HealthStream Regulatory Script

Overview of HIV
Release Date: August 2011
HLC non-CE Version: 603
HLC CE Version: 603

Lesson 1: Introduction
Lesson 2: HIV & AIDS
Lesson 3: Transmission of HIV
Lesson 4: HIV Testing
Lesson 5: Treatment & Prevention of HIV Infection
Lesson 6: Information for Florida Providers
Welcome to the introductory lesson on an overview of HIV. [glossary]

This lesson gives the course rationale, goals, and outline.

As your partner, HealthStream strives to provide its customers with excellence in regulatory learning solutions. As new guidelines are continually issued by regulatory agencies, we work to update courses, as needed, in a timely manner. Since responsibility for complying with new guidelines remains with your organization, HealthStream encourages you to routinely check all relevant regulatory agencies directly for the latest updates for clinical/organizational guidelines.

If you have concerns about any aspect of the safety or quality of patient care in your organization, be aware that you may report these concerns directly to The Joint Commission.
HIV is one of the most important health threats of our time. It has killed millions of people in the United States and worldwide.

The Centers for Disease Control and Prevention (CDC) estimates that over one million people are living with HIV/AIDS in the United States, and that one in five is unaware of his or her infection.

Therefore, all healthcare professionals need a basic understanding of the virus and the disease it causes: AIDS [glossary].

This course will teach you the basics about HIV and AIDS.

You will learn:
- The relationship between HIV and AIDS
- How HIV is spread
- How HIV infection is diagnosed
- How HIV infection can be prevented and treated

Reference 1
## Course Goals

After completing this continuing education activity, participants should be able to:

- Distinguish between HIV infection and AIDS in patients.
- Recognize the transmission routes of HIV in patients.
- Identify tests used to diagnose and monitor the progress of HIV infection in patients.
- Cite strategies for preventing the spread of HIV and the treatment of infections in patients.
**Course Outline**

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This introductory lesson gave the course rationale and goals.

Lesson 2 will describe the relationship between HIV and AIDS. Important features of HIV and AIDS are presented.

Lesson 3 will explain how HIV is spread.

Lesson 4 will discuss HIV testing.

Lesson 5 will provide a brief outline of HIV prevention and treatment strategies.

Lesson 6 will discuss changes to the Florida Omnibus AIDS Act.
Welcome to the lesson on HIV and AIDS.
This lesson will discuss the relationship between HIV and AIDS, how HIV affects the immune system, and the stages of HIV infection.

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</tbody>
</table>
HIV and AIDS are **not** the same.

HIV is a virus that affects the human immune system.

AIDS is the disease that the virus can cause.

Reference 2

### HIV stands for:
- Human: Affects people
- Immune deficiency: Weakens the immune system
- Virus: Microorganism that causes disease

### AIDS stands for:
- Acquired: Obtained as a result of non-genetic causes
- Immune: Protection against disease
- Deficiency: Lack or absence
- Syndrome: Many symptoms with a single underlying cause
How HIV Affects the Immune System

The immune system is made up of cells and tissues that:
- Protect the body from infection
- Fight disease

One of the key cells of the immune system is the CD4 T cell, which is a specific type of white blood cell.

HIV destroys CD4 T cells, which leaves the immune system weakened.

As a result, the body becomes less and less able to defend itself from certain diseases and infections.

Opportunistic diseases can develop. These are diseases that typically affect only people with unhealthy immune systems.

Reference 2
How HIV Can Cause AIDS

HIV infection progresses from acute infection to AIDS. This may be divided into four basic stages:

1. Initial infection
2. Infection without symptoms
3. Infection with symptoms
4. AIDS

Click on each stage to learn more.

References 3-6

Initial infection

This stage begins the moment HIV enters the body and lasts 2-4 weeks. Often, there is a flu-like illness with fever, fatigue, aches, and a rash. In some cases, initial infection has no symptoms at all. During this stage, some HIV test results are still negative. However, the infected person can transmit HIV to others.

Infection without symptoms

This stage of HIV infection can last for years. The patient has no major symptoms, but may have swollen lymph nodes. CD4 counts do not drop significantly. However, the virus is actively copying itself within CD4 cells. This begins the damage to the immune system. The infected person tests positive on HIV testing. The person can transmit HIV to others.

Infection with symptoms

This stage of HIV infection also can last for years. The patient's CD4 count begins to decrease. Symptoms begin to develop and may include tiredness, fever, loss of appetite, and swollen lymph glands. Opportunistic diseases such as yeast infection may develop. The infected person tests positive on an HIV test. The person can transmit HIV to others.

AIDS

AIDS is the final and most severe stage of HIV infection. AIDS is diagnosed when the CD4 count is less than 200 cells per cubic millimeter of blood and one or more AIDS defining illnesses are present. Examples of AIDS-defining conditions include pneumocystis jiroveci pneumonia, Kaposi sarcoma, cryptosporidiosis, CMV disease, thrush, and active tuberculosis. The person can transmit HIV to others.
Many anti-HIV medications have been developed over the past 20 years.

