in the "personal protective equipment" section, to reduce the risk of exposure of the employee's skin or mucous membranes to OPIM. It is also recommended that all health care workers take precautions to prevent injuries caused by needles, scalpels, and other sharp instruments or devices. Both Universal and Standard Precautions apply to blood and OPIM listed above in the "Blood and Other Potentially Infectious Materials (OPIM)" section.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

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

Traditionally, latex gloves have been advised to use when dealing with blood or OPIM unless an employee is 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 in these cases. 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 more likely to be present, 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.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

**SAFER MEDICAL DEVICES**—Safer medical devices and work practices should be used in preference to personal protective equipment to minimize or eliminate employee exposure.

The number of safer medical devices continues to grow. Employers must include employees in ongoing evaluation of safer medical devices and implement these devices when feasible. Evaluation and implementation of these devices must be documented in the Exposure Control Plan. Safer medical device lists can be accessed through web sites 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:

<http://www.healthsystem.virginia.edu/pub/epinet/home.html>

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

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

- After removal of gloves and/or other protective equipment.
- Immediately after hand contact with blood or other infectious materials.
- Upon leaving the work area.
- It is also recommended that hand hygiene be performed before and after patient contact and after using restroom facilities.

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# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

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 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).
- Use the paper towel to open the door when leaving the room.

It is advisable to keep fingernails short, and to wear a minimum of jewelry. More information on hand hygiene can be found in the CDC Guideline for Hand Hygiene in Healthcare Settings, 2002.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL



**HOUSEKEEPING**—Work areas must 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, environmental and working surfaces must be properly cleaned and disinfected after contact with blood or OPIM.

Contaminated or possibly 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.

[http://www.epa.gov/oppad001/list\\_a\\_sterilizer.pdf](http://www.epa.gov/oppad001/list_a_sterilizer.pdf)

[http://www.epa.gov/oppad001/list\\_b\\_tuberculocide.pdf](http://www.epa.gov/oppad001/list_b_tuberculocide.pdf)

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

**SPECIMEN HANDLING**—Specimens of blood or OPIM must be placed in a closeable, labeled or color-coded leak proof container prior to being stored or transported.

**LAUNDRY**—Laundry that is or may be soiled with blood or OPIM, and/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 the Healthcare Facilities, 2003.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

**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 require by a medical procedure. The intact phlebotomy needle/holder must be placed directly into an appropriate sharps container.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

**PERSONAL ACTIVITIES**—Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas that carry occupational exposure.

**FOOD & DRINK**— Food and drink must not be stored in refrigerators, freezers or cabinets where blood or OPIM are stored, or in other areas where OPIM is present.

**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 United States 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.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

**HIV/HBV RESEARCH LABORATORIES & PRODUCTION FACILITIES**—Additional requirements for HIV/HBV research laboratories and production facilities can be found in WAC 296-823- 180.

# UNIVERSAL PRECAUTIONS & INFECTION CONTROL

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

## MANAGEMENT OF OCCUPATIONAL EXPOSURE TO HIV/HBV/HCV & OTHER BLOODBORNE PATHOGENS

**OCCUPATIONAL EXPOSURE**—An occupational exposure is defined as a percutaneous injury (e.g., a needlestick or cut with a sharp object) or contact of mucous membrane or non-intact skin (e.g., exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other potentially infectious materials.

**WHAT ARE THE RISKS FROM AN OCCUPATIONAL EXPOSURE?** 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.



# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**RISK OF HIV TRANSMISSION**—The risk of HIV infection to a health care worker through a needlestick is less than 1 percent. 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. As of 2010, the CDC reports 57 documented cases and 143 possible cases of occupational exposure to HIV since reporting started in 1985. No confirmed cases of occupational HIV transmission to health care workers have been reported since 1999.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**RISK OF HEPATITIS B & C TRANSMISSION**—Healthcare personnel who have received hepatitis B vaccine and developed immunity to the virus are at virtually no risk for infection. For a susceptible person, the risk from a single needlestick or cut exposure to HBV-infected blood ranges from 6-30% and depends of the hepatitis B antigen (HBeAg) status of the source individual. Hepatitis B surface antigen (HBsAg) positive individuals who are HBeAG positive have more virus in their blood and are more likely to transmit HBV than those who are ABeAG negative. While there is a risk for HBV infection from exposures of mucous membranes or noncontact skin, there is no known risk for HBV infection from exposure to intact skin. Less than 400 healthcare workers are infected with HBV per year, according to CDC.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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. Familiarize yourself with existing protocols and the location of emergency eyewash or showers and other stations in your facility.

**MUCOUS MEMBRANE EXPOSURE—**If the exposure is to the eyes, nose or mouth, flush thoroughly with water, saline or sterile irrigants.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**SHARP 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 blood-borne 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 health care professional.

*Note: 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 blood-borne pathogens.*

**EXPOSURE TO URINE VOMIT OR FECES**—Exposure to urine, feces, vomit or sputum is not considered a potential blood-borne pathogens exposure unless the fluid is visibly contaminated with blood. Follow your employer's procedures for cleaning these fluids.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 and 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.

*Note: HIV and hepatitis infection are notifiable conditions under WAC 246-101.*

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**POST-EXPOSURE PROPHYLAXIS (PEP)**-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. 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 blood-borne diseases, like HBV or HCV.

HBV 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 antiviral are not currently FDA- approved for prophylaxis.



# MANAGEMENT OF OCCUPATIONAL EXPOSURE

Post-exposure prophylaxis can only be obtained from a licensed healthcare provider. Your facility may have recommendations and a process 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 blood-borne 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 medications continued for 28 days.

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.

Washington state workers have a right to file a worker's compensation claim for exposure to blood-borne pathogens. Industrial insurance covers the cost of post-exposure prophylaxis and follow-up for the injured worker.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**HIV/HBV/HCV TESTING POST-EXPOSURE**—All occupational exposures should be evaluated by a health care professional. Evaluation should include follow-up counseling, post-exposure testing, and medical evaluation regardless of whether or not PEP is indicated. Antibody testing for HIV, HBV and HCV should be conducted for longer than six 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 (e.g., 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 (e.g., 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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 person" when a law enforcement officer, fire fighter, health care provider or health care facility staff, and certain other professions experience an occupational exposure.

If you work in one of the occupations covered by RCW 70.24.340 and 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 the health officer will issue a health order for HIV testing of the source individual, s/he will first make the determination of 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 health care 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 seven days of the occurrence.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

Source testing does not eliminate the need for baseline testing of the exposed individual for HIV, HBV, HCV and liver enzymes. Provision of PEP is not contingent upon the results of a source's test because PEP should be started as soon as possible following exposure, while the source person's test results may not be available for days or weeks following the exposure.

PEP for occupational exposure is standard, and its effectiveness has been documented. PEP for sexual exposure (assault or consenting) or for needle-sharing 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 has operated a PEP clinic for non-occupational exposure since 1997. For more information, call (415) 487-5538 or (415) 514-4PEP after hours.

Because PEP should be started within 48 hours of exposure, a local emergency room often serves as the source for PEP. If the emergency room physician or your doctor has questions about PEP, he or she can call PEPLine, the University of California at San Francisco's hotline for clinicians- 1-888-HIV-4911. This is not a hotline for answering basic questions about HIV.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**NON-OCCUPATIONAL EXPOSURE TO HIV**—PEP should never be used for primary prevention of HIV. PEP can also be used to treat people who have been exposed to HIV during a single event unrelated to work such as sexual assault. Advice for counseling and PEP related to sexual assault is found in the Testing and Counseling section.

## **BLOODBORNE PATHOGEN | SANITARY | FOOD PREPARATION PROCEDURES FOR HOMES & HOME-LIKE SETTINGS—PROTECTING YOURSELF & OTHERS**

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 on carpeting, vinyl flooring, clothing, on 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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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, etc.

Never rub the eyes, mouth or face while wearing gloves.

Latex gloves should never be washed and reused.



# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 ON SKIN**—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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**CLEANING BODILY FLUID SPILLS ON VINYL FLOORING**—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 pre-treated 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 (e.g., household bleach usually 5.25%–6.15% sodium hypochlorite 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 BODILY 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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**CLEANING CLOTHING OR OTHER 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 strong 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. Place the plastic bag used to transport the soiled clothing into another plastic bag, being careful not to touch the surface of the bag that was exposed to the clothing. Dispose of the bag as described in the previous paragraph.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 & 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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 70-90% ethyl alcohol for 30 minutes, and 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 eight months, wild animals, pets without current immunizations, and pets with illnesses of unknown origin.

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 immunocompromised.

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 if people living with HIV are likely to be exposed to the possible sources of disease causing agents. Follow all pet care with thorough hand-washing.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

Some of these diseases may be passed to an immunocompromised person by an animal licking their 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, vomit, etc. 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 immuno-compromised 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 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.



# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**KITCHEN SAFETY & PROPER FOOD PREPARATION SKILLS**—HIV does not live long outside the body and cannot be acquired by touching surfaces unless they are contaminated with blood or other hazardous materials as explained in previous sections. Kitchen hygiene for persons with HIV disease are the same as for healthy individuals, but people with HIV are more susceptible to unsterilized or spoiled food products.

- Wash hands thoroughly before preparing food.
- Use care when tasting food. Use a clean spoon to taste food. 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 wood cutting boards if possible.
- Kitchen garbage should be contained in a leak-proof, washable receptacle that is lined with a plastic bag. Seal the garbage liner bags and remove the garbage frequently.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**SAFE & 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 needle sticks 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.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**FOUND SYRINGES IN PARKS & OTHER PUBLIC LOCATIONS**—Used syringes that are tossed aside in parks, along roadsides, in laundromats, etc., 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, presence of blood and the type of injury (scratch versus puncture.) The risk of HIV infection to a health care worker from a needlestick containing HIV-positive blood is about 1 in 300, according to CDC data. The amount of time an improperly disposed of syringe is in the environment is usually not known, so the risk of infection cannot be quantified. In some communities facilities for safe disposal of used syringes and exchange for new ones are available through health departments or other agencies. The purpose of these programs is to reduce public exposure to contaminated syringes.

Anyone with an accidental needlestick requires an assessment by a medical professional. The medical professional should make certain that the injured person had been vaccinated against Hepatitis B and tetanus; s/he may also recommend testing for HIV, HCV, and HBV.

If a found syringe is handled, but no needle stick occurred, testing for HIV is not necessary. Handling a syringe is not a risk for HIV transmission.

# MANAGEMENT OF OCCUPATIONAL EXPOSURE

**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 one-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 be placed out of the reach of children.
- Call your local health department to determine what disposal sites are available to you.

# HIV TESTING

**HIV TESTING OVERVIEW**—The Centers for Disease Control and Prevention (CDC) recommends screening all people aged 13 to 64 for HIV as part of routine preventive healthcare. More frequent testing may be recommended for those with a higher risk of acquiring infection. When deciding to test, it is important to determine the person's last possible exposure. A negative result is possible if a recently infected person tests within the window period – the time from infection to when a test is able to detect the presence of the virus. The window period is dependent on the individual's immune response and the type of test used with the blood, oral fluid or urine specimen.



## CHAPTER II:

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# EXAM QUESTIONS

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Use the exam answer sheet to answer the following questions (continue to next slide).

There is NOT more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.





# EXAM QUESTION

Precautionary safer sex practices can reduce the spread of HIV include using:

- a. Natural-membrane condoms
- b. Universal precautions
- c. Barriers such as dental dams during oral sex
- d. Shared sex toys



# EXAM QUESTION

HIV transmission through blood transfusions greatly decreased after 1986 due to mandatory testing of all blood.

T) TRUE

F) FALSE





# EXAM QUESTION

When an HIV infected woman takes antiretroviral drugs during pregnancy she can reduce the risk of transmission to:

- a. There is no reduction
- b. 90%
- c. Below 2%
- d. Above 4%





# EXAM QUESTION

When should healthcare practitioners wear gloves?

- a. Never, all health centers are clean and sterile
- b. When touching mucous membranes of a patient
- c. When working at a computer
- d. When they arrive to work



# EXAM QUESTION

Which bodily fluid has been proven to transmit HIV?

- a. Saliva
- b. Urine
- c. Breast milk
- d. Sweat





# EXAM QUESTION

An Exposure Control Plan requires employers to:

- a. Decrease the risk of exposure to infectious diseases to zero
- b. Identify individuals who have been exposed and report to the CDC
- c. Fit all employees with full-body protective gear who are in potential hazardous conditions
- d. Establish a procedure for evaluating the circumstances surrounding exposure incidents.





# EXAM QUESTION

Companies are NOT required to provide bloodborne pathogens training to employees at risk of occupational exposure.

T) TRUE

F) FALSE



# EXAM QUESTION

A person who has unprotected sex with multiple partners is at a greater risk for exposure to HIV/AIDS. According to the CDC “multiple partners” is defined as:

- a. More than 100 partners within one’s lifetime
- b. Six or more partners in a year
- c. An average of one partner per month
- d. More than one partner a year





# EXAM QUESTION

All employees with risk of occupational exposure must be offered hepatitis B vaccination after receiving training and within 10 days of assignment.

T) TRUE  
F) FALSE



# EXAM QUESTION

Post-exposure prophylaxis (PEP) for a needle stick injury should begin within:

- a. 1-2 months after exposure
- b. 7 days after exposure
- c. 72-hours after exposure
- d. 48-hours after exposure





# EXAM QUESTION

Where should needles & syringes be discarded?

- a. Any garbage can
- b. Take all sharps to the emergency room
- c. In a biohazard bag
- d. In a proper sharps container



# EXAM QUESTION

When disposing of contaminated laundry it is appropriate to place the article in a biohazard bag or double-bag the article and label it for biohazard disposal.

T) TRUE

F) FALSE





# EXAM QUESTION

What is the first *immediate* action if a healthcare professional should be exposed to blood of a patient?

- a. Follow the hospital post-exposure control plan
- b. Wash the affected area with soap and water
- c. Take a disability leave until infection has been ruled out
- d. Remove and properly dispose of exposed clothing



# EXAM QUESTION

If both partners are HIV-positive it is NOT necessary to use condoms or other preventative strategies.

