HIV/AIDS: Part 2

Script

Welcome

Disclaimer
Statistics for HIV/AIDS cases are different for each state. In this course, Florida statistics are referred to. For information on your state’s statistics for HIV/AIDS cases, contact your state or local health department.

Introduction
This course presents an overview of the progression of the HIV/AIDS disease; treatment used for HIV/AIDS; epidemiology of HIV/AIDS; psychological issues an HIV-infected person can experience and ways that they can live a healthy life. This is part two of a two part course. Completion of both HIV/AIDS Part 1 and HIV/AIDS Part 2 meet the following training requirements:

Section 381.0035 (1), F.S.
DCF Education
F.A.C. 64B9-5.009

Objectives
After completing this course, participants should be able to:
Describe the four stages of HIV
Identify the treatment used to prevent HIV transmission
Recall Florida statistics of HIV/AIDS cases
Recall U.S. statistics of HIV/AIDS cases
Recognize ways for an HIV-infected person to maintain a quality of life

Stages of HIV
The process of HIV infection can be broken down into four stages: Primary or Acute HIV, Clinically Asymptomatic HIV, Symptomatic HIV, and AIDS. Let’s explore these phases in more detail, including any signs and symptoms that may or may not take place in each stage.

Primary or Acute HIV
Within 2-4 weeks after infection with HIV, a person can experience an acute illness with flu-like symptoms, such as fever, chills, rash, fatigue, sore throat, and so on. During this period of infection, high levels of virus are produced in the person’s bloodstream and antibodies are produced. This process is known as seroconversion. If an HIV antibody test is done before seroconversion is complete, then the test result may show up negative. This is because sufficient antibodies have not yet been developed by the body. As
mentioned in the “HIV/AIDS: Part 1” course, it is important for a person to wait 1-3 months from the time of possible HIV exposure to get an accurate test result. And if a person was tested within the first 3 months after possible HIV exposure, that person should consider retesting 3 months later to confirm their results.

**Clinically Asymptomatic HIV**
This stage lasts for an average of ten years, but can vary in length from person to person. During this phase, the immune system slowly deteriorates but individuals may be free from symptoms and opportunistic infections. Opportunist infections are infections that take advantage of a weakened immune system. Levels of HIV in the blood are very low, but are detectable. If an HIV test is performed, it will show up positive. It is important to remember that even though an HIV infected person has no noticeable signs or symptoms and appears healthy, they are still able to transmit the virus to others during this phase.

**Symptomatic HIV**
In this stage, the immune system has become so damaged by HIV that symptoms become present. Initially, symptoms are typically mild, but as the immune system weakens, the symptoms worsen. A few of the most common symptoms include, but are not limited to, fever, weight loss, headaches, diarrhea, and acute illness. This stage is mainly caused by the appearance of opportunistic infections that the immune system would normally prevent.

**AIDS**
This is the stage of infection that occurs when the immune system is badly damaged and the person becomes vulnerable to opportunistic infections, leading eventually to the diagnosis of AIDS. AIDS diagnosis can be made only by a licensed healthcare provider. While the HIV virus can sometimes cause people to feel sick, many of the signs and symptoms of AIDS come from opportunistic infections which occur in patients with a damaged immune system. When HIV infection progresses to AIDS, many people begin to suffer from common symptoms. These can include, but are not limited to, chills, fever, sweats, swollen lymph glands, fatigue, or weight loss.

**Treatment**
Although there is no known cure for HIV/AIDS, there are a variety of available treatments that are proven highly effective in preventing HIV transmission and slowing the course of the disease. Specifically, U.S. researchers have found that giving antiretroviral medications to HIV-positive people can decrease rates of HIV transmission to partners by 96%. In this section, we’ll explore antiretroviral therapies and medications.

**Viral Load**
Before discussing antiretroviral therapies and treatments, it is important to first define “viral load.” Viral load is the amount of HIV in a person’s blood sample. A viral load can be high or low and changes over time. The goal of HIV treatment is to help move the person’s viral load down to undetectable levels. NOTE: This means that the amount of virus in a sample of blood is below the test’s ability to measure it and does not mean the virus has been removed from the body and is no longer transmittable to others. Knowing a person’s viral load helps the healthcare provider monitor their patient. For instance, the provider can decide when to start their patient on treatment and can determine if the medication regimen is working.

**Antiretroviral Therapy (ART)**

Antiretroviral therapy (ART), sometimes referred to as highly active antiretroviral therapy (HAART), is the standard treatment for HIV/AIDS. The goal of antiretroviral therapy is to slow the rate at which HIV multiples in the body. This type of therapy is administered by multiple types of antiretroviral drugs, referred to as “cocktails.” This is because a combination of three antiretroviral medications is more effective than taking just one medication in the treatment of HIV. Taking multiple medications does a better job of controlling the amount of virus in the body, protecting the immune system, and reducing the risk of developing drug resistance.