As a result, HIV-infected patients are able to live longer and longer without developing AIDS.

Reference 7
Drag and drop terms from the word bank to complete the following sentences.

1. HIV is a _______. [virus]
2. HIV infects cells of the ___________. [immune system]
3. The final and most severe stage of HIV infection is ________. [AIDS]

Word bank:
- Virus
- Bacterium
- Fungus
- Cancer
- Immune system
- Nervous system
- Reproductive system
- Urinary system
- Symptomatic infection
- AIDS
You have completed the lesson on HIV and AIDS.

Remember:
- HIV is the virus that causes AIDS.
- HIV infects CD4 cells. This damages the immune system.
- HIV infection can be described in stages. A stage without symptoms can last for years. AIDS is the final and most severe stage of HIV infection.
- With proper treatment, HIV-infected patients are living longer and longer without developing AIDS.
Welcome to the lesson on the transmission of HIV. This lesson will cover the spread of HIV through body fluids and review high-risk behaviors.

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<thead>
<tr>
<th>Introduction</th>
<th>Lesson 3: Transmission of HIV</th>
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<tr>
<td>Welcome to the lesson on the transmission of HIV.</td>
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<tr>
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<td></td>
<td>• Mother-to-child transmission</td>
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<tr>
<td></td>
<td>• Occupational exposure</td>
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</tbody>
</table>
When a person is infected with HIV, he or she can spread the virus to others through certain bodily fluids.

These fluids are:
- Blood
- Semen (men)
- Vaginal secretions (women)
- Breast milk (lactating women)

These bodily fluids are *known* to spread HIV.

See the table to the right for a list of bodily fluids that *may* contain HIV.

Reference 8

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebrospinal fluid</td>
<td>Brain and spinal cord</td>
</tr>
<tr>
<td>Synovial fluid</td>
<td>Joints</td>
</tr>
<tr>
<td>Pleural fluid</td>
<td>Lungs</td>
</tr>
<tr>
<td>Peritoneal fluid</td>
<td>Abdominal cavity</td>
</tr>
<tr>
<td>Pericardial fluid</td>
<td>Heart</td>
</tr>
<tr>
<td>Amniotic fluid</td>
<td>Womb</td>
</tr>
</tbody>
</table>
Transmission of HIV can occur when an infectious bodily fluid comes into contact with certain vulnerable areas of an uninfected person’s body.

These areas, in general, include:
- Non-intact skin [glossary]
- Mucous membranes [glossary]
- The bloodstream

Contact can happen as a result of:
- High-risk behaviors [glossary]
- Mother-to-child exposure
- Accidental exposure in the healthcare setting

On the following screens, let’s take a closer look at each potential way of spreading HIV.

Reference 8
High-Risk Behaviors

HIV is most often spread through the following high-risk behaviors:

- Unprotected sex with an HIV-infected partner
- Sharing needles/syringes for injection drugs with an HIV-infected person

Reference 8
High-Risk Behaviors: Unprotected Sex

Unprotected vaginal, anal, or oral* sex can spread infected semen or vaginal secretions:
- From an infected partner
- To an uninfected partner’s mucous membranes (lining the vagina, penis, anus/rectum, or mouth)

If the *infected* person has cuts or sores in the oral, genital, or anal area, contaminated blood also could be spread.

If the *uninfected* person has cuts or sores in the oral, genital, or anal area, infected fluids also could make contact with that non-intact skin.

*Note: Oral sex is included in the list of high-risk behaviors. Despite popular opinion, oral sex is not a safe substitute for intercourse. HIV and other STDs can be transmitted through oral sex.

Reference 8

Factors that increase the risk of sexual transmission of HIV:
- HIV-infected sexual partner
- Sexual partner of unknown HIV status
- Multiple sexual partners
- Risky sexual partners, such as injection-drug users
- Presence of other STDs
<table>
<thead>
<tr>
<th>High-Risk Behaviors: Sharing Drug Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing injection-drug equipment such as needles or syringes can spread HIV.</td>
</tr>
<tr>
<td>Reference 8</td>
</tr>
</tbody>
</table>

Sharing contaminated needles gives HIV direct access to the bloodstream.
HIV may be transmitted from an infected mother to her child during:

- Pregnancy
- Labor/delivery
- Breastfeeding

During these activities, the mother’s contaminated body fluids (blood, vaginal secretions, breast milk) can come into contact with the child’s bloodstream and/or mucous membranes.

This is the most common cause of HIV infection in children.

Reference 9
Healthcare personnel are at risk for HIV infection from:
- Needle-stick or other sharps injury [glossary]
- Splashes, sprays, or other sources of patient bodily fluids

Sharps injury can give HIV direct access to the worker’s bloodstream.