T) TRUE

F) FALSE





# EXAM QUESTION

In order for infectious agents to be transmitted a Chain of Infection must occur. Which is NOT part of the chain of infection?

- a. Infection Gateway
- b. Susceptible Host
- c. Entry Portal
- d. Infection Agent

## CHAPTER III:

# TESTING & COUNSELLING

# TYPES OF TESTING

**ANTIBODY TESTS**—Antibodies are produced by the immune system to fight infection. The immune system usually takes 2 to 8 weeks to produce antibodies against HIV. Current antibody tests may identify infection as early as 21 days, but not all testing providers use the most current testing technology. Antibody tests can be used as an initial screening for HIV or as supplemental tests to assist in making a diagnosis.

Antibody screening tests (immunoassays) are the most commonly used HIV tests. Immunoassays (IA) conducted at the point of care are capable of providing preliminary rapid results in 20 minutes or less. Recently developed laboratory-based enzyme immunoassays (EIA) or chemiluminescent immunoassays (CIA) can identify infection as early as 3 weeks after infection. Screening immunoassays have been designed to detect HIV-1 and/or HIV-2 antibodies in blood, oral fluid and urine specimens. Reactive/positive screening test results are considered preliminary.. Supplemental testing is required to confirm the infection.



# TYPES OF TESTING

**Blood-based screening tests:** This type of test detects antibodies in whole blood, plasma and/or serum. Most point of care rapid tests can detect antibodies in whole blood collected via finger stick or venipuncture. If a point of care test is unavailable, plasma or serum specimens may be collected at the test site and submitted to a lab for processing. Blood-based screening tests are used in public health clinics, medical offices and community outreach settings.

**Oral fluid:** This test detects HIV antibodies in fluid in the mouth called oral mucosal transudate. The oral specimen rapid test kit uses a special swab to collect the fluid around the gums of the mouth. If a point of care test is not available, an oral fluid collection device may be sent to a licensed lab for processing. Public health clinics and community outreach agencies may offer HIV testing using oral fluid specimens.

**Urine:** Only one FDA approved enzyme immunoassay (EIA) is available on the market to detect HIV antibodies in urine (Maxim HIV-1 Urine EIA manufactured by Maxim Biomedical, Inc.). The availability of the urine HIV test within physician offices in Washington State is limited.



# TYPES OF TESTING

Supplemental antibody tests: Positive/reactive screening tests have been historically confirmed by laboratory-based antibody tests such as the Western blot (WB) or immunofluorescence assays (IFA). The HIV-1 Western blot and IFA are no longer part of the recommended algorithm for testing serum or plasma specimens. Both tests should be replaced by newer technology capable of confirming early infections. It is recommended to use a combination antigen / antibody immunoassay (see below) capable of identifying infection earlier as the initial screening test for HIV. A supplemental antibody test such as the Multispot HIV-1/HIV-2 (Bio-Rad Laboratories) capable of differentiating HIV-1 antibodies from HIV-2 antibodies is recommended to confirm an HIV diagnosis. Negative or indeterminate results on the differentiation test may require supplemental viral RNA testing (see below).

# TYPES OF TESTING

## COMBINATION ANTIGEN (AG) / ANTIBODY (AB) TESTS

Recently developed “4th generation” immunoassays are capable of detecting antibodies against the Human Immunodeficiency Virus and parts of the virus itself (antigen). Combination tests are capable of identifying HIV infections earlier than tests that detect only antibodies as described above. Viral antigens such as the viral capsid (core) protein p24 may be detectable 2 weeks after infection. However, the p24 protein may be undetectable after the body begins to produce antibodies to the virus. Therefore, combination tests capable of detecting both virus antigens and antibodies to HIV were developed. Combination antigen and antibody tests require a blood sample (serum, plasma, or whole blood) to be collected.

**NUCLEIC ACID TESTS**—Nucleic acid tests detect the genetic material of the virus. Ribonucleic acid (RNA) tests are capable of identifying HIV in the bloodstream around 10 days after infection. FDA approved RNA tests must be performed by licensed laboratories. A blood (plasma) specimen is required to perform nucleic acid testing.

# HOW & WHERE TO GET TESTED

**WHO SHOULD BE TESTED?** The CDC recommends at least one HIV test for everyone between the ages of 13 and 64. Anyone who has placed themselves at risk through unprotected anal, vaginal or oral sex, or shared needles, and anyone who has had an occupational exposure may benefit from more frequent HIV testing. When people have partners with these risk factors, they (along with their partners) should consider testing for HIV. For occupational exposure, refer to your employer protocol.

**WHERE TO TEST FOR HIV?** People may get an HIV test at some public health departments, through their medical provider, family planning or sexually transmitted disease clinics, and in some cases at community sites such as syringe exchanges or nonprofit HIV prevention agencies. Two thirds of new HIV infections reported in Washington are diagnosed by healthcare providers. People can also purchase at home HIV testing kits. For more extensive information on at home HIV testing kits please refer to at HIV testing section.

# HOW & WHERE TO GET TESTED

**CONFIDENTIAL TESTING**—With confidential HIV testing, the client gives their legal name, and the information about their testing is maintained in medical records. Results and testing information are not released to others except when medically necessary or under special circumstances such as when they sign a release for the results to be given to another person or agency that will offer them medical or social support services. Confidential HIV testing allows people diagnosed with HIV to be efficiently linked to HIV medical care, which leads to better health for them and reduces the chance that they will transmit HIV to others.

**ANONYMOUS TESTING**—HIV is a reportable condition. Confidential HIV results are reported to local public health officials. An anonymous HIV antibody test means that the client doesn't give a name and the person who orders or performs the test does not maintain a record of the name of the person they are testing. Washington law assigns responsibility to local Health Officers for determining how much confidential testing should be available within their jurisdictions. Anonymous testing may delay or prevent efficient linkage to medical care for people diagnosed with HIV. For this reason, anonymous HIV testing is not recommended for most people who need an HIV test.

# HOW & WHERE TO GET TESTED

**INFORMED CONSENT REQUIRED**—HIV testing can only be done with the person's consent. Consent may be contained within a comprehensive consent for medical treatment or be a separate from medical treatment if the test is conducted in a non-medical setting. Persons seeking an HIV test must be informed that they will be tested for HIV and given a chance to ask questions about the test. Consent can be verbal or written, but must be specific to HIV and must be documented by the organization providing the test.

There are some rare exceptions where a person can be tested without their consent (including source testing relating to occupation exposures and legally-mandated situations specified in Washington State law).



# HOW & WHERE TO GET TESTED

## **TESTING INFORMATION & RISK ASSESSMENT REQUIRED—**

Except for the exceptions listed above, all people tested for HIV should be assessed for their risk of infection and, unless previously tested and declining information, they should be provided with appropriate information about the test including, but not limited to:

- The benefits of learning their HIV status and the potential dangers of the disease;
- How HIV is transmitted and way in which it can be prevented;
- Meaning of HIV test results and the importance of obtaining the results; and
- As appropriate, the availability of anonymous testing and the differences between anonymous and confidential testing.

# HIV ANTIBODY TEST RESULTS

**THE “WINDOW PERIOD”** –HIV antibody testing has a “window period”. The window period is the time between infection with the virus and when the HIV-infected person develops enough antibodies to be detected by an HIV test. Until the infected person’s immune system makes enough antibodies to be detected, the test will be negative even though the person is infected with HIV. If a test is done to detect the RNA of HIV virus present in the body there is also a window period, but it is much shorter than for an antibody test.

Some infected people are able to produce antibodies as early as two weeks after infection. Most will develop enough antibodies to be detected by 12 weeks after infection.

Unfortunately, there is no way to know how long each infected person will take to develop antibodies. However, virtually everyone who is infected will produce enough antibodies for detection by 12 weeks (three months). Therefore, to be sure people should test three months after the last potential HIV exposure.

In newly infected people the HIV virus multiplies rapidly. Prior to receiving treatment with antiviral drugs, the large amount of virus in their blood makes them highly infectious. During the window period it is possible for an infected person to test negative (before they develop antibodies) but still be able to infect another person. Persons who engage in behaviors that place them at risk for HIV should be encouraged to adopt risk reduction practices even if their HIV test was negative, and should be advised to obtain an HIV test at least twice annually if they continue with HIV risk behaviors.

# HIV ANTIBODY TEST RESULTS

**NEGATIVE RESULTS**—If the test result is negative, it means one of two things:

1. Either the person does not have an HIV infection, or
2. The person became infected recently and has not produced enough antibodies to be detected by the test.

If a person is concerned about a recent risk incident, they should test three weeks to three months from the date of their last possible exposure. Some persons could obtain a test that detects HIV directly in their blood sooner than three weeks if they are at very high risk, such as unprotected sex or needle sharing with a person known to be infected with HIV. Identification of the most appropriate testing approach will be determined by the HIV test provider in consultation with the person seeking the test. If a particular testing modality is not available from a provider, but is indicated, a referral will be made to another provider who can provide that type of test. A negative test result does not mean a person is immune to HIV. If risky behavior continues, infection may occur.

# HIV ANTIBODY TEST RESULTS

**POSITIVE RESULTS**—A positive confirmatory test indicates the presence of HIV antibodies or HIV RNA:

- This person is infected with HIV;
- They can spread the virus to others through unsafe sexual practices, sharing contaminated injection equipment and/or breastfeeding; and
- The person is infected for life
- The person should immediately be assisted to obtain HIV medical care and treatment.

# HIV ANTIBODY TEST RESULTS

**INDETERMINATE RESULTS**—Occasionally, a confirmatory HIV test result will come back with an "indeterminate" or "inconclusive" test result. If a person has recently engaged in behaviors that put them at risk for getting HIV, it could mean that they are newly- infected with HIV and are developing antibodies. This is called “sero-converting.”

If seroconversion is suspected, RNA testing can determine if the HIV virus is present. If RNA testing is not available, a second specimen should be gathered and tested with a different antibody test. If sero-converting, this second test might give a positive result.

Indeterminate results are not always indicative of sero-conversion. These results can also be caused by cross reaction with other proteins from several sources including pregnancy, other autoimmune diseases, and recent influenza vaccinations.



# HIV ANTIBODY TEST RESULTS

For low risk people when sero-conversion is not suspected, re-testing should be conducted at one month and at three months from the last possible exposure to verify that they are not infected. Non-infection is indicated if the subsequent tests continue to be indeterminate (without additional HIV antibody protein bands) or are negative.

Indeterminate results for low risk clients are rare. It is possible for some uninfected people to always test indeterminate (due to the cross reaction from protein something other than HIV). Other uninfected people who first test indeterminate may clear their bodies of those other proteins that are causing the cross-reaction and in subsequent tests, test negative. Still others go back and forth between indeterminate and negative. Counseling messages should explain that only HIV positive tests indicate infection with HIV; and, that some people test indeterminate because of other (non-HIV) proteins in their bodies that register on the test. No further testing for other diseases is indicated.

# HIV COUNSELING & TESTING

**HIV COUNSELING WITH HIV TESTING**—Washington State law (WAC 246-100-207 and -209) requires that HIV test counseling be offered to all clients who are at risk for HIV or who request counseling. At the same time, the law states that persons who refuse counseling should not be denied an HIV test (clients can refuse counseling); and, that the person conducting the HIV test does not have to provide the counseling themselves, but can refer the client to another person or agency for counseling if the client requests pre-test counseling (the person testing the client does not have to provide the counseling themselves).

The person who provides HIV test counseling to clients who request it should direct the counseling towards increasing the client's understanding of their own risk of acquiring or transmitting HIV; motivating the client to reduce their risk; and assisting the client to build skills to reduce their risk.

# HIV COUNSELING & TESTING

**PRE-TESTING COUNSELING**—Pre-test counseling is not required unless requested by a person seeking an HIV test after being informed it is available. Pre-test counseling should:

- Assist the individual to set realistic behavior-change goals and establish strategies for reducing their risk of acquiring or transmitting HIV;
- Provide appropriate risk reduction skills-building opportunities to support their behavior change goals

Provide or refer for other appropriate prevention, support or medical services.

# HIV

## COUNSELING & TESTING

**POST-TEST COUNSELING**—Everyone who tests negative should be offered an individual counseling session at the time they receive their test results. This counseling can be provided by the person providing the results or can be a referral for the client to receive these services at another agency. This post-test counseling should accomplish the same goals as pre-test counseling: assist the client to set behavior change goals, establish strategies to achieve these goals provide skills-building to support achieving these goals and provide appropriate referrals.

For those clients who test positive, counseling can't just be offered, it must be provided or referred and (in addition to what is provided to negative clients) must also include:

- If confidentially tested, the information that HIV is a reportable condition;
- Either the provision of partner notification support or referral to public health for these services;
- Appropriate referrals for alcohol and drug and mental health counseling, medical evaluation, TB screening, and HIV prevention and other support services.
- Persons newly diagnosed with HIV should be assisted to obtain appropriate medical care.

# HIV COUNSELING & TESTING

**TESTING CONFIDENTIALITY**—Information about a person’s HIV test and results is confidential information and must not be shared with others. People who perform HIV counseling and testing in public health departments or health districts sign strict confidentiality agreements. These agreements regulate the personal information that may be revealed in counseling and testing sessions, and test results. They are more restrictive than other rules that govern personal medical records. Washington law provides severe penalties for anyone who discloses confidential HIV information. Even accidental information breaches must be immediately reported to and investigated by the Washington State Department of Health.

HIV test results are kept in locked files and/or secure databases, with only authorized staff members having access to them.



# HIV TESTING

**HIV TESTING & PREGNANCY**—Health care providers caring for pregnant clients are required by Washington State law to ensure HIV counseling and testing for each pregnant woman who is seeking prenatal care (RCW 70.24.095 and WAC 246-100-208).

All pregnant women are to be offered an HIV test and should be tested unless they refuse the HIV test. Those who refuse HIV testing must sign a form saying that they “opt-out” of the HIV test.

HIV-infected women can reduce the chance of transmitting the virus to their children if they take antiretroviral drugs during pregnancy and delivery. See the Transmission and Infection Control section of this guide for more information.