It is important to understand that each individual responds differently to the therapy. In addition, antiretroviral drugs do not cure HIV/AIDS and that even during treatment, the virus is replicating and the person remains infectious to others.

**ART Drugs**

These are the five different classes of drugs used to treat HIV/AIDS:

- Nucleoside/nucleotide reverse transcriptase inhibitors (NRTI)
- Non-nucleoside reverse transcriptase inhibitors (NNRTI)
- Protease inhibitors (PI)
- Entry/Fusion inhibitors
- Integrase inhibitors is the newest class of drugs for slowing the progression of HIV

Since each class of drug attacks the virus at different points in its life cycle, the person taking HIV medications will generally take three different antiretroviral drugs from two different classes. The key to treating HIV successfully is to pick the right combination of drugs from the different classes of HIV medications. When choosing the combination of ART drugs, consider the drugs’ effectiveness in reducing viral load, its’ possible side-effects, the cost of drug treatment, and the likelihood that the virus will become resistant to a certain class of drug.
Post-Exposure Prophylaxis (PEP)
Though it does not guarantee that a person exposed to HIV will not become infected with HIV, PEP is an antiretroviral drug treatment that aims to reduce the chance of becoming HIV positive after a person has been exposed to HIV. There are two types of PEP: (1) occupational PEP, (sometimes called "oPEP"), is when a person working in a healthcare setting is potentially exposed to material infected with HIV. For example, healthcare workers can be exposed to HIV by needle sticks, or by getting blood or other body fluids in their eyes or mouth. And (2) non-occupational PEP, (sometimes called “nPEP”) is when a person is potentially exposed to HIV outside the workplace. For example, this can happen if a condom breaks or if someone is sexually assaulted.

When to Take PEP
The longer the person waits to start PEP, the greater the risk of becoming HIV positive. To be effective, PEP should begin within 72 hours of exposure, before the virus has time to rapidly reproduce in the body. PEP consists of 2-3 antiretroviral medications and should be taken for 28 days. Understand that the antiviral drugs used in PEP have serious side effects and that the healthcare provider considers whether PEP is right for each person. In addition, the test subject may be asked to return for more HIV testing at 4 to 6 weeks, 3 months, and 6 months to determine their status.

Pre-Exposure Prophylaxis (PrEP)
Pre-exposure prophylaxis (PrEP) is the use of antiretroviral drugs before exposure to HIV. Its purpose is to decrease the risk of HIV transmission, rather than treat the virus. An example of this concept is when a traveler is vaccinated before visiting an area where infectious diseases, such as malaria, are common. This same idea may help to protect people against HIV. Researchers have hopeful evidence that shows PrEP’s effectiveness. For more information on ongoing research, visit the Centers for Disease Control and Prevention (CDC’s) PrEP page: http://www.cdc.gov/hiv/prep/ . A link is provided in the resources tab of this course player.

Disclaimer Reminder
Remember, as stated earlier in the course, statistics for HIV/AIDS cases are different for each state. In this section of the course, Florida statistics are referred to. For information on your state’s statistics for HIV/AIDS cases, contact your state or local health department.

Epidemiology
Epidemiology is the study of the distribution and causes of a disease in populations. Epidemiologists study how many people have a disease, the outcome of the disease (recovery, death, disability, etc.), and the factors that influence the distribution and outcome of the disease.
HIV/AIDS in Florida

Let’s take a look at a snapshot of HIV/AIDS in Florida. These statistics are provided by the Florida Department of Health. At the time of the study, there were 95,335 Florida residents known to be living with HIV/AIDS. Of that number:

70% were male.
49% were black and 20% were Hispanic.
70% were 40 years of age or older (33% were age 50 or older)
46% were attributed to men who have sex with men (MSM).
38% were attributed to heterosexual contact.

5,022 adults and 20 pediatrics (age 13 and younger) were newly diagnosed with HIV/AIDS in Florida. Of that number:
75% were male.
49% were black and 22% were Hispanic.
22% were diagnosed at age 50 or older.
47% were attributed to MSM.
33% were attributed to heterosexual contact.

4% were among injection drug users.
25% lived in Miami-Dade County and 17% in Broward County.
10% were diagnosed with HIV and AIDS simultaneously.

HIV in the U.S.
The CDC estimates 1.2 million people in the U.S. are living with HIV infection and 1 in 5 are unaware of their infection. MSM, particularly young, black MSM, are most severely affected by HIV. By race, African Americans face the most severe HIV burden.

See the Resources tab of this course player for detailed statistics by risk group and race/ethnicity in the document titled HIV in the U.S.