Splashes and sprays can put infected fluids in contact with exposed mucous membranes or non-intact skin. This is especially likely if the healthcare worker is not using proper Standard Precautions. Thanks to the proper precautions, only one reported case of occupational HIV transmission to a health care worker has been confirmed since 2001, according to the CDC.

Reference 10
Noninfectious Bodily Fluids

As a healthcare provider, you must be careful to protect yourself from bodily fluids.

However, certain fluids and secretions are not infectious.

HIV is **not** present in an infected person’s
- Feces
- Nasal secretions
- Saliva
- Sputum
- Sweat
- Tears
- Urine
- Vomitus

**However**, if blood is present in these fluids, they should be considered **infectious**.

Reference 11
Transmission Myths and Misconceptions

A person cannot get (or give) HIV infection from:
- Casual contact (like shaking hands or hugging)
- Sweat, saliva, or tears
- Clothing
- Public drinking fountains, phones, or toilets
- Sharing a meal
- Insect bites or stings
- Donating blood
- Kissing with a closed mouth

Note: Kissing with an open mouth carries a small risk of HIV transmission. Blood contact may occur if cuts or sores are present.

References 8, 12

HIV is not transmitted by casual contact.
<table>
<thead>
<tr>
<th>Review</th>
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<tbody>
<tr>
<td><strong>Select the answer that best fits the question.</strong></td>
</tr>
<tr>
<td>__________ is (are) at increased risk for HIV infection.</td>
</tr>
<tr>
<td>a. An injection drug user</td>
</tr>
<tr>
<td>b. The unborn child of an HIV-positive mother</td>
</tr>
<tr>
<td>c. A healthcare worker who does not follow Standard Precautions</td>
</tr>
<tr>
<td>d. A, B, and C</td>
</tr>
<tr>
<td>e. None of the above</td>
</tr>
</tbody>
</table>

**MULTIPLE CHOICE INTERACTION**

Correct: D

Feedback for A: Not quite. The correct answer is D. All of these individuals are at increased risk for HIV.

Feedback for B: Not quite. The correct answer is D. All of these individuals are at increased risk for HIV.

Feedback for C: Not quite. The correct answer is D. All of these individuals are at increased risk for HIV.

Feedback for D: Correct. All of these individuals are at increased risk for HIV.

Feedback for E: Incorrect. The correct answer is D. All of these individuals are at increased risk for HIV.
You have completed the lesson on HIV transmission.

Remember:

- HIV is present in blood, semen, vaginal secretions, and breast milk.
- HIV is spread when an infectious body fluid comes into contact with non-intact skin, mucous membranes, or the bloodstream.
- HIV can be spread through high-risk behaviors. This includes unprotected sex and sharing injection-drug equipment.
- An HIV-positive mother can spread the virus to her child during pregnancy, labor and delivery, or breastfeeding.
- Healthcare workers are at risk for occupational exposure to HIV.
- Many bodily fluids do not contain HIV.
- HIV cannot be spread through casual contact.
Lesson 4: HIV Testing

**Introduction**

Welcome to the lesson on testing for HIV.

We will review the concept of screening and discuss the various HIV tests available, and the strategies to use them.

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<td>• Confirmatory testing</td>
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<td>• Surveillance and epidemiological trends</td>
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</table>
### Screening

The CDC recommends that screening for HIV infection be performed in the following circumstances:

- Routinely for all people aged 13-64 years
- All patients being treated for tuberculosis
- All patients seeking treatment for a Sexually Transmitted Disease (STD)
- All pregnant women

Separate written consent for HIV testing is not required; general consent for medical care is sufficient. However, the patient should be notified that testing will be performed unless the patient declines.

Reference 13

### Definitions

- **Screening**: Performing an HIV test for all people in a defined population
- **Diagnostic Testing**: Performing a test for people with signs or symptoms that could be from an HIV infection
Antibody Testing

In most cases, HIV infection is diagnosed by looking for antibodies against the virus.

One problem with antibody testing is that an infected person may not test positive until weeks to months after being infected.

Before this time, an HIV antibody test on an infected person may come back negative. This is a false negative. The infected person does carry the virus and can infect others.

Reference 12
HIV antibody testing uses a series of lab procedures.

The first procedure used is the ELISA. ELISA stands for enzyme-linked immunosorbent assay.

This test also may be called an enzyme immunoassay (EIA).

ELISA can detect HIV antibodies in:
- Blood drawn from a vein
- Finger-prick blood
- Oral fluid
- Urine

Rapid testing with results available in less than 30 minutes is available for home or clinic use.

Reference 12

CDC/James Gathany
Confirmatory Testing

If the first ELISA test result is positive, more tests are done. This is to verify the positive result.

In some protocols, two repeat ELISAs are performed. In others, a confirmatory test follows a positive screening test.