# HIV TESTING

**HIV TESTING: SEXUAL ASSAULT**—Sexual assault is prevalent in the U.S. More than 300,000 women and almost 93,000 men are raped annually, according to the National Violence Against Women Survey (NVAWS). Based on existing crime report data, an estimated 40% of female rape survivors are under age 18; and most sexual assault survivors know their assailant. Men are also survivors of sexual assault; however they are much less likely to report being assaulted so data and reporting are not as accurate. Apart from the emotional and physical trauma that accompanies sexual assault, many survivors are concerned about HIV.

**SEXUAL ASSAULT & HIV RISKS**—According to CDC, the overall odds of HIV infection from a sexual assault in the U.S. are 2 in 1,000. This is a low risk. Unfortunately, the fear of HIV, even though it is a low risk, adds an additional emotional burden to many people who have been a survivor of sexual assault.

# HIV TESTING

**HIV TESTING**—HIV is a low risk from sexual assault. However; because so many assault survivors are concerned about HIV, it may help the healing process to have an HIV test. Almost all HIV tests will be negative and be a relief to the survivor. For those very few that are positive, the individual will need that information both for personal health reasons and for any legal proceedings that result from the assault.

**ASSAULT WINDOW PERIOD**—The window period for HIV antibody testing must be taken in to account when testing after an assault. Any test shortly after the assault will only show the baseline status of the survivor. If the survivor is negative, this first early test will provide proof that the survivor was negative at the time of the assault. This can be helpful in the rare cases that a survivor is infected with HIV through an assault as it can be used as evidence in criminal cases.

In order to verify that the survivor was not infected by the assault it will be necessary to test again after the window period. If this test is negative it will indicate that the individual was uninfected at the time of the assault. If positive, this test will indicate that the survivor was infected by the assault (if no other behaviors the survivor engaged in could have infected the survivor).

# HIV TESTING

**SEXUAL ASSAULT & PEP**—A survivor might opt to take to PEP (Post-Exposure Prophylaxis) in order to prevent HIV infection. To be effective PEP must begin within 72 hours of exposure, before the virus has time to make too many copies of itself in the body. PEP consists of 2-3 antiretroviral medications and should be taken for 28 days. PEP is safe but may cause side effects like nausea in some people. These side effects can be treated and are not life threatening. PEP is not 100% effective-- it does not guarantee that someone exposed to HIV will not become infected with HIV.

# HIV TESTING

**OTHER TESTING**—When counseling survivors about the risk of HIV from assault, remember that victims should consider the risks of contracting other STIs and if the victim is female, the possibility of becoming pregnant.

The risk of STIs and pregnancy are much higher than HIV for most victims of sexual assault. Victims of sexual assault should get testing for STIs, and if female, she should take emergency contraception.

Most experts recommend that a sexual assault survivor go directly to the nearest hospital emergency room, without changing their clothing, bathing or showering first. Trained staff in the emergency room will counsel the survivor, and may also offer testing or referral for HIV, STIs, and pregnancy. It is common practice for the emergency room physician to take DNA samples of blood or semen from the victim's body, which can be used as evidence against the attacker. Some emergency departments may refer sexual assault survivors to the local health jurisdiction for HIV testing.

Many people feel that the emergency room setting is an unpleasant setting to question a sexual assault survivor regarding her/his sexual risks, etc. However, testing shortly after a sexual assault will provide baseline information on her/his status for the various infections. This information can be useful for the survivor and health care provider, especially for follow-up care and treatment. Additionally, baseline information can be used for legal and criminal action against the assailant. All testing to be used for baseline information and legal action should be done confidentially.



# HIV TESTING

**ASSAILANT TESTING**—In Washington State, only the victims of convicted sexual offenders may learn the attacker's HIV status. The victim needs to consider whether to start post-exposure prophylaxis (PEP) independently of the source's test result, because the time between the attack and the conviction will always be longer than the 72 hours in which PEP should be started.

# PARTNER NOTIFICATION

## PARTNER NOTIFICATION

Partner notification is a voluntary service provided to HIV-positive people and their sex and/or injection equipment-sharing partners. This service is provided using a variety of strategies to maintain the confidentiality of both the HIV-infected client and the partners.

HIV-infected people are counseled about the importance of their partners being notified of exposure to HIV and offered an HIV test. Clients can notify their partners themselves or have public health staff notify their partners. When public health staff notify partners, they notify them of their exposure, provide counseling and information, and offer HIV testing but they do not identify the original client who tested positive.

Partner notification is a critical tool to inform partners who of their exposure so that they can test for HIV. If uninfected, they can take steps to ensure that they do not become infected. If infected, they can take steps to take care of their health and ensure that they do not pass the virus on to others. Partner notification services also provide an opportunity to ensure that HIV infected people can be assisted to obtain appropriate medical care.

# REPORTING REQUIREMENTS

## REPORTING REQUIREMENTS

As previously discussed: HIV and AIDS are both reportable conditions in Washington State. See the Legal section of this curriculum for more information on this topic.

## CHAPTER III:

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# EXAM QUESTIONS

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Use the exam answer sheet to answer the following questions (continue to next slide).

There is **NOT** more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.





# EXAM QUESTION

A person tested negative (before they developed antibodies) for HIV; they are not able to infect others during the window period.

T) TRUE  
F) FALSE





# EXAM QUESTION

Washington State law requires that pregnant women be offered counseling regarding the risks of HIV and offered voluntary HIV testing.

T) TRUE

F) FALSE



# EXAM QUESTION

Which statement is *true* regarding partner notification in the case of unknown HIV infection?

- a. The federal government requires partner notification
- b. Notification is voluntary and done confidentially
- c. Washington State requires notification of positive rapid test results
- d. Only spouses must be notified in Washington State





# EXAM QUESTION

HIV-infected persons who are being treated with antiretroviral drugs are:

- a. No longer infectious to others
- b. Unlikely to harbor other STD infections
- c. Still infectious to others
- d. Unlikely to develop drug resistance

## CHAPTER IV:

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# CLINICAL MANIFESTATIONS & TREATMENT

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# NATURAL HISTORY OF HIV INFECTION

A person with untreated HIV infection will experience several stages of infection. These include: viral transmission, primary HIV infection, seroconversion, asymptomatic HIV infection, symptomatic HIV infection, and AIDS. These stages are sometimes called the "natural history" of disease progression. The progression of HIV infection can be slowed dramatically in developed countries where people have access to HIV medications and high quality medical care. In countries where there is limited access to these expensive medications, or when people do not become aware of their HIV infection until very late, the disease progresses.



# NATURAL HISTORY OF HIV INFECTION

**VIRAL TRANSMISSION**—This is the initial infection with a person with HIV passing the infection to another person as a result of the risk factors described in earlier sections of this manual. When a person is newly infected with HIV, they will probably have some virus circulating in their bloodstream, and may become infectious to others within five days, before the onset of any symptoms. They will remain infectious for the rest of their lives but will be much less so if they receive medical treatment for HIV.

# NATURAL HISTORY OF HIV INFECTION

**PRIMARY HIV INFECTION**—During the first few weeks of HIV infection, an infected person has a very high amount of virus in their bloodstream. The high viral load means the individual can more easily pass the virus to others. Unfortunately, during primary infection, many people are unaware that they are infected, so they may not stop or reduce risky behaviors during this time.

The most common symptoms noticed by persons newly infected with HIV are fever, swollen glands in the neck, armpits and/or groin, rash, fatigue and a sore throat. This is sometimes called "seroconversion syndrome" or "seroconversion sickness." These symptoms are also common with many other types of infections, so unless the infected person or their health care provider suspects that the symptoms are associated with recent HIV risk behavior, a correct diagnosis may not be made at this stage. The initial symptoms go away in a few days or weeks, but the individual remains infectious to others.

Healthcare providers should consider the diagnosis of HIV primary infection if an individual has behaviors which put him or her at risk for HIV and is presenting with the above symptoms. If individuals experience these symptoms after having unprotected sex or sharing needles, they should seek medical care and tell their provider why they are concerned about HIV infection. An HIV antibody test should be done but it will only reflect the person's prior HIV status. To detect acute HIV infection, an HIV RNA test that tests directly for the HIV virus should be done to confirm or rule out recent HIV infection.

The most recent guidelines from the Department of Health and Human Services (2014) indicate that antiviral therapy is recommended for persons at all stages of HIV infection, including primary infection.

# NATURAL HISTORY OF HIV INFECTION

**SEROCONVERSION**—Seroconversion is the time period that it takes from infection to the production of sufficient antibodies, to be detected by an HIV test. This may vary from person to person.

As discussed in the Testing and Counseling section of this manual, HIV antibodies are detectable sometime within the first nine days to six months of infection, depending on the HIV test used, and will remain detectable for life.

**ASYMPTOMATIC HIV INFECTION**—During this time period an HIV-infected person has no noticeable signs or symptoms. The person may look and feel healthy, but can still pass the virus to others. It is not unusual for an HIV- infected person to live 10 years or longer without any outward physical signs of progression to AIDS. Meanwhile, the person's blood and other systems are affected by HIV. This would be reflected in laboratory tests. Unless a person in this stage has been tested for HIV, they will not be aware that they are infected.

# NATURAL HISTORY OF HIV INFECTION

**SYMPTOMATIC HIV INFECTION**—During the symptomatic stage of HIV infection, a person begins to have noticeable physical signs that are related to HIV infection. Although there are no symptoms that are specific **ONLY** to HIV infection, some common symptoms are:

- a persistent low grade fever
- pronounced weight loss that is not due to dieting
- persistent headaches
- diarrhea that lasts more than one month
- difficulty recovering from colds and the flu
- becoming sicker than they normally would with other illnesses
- women may have recurrent vaginal yeast infections
- thrush (a yeast infection) coating the mouth or tongue

Anyone who has symptoms like these should seek medical advice, including screening for HIV. The only way to know for sure if you are infected with HIV is to take an HIV antibody test.

# AIDS

An **AIDS** diagnosis can only be made by a licensed healthcare provider. The diagnosis is based on the result of **HIV**-specific blood tests, and/or the person's physical condition. Another term for **AIDS** is “Stage Three **HIV** Infection”.

There is a group of "AIDS-defining illnesses," white blood cell counts and other conditions that are specifically linked to making an **AIDS** diagnosis. Once a person is diagnosed with **AIDS**, even if they later feel better, they do not "go backwards" in the classification system for **HIV** infection. This means that they are always considered to have **AIDS**.

People who have an **AIDS** diagnosis may often appear to a casual observer to be quite healthy, but continue to be infectious and can pass the virus to others if they do not receive appropriate treatment.

Over time, people with **AIDS** have a reduced white blood cell count and poorer health. They may also have a significant amount of virus present in their blood, which is measured as viral load.



# AIDS

**COFACTORS**—A cofactor is a separate condition that can change or "speed up" the course of disease. There are several cofactors that can increase the rate of progression to AIDS. They include a person's age, certain genetic factors and possibly drug use, smoking, nutrition and co-infection with HCV or another sexually transmitted disease.

**TIME FROM INFECTION TO DEATH**—If HIV infection is untreated, the average time from viral transmission to death is 10-12 years. HIV medications and treatments have significantly changed the course of HIV infection since the early days of the epidemic. With daily medication, regular laboratory monitoring, and lifestyle changes (e.g., exercise, adequate sleep, smoking cessation), HIV can be manageable as a chronic disease. People living with HIV can have healthy lives with normal or near-normal lifespans.

# AIDS

## CASE DEFINITION FOR STAGE 3 HIV (AKA AIDS)

HIV infection is classified as stage 3 (AIDS) when the immune system of a person infected with HIV becomes severely compromised (measured by CD4 cell count) and/or the person becomes ill with an opportunistic infection. In the absence of treatment, AIDS usually develops 8 to 10 years after initial HIV infection; with early HIV diagnosis and treatment, this may be delayed by many years. A stage 3 (AIDS) diagnosis is given to a person aged:

- less than 1 year of age with a CD4+ (T-cell) count <750
- 1-5 years of age with a CD4+ count <500
- 6 years through adult <200

# AIDS

## STAGE 3 (AIDS) INDICATOR CONDITIONS (ADULTS)

A positive HIV test plus one or more of the following:

- Candidiasis, of esophagus, trachea, bronchi or lungs
- Cervical cancer, invasive
- Coccidioidomycosis, extrapulmonary
- Cryptococcosis, extrapulmonary
- Cryptosporidiosis with diarrhea greater than one month
- Cytomegalovirus of any organ other than liver, spleen, or lymph nodes
- Herpes simplex with mucocutaneous ulcer lasting longer than one month or bronchitis, pneumonitis, esopagitis
- Histoplasmosis, extrapulmonary
- HIV-associated dementia: disabling cognitive and/or motor dysfunction interfering with activities of daily living
- HIV-associated wasting: involuntary weight loss >10% of baseline plus chronic diarrhea (2 loose stools/day for 30 days) or chronic weakness and documented enigmatic fever 30 days

# AIDS

## STAGE 3 (AIDS) INDICATOR CONDITIONS (ADULTS) CONT'D:

- Kaposi's sarcoma
- Lymphoma of brain
- Lymphoma, non-Hodgkins of B-cell or unknown immunologic phenotype and histology showing small, noncleaved lymphoma or immunoblastic sarcoma
- Mycobacterium avium complex or M. kansasii, disseminated
- Tuberculosis
- Nocardiosis
- Pneumocystis carinii pneumonia
- Pneumonia, recurrent-bacterial (2 episodes in 12 months)
- Progressive multifocal leukoencephalopathy
- Salmonella septicemia (non-typhoid), recurrent
- Strongyloidiasis, extraintestinal
- Toxoplasmosis of internal organs

# AIDS

## DIFFERENCES BETWEEN CLINICAL MANIFESTATIONS & OPPORTUNISTIC INFECTIONS

The "opportunistic" diseases and infections associated with HIV infection are any of the infections that are part of an AIDS- defining classification.

When a person's immune system is suppressed, they have weaker defenses against the wide variety of bacteria, viruses, fungi and other pathogens that are present almost everywhere. A "clinical manifestation" is the physical result of some type of illness or infection.