U.S. vs. Florida Fact Sheet
To access information about the top leading U.S. cities and states and Florida counties reporting the highest number of HIV/AIDS cases, download the fact sheet located in the resources tab of this course player. Then, click “U.S. vs. Florida Fact Sheet” to download the document.

Quality of Life
So far, we have discussed the four stages of HIV, treatments used to prevent HIV transmission, statistics of HIV/AIDS cases in Florida and the U.S., and now we will explore ways for an HIV-infected person to maintain their quality of life.
Mental Health
Research shows that people who are living with HIV/AIDS often have mental health disorders like anxiety, depression, or mania. An HIV-infected person can experience other psychological issues such as rejection, anger, guilt, self-conscious about physical changes, or loss. It is important to understand that antiretroviral drugs can even make some mental health issues worse and that some opportunistic infections can affect the nervous system and can lead to changes in behavior and functioning. Let’s explore some of the common psychological issues in more detail.

Psychological Issues
If the person living with HIV becomes depressed, it can cause the person to not stick to their treatment regimen, leading indirectly to drug resistance and poor management of the disease. Or, the person may feel rejected from society if they fail to receive acceptance or emotional support from family, friends, or coworkers. They may also feel angry with themselves for contracting the disease or feel guilty about possibly transmitting the disease to others. Additionally, the person may feel self-conscious about their body due to dramatic changes in their physical appearance, such as severe weight loss.

Finally, a person living with HIV/AIDS can experience loss in many ways. For example, loss can include a loss of physical and mental strength, financial assets, or even privacy. Understand that in response to loss, every person grieves differently.

Healthcare Providers Need Support Too
The psychological suffering experienced by people with HIV/AIDS can also be shared by family, friends, caregivers, and partners. Specifically, healthcare providers can often experience the same vulnerable feelings of their patient. Because of this, access to a support system is just as important for the caregiver as it is for the patient.

Tips for Coping
If a healthcare provider should experience any psychological issues from working closely with their patients, these coping skills can be helpful:

Don’t become isolated. Instead, meet with a counselor regularly, to discuss feelings. Don't try to be everything to everyone. Instead, set limits and boundaries and stick to them. Don't expect to know everything. Instead, ask questions and feel comfortable saying, “I don’t know.” Don't deny personal fears about AIDS. Instead, seek the information needed to help understand and accept the fears.
Don't work in an environment where coping is not allowed. Instead, discuss with the employer some tactics for performing the job in a way that reduces stress. Don't dismiss standard precautions. Instead, understand that safety measures protect the patient’s and caregiver’s health.

**Open Communication**

Since good mental health is essential for a person’s successful HIV treatment and for living a happy and healthy life, it is essential for the infected person to be open and honest with their healthcare provider so that their mental health and well-being can be monitored. For instance, a patient should disclose with their healthcare provider if they are taking any psychiatric medications, because it’s possible the drugs may interact with HIV medications.

**Nutrition and Exercise**

While medications are very important for treating HIV, eating a well-balanced and nutritious diet can help to boost a person’s immune system. In addition, because HIV affects the immune system, a person may be at greater risk for food-borne illnesses. So, food safety is a concern to prevent infections. Regular exercise can help increase a person’s strength and endurance and can help prevent problems with their metabolism. If a person is living with HIV/AIDS, they should consult with their healthcare provider before starting an exercise routine. Their routine should be appropriate for them and reflect their HIV care plan. Finally, it’s important to a person’s health to get plenty of rest, have regular doctor and dentist check-ups, and avoid tobacco, alcohol, or illicit drug use.

**Immunizations**

If a person is HIV-positive, immunizations (also known as vaccines) are an important part of the person’s care plan. This is because vaccines can help protect the body from serious illnesses and can help prevent diseases. Immunizations can come in the form of injections, drops, or sprays. A few recommended immunizations for HIV-positive adults can include:

- Hepatitis A and B
- Influenza (Injection, not the nasal spray)
- Polysaccharide Pneumococcal (pneumonia)
- Tetanus,
- Diphtheria, or
- Pertussis

A healthcare provider can assist the HIV-infected person with deciding which immunizations are appropriate for them, based on the person’s age and risk for contracting a specific illness. For a complete list of the recommended immunizations for
people living with HIV, visit the AIDSinfo’s website by clicking the link located in the resources tab.

**Summary**
In summary, this course presented an overview of the progression of the HIV/AIDS disease; treatment used for HIV/AIDS; epidemiology of HIV/AIDS; psychological issues an HIV-infected person can experience and ways that they can live a healthy life. To access additional resources for this course, click on the “Resources” tab located on the top-right of this course player. Then, click an item to view the attached content.