If either or both of these ELISAs are positive, the sample is tested by Western blot. This is a different lab method of looking for antibodies.

If the Western blot is positive, the sample is HIV-positive.

If the results of the Western blot are negative or unclear, the patient should come back in a month to repeat the testing.

Other available confirmation tests include the Indirect Immunofluorescent Antibody (IFA) Assay, the Modified Western Blot, and the Line Immunoassay (LIA).

References 14, 15
HIV testing is important for three main reasons:

- Patients who test positive can get the care they need.
- Patients who find out they are HIV-positive are more likely to stop high-risk behaviors.
- Testing allows public health agencies to track HIV infection trends.

Reference 16
Other HIV Tests

**CD4 Testing**
The CD4 cell count correlates with the risk of opportunistic infections, and is therefore a useful measure of the stage or severity of disease.

**HIV Viral Load**
The amount of virus in the bloodstream can be measured and tracked as a way of monitoring disease activity.

**P24 Antigen Testing**
This protein, produced by the HIV virus, can be measured. It is useful in screening donated blood, monitoring response to treatment, and diagnosing infections early.

Reference 12
Male-to-male sexual contact resulted in over 50% of new HIV infections in 2006.

In addition, high-risk heterosexual contact accounted for another 31% of cases. This shows that the majority of HIV spread is through sexual contact. The majority of the remaining cases are related to injection drug use.

Reference 17
Groups at Risk

Blacks account for a disproportionately large number of HIV cases in the U.S.

Reference 17

Estimated Rates of New HIV Infections, by Race/Ethnicity, 2006

Source: CDC
A patient requests HIV testing. A sample is drawn. The first test performed is the ______ [ELISA]. The test results are positive. The next step in the testing procedure is to perform ______ [two repeat ELISAs]. The results are positive. Confirmatory testing is performed by ______ [Western blot]. The test results are unclear. The patient should be advised ______ [to return in one month for repeat testing].
### Summary

You have completed the lesson on HIV testing.

**Remember:**
- Antibody testing is the most common test used to diagnose HIV infection.
- Antibody testing within weeks to months of HIV infection may give a false negative result.
- Antibody testing starts with the ELISA test. This test can be done on blood drawn from a vein, finger-prick blood, oral fluid, or urine.
- If the first ELISA test is positive, the ELISA is repeated once or twice. If these ELISA results are positive, a confirmatory test is done. If the confirmatory test is positive, the patient is HIV-positive.
- HIV testing is important for planning treatment, decreasing high-risk behaviors, and surveillance.
- HIV surveillance shows sexual contact poses the highest risk for HIV in the United States. HIV risk is disproportionally high in blacks.
### Lesson 5: Treatment & Prevention of HIV Infection

#### Introduction

Welcome to the lesson on treatment and prevention of HIV infection.

The following pages will review baseline testing, monitoring of treatment, and prevention of spread of HIV.

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<td>- Decreasing risk of mother-to-child transmission</td>
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<td>- Preventing occupational exposure</td>
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Point 1 of 14
### CD4 Count & Viral Load

Remember: HIV infection can progress very slowly. Patients can have a long period without symptoms. Some patients may not have testing until years after they are infected.

Therefore, when a patient tests positive for HIV, it is important to find out exactly how far the infection has progressed.

This is done by taking baseline measurements.

Important baseline measurements are:
- **CD4 count**
- **Viral load**

Click on each measurement to learn more.

Reference 18

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**CD4 count**

Remember: HIV attacks the immune system by infecting CD4 cells. As HIV infection progresses, CD4 count falls. Therefore, the CD4 count gives a measure of how far the infection has progressed. It also indicates how much damage has been done to the immune system.

**Viral load**

Viral load is a measure of how much virus is present in the body. As HIV infection progresses, viral load increases.
Other basic lab tests may be used to check the baseline health of an HIV-positive patient.

The patient should have a full medical history including:
- Past and current illnesses
- Medication review
- Vaccination history
- HIV exposure history
- Mental health and substance use history
- Sexual history
- Review of systems
- Opportunistic infections review

The patient should also have a full physical exam.

Reference 18
Co-infections and Opportunistic Infections

Finally, certain other infections are often present with HIV. All HIV-infected people should be screened for viral hepatitis and other STDs. Appropriate cancer screening should be performed as well. In addition, annual screening for tuberculosis should be performed.

Any opportunistic infections also should be identified and addressed.

Prophylaxis for many opportunistic infections is available to prevent their appearance.

References 18, 19
Monitoring HIV Infection

Once a baseline has been established, the HIV-infected patient should continue to have regular medical checkups.

Regular checkups are needed to:
  • Track the progress of the infection
  • Plan treatment

The infection is tracked by monitoring:
  • CD4 count (every three to six months)
  • Viral load (every three to four months)

Overall health of the patient also gives an indication of how HIV infection is progressing.