For example: the opportunistic infection cytomegalovirus can cause the clinical manifestation of blindness in people with AIDS.



# AIDS

**HIV IN THE BODY**—The original case definition of HIV infection was based on the clinical symptoms seen in men. In 1993, the CDC revised the classification system for HIV infection and expanded the case definition for AIDS to include invasive cervical cancer, obviously a condition found only in women. Since 1993, scientists have reported further differences in the way that HIV affects men, women and children.

**HOW HIV WORKS IN THE BODY**—Scientists are always learning new information about how HIV affects the body. HIV infection affects many body systems. HIV infection causes a gradual, pronounced decline in the immune system's functioning. People with HIV are at risk for a wide variety of illnesses, both common and unusual.

HIV affects:

- the kind and number of blood cells
- the amount of fat and muscle distribution in the body
- the structure and functioning of the brain
- the normal functioning of the immune system
- the body's basic metabolism

# AIDS

HIV infection can cause many painful or uncomfortable conditions, including:

- confusion or dementia
- diarrhea
- fatigue
- fever
- nausea or vomiting
- painful joints, muscles, or nerve pain
- difficulty with breathing
- urinary or fecal incontinence
- vision or hearing loss
- thrush (yeast infections in the mouth)
- chronic pneumonias, sinusitis, or bronchitis
- loss of muscle tissue and body weight

# AIDS

**HIV IN CHILDREN**—Children show significant differences in their HIV disease progression and their virologic and immunologic responses, compared to adults. Without drug treatment, children may have developmental delay, pneumocystis carinii pneumonia, failure to thrive, recurrent bacterial infections and other conditions related to HIV. The antiretroviral treatments that are available for HIV infection may not be available in pediatric formulations. The medications may have different side effects in children than they do in adults.

It is vital that women know their HIV status before or during pregnancy. Antiretroviral treatment greatly reduces the chance that their child will become infected with HIV. Prior to the development of antiretroviral therapies, most HIV-infected children usually became very sick by the age of seven. In 1994, scientists discovered that a short treatment course of antiretroviral medication for pregnant women dramatically reduced the number, and rate, of children who became infected prenatally. C-sections for delivery in certain cases may also reduce HIV transmission. As a result of prenatal screening and appropriate treatment, maternal to child HIV infections have greatly declined in the developed world. In Washington State, providers of prenatal medical care are required to offer HIV testing to their patients.

Early diagnosis of HIV infection in newborns is now possible. Antiretroviral therapy for infants is now the standard of care, and should be started as soon as the child is determined by testing to be HIV-infected. Current recommendations are to treat apparently uninfected children who are born to mothers who are HIV-positive with antiretroviral medicines for six weeks to reduce the possibility of HIV transmission.

# HIV IN WOMEN

**ACCESS TO MEDICAL CARE**—People who have HIV infection should seek out a physician who is skilled in the treatment of HIV and AIDS. This may be someone who specializes in the treatment of HIV and other infectious diseases, or a non-specialist primary health care provider with experience in treating HIV.

People in Washington State may get help with accessing an HIV healthcare provider through the assistance of medical case manager(s) in their communities. Community based AIDS service organizations can also help. Information about medical case management programs and other services available in Washington can be found at:

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HIVAIDS/HIVCareClientServices/CaseManagement>

Your local health department or health district may be able to provide information about case management programs and HIV healthcare providers in your area.

# HIV IMPACT

## THE IMPACT OF NEW DRUG THERAPIES ON HIV CLINICAL PROGRESSION

### HISTORY OF NEWER HIV DRUG THERAPIES

Before 1996, there were few medications with limited that were available to treat HIV. Researchers discovered that taking combinations of these medications with new medications that were becoming available at that time, such as protease inhibitors or non-nucleoside reverse transcriptase inhibitors, dramatically reduced the amount of HIV, in the bloodstream of a person infected with HIV. Two or three different medications were used in combination, each targeting a different part of the virus and its replication. Today many newer antiviral medications and formulations have been introduced that have simplified control of HIV infection. These drugs are highly effective, easier for people with HIV to take, and generally have less side effects.

The reduction of deaths from AIDS in the United States has been primarily attributed to the use of these drugs, which is called "highly active antiretroviral therapy" (HAART). The shorter acronym "ART" is also commonly used to denote medicines used to target HIV.



# HIV IMPACT

**IMPORTANTCE OF USING HIV DRUG THERAPIES CORRECTLY**—Highly active antiviral therapy works well for many people, keeping the amount of virus in their bodies to very low levels, but it not a "cure" for HIV. Once therapy is discontinued, viral load will increase. Even during treatment, some viral replication may occur. Early and consistent treatment with HAART greatly improves health outcomes for people living with HIV and reduces the chance that they will transmit the infection to others.

It is important for persons with HIV take their medication every day according to their physician's instructions. Following treatment recommendations and taking medications as directed is called "adherence". When people with HIV are adherent to therapy their health outcomes are greatly improved. If they are not, therapy will not be effective and viral resistance to medication will develop. If this happens, their immune symptoms will continue to be damaged and HIV-related symptoms may appear and they will need to take different medications to control their HIV infection. This replacement therapy may be less effective and more difficult to follow than their original one. People who have persistent problems with adherence are at risk of running out of effective combination drug therapy because their HIV virus has developed resistant to multiple medications.

People taking HIV medications may experience side effects, even when the therapy is effective. Not taking HIV medications as prescribed may also lead to undesirable physical symptoms. Because these vary among individuals, the best source of information about side effects is a health care provider. All medications have side effects. As HAART has become more advanced these side effects have become more manageable, and most people can tolerate these drugs very well. The benefits of HAART far outweigh the side effects that may be associated with their use.

# HIV IMPACT

**COST OF HIV TREATMENT IS HIGH**—HIV medicines may cost more \$1300 per person each month. Both private insurance programs and government programs offer coverage for HIV medical visits and antiviral medications. In some cases deductibles and co-payments make it difficult for individuals with low incomes to afford HIV treatment. Information about programs that help people with HIV afford medical care is available here:

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HIVAIDS/HIVCareClientServices>

Medical case managers and community based organizations dedicated to the fight against HIV can also help people with HIV find resources that help them meet the ongoing challenges of living with HIV.

People who live in other countries may have very limited access to HIV therapies due to the expense and lack of healthcare facilities, but there are international programs working to improve this situation. The United States is a leading contributor to these programs.

# HIV IMPACT

**ALTERNATIVE THERAPIES FOR HIV INFECTION**—People have used and relied on "alternative" (sometimes called complimentary) therapies to treat HIV infection for as long as HIV has been known. Many people use these treatments along with therapies from their medical provider. Other people choose to only use alternative therapies.

These therapies include a wide range of treatments, from vitamins, massage, herbs, naturopathic remedies, and many more. Some alternative therapies may not be harmful, but there is very little evidence that these treatments are effective. Many of these remedies haven't been studied scientifically, so they may produce adverse effects when used with HIV medications that are not yet known.

It is important for people who are taking alternative therapies to tell their medical provider. There may be drug reactions or other harmful side effects from the interactions of the "natural" medicine and antiretrovirals. For example, St. John's Wort, a widely available herbal remedy sometimes taken to overcome depression, has known adverse interactions with some HIV medications.

Other drugs, including over the counter medications, prescription medications and "street drugs," may have serious interactions with antiretroviral medications. People on HIV medications should inform their health care provider if they are using any of these drugs.

# HIV IMPACT

**WHEN WILL A VACCINE BE AVAILABLE?**—No one knows when a vaccine will be available. Prevention is still the only way to avoid HIV infection. Early diagnosis and treatment of HIV infection is also effective in preventing HIV because people receiving effective treatment are much less likely to transmit HIV to others.

**FINDING CASE MANAGEMENT**—People living with HIV often seek the assistance of an HIV case manager who can help connect them to medical care, health insurance, and community support services. Washington State has several systems in place to provide prescription and medical assistance to people living with HIV and AIDS. Contact your local health department or district to find case management in your community. You can also call the Washington State Department of Health Client Services toll-free at 1-877-376-9316 or find contact information for case management services on their webpage: <http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HIVAIDS/HIVCareClientServices/CaseManagement>.

# HIV IMPACT

## TUBERCULOSIS, OTHER SEXUALLY TRANSMITTED DISEASES & HEPATITIS B & C

Because of the interrelationships between tuberculosis (TB) sexually transmitted diseases (STI), HBV, HCV and HIV, a brief discussion of each of these is included in this curriculum.



# HIV IMPACT

**DEFINITION OF TUBERCULOSIS (TB)**—Mycobacterium tuberculosis (TB) is transmitted by airborne droplets from people with active pulmonary or laryngeal TB during coughing, sneezing, or talking. Although the TB bacteria can live anywhere in the body, infectious pulmonary or laryngeal TB poses the greatest threat to public health.

**CAUSE OF TB**—Latent infection, which is asymptomatic and not infectious, can last for a lifetime. A presumptive diagnosis of active TB is made when there are positive test results in sputum or other bodily fluids. The diagnosis is confirmed by identification of the tuberculosis bacterium in culture. This should be followed by drug sensitivity testing of the bacteria.

**EPIDEMIOLOGY OF TB**—Globally, there may be as many as two billion people (1/3 of the world's population) infected with TB, and 9 million active cases of TB each year. Tuberculosis is one of the leading killers of people who are HIV infected. Approximately 80 new cases of tuberculosis are diagnosed among Washington residents each year.

# HIV IMPACT

**TRANSMISSION & PROGRESSION**—When infectious secretions sneezed or coughed by an adult with pulmonary TB are breathed in by another person, the bacteria may enter that person’s lungs. After several weeks, the bacteria multiply and some pneumonia-like symptoms may occur. The TB bacteria are disseminated through the body by the bloodstream and lymph system.

The largest amount of bacteria goes to the lungs. In most cases, this process, called primary infection, resolves by itself and something called "delayed-type hypersensitivity" is established. This is measured with the tuberculin skin test. The incubation period for this primary infection is two to 10 weeks. In most cases, a latent state of TB develops. 90% of people with latent TB never experience subsequent disease. Other than a positive tuberculin skin test, people with latent TB infection have no clinical, radiographic (x-ray), or laboratory evidence of TB and cannot transmit TB to others.

Among the other 10% of infected individuals, the TB infection undergoes “reactivation” at some time and they develop active TB. About 5% of newly infected persons do so within the first two years after primary infection and another 5% will do so at some point later in life.

# HIV IMPACT

**SYMPTOMS OF TB**—The period from initial exposure to conversion of the tuberculin skin test is four to 12 weeks. During this period, the patient shows no symptoms. The progression to active disease and symptoms (such as cough, weight loss, and fever) usually occurs within the first two years after infection, but may occur at any time.

It is important to recognize the behavioral barriers to TB management, which include deficiencies in treatment regimens, poor client adherence to TB medications, and lack of public awareness. Primary health care providers need adequate training in screening, diagnosis, treatment, counseling, and contact tracing for TB through continuing education programs and expert consultation. Promoting patient adherence to the sometimes complicated medication schedule also requires consideration of the patient's cultural and ethnic perceptions of his/her health condition. Providing strategies and services that address the multiple health problems associated with TB (such as alcohol and drug abuse, homelessness, and mental illness) also builds trust and promotes adherence to treatment plans.

Clinical trials have shown that daily preventive therapy for 12 months reduces the risk for TB disease by more than 90% in patients with latent TB infection who complete a full course of therapy. There is evidence that six months of preventive therapy with Isoniazid may also prevent disease in about two thirds of patients who complete the regimen. Every effort should be made to ensure that patients adhere to this therapy for at least six months. Children need at least nine months of preventive therapy.

# HIV IMPACT

**TREATMENT OF TB & MULTIDRUG RESISTANT-TB**—In order to prevent drug resistance and cure TB, the CDC recommends that TB be treated with a multidrug regimen, which may last 6 to 12 months. Current recommendations can be found in the Washington State Department of Health's *TB Services Manual*

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Tuberculosis/ProviderMaterials/TBServicesManual>

**TB/HIV CO-INFECTION**—HIV/TB co-infected persons are at considerably greater risk of developing TB disease than those who only have TB. Studies suggest that the risk of developing TB disease is 7% to 10% each year for persons who are infected with both *M. tuberculosis* and HIV, whereas it is 10% over a lifetime for a person infected only with *M. tuberculosis*.

In an HIV-infected person, TB disease can develop in either of two ways. A person who already has latent TB infection can become infected with HIV, and then TB disease develops as the immune system becomes weakened. A person who has HIV infection can become infected with TB can then rapidly develop disease because their immune system is not functioning.

Pulmonary TB and extrapulmonary TB are among the conditions included in the 2014 CDC AIDS surveillance case definition. Any HIV-infected person with a diagnosis of TB disease should be reported as having TB and AIDS.

# HIV IMPACT

## FOR MORE INFORMATION ON TB CONTACT:

- The communicable disease staff in each county health department/district
- The Washington State Department of Health TB program, (360) 236-3443
- The Centers for Disease Control and Prevention Division of TB Elimination Web site: <http://www.cdc.gov/tb/>
- 

WA State Department of Health web site:

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Tuberculosis>



# OTHER STI'S & HIV

**DEFINITION OF STI**—The term STI (sexually transmitted disease) refers to more than 25 infectious organisms transmitted through sexual activity and dozens of clinical syndromes that they cause. STIs affect men and women and can be transmitted from mothers to babies during pregnancy and childbirth. They are also called sexually transmitted infections (STIs).

**BACTERIAL, VIRAL & OTHER CAUSES OF STI**—Different bacteria cause STIs such as chlamydia, gonorrhea and syphilis. Herpes, genital warts, hepatitis B and HIV have different viral causes. Scabies are caused by mites, and pubic lice cause “crabs.” Trichomoniasis is caused by tiny organisms called protozoa; “yeast” infections are caused by fungi. STIs such as pelvic inflammatory disease can have more than one cause - both gonorrhea and chlamydia can cause this condition in women. A man may have more than one cause for epididymitis, usually gonorrhea and/or chlamydia. Non gonococcal urethritis (NGU) is usually caused by bacteria.