Reference 19
Treatment of HIV

It is important to monitor the progress of HIV infection. This can help the patient decide when to start drug treatment.

The HIV drugs available today do not cure the infection. They do slow the infection down. This can help the patient stay healthy longer.

Because of the potential for the virus to become resistant, drug treatment is usually started only when clinically indicated and the patient is able to cooperate fully with instructions and monitoring.

Reference 12
HIV Prevention

Remember: Common ways of spreading HIV are:
- High-risk behaviors
- Mother-to-child transmission

Patients who engage in high-risk behaviors should be given information about risk prevention.

HIV-positive mothers should be given information about how to reduce the risk of spreading HIV to their children.

Let’s take a closer look on the following screens.
5008

High-Risk Behaviors: Unprotected Sex

To prevent sexual transmission of HIV, only two methods are 100% effective:

- Sexual abstinence [glossary]
- Sexual activity only in a long-term, mutually monogamous [glossary] relationship with an HIV-negative partner

For some of your patients, these may be realistic goals.

For other patients, you will need to provide information on how to make unsafe sexual relationships safer.

For example, help patients come up with specific strategies for:

- Using latex condoms correctly and consistently
- Reducing the number of sexual partners
- Reducing the number of risky sexual partners

Reference 20
For injection-drug users, the safest practice is to stop using injection drugs.

In many cases, however, this may not be a realistic goal.

In these cases, help the patient come up with specific strategies for:

- Entering a drug treatment program
- Using clean needles for drug injection

Reference 20
Mother-to-Child Transmission

The CDC recommends that HIV testing should be offered to all pregnant women.

If a pregnant woman tests positive, various drug regimens are available to be administered during the pregnancy and labor and delivery. Often, the newborn may be treated as well.

Remember: HIV also can be transmitted through breast milk. Therefore, HIV-positive mothers should not breastfeed.

Reference 9
You now know the basics for helping protect patients from HIV exposure and infection.

Let’s take a look at reducing your risk.

Needlesticks are a concern for healthcare workers. This is especially true if the patient has a disease caused by a bloodborne pathogen, such as HIV.

To help protect workers from HIV and other bloodborne infections, the Occupational Safety and Health Administration (OSHA) issued the Bloodborne Pathogens Standard (BPS).

The BPS mandates the use of Universal Precautions (now Standard Precautions).

References 21, 22
Standard Precautions

According to Standard Precautions, healthcare workers should:

- Assume that all blood and other bodily fluids are infectious.
- Use barrier protection (gloves, face shield, protective clothing, etc.) as needed to protect skin and mucous membrane from contact with blood and other bodily fluids.
- Wash hands and other skin surfaces immediately and thoroughly after contact with patient blood or other bodily fluids.
- Wash hands immediately after glove removal.
- Avoid accidental injury from needles, scalpels, and other sharps.

For more information about standard precautions and preventing needlestick injuries see the course: Standard Precautions: Bloodborne Pathogens and Other Potentially Infectious Materials.

References 21, 22
**Review**

Select the answer that best fits the question.

HIV drugs available today:
- a. Cure HIV infection.
- b. Slow the progress of HIV infection.
- c. Prevent HIV infection from developing into AIDS.
- d. Prevent the development of all opportunistic infections.

**MULTIPLE CHOICE INTERACTION**

Correct: **B**

Feedback for A: Incorrect. There are no drugs available today to cure HIV infection. The correct answer is B. Available drugs slow the progress of HIV infection and help the patient stay healthy.

Feedback for B: Correct. Available drugs slow the progress of HIV infection and help the patient stay healthy.

Feedback for C: Incorrect. Available drugs slow the progress of HIV infection and help the patient stay healthy. However, they cannot ensure that HIV infection does not progress to AIDS. The correct answer is B.

Feedback for D: Incorrect. Available drugs slow the progress of HIV infection and help the patient stay healthy. However, they cannot ensure the prevention of all opportunistic infections. The correct answer is B.
You have completed the lesson on HIV treatment and prevention.

Remember:
- CD4 count and viral load are used to establish a baseline and monitor the health of an HIV-infected patient.
- HIV-infected patients also should be assessed for overall health.
- Careful monitoring can help an HIV-infected patient decide when to start drug treatment. Drugs do not cure HIV infection. However, they can help the patient stay healthy for longer.
- All patients should be encouraged to decrease high-risk behaviors.
- HIV-positive pregnant women should be informed of drug treatment available to reduce the risk of mother-to-child HIV transmission. They also should be informed of the risk of HIV transmission with breastfeeding.
- Healthcare workers must use Standard Precautions with all patients to guard against exposure to HIV.
Welcome to the lesson on Florida legislation about HIV and AIDS. This lesson will discuss HIV and AIDS legislation in Florida and the requirements for testing in that state.