# OTHER STI'S & HIV

**STI, NATIONALLY**—STIs are a significant health challenge facing the United States. CDC estimates that nearly 20 million new sexually transmitted infections occur every year in this country, half among young people ages 15–24. Each of these infections is a potential threat to an individual's immediate and long-term health and well-being. In addition to increasing a person's risk for HIV infection, STIs can lead to severe reproductive health complications, such as infertility and ectopic pregnancy. STDs are also a serious drain on the U.S. health care system, costing the nation almost \$16 billion in health care costs every year.

Primary and secondary cases of syphilis increased 11.1% to 15,667 cases from 2011-2012. The rate of increase was solely among men, particularly gay and bisexual men.

The Kaiser Family Foundation ([www.kff.org](http://www.kff.org)) lists estimates for incidence (new cases) and prevalence (total number of cases) of both bacterial and viral STIs in the US, noting that by age 24, at least one in three sexually active people are estimated to have contracted an STI.

# OTHER STI'S & HIV

**HIV & STIs**—The presence of infection with other STIs increases the risk of HIV transmission because:

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

# OTHER STI'S & HIV

**SYMPTOMS OF STI**—In the past there was a great emphasis on symptoms as indicators of STI infection. Research has changed this. We now know that 80% of those with chlamydia, 70% of those with herpes and a great percentage of those with other STIs have no symptoms, but can still spread the infections.

Along with prompt testing and treatment for those who do have symptoms, the emphasis in the U.S. is screening for infection based on behavioral risk. Patients cannot assume that their health care providers are performing routine STI testing. For example, women who are getting a pap test or yearly exam should not assume that they are also being tested for chlamydia or any other STI. All people should discuss their risk factors for STIs with their health care provider so that providers and patients can make the most informed decisions about STI screening, and treatment if indicated.

# OTHER STI'S & HIV

**PREVENTION OF STI**—STI infection can be prevented. Some ways to prevent STIs include:

- Abstain from sex or be in a mutually monogamous relationship with an uninfected partner.
- Many STIs have no symptoms; discuss risk factors with your partners.
- Know that birth control pills and shots do not prevent infections – you must use condoms along with other birth control methods to prevent STIs.
- Go with your sex partner(s) for tests if either of you have risk factors or observe any symptoms.
- Avoid douching.
- Learn the right way to use condoms, talk about it with your partners, and then use them correctly and consistently every time you engage in sex.
- Be sure that you all sex partners are examined and treated if an STI occurs.
- Notify your sex partners if you are diagnosed with an STI. Help may be available for this from your local public health department.



# OTHER STI'S & HIV

**STI TESTS**—Urine tests for some STIs are widely available in medical settings. Blood tests for herpes and hybrid capture tests for genital warts may also be available. Cultures, wet preps and blood draws for syphilis remain the standard testing method, however. Both men and women should disclose any history of STI to their medical provider.

**STI TREATMENT**—STIs are curable with the correct treatment. STI treatment is based on lab work and clinical diagnosis. Treatments vary with each disease or syndrome. Because of developing resistance to medications for some STIs, check the latest CDC treatment guidelines. <http://www.cdc.gov/std/treatment/2010/default.htm>

# HEPATITIS B & HIV

**WHAT IS HEPATITIS?**—Hepatitis is an inflammation of the liver that may be caused by many things, including viruses. Current viruses known to cause hepatitis are identified by the infections they cause, including Hepatitis A B, C, D, E and others.

**WHAT IS HEPATITIS B?**—Hepatitis B (HBV) is a virus that is transmitted by the blood and body fluids of an infected person.

# HEPATITIS B & HIV

**PREVENTION OF HBV**—Effective vaccines to prevent hepatitis B virus infection have been available in the United States since 1981. Ten years later, a comprehensive strategy was recommended for the elimination of HBV transmission in the United States. This strategy encompassed four components:

- Universal vaccination of infants beginning at birth;
- Prevention of perinatal HBV infection through routine screening of all pregnant women for HBV infection and the provision of immunoprophylaxis to infants born either to infected women or to women of unknown infection status;
- Routine vaccination of previously unvaccinated children and adolescents; and
- Vaccination of adults at increased risk for infection (including health-care workers, dialysis patients, household contacts and sex partners of persons with chronic HBV infection, recipients of certain blood products, persons with a recent history of having multiple sex partners concurrently, those infected with a sexually transmitted disease, men who have sex with men [MSM], and injection drug users).

# HEPATITIS B & HIV

**WHY ISN'T EVERYONE VACCINATED FOR HBV?**—HBV vaccine is relatively inexpensive for infants and children. The adult doses are more expensive (costing about \$150 per person.) This cost is the likely reason that more adults are not vaccinated against HBV.

**HBV EPIDEMIOLOGY**—CDC estimates that between 700,000 and 1.4 million persons are living with hepatitis B. Many of them do not know they are infected and may have no symptoms. In 2012 approximately 18,760 people become infected with HBV. Of these, about 2-6% of adults will become chronically infectious carriers of the virus. In 2012, 40,599 reports of chronic HBV infection were submitted to CDC by 44 states. Each year, over 11,000 people will be hospitalized and about 4,000-5,000 people will die in the U.S. from chronic liver disease or liver cancer caused by HBV.

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# HEPATITIS B & HIV

**RISK FACTORS FOR HBV INFECTION**—Unvaccinated people are at higher risk for getting HBV if they:

- share injection needles/syringes and equipment;
- have sexual intercourse with an infected person or with more than one partner;
- are a man and have sex with a man;
- work where they come in contact with blood or body fluids, such as in a health care setting, prison, or home for the developmentally disabled;
- use the personal care items (razors, toothbrushes) of an infected person;
- are on kidney dialysis;
- were born in a part of the world with a high rate of Hepatitis B (China, Southeast Asia, Africa, the Pacific Islands, the Middle East, South America and Alaska);
- Receive a tattoo or body piercing with improperly sanitized equipment.

# HEPATITIS B & HIV

**HOW HBV IS NOT TRANSMITTED**—HBV is **not** transmitted by:

- Breastfeeding
- Sneezing
- Hugging
- Coughing
- Sharing eating utensils or drinking glasses
- Food or water
- Casual contact

# HEPATITIS B & HIV

**PROGRESSION OF HBV**—The average incubation period for HBV is about 12 weeks. People are infected when they are "Hepatitis B surface antigen positive", (HbsAg) either because they are newly infected, or because they are chronic carriers. HBV causes damage to the liver and other body systems, which can range in severity from mild, to severe, to fatal. Acute Hepatitis B infection is a serious medical issue and can be life threatening.

Most people recover from initial HBV infection and do not become carriers. Carriers (about 2-6% of adults who become infected) have the virus in their body for months, years, or for life. They can infect others with HBV through their blood or contact with other body fluids.

# HEPATITIS B & HIV

**SYMPTOMS OF HBV**—People with HBV may feel fine and look healthy. Some people who are infected with HBV may display mild symptoms, which could include:

loss of appetite | fatigue | abdominal pain | jaundice (yellowing of the eyes and skin) | joint pain | malaise | dark urine | nausea or vomiting | skin rashes

Others who are infected with HBV experience more severe symptoms, and may be incapacitated for weeks or months. Long-term complications may also occur, and include:

chronic hepatitis | recurring liver disease | liver failure | cirrhosis (chronic liver damage) | liver cancer

# HEPATITIS B & HIV

**PREVENTION OF HBV**—A vaccine for HBV has been available since 1982. This vaccine is suitable for people of all ages, even infants. People who may be at risk for infection should get vaccinated.

To further reduce the risk of or prevent HBV infection, a person can:

- abstain from sexual intercourse and/or injecting drug use
- maintain a monogamous relationship with a partner who is uninfected or vaccinated against HBV
- use safer sex practices (as defined in the Transmission section)
- never share needles/syringes or other injection equipment
- never share toothbrushes, razors, nose clippers or other personal care items that may come in contact with blood
- use Universal or Standard Precautions with all blood and body fluids



# HEPATITIS B & HIV

Infants born to mothers who are **HBV** carriers have a greater than 90% reduction in their chance of becoming infected with **HBV**, if they receive an injection of hepatitis B immune globulin and hepatitis B vaccine shortly after birth, then two vaccine doses by age six months.

It is vital that the women and their medical providers are aware that the woman is a **HBV** carrier.

People with **HBV** should not donate blood, semen or body organs.

**TREATMENT OF HBV**—There are no medications available for recently acquired (acute) **HBV** infection, treatment is supportive. There are antiviral drugs available for the treatment of chronic **HBV** infection; however treatment success varies by individual. The vaccine is not used to treat **HBV** infection once a person is infected.

# HEPATITIS C & HIV

**WHAT IS HEPATITIS C?** Hepatitis C is a liver disease caused by the hepatitis C virus (HCV), which is found in the blood of persons who have this disease. Hepatitis C is the leading cause of chronic liver disease in the United States. Hepatitis C was discovered in the late 1980s.

**HCV EPIDEMIOLOGY**—Globally, 180 million people are infected with HCV. An estimated 4.1 million Americans have been infected with HCV. This means that they have a current or previous infection with the virus. About 3.2 million are chronically infected. The CDC estimates that as many as 1 million Americans were infected with HCV from blood transfusions, and that 3.75 million Americans do not know they are HCV-positive. Of these, 2.75 million people are chronically infected, and are infectious for HCV. In the U.S., about 17,000 Americans become infected with Hepatitis C and 12,000 deaths per year are attributed to HCV-associated liver disease. The number of deaths from HCV are expected to triple in the next 10-20 years. HCV is five times more common in people born between 1945 and 1965. CDC estimates that 3% of people born during these years have HCV antibodies in their blood. Because of this increased risk, CDC recommends that all persons in this age group should be screened for HCV.

An estimated 110,000 people in Washington State are infected with HCV.

# HEPATITIS C & HIV

**TRANSMISSION OF HCV**—Hepatitis C is usually spread when blood from a person infected with the Hepatitis C virus enters the body of someone who is not infected. Today, most people become infected with Hepatitis C by sharing needles or other equipment to inject drugs. Before widespread screening of the blood supply began in 1992, Hepatitis C was also spread through blood transfusions and organ transplants. Although uncommon, outbreaks of Hepatitis C have occurred from blood contamination in medical settings.

Hepatitis C can also be spread by through sex, although scientists do not know how frequently this occurs. Having a sexually transmitted disease or HIV, sex with multiple partners, or rough sex appears to increase a person's risk for Hepatitis C. There also appears to be an increased risk for sexual transmission of Hepatitis C among gay men who are HIV-positive.

There is little evidence that Hepatitis C is spread by getting tattoos in licensed, commercial facilities. Whenever tattoos or body piercings are given in informal settings or with non-sterile instruments, transmission of Hepatitis C and other infectious diseases is possible.

# HEPATITIS C & HIV

**HOW HCV IS NOT TRANSMITTED**—HCV is not transmitted by:

- Breastfeeding (unless blood is present)
- Sneezing
- Hugging
- Kissing
- Coughing
- Sharing eating utensils or drinking glasses
- Food or water
- Casual contact

# HEPATITIS C & HIV

**PROGRESSION OF HCV**—The severity of HCV differs from HIV. The CDC states that, for every 100 people who are infected with HCV:

- 15-25% will fully recover and have no liver damage;
- 75-85% will develop long-term chronic infection;
- 60-70% will develop chronic liver disease;
- 5-20% will develop cirrhosis over a period of 20-30 years
- 1-5% will die from chronic liver disease.

# HEPATITIS C & HIV

**SYMPTOMS OF HCV**—Persons with HCV may have few or no symptoms for decades. When symptoms do appear, they are a sign of advanced liver disease. Even if a person has no symptoms, the virus can still be detected in the blood.

When present, the symptoms of HCV are:

- loss of appetite
- nausea
- vomiting
- abdominal pain
- fever
- muscle and joint pain
- jaundice (yellowing of the eyes and skin)
- dark-colored urine



# HEPATITIS C & HIV

## PREVENTION OF HCV

There is no vaccine to prevent HCV infection. The following steps can protect against HCV infection:

- Follow Universal and Standard Precautions to avoid contact with blood or accidental needlesticks.
- Refrain from acquiring tattoos or skin piercings outside of a legitimate business that practices Universal Precautions.
- Refrain from non-prescription injection drug use and do not share drug equipment.
- DO not share toothbrushes, razors, nail clippers or other personal care items.
- Cover cuts or sores on the skin.
- Persons who are HCV-infected may lower the small risk of passing HCV to their sex partner by using latex condoms and practicing safer sex.
- Women who are HCV-infected and wish to have children should discuss their choices beforehand with a medical specialist.
- People with HCV should not donate blood, semen or body organs.

# HEPATITIS C & HIV

**TREATMENT OF HCV**—In 2013 the Food and Drug Administration approved two new antiviral drugs to treat chronic HCV infection. Both medications have been proven to be effective when used as a component of a combination antiretroviral regimen to treat HCV infected adults. Clinical trials have shown that these new medications achieve sustained viral response (SVR) in 80-95% of patients after 12-24 weeks of treatment.

# HEPATITIS C & HIV

**TESTING FOR HCV**—Many people who are infected with HCV are unaware of their status. People who should consider testing include:

- People born between 1945 and 1965
- Current or former injection drug users
- Persons who received blood transfusions or an organ transplant prior to 1992
- Hemophiliacs who received clotting factor concentrates produced before 1987
- Persons who received chronic hemodialysis
- Infants born to infected mothers
- Healthcare workers who have been occupationally exposed to blood or who have had accidental needlesticks
- Persons who are sex partners of people with HCV

# HEPATITIS C & HIV

Testing for HCV is available through health care providers and some community agencies such as health departments, syringe exchange services, and hepatitis support organizations. A home-based test kit is also available from pharmacies. Information about this test is available at: [HomeUseTests/ucm125785.htm](https://www.hometracks.com/HomeUseTests/ucm125785.htm)

# HEPATITIS C & HIV

**HIV/HCV CO-INFECTION**—Many people who become infected with HIV from injection drug use are already infected with HCV. Some estimate that 40% of HIV-infected people in the U.S. are also infected with HCV. People who are co-infected with both viruses and have immune system impairment, may progress faster to serious, chronic or fatal liver damage. Most new HCV infections in the U.S. are among injecting drug users. The majority of hemophiliacs who received blood products contaminated with HIV also are infected with HCV. Treating HIV in someone with HCV may be complicated, because many of the medicines that are used to treat HIV may damage the liver; however treatment for co-infection is possible in some cases with close physician supervision.