Note: If you are not a Florida provider, please advance through the material in this lesson.
Florida has consistently had the third highest number of AIDS cases in the United States.

In addition:
- Over 90,000 Floridians are living with HIV.
- As many as 25% are unaware of their infection.

Each year, 5,000 new cases of HIV are diagnosed in Florida. Many of those infected are African Americans and Hispanics.

References 23, 24
Florida Legislation

Florida was one of the first states to enact legislation addressing its high rates of HIV infection. Florida’s Omnibus AIDS Act addresses how HIV and AIDS affect public health and welfare.

Provisions of the Omnibus Act cover:
- Informed, voluntary, and confidential testing
- Anti-discrimination
- Role of the Florida Department of Health in testing, patient care, and research

Changes to the original Omnibus AIDS Act have been made since its 1988 passage. These changes “fine-tune” the original legislation and fill in several gaps that were present.

Let’s take a closer look at aspects of the Omnibus AIDS Act that you should be familiar with on the next screens.

Reference 25

Florida Legislation:
Performing HIV Tests

The Omnibus AIDS Act requires healthcare providers ordering HIV tests to:

- **Obtain the patient's informed consent**
- **Notify the patient of his/her test results**
- **Confirm positive test results**

Click on each requirement for additional information.

Reference 25

<table>
<thead>
<tr>
<th>CLICK TO REVEAL</th>
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<tr>
<td><strong>Informed Consent:</strong></td>
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<td>- Patients must understand and agree to the test. They need to be told a positive test must be reported to the county health department, anonymous testing is available and where it may be obtained, and the extent test results will be kept confidential in the medical records.</td>
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<td>- Some exceptions to informed consent include pregnant women who will be tested unless they refuse, medical emergencies, when obtaining consent would impair care of the patient, in certain cases of STD transmission e.g. prostitutes and inmates, in some criminal acts involving body fluid transmission, the source of significant exposure to a medical worker, and for monitoring HIV-positive patients.</td>
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| Notification:  |
| - Healthcare providers must ensure that all reasonable efforts to notify the patient of his/her test results are made.  |
| - Pretest counseling is not required and specific posttest counseling procedures are left to the individual medical practice.  |

| Confirmation:  |
| - All preliminary HIV test results that are positive must be confirmed by a second, more definitive test.  |
| - The release of preliminary HIV test results is only allowed when decisions about medical care cannot await the confirmatory testing.  |
The Omnibus AIDS Act makes HIV test results “super confidential.” Improper release of HIV test results carries significant legal consequences:

- A healthcare professional who violates the informed consent or confidentiality rules of the act is subject to discipline from his/her licensing body.
- Any person who violates the confidentiality requirements, whether intentional or not, may be subject to up to one year of prison.
- Any person who maliciously, or for monetary gain, breaches the confidentiality of STD information commits a felony of the third degree.

Reference 25
<table>
<thead>
<tr>
<th>Summary</th>
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<tbody>
<tr>
<td>You have completed the lesson providing information for Florida providers.</td>
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<tr>
<td>For additional information about the Omnibus AIDS Act, visit the Florida Department of Health’s website.</td>
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**Florida Department of Health**

Please link to [http://www.doh.state.fl.us/](http://www.doh.state.fl.us/)
REFERENCES


<table>
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<tr>
<th>#</th>
<th>Term</th>
<th>Definition</th>
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<tr>
<td></td>
<td>HIV</td>
<td>human immunodeficiency virus</td>
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<td></td>
<td>AIDS</td>
<td>acquired immunodeficiency syndrome</td>
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<td></td>
<td>lymph glands</td>
<td>a small collection of tissue along the lymphatic system that acts as a filter</td>
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<td></td>
<td><em>pneumocystis jirovecii</em> pneumonia</td>
<td>infection of the lungs by the fungus <em>pneumocystis jirovecii</em>, formerly known as <em>pneumocystis carinii</em></td>
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<td>Kaposi sarcoma</td>
<td>a type of cancer characterized by the development of skin lesions and most frequently seen in men with AIDS</td>
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<td></td>
<td>cryptosporidiosis</td>
<td>a diarrheal disease caused by the Cryptosporidium parasite</td>
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<td>CMV disease</td>
<td>disease caused by the virus CMV (cytomegalovirus), which is generally harmless to people in otherwise good health, but is a major cause of disease and death in immunocompromised people, including AIDS patients</td>
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<td></td>
<td>thrush</td>
<td>yeast infection of the mouth</td>
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<td></td>
<td>tuberculosis</td>
<td>disease caused by the bacterium <em>Mycobacterium tuberculosis</em>, which can infect any part of the body but usually infects the lungs</td>
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<td>Non-intact skin</td>
<td>skin with cuts, scratches, sores, or other breaks</td>
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<td>mucous membrane</td>
<td>the lining of certain cavities, such as the nose, mouth, vagina, and anus/rectum, that produces a protective layer of mucus</td>
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<td>High-risk behaviors</td>
<td>activities that increase the likelihood that a person will get HIV</td>
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<td>STD</td>
<td>Sexually Transmitted Disease - any disease transmitted by sexual contact; caused by microorganisms that survive on the skin or mucous membranes of the genital area; or transmitted via semen, vaginal secretions, or blood during intercourse. STDs include AIDS, chlamydia, genital herpes, genital warts, gonorrhea, syphilis, yeast infections, and some forms of hepatitis.</td>
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<td>sharps injury</td>
<td>accidental piercing of the skin by a sharp instrument such as a needle or scalpel</td>
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<td>antibodies</td>
<td>proteins formed by the body's immune system to protect against disease-causing organisms</td>
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<td>baseline</td>
<td>starting point</td>
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<td>abstinence</td>
<td>refraining from</td>
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<td></td>
<td>monogamous</td>
<td>having only one sexual partner</td>
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<td></td>
<td>scalpel blade</td>
<td>blade used in a certain type of surgical instrument</td>
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ASSESSMENT

1. What is the relationship between HIV and AIDS?
   a. HIV is the same thing as AIDS.
   b. HIV is a virus that causes AIDS.
   c. AIDS is the only way to diagnose HIV.
   d. AIDS is present in all patients with HIV.

   Correct: HIV is a virus that causes AIDS.
   Rationale: HIV is a virus. This virus causes the disease AIDS.

2. Which type of cell does HIV infect?
   a. Skin cell
   b. CD4 cell
   c. Liver cell
   d. CD22 cell

   Correct: CD4 cell
   Rationale: HIV infects the CD4 cells of the immune system.

3. Which system of the body is damaged by HIV?
   a. Immune system
   b. Circulatory system
   c. Reproductive system
   d. Gastrointestinal system

   Correct: Immune system
   Rationale: HIV infects and destroys CD4 cells. These cells are an important part of the immune system.

4. What happens in the most advanced stage of HIV infection?
   a. The patient has AIDS.
   b. The patient has no symptoms.
   c. The patient has a CD4 count above 2,000.
   d. The virus copies itself within smooth muscle cells.

   Correct: The patient has AIDS.
   Rationale: AIDS is the final stage of HIV infection.
5. What happens in the first stage of HIV infection?
   a. The patient has AIDS.
   b. The patient cannot spread the virus.
   c. The patient may have flu-like symptoms.
   d. The patient develops opportunistic infections.

Correct: The patient may have flu-like symptoms.
Rationale: The first stage (initial infection) begins the moment HIV enters the body. Sometimes, there is a brief flu-like illness. Although HIV tests are usually negative initially, the infected person can still spread the virus to others.

6. Mark is a patient infected with HIV. Which of Mark's bodily fluids contains infectious virus?
   a. Urine
   b. Sweat
   c. Semen
   d. Sputum

Correct: Semen
Rationale: HIV is found in semen. It is not found in urine, sweat, or sputum.

7. A patient is infected with HIV. Which of the following bodily fluids is known to spread the virus?
   a. Feces
   b. Sputum
   c. Nasal secretions
   d. Vaginal secretions

Correct: Vaginal secretions
Rationale: Vaginal secretions contain infectious HIV in an infected person.

8. HIV can be spread through:
   a. Sharing a meal with an infected person
   b. Sharing clothing with an infected person
   c. Sharing injection needles with an infected person
   d. Sharing a seat on the bus with an infected person

Correct: Sharing injection needles with an infected person
Rationale: HIV is most commonly spread through sharing injection needles or unprotected sex.

9. Which of the following is ONE of the TWO MOST COMMON ways that HIV is spread?
a. Mosquito bite  
b. Unprotected sex  
c. Needle-stick injury in the healthcare setting  
d. Splash or spray of blood in the healthcare setting

Correct: Unprotected sex  
Rationale: HIV is most commonly spread through unprotected sex or sharing injection needles.

10. When can HIV be transmitted from an infected mother to her child?
   a. When the mother breastfeeds her child  
   b. When the mother hugs or kisses her child  
   c. When the mother holds the child in her lap  
   d. When the mother prepares a bottle for her child

Correct: When the mother breastfeeds her child  
Rationale: HIV may be transmitted from an infected mother to her child during pregnancy, labor/delivery, or breastfeeding.

11. The FIRST step in HIV antibody testing is usually:
   a. ELISA  
   b. Viral load  
   c. Western blot  
   d. Southern blot

Correct: ELISA  
Rationale: The first step in HIV antibody testing is an ELISA. If this test is positive, one or two more ELISAs are performed to confirm the positive result. If one or both of these tests is positive, an additional test is performed to confirm the result.