COMPARISON CHART OF HIV   HBV   HCV			
TRANSMISSION BY:	HIV	HBV	HCV
Blood	Yes	Yes	Yes
Semen	Yes	Yes	Rarely (more likely if blood present)
Vaginal Fluid	Yes	Yes	Rarely (more likely if blood present)
Breast Milk	Yes	No (but may be transmitted if blood present)	No (but may be transmitted if blood is present)
Saliva	No	No	No
Target in the Body	Immune System	Liver	Liver
Risk of infection after needle stick exposure to infected blood	0.50%	1-31%	2-3%
Vaccine Available?	No	Yes	No
Curable?	No	Yes	Yes



# HEPATITIS C & HIV

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## CHAPTER IV:

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# EXAM QUESTIONS

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Use the exam answer sheet to answer the following questions (continue to next slide).

There is **NOT** more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.



# EXAM QUESTION

Children are effected differently than adults during the HIV disease progression due to:

- a. Their strong immune systems
- b. Their bodies have no side effects from medications
- c. The lack of antiretroviral treatments available
- d. Early diagnosis rarely benefit the child





# EXAM QUESTION

Hepatitis C is a liver disease and is transmitted through blood.

T) TRUE  
F) FALSE



# EXAM QUESTION

An AIDS diagnosis can be made by ANY healthcare provider.

T) TRUE  
F) FALSE





# EXAM QUESTION

HIV vaccinations are available at your local pharmacy.

T) TRUE  
F) FALSE





# EXAM QUESTION

Some people who have been infected with certain strains of HIV may be resistant to antiretroviral therapies. This reduces the number of treatments available to those individuals.

- a. TRUE
- b. FALSE



# EXAM QUESTION

According to the CDC, approximately \_\_\_\_\_ people are living with hepatitis B.

- a. 700,000 to 1.4 million
- b. 800,000 to .8 million
- c. 400,000 to 2.1 million
- d. This figure is unknown





# EXAM QUESTIONS

Match the following viruses to one statistic:

37. HIV

38. HBV

39. HCV

- a. Virus attacks the immune system
- b. Risk of infection from needlestick exposure is 2-3%
- c. Vaccine IS available

## CHAPTER V:

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# LEGAL & ETHICAL ISSUES

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# REPORTING REQUIREMENTS

AIDS and HIV are reportable conditions in Washington State, by statute WAC 246-101.

**HIV & AIDS ARE REPORTABLE—**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.

**WHAT DOES ‘REPORTABLE’ MEAN?** In the case of HIV or AIDS, providers who diagnose a person must submit a confidential case report to the local health jurisdiction within 3 days.

**ARE HIV POSITIVE RESULTS FROM AN ANONYMOUS TEST REPORTABLE?** 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 departments.



# REPORTING REQUIREMENTS

**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 if the test result is positive, the individual testing positive will be counseled about the importance of notifying spouses and partners and will be given the choice to notify his/her spouse(s), to allow the health care provider to notify the spouse(s) or refer to the local health jurisdiction for assistance in notifying the spouse(s).



# REPORTING REQUIREMENTS

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## CONFIDENTIALITY REQUIREMENTS

All medical records are confidential and must be maintained in a manner that protects that confidentiality. There are special requirements around HIV and AIDS, found in WAC 246-101 and RCW 70.24.105.

**WHAT DOES ‘CONFIDENTIAL’ MEAN?** 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 health provider to another health care provider for related on-going medical care of the patient
- In a life or death emergency
- To a third party payer (insurance provider)
- In the case of reporting notifiable conditions to the local health jurisdiction or the Washington State Department of Health

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 state and county health officers to investigate potential breaches of confidentiality of HIV identifying information and report those to the Washington State Department of Health.

# REPORTING REQUIREMENTS

## WHY ARE THERE ADDITIONAL CONFIDENTIALITY PROTECTIONS FOR HIV, MENTAL HEALTH, SUBSTANCE ABUSE & OTHER SELECTED RECORDS?

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 & 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. RCW 49.60.174. The WLAD is enforced by the Washington State Human Rights Commission.

# REPORTING REQUIREMENTS

**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. Documenting the situation and dates may be critical when presenting the information to OCR.

WSHRC jurisdiction information can be found on its website, [www.hum.wa.gov](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.

# REPORTING REQUIREMENTS

**HOW THE LAW PROTECTS INDIVIDUALS WITH HIV INFECTION OR AIDS**—These laws make it 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, etc.)
- Health care, 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

*Note: Federal and state jurisdictions differ.*

# REPORTING REQUIREMENTS

## EMPLOYMENT LAWS ALSO PROTECT HIV INFECTED AND AIDS-DIAGNOSED PEOPLE FROM 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

*Note that 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, or Indian tribes.*



# REPORTING REQUIREMENTS

**EMPLOYERS MUST PROVIDE A DISCRIMINATION-FREE ENVIRONMENT** EMPLOYERS MUST PROVIDE A **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 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 and/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.

# REPORTING REQUIREMENTS

**REASONABLE ACCOMMODATION**—Employers are responsible for providing reasonable worksite accommodations which will enable a qualified, disabled employee or job applicant to perform the essential tasks of his/her 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 person seeking accommodation. The reasonable accommodation grant may not be exactly the same one as requested by the employee, but can be 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.

# REPORTING REQUIREMENTS

## BEHAVIORS ENDANGERING PUBLIC HEALTH

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

**AUTHORITIES & RESPONSIBILITIES OF THE HEALTH OFFICER**—The local health officer is the physician who is responsible for enforcing public health authority within a jurisdiction. Often, health officers also direct the operations of the local county's health department or health district. They may delegate their authority to employees that they direct as provided by law.

Health officers have the authority to:

- interview persons infected with an STI
- 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

# REPORTING REQUIREMENTS

Health officers can seek court enforcement of these orders. State law describes the standards that must be met before action by the health officer may take this action.

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 REQUIREMENTS

**REPORTING NON-COMPLIANCE**—By state law and rule, health care 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.

If a health care provider has knowledge that a specific patient is failing to comply with prescribed infection control measures (e.g., acquisition of a new STI, sex without disclosure of HIV status prior to sexual partners, failure to disclose HIV status to needle-sharing partners, or donating or selling HIV-infected blood, etc.) s/he should contact the local public health officer to confidentially discuss the circumstances of the case and to determine if the name of the person should be reported for further investigation.



# REPORTING REQUIREMENTS

**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.

There are also other laws and regulations concerning behaviors endangering and occupational exposures. These may be specific to professions and to the jurisdictions of public health officers. For more specific information, consult public health officials in your area or the Washington State Department of Health.

## CHAPTER V:

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# EXAM QUESTIONS

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Use the exam answer sheet to answer the following questions (continue to next slide).

There is **NOT** more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.



# EXAM QUESTION

Health officers have the authority to:

- a. Interrogate persons infected with an STI
- b. Arrest persons suspected of being infected to receive examination, testing, counseling or treatment
- c. Notify sexual or needle-sharing partners of exposure to disease
- d. Issue orders to cease and desist from specific conduct that does not endanger the public health of others





# EXAM QUESTION

What is the *first* action an employee with HIV/AIDS should take if they believe they are being discriminated in the workplace on the basis of their disease:

- a. Speak with the shop steward or union representative
- b. Document the circumstances of the discrimination
- c. Contact the Washington State Human Rights Commission
- d. File a complaint in state court within 180 days



# EXAM QUESTION

Companies that determine that an employee is HIV infected or has AIDS may legally terminate employment of the employee.

T) TRUE  
F) FALSE





# EXAM QUESTION

Persons with AIDS are protected under the Americans with Disabilities Act.

T) TRUE  
F) FALSE



# EXAM QUESTION

Which statement is *TRUE* regarding spousal notification in the case of a known HIV infection?

- a. The federal government requires spousal notification
- b. Some states have “duty to warn” laws
- c. Washington State requires notification of some tests
- d. Only spouses must be notified if living in Washington State





# EXAM QUESTION

Violation of confidentiality law is:

- a. Investigated by the Department of Homeland Security
- b. A felony that may result in prison time or large fines
- c. A misdemeanor that may result in heavy fines and/or imprisonment
- d. Not a concern with HIV because the public has a right to know who is infected

## CHAPTER VI:

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# PSYCHOSOCIAL ISSUES

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# PSYCHOSOCIAL ISSUES

Washington State has a system to link people with HIV infection and AIDS to care and support services. Medical case managers are often the primary contact people for services. 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 by people living with HIV.

To locate a case manager, go to Statewide Case Manager Directory or  
<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/HIV/AIDS/HIVCareClientServices/CaseManagement> or call the Washington State Department of Health at 1-877-376-9316.



# PERSONAL IMPACT

**DIFFICULT REALITIES**—Persons with HIV and their families and friends face some difficult realities.

As a chronic disease, HIV presents lifelong challenges, including the need to closely follow prescribed treatment and maintain adequate insurance coverage.

Men who have sex with men and injection drug users may be stigmatized and subjected to social and job-related discrimination, and this may increase with a diagnosis of HIV or AIDS.

People who are living with HIV have a responsibility to protect these partners from becoming infected. This includes disclosing their HIV status to potential sex or needle-sharing partners and practicing safer sex behaviors.

As with all chronic conditions, most people living with HIV may experience anxiety, depression or other mental health problems at some point during their lives and will need psychosocial support services.

People living with HIV have higher rates of substance abuse disorders, including alcohol and tobacco use, than the general population.

# CAREGIVER ISSUES

People with HIV infection may require assistance from a caregiver at some stage of their lives, similarly to people experiencing other chronic conditions. Caregivers should understand the risk of HIV transmission in a homecare setting. Usually these are not as great as in other health care setting, but each caregiver should know how to be prepared for a realistic level of risk. Good self-care for the caregiver is also important. Some recommendations for self-care include:

Set realistic limits in care-giving time and responsibility, and stick to those limits.

Ask questions of health care providers to help you understand what is needed in a particular setting.

If employed as a health care worker, discuss with your employer ways to perform your job in ways that reduce stress and burnout.

Remember that **UNIVERSAL** and **STANDARD PRECAUTIONS** are for the patient's health and welfare, as well as your own.

Seek support from professionals and peers as needed to maintain your effectiveness and morale as a caregiver.

# 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 differently affected by the AIDS epidemic.

# SPECIAL POPULATIONS

**MEN WHO HAVE SEX WITH MEN (MSM)**—While this is changing rapidly, American society still has issues with homosexuality. Legal recognition of the rights of gay and lesbian people is expanding, but does not guarantee acceptance by all members of society. As discussed earlier, stigma and discrimination are still factors that influence the experience of all men who have sex with men (MSM), including those living with HIV. These factors can lead to reluctance on the part of MSM to seek HIV testing and medical care. Some traditional sources of social support such as churches and civic groups may not extend the same level of support to gay and lesbian people because of the stigma attached to HIV, AIDS, and homosexuality. Self-esteem issues and psychological issues including depression, anxiety, mental health problems, and risk-taking behaviors may also be caused or made worse due to stigma and discrimination against MSM.

HIV-negative men who have sex with men are often bombarded by risk reduction messages. Over time, MSM people can become "fatigued" with safer sex messages, and focus less attention on protecting themselves from HIV infection. Some may feel incorrectly that HIV infection is inevitable and 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 sometimes difficult to reach those 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.

# SPECIAL POPULATIONS

**INJECTING DRUG USERS**—American society also has issues with illegal drug use and "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 blood-borne 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. This belief is not supported by any evidence, however.

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 injection drug users. The desire to stop using illegal drugs may be very far from the ability to stop. While there is a large demand for spaces in treatment facilities, 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, the individual may be lost to follow-up.



# SPECIAL POPULATIONS

**PEOPLE WITH HEMOPHILIA**—Hemophiliacs lack the ability to produce certain blood clotting factors. Before the advent of antihemophilic factor concentrates (products like "factor VIII" and "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 1980's, 90% of severe hemophiliacs contracted HIV and/or HCV through use of these products. There is anger within this community because there is evidence to show that the company's 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 significant 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 hometowns.

# SPECIAL POPULATIONS

**WOMEN WITH HIV**—Women in the U.S. account for one fifth of new HIV infections each year. In some areas of the world are becoming infected with HIV at higher rates than any other group of people. This is particularly true with 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 who 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 due to issues of self-efficacy and/or domestic violence affecting 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.

# SPECIAL POPULATIONS

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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 child-care problems that prevent them from going to medical appointments.

Many women who have HIV infection 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.

# SPECIAL POPULATIONS

**PEOPLE OF COLOR**—African Americans and Hispanics specifically have disproportionately higher rates of AIDS cases in the U.S., 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 half of new HIV cases in the U.S. Hispanics make up about 13% of the population, but account for 20% of the AIDS cases in the U.S.

There is no single reason that stands out as to why these differences 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, which also include adequate housing, food, employment, etc.

# SPECIAL POPULATIONS

Another factor may be the diversity within these populations. Diversity is evident in immigrant status, religion, languages, geographic locations and, again, socioeconomic conditions. Getting information out in appropriate ways to these diverse populations is challenging.

There is a significant amount of denial about HIV risk, which 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 through 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.



## CHAPTER VI:

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# EXAM QUESTIONS

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Use the exam answer sheet to answer the following questions (continue to next slide).

There is **NOT** more than one answer on each question.

If you make a mistake simply mark your correct answer, cross out the other mark and initial next to the question.

Now is also a good time to go back and review material to answer the questions.



# EXAM QUESTION

People with HIV or AIDS face stigmatization from society at large due to their illness. Many people do not mention their illness for fear of this stigma.

T) TRUE  
F) FALSE





# EXAM QUESTION

Washington State Department of Health has additional resources for healthcare providers and individuals seeking HIV/AIDS data.