12. Which is most likely to be the FINAL step in confirming a positive HIV test:
   a. ELISA  
   b. Viral load  
   c. Western blot  
   d. Southern blot

Correct: Western blot  
Rationale: The first step in HIV antibody testing is an ELISA. If this test is positive, one or two more ELISAs are performed to confirm the positive result. If one or both of these tests is positive, a Western blot is often performed to confirm the result. Other available confirmation tests include the Indirect Immunofluorescent Antibody (IFA) Assay, the Modified Western Blot, and the Line Immunoassay (LIA).

13. What is the significance of HIV testing?
a. HIV testing is pointless because there is no way to alter the progress of the disease.
b. HIV testing is useful because testing allows public health agencies to track HIV infection trends.
c. HIV testing is not in the best interest of patients because there is no way to keep the results confidential.
d. HIV testing is dangerous because patients who find out they are HIV-positive are more likely to engage in high-risk behaviors.

Correct: HIV testing is useful because testing allows public health agencies to track HIV infection trends.
Rationale: HIV testing helps public health agencies track infection trends. These trends help indicate where prevention efforts should be focused.

14. Which group made up the largest percentage of people diagnosed with HIV/AIDS in the United States in 2006?
   a. Blacks
   b. Whites
   c. Hispanics
   d. Indonesians

Correct: Blacks
Rationale: In the United States in 2006, 49% of people diagnosed with HIV/AIDS were Black, 31% were White, and 18% Hispanic. This reflects the emergence of people of color as a high-risk group for HIV/AIDS.

15. Two groups in the United States are at highest risk for HIV infection. One of these groups is injection-drug users. What is the other group?
   a. Heterosexual teens
   b. Men who have sex with men
   c. Women who have sex with women
   d. Men between the ages of 40 and 50

Correct: Men who have sex with men
Rationale: Surveillance data have consistently shown that two groups in the United States are at highest risk for HIV infection. These groups are injection-drug users and men who have sex with men.

16. When a patient is diagnosed with HIV infection, it is important to establish a baseline and then monitor the infection. What is a key test for this purpose?
   a. CD4 count
   b. Hematocrit
   c. Treadmill test
   d. Liver function test

Correct: CD4 count
Rationale: HIV infects CD4 cells. As the infection progresses, CD4 count falls. Therefore, this is an important test for establishing a baseline and monitoring the infection.

17. How do HIV drugs work?
a. HIV drugs cure the infection.
b. HIV drugs slow the progress of the infection.
c. HIV drugs stop the infection from progressing.
d. HIV drugs have little to no effect in most patients.

Correct: HIV drugs slow the progress of the infection.
Rationale: HIV drugs do not cure the infection. They can, however, slow the infection down.

18. What is the effect of latex condom use during sex?
   a. Condoms make sex safer.
   b. Condoms make sex 100% safe.
   c. Condoms are considered a high-risk behavior.
   d. Condoms have no effect on risk of HIV transmission.

Correct: Condoms make sex safer.
Rationale: Using a condom does not make sex 100% safe, but does make sex safer.

19. What can reduce the risk of mother-to-child transmission of HIV during pregnancy and labor/delivery?
   a. Underwater delivery
   b. Anti-HIV drugs
   c. Bed rest during pregnancy
   d. High-dose vitamin C during pregnancy

Correct: Anti-HIV drugs
Rationale: HIV treatment administered to the mother and the newborn, combined with cesarean delivery, can reduce the rate of mother-to-child HIV transmission to 2% or less.

20. What should healthcare workers do to protect themselves from risk of HIV infection?
   a. Use Contact Precautions with all patients.
   b. Use Standard Precautions with all patients.
   c. Take precautions only with patients know to have HIV/AIDS.
   d. Take precautions only with patients know to have high-risk behaviors for HIV/AIDS.

Correct: Use Standard Precautions with all patients.
Rationale: Standard Precautions should be used in the care of ALL patients to prevent unprotected contact with potentially infectious bodily fluids.

21. Which of the following factors increase the risk of sexual transmission of HIV:
   a. HIV-infected sexual partner
b. Multiple sexual partners  
c. Presence of other STDs  
d. All of the above

Correct: All of the above  
Rationale: Each of these is a risk factor for the sexual transmission of HIV. A sexual partner of unknown HIV status and risky sexual partners such as injection-drug users are additional risk factors.

22. All of the following are standard precautions that should be employed when caring for patients EXCEPT:
   a. Assume that all blood and body fluids are infectious.  
   b. Use gloves, gowns, face shields, and other protective equipment anytime there is a chance of being exposed to blood or bodily fluids  
   c. Wear a single pair of gloves each day, washing them between patients.  
   d. Wash hands immediately after contact with blood or body fluids and after removing gloves.

Correct: Wear a single pair of gloves each day, washing them between patients  
Rationale: Gloves should be disposed of and hands should be washed between patients. A clean pair of gloves should be used for each occasion that may pose some risk.