T) TRUE  
F) FALSE



# EXAM QUESTION

Prevention methods can be shared through all diversities and reach a greater common good.

T) TRUE  
F) FALSE





# EXAM QUESTION

Caregivers face risks when caring for patients in homecare settings. Which of the following are NOT important for caregivers to remember?

- a. Understanding risk of HIV transmission in a homecare setting
- b. Good self-care
- c. Don't worry about wearing gloves when helping a patient
- d. Support from peers and professionals as needed





# EXAM QUESTION

Which statement is *not true* about women with HIV?

- a. Women tend to delay care because they are too busy to get treatment
- b. Women fear disclosing their HIV status for fear of losing jobs, housing, or other forms of discrimination
- c. Women don't cheat, so they would likely not get HIV
- d. Women in domestic abuse relationships may fear seeking help

**CONGRATULATIONS!**

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A red ribbon is tied in a loop on a white fabric background. The word "GLOSSARY" is written in large, white, bold, sans-serif capital letters across the center of the image, with a slight shadow effect. The ribbon is positioned diagonally, with the loop at the top right and the ends extending towards the bottom left.

# GLOSSARY

# A GLOSSARY

***Acute (disease)*** - Of short duration, usually with an abrupt onset, and sometimes severe, as opposed to long-term (chronic) disease.

***AIDS (Acquired Immunodeficiency Syndrome)*** - The late stage of the illness triggered by infection with Human Immunodeficiency Virus (HIV). According to the official definition published by the Centers For Disease Control (CDC), a person receives an AIDS diagnosis when he or she has a CD4 Cell count of less than 200 and/or certain opportunistic infections common with advanced immune deficiency.

***AIDS -Defining Illness*** - One of the serious illnesses that occurs in HIV-positive individuals and a reason for an AIDS diagnosis according to the Centers For Disease Control (CDC)'s definition of AIDS. Among these conditions are Pneumocystis Carinii Pneumonia (PCP), Mycobacterium Avium Complex (MAC), AIDS Dementia Complex, AIDS Wasting Syndrome, invasive cervical cancer and Kaposi's Sarcoma (KS).

***Amniotic Fluid*** - The watery fluid that surrounds the unborn child in the uterus.

***Anonymous Testing*** - The person who performs the HIV antibody test does not maintain a record of the name of the person they are testing. Anonymous testing may create barriers to entering medical care for those who seek this form of test.



# A GLOSSARY

***Antigen*** - A substance that, when introduced into the body, is capable of inducing the production of a specific antibody.

***Antiretroviral*** - A substance that stops or suppresses the activity of a retrovirus, such as HIV. Nucleoside Analogs and Protease Inhibitors are examples of antiretroviral drugs.

***Asymptomatic*** - Showing no outward sign of disease.

***Asymptomatic HIV*** - Used in HIV/AIDS literature to describe a person who has a positive reaction to one of several tests for HIV antibodies, but who shows no clinical symptoms of the disease. Many people with HIV do not look or feel "sick."

***Azidothymidine*** - (also called zidovudine or ZDV) is a nucleoside analog that suppresses replication of HIV.



# B GLOSSARY

***Blood-borne Pathogen*** - Any pathogen (like a virus or bacteria) present in blood or other potentially infectious material. Blood-borne pathogen (BBP) standards are enforced by the Department of Labor and Industries. BBP training may be an annual requirement of certain jobs.

***Bodily Fluids*** - Any fluid produced by the human body, such as blood, urine, saliva, sputum (spit), tears, semen, mother's milk or vaginal secretions. Only blood, semen, mother's milk and vaginal secretions have been linked directly to the transmission of the HIV virus.

# GLOSSARY

***Carrier*** - A person who is apparently healthy, but who is infected with some disease-causing organism (such as HIV or HBV) that can be transmitted to another person.

***Centers for Disease Control and Prevention (CDC)*** - Federal health agency which is a branch of the U.S. Department of Health and Human Services. The CDC provides national health and (CDC safety guidelines and statistical data on AIDS, STIs, hepatitis and other diseases. 1-(800)-CDC-INFO or 1-(800)-232-4636.

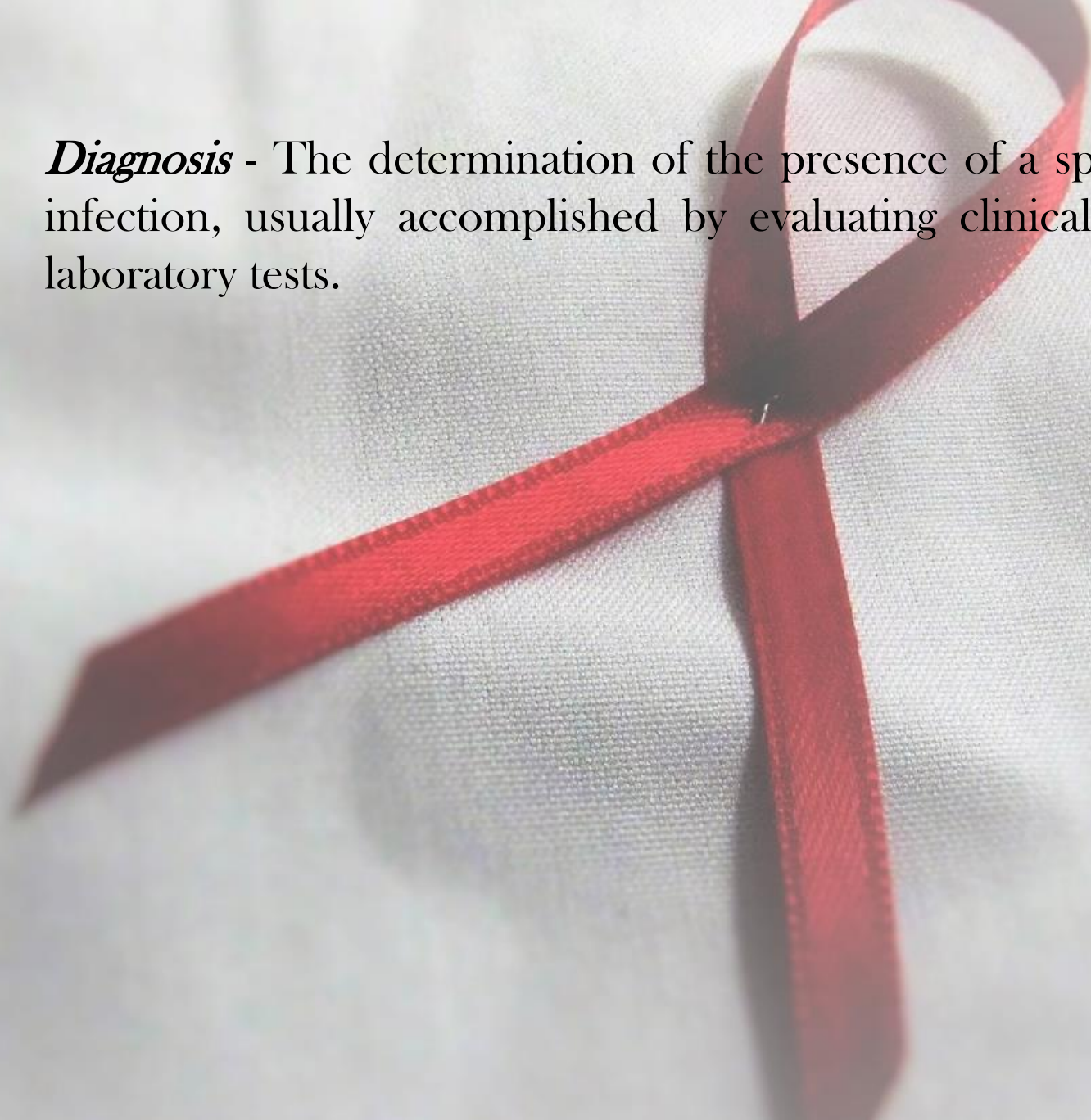
***Chronic*** - Refers to symptoms and diseases that last for an extended period of time without noticeable change.

***Confidential Testing*** - The patient gives their real name and the results of the HIV antibody test are known only to that individual and the health care provider performing the test. Positive results from confidential HIV tests are now reportable to local public health officials, as are many other diseases.



# D GLOSSARY

***Diagnosis*** - The determination of the presence of a specific disease or infection, usually accomplished by evaluating clinical symptoms and laboratory tests.





# GLOSSARY

***ELISA/EIA Screening*** - A screening blood test for the presence of antibodies to HIV. A positive result from an ELISA/EIA test always needs to be confirmed by a second ELISA/EIA test and an FDA-approved confirmatory test, such as the Western Blot.

***Epidemiology*** - The study of the incidence, distribution and control of a disease in a population.

***Etiology*** - The causes or origins of disease.

***Exposure*** - The act or condition of coming in contact with, but not necessarily being infected by, a disease-causing agent.





# F GLOSSARY

***False Negative*** - A false-negative test result is one that does not detect what is being tested even though it is present. A false-negative test result may thus suggest that a person does not have a disease or condition being tested for when in fact he or she does.



# GLOSSARY

***"HAART"*** - Highly active antiretroviral therapy. The use of combinations of medicines to prevent the development of or treat AIDS in someone who is HIV-positive. Often including a combination of a Protease Inhibitor or Non-nucleoside Reverse Transcriptase Inhibitor and two Reverse Transcriptase Inhibitors, whose purpose is to reduce viral load to undetectable levels. Sometimes abbreviated to ***"ART"***.

***Helper/Suppressor T-Cells*** - White blood cells (lymphocytes) that are part of the immune system.

***Hepatitis B (HBV)*** - One of several different viral infections affecting the liver. The effects of the disease on the liver can range from mild to severe or fatal. HBV is transmitted in the same way that HIV is transmitted. HBV is vaccine-preventable.

***Hepatitis C (HCV)*** - Another of the hepatitis viruses that affect the liver. As with HBV, the effects of the disease vary by person. HCV is usually transmitted through infected blood. At this time, there is no vaccine for HCV but it can be cured.

# GLOSSARY

***"High-Risk" Behavior*** - Behaviors, practices and activities that increase the risk of acquiring or transmitting sexually transmitted diseases. HIV or HBV. These include anal, vaginal or oral intercourse without a condom and sharing injection equipment.

***HIV Antibody Screening Test*** - A blood test that reveals the presence of antibodies to HIV.

***HIV***- Human Immunodeficiency Virus, the cause of AIDS.

***HIV Antibody Negative*** - A negative HIV antibody test result means that a person does not have detectable HIV antibodies at the time of the test. Since it can take up to 3 months after HIV infection for antibodies to develop, a negative test result is reliable only if the person has not had any sexual or needle- sharing risk behavior during the 3 months prior to testing. Some people with recent risk behavior will test HIV antibody negative, yet may have actually been infected during the previous 3 months.





# GLOSSARY

***HIV Antibody Positive*** - A test result indicating that antibodies to HIV are found. The person is infected with HIV and infectious to others for life. Also referred to as "HIV-positive."

***HIV Disease*** - The term which describes the spectrum of stages of HIV infection.

***HIV RNA/DNA Tests*** - Blood tests which may be done for people with documented exposure to HIV through unprotected sexual intercourse or needle sharing. These tests are expensive, not meant for general screening, and not used for the general public at this time.

# GLOSSARY

***Immune Status*** - The state of the body's immune system. Factors affecting immune status include heredity, age, diet, and physical and mental health.

***Immune System*** - The complex functions of the body that recognize foreign agents or substances, neutralizes them and has the capacity to recall the response later when confronted with the same challenge. A body system that helps resist disease-causing germs, viruses or other infections.

***Immunosuppressed*** - An impairment of the immune system functions, thus making a person susceptible to certain diseases that they would not ordinarily develop.

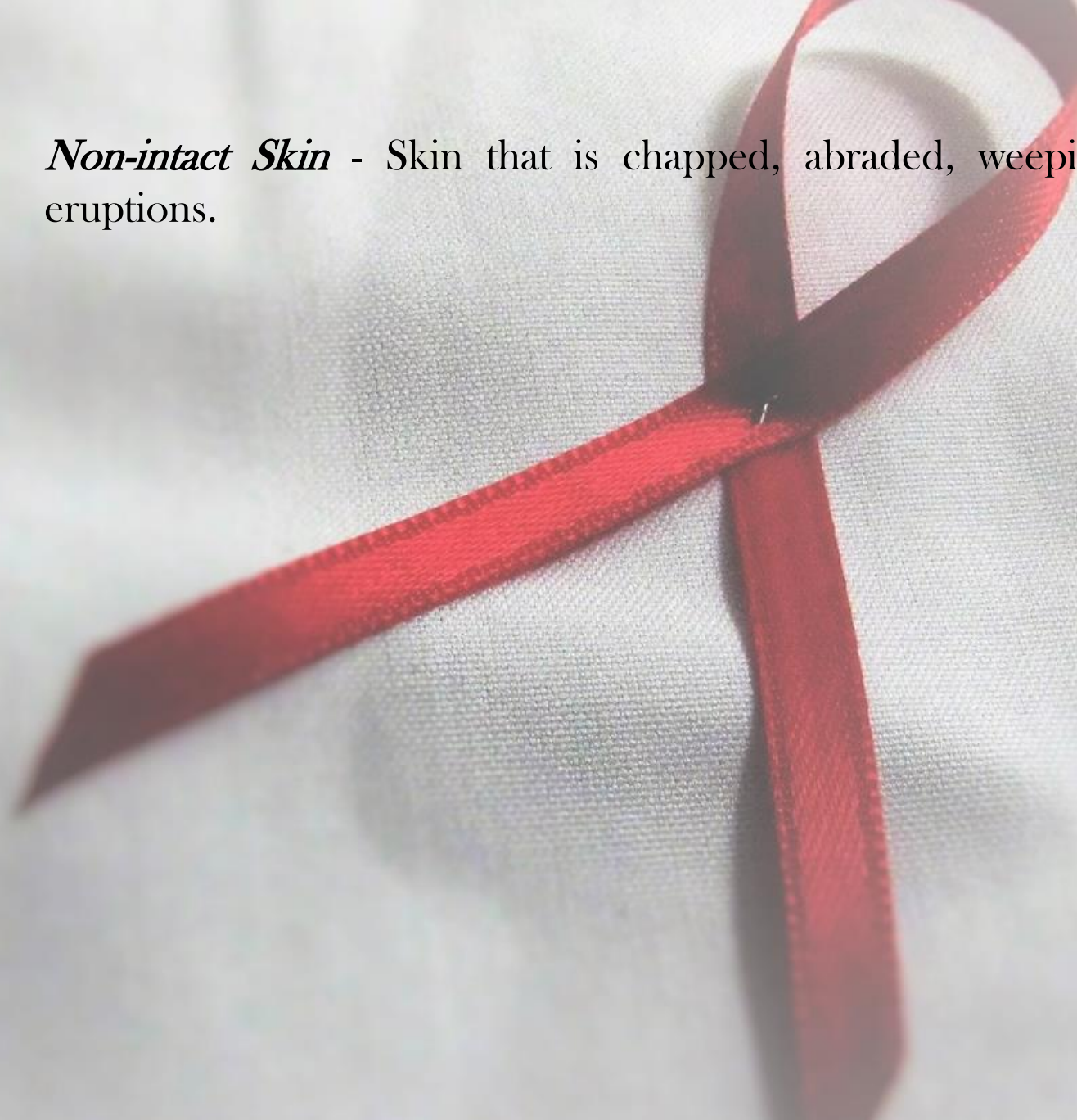
***Infection*** - The state or condition in which the body (or part of the body) is invaded by an infectious agent (e.g., a bacterium, fungus or virus), which multiplies and produces an injurious effect (active infection).

***Injection Drugs*** - Drugs injected by needle directly into a vein, skin or muscle.



# N GLOSSARY

*Non-intact Skin* - Skin that is chapped, abraded, weeping, has rashes or eruptions.







# GLOSSARY

***"OPIM"*** - Other potentially infectious material. As defined in the Blood-borne Pathogens standard, fluids other than blood that may transmit disease, including HIV.

***Opportunistic Infections*** - Infections or cancers that occurs especially or exclusively in persons with weak immune systems due to AIDS, cancer or immunosuppressive drugs. Examples: Kaposi's Sarcoma (KS), Pneumocystis Carinii Pneumonia (PCP), Toxoplasmosis and Cytomegalovirus.

***OSHA*** - Occupational Safety and Health Administration.

# P

## GLOSSARY

***p24 Antigen Test*** - A test that checks for the presence of HIV's capsid protein, P24, in serum. Unlike antibody tests, the p24 antigen test detects HIV directly.

***Pathogen*** - A disease-causing substance or organism.

***Percutaneously*** - Entering the body through the skin; for example, by needlestick or on broken skin.

***Pericardial Fluid*** - A clear fluid contained in the thin, membranous sac that surrounds the heart.

***Perinatal*** - Happening just before, during or immediately after birth.

***Peritoneal Fluid*** - Fluid contained in the membrane lining of the abdominal cavity.

***Personal Hygiene Items*** -Any personal item, including but not limited to razors, toothbrushes, towels or other personal care items that may be contaminated with blood or other bodily fluids capable of transmitting HIV. Personal hygiene items should not be shared.



# P GLOSSARY

**Personal Protective Equipment** - including, but not limited to, gloves, masks, eyewear and face shields, which will be provided by an employer and worn by employees as appropriate when the employee will or may come into contact with blood-borne pathogens.

**Pleural Fluid** - Fluid contained in the membrane that covers the lung and lines the chest cavity.

***Pre-Exposure Prophylaxis (PrEP)*** - Pre-Exposure Prophylaxis or PrEP is a way for HIV negative people to prevent getting infected with HIV by taking a pill every day. The pill contains two medicines that are also used to treat HIV. If a person is taking PrEP and is exposed to HIV through sex or injection drug use, the medicines can work to keep the virus from taking hold and infecting the body. Coupled with other prevention methods like condoms, PrEP offers protection against HIV if taken properly. PrEP can only be prescribed by a health care provider and must be taken as directed to work. When taken as directed PrEP can lower the risk of getting HIV infection up to 92%.

# P

## GLOSSARY

***Post-Exposure Prophylaxis (PEP)*** - Post-Exposure Prophylaxis: administering drug treatment to prevent disease in an individual after exposure to an infectious organism. For example, guidelines have been established for post-exposure prophylaxis of health care providers who have been exposed to HIV through needle sticks. Also can refer to provision of anti-HIV medications (antiviral medications) to someone who has had a substantial exposure, usually to the blood of another person. PEP should be started optimally within 2 hours of the exposure, preferably within 24 hours of exposure. PEP can only be provided by a medical practitioner and after evaluation of the possible exposure.

***Primary HIV Infection*** - The first 4-6 weeks of HIV infection, when an individual may show some transient symptoms, including swollen lymph nodes, fever, and sore throat. These symptoms may be mistaken for other illnesses and usually pass quickly. It is usually possible to detect HIV at this stage; however, many people who are newly infected do not get tested and are unaware of their infection. Also called acute infection.



# P GLOSSARY

***Prophylaxis*** - Any substance or steps taken to prevent something from happening (for example, condoms, vaccines and possibly antiretroviral therapy).

***Protease Inhibitors*** - Drugs that binds to and blocks HIV protease from working, thus preventing the production of new functional viral particles.



# R GLOSSARY

***Reportable Diseases*** - Under State Board of Health rules, health care providers are required to confidentially notify public health officials of the diagnosis of certain diseases or conditions. Confidential name based reporting is used for AIDS cases and symptomatic infection as well as HIV.



# S

## GLOSSARY

***"Safer Sex"*** - Sexual practices that reduce or eliminate the opportunity for the exchange of blood, semen or vaginal secretions.

***Seroconversion*** - development of detectable antibodies to HIV in the blood as a result of infection. It normally takes several weeks to several months for antibodies to the virus to develop after HIV transmission. When antibodies to HIV appear in the blood, a person will test positive in the standard Enzyme-linked Immunosorbent Assay (ELISA) test for HIV.

***Serologic Test*** - Any number of tests performed on blood. In this context, referring to a test that measures antibodies to HIV.

***Seropositive*** - A condition in which antibodies to a disease-causing agent are found in the blood; a positive reaction to a blood test. The presence of antibodies indicates that a person has been exposed to the agent.



# S

## GLOSSARY

***Sexual Intercourse*** - As defined in RCW 9A.44.010 - "Sexual intercourse has its ordinary meaning and occurs upon any penetration, however slight; and also means any penetration of the vagina or anus, however slight, by an object, when committed on one person by another, whether such persons are the same or opposite sex, except when such penetration is accomplished for medically recognized treatment or diagnostic purposes; and also act of sexual contact between persons involving the sex organs of one person and the mouth or anus of another whether such persons are of the same or opposite sex." Referred to in this document as anal, vaginal and/or oral sex.

***Sexually Transmitted Disease (STI)*** - Refers to the more than 25 infectious organisms (bacteria, viruses, mites, protozoa and fungi) that can be spread through sexual activity. Some are: gonorrhea, syphilis, chancroid, granuloma inguinale and lymphogranuloma venereum, scabies, herpes genitalis and anorectal herpes and warts, pediculosis, trichomoniasis, genital candidiasis, molluscum contagiosum, nonspecific urethritis, chlamydial infections, cytomegalovirus, AIDS, Herpes Simplex Virus II and Molluscum Contagiosum.

# S

## GLOSSARY

***Standard Precautions*** - Recommendations designed to reduce the risk of transmission of blood-borne pathogens and BSI (body substance isolation which is designed to reduce the risk of transmission of pathogens from moist body substances) and applies to all patients receiving care in hospitals, regardless of their diagnosis or presumed infection status. Standard Precautions apply to 1) blood; 2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; 3) non-intact skin; and 4) mucous membranes. Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.

***Sterilization*** - Destruction of microbial life by means of steam, gas or liquid agents.

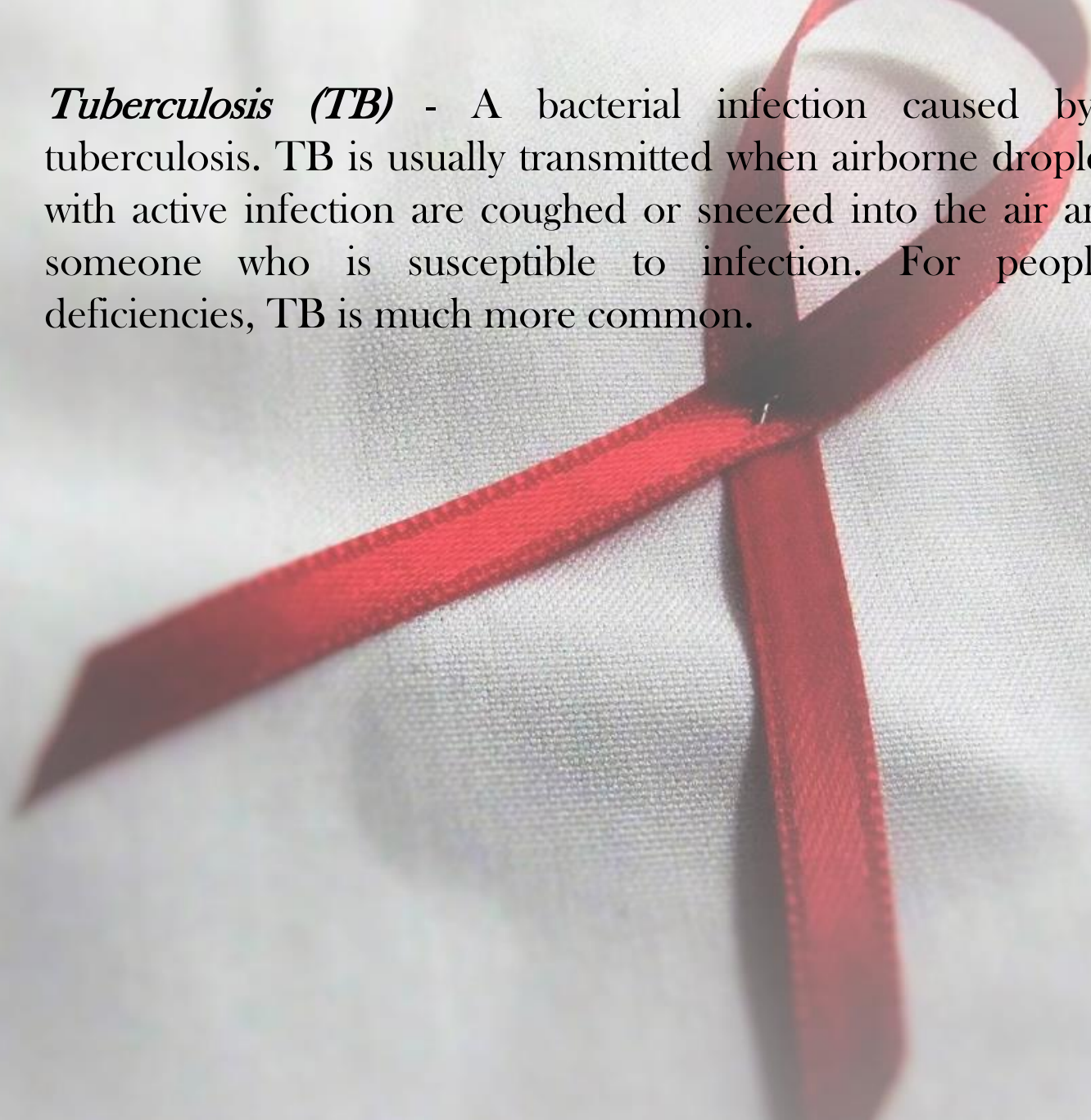
***Subcutaneous*** - Beneath or introduced beneath the skin (for example, subcutaneous injections).

***Syndrome*** - A set of related symptoms or manifestations of a disease that define a specific condition.



# T GLOSSARY

***Tuberculosis (TB)*** - A bacterial infection caused by *Mycobacterium tuberculosis*. TB is usually transmitted when airborne droplets from someone with active infection are coughed or sneezed into the air and breathed in by someone who is susceptible to infection. For people with immune deficiencies, TB is much more common.







# GLOSSARY

***Universal Precautions*** - Term relating to procedures designed to prevent transmission of blood-borne pathogens in health care and other settings. Under universal precautions, blood or other potentially infectious materials of all patients should always be considered potentially infectious for HIV and other pathogens. Employees should take appropriate precautions using personal protective equipment like gloves to prevent contact with blood.

# GLOSSARY

***Vaccine*** - A substance that contains weakened or killed infectious organisms. A vaccine provides long-term immunity against a pathogen by producing an acquired immune response without causing disease. No effective HIV vaccine has yet been discovered.

***Viral Load Test for HIV*** - Measures the amount of HIV RNA per unit of blood PLASMA. An indicator of virus concentration and reproduction rate, HIV viral load is employed as a measure of the success of antiretroviral therapy. It is expressed in number of copies of or equivalents to the HIV RNA genome per milliliter of plasma.

***Viral Resistance*** - When HIV becomes resistant to one or more of the classes of medication used to treat the infection. This may happen if the medications are not taken correctly.

***Virus*** - An organism that can cause disease. Viruses can reproduce only within living cells into which they inject their genetic material.



# W

## GLOSSARY

***HIV Western Blot Assay*** - A test formerly used routinely to confirm ELISA/EIA test results (see ELISA/EIA test), now superseded by more accurate methods.

***Window Period*** - The time period between when a person is actually infected with HIV and when antibodies to HIV can be detected in the test is called the window period. With current testing methodologies, the window period may be 2-12 weeks after infection. The CDC still advises that a small number of people may take up to six months to show antibodies.

***WISHA*** - Washington Industrial Safety and Health Act.

***“Works”*** - The collective term for the syringe, needle, “cooker,” cotton, and rinse water - elements of the injection drug user's paraphernalia.

A red ribbon is tied in a bow, symbolizing HIV/AIDS awareness. The ribbon is set against a light, textured background.

# ACKNOWLEDGEMENTS

- Center for Disease Control: <https://www.cdc.gov/hiv/default.html>
- Washington State KNOW HIV program guide