

HIV Infection In services education

OBJECTIVES

After completing this program, the home health aide will be able to:

- » Name two early symptoms of initial HIV infection
- » List three methods by which HIV is transmitted
- » Note that there are many people with HIV infection who are unaware they are infected, and
- » Recognize that standard precautions offer the best protection for preventing transmission of HIV in the workplace.

OVERVIEW

The number of persons in the United States infected with the human immunodeficiency virus (HIV) continues to increase. According to 2003 statistics, the Centers for Disease Control and Prevention (CDC) estimated there were 850,000–950,000 Americans living with HIV. Twenty-five percent were estimated to be unaware of their serostatus. Additionally, most HIV infected individuals are living much longer before developing acquired immunodeficiency syndrome (AIDS). In light of those statistics, home health aides are currently very likely to care for HIV-infected patients without being aware of the patient's HIV serostatus.

The purpose of this in-service is to provide information about HIV infection and dispel some common misunderstandings home health aides may have about the condition.

CONTENT

Read the Fact Sheet	15 minutes
Read the Case Study	10 minutes
Complete “Think About It”	10 minutes
Complete the Post-test	15 minutes
Feedback Session	10 minutes

SUPPLEMENTAL LEARNING ACTIVITIES

- * Obtain Fact Sheets from the CDC. Distribute the Fact Sheets and discuss with participants, <http://www.cdc.gov>.
- » Obtain additional information from the National Institutes of Health (NIH) and distribute to participants. <http://aidsinfo.nih.gov>.
- » Arrange for a registered nurse to speak to participants. Have the nurse present information about your agency's infection control plan and the importance of using standard precautions with every patient. Ask the nurse to emphasize the vital importance of immediately reporting any potential exposures to bloodborne pathogens.
- » Arrange for a social worker to speak to participants and encourage a group discussion about how the participants feel about caring for patients with HIV infections.
- » Ask a member of the administrative staff to speak to participants about State laws regarding disclosures about a patient's HIV serostatus.

POST-TEST ANSWERS

1. d They are similar to a mild case of flu.
2. a Casual contact with an HIV-infected person
3. b False
4. c The 1980s
5. d No, about one-fourth of the HIV-infected patients themselves don't know they are infected.
6. a A virus causes it.
7. a True
8. b Headache and tired feeling
9. a It is transmitted through contact with HIV-contaminated body fluids.
10. d There is a vaccine that will prevent HIV infection.

INSTRUCTOR'S LOG

DATE / TIME / PLACE

Attachments

Participation Record

Post-test

Handouts

Other

_____ RN

FACTS ABOUT HIV INFECTION

During the summer of 1981, a high incidence of a relatively rare form of cancer in otherwise healthy young men was reported in the United States, especially in New York City and San Francisco. The cancer had previously been found only in patients with severely impaired immune systems. Those cancer patients turned out to be among the earliest U.S. cases of what we now call acquired immunodeficiency syndrome (AIDS).

In 1982, the transmission of AIDS was linked to blood and body fluids, and in 1984 the virus causing AIDS was identified. That virus is now known as human immunodeficiency virus (HIV). The following year, antibody testing became available.

In the years following its discovery in the U.S., HIV infection progressed rapidly to symptomatic AIDS and almost all patients died within a few years of diagnosis. In 1987, the first drug specifically for patients with AIDS was approved and, since that time, newer and better drugs have been found to delay the onset of AIDS following HIV infection.

In some parts of Africa, almost a third of the entire population (between the ages of 15 and 45) is infected with HIV. In the U.S., increasing numbers of Americans have HIV infection and, unfortunately, about 25% of them do not even know they are infected.

Overall, home health aides are increasingly less likely to know which of their patients have HIV infections. Therefore it is essential that all patients be treated as if they are infected. Home health aides should strictly follow standard precautions with every single patient, every single day.

HIV INFECTION

Cause

Two types of the HIV virus have been identified. They are called HIV-1 and HIV-2. The types are very similar although AIDS seems to develop more slowly in people infected with HIV-2. HIV-1 is by far the more common type in the United States while HIV-2 is common in West Africa. HIV is a virus that infects the cells of the body and substitutes its own genetic structure for the genetic structure within the cells. Each time the cells divide, new copies of the virus are produced. These new viruses are released from the infected cells to invade other cells.

Symptoms

Some individuals do not have any symptoms when they first become infected with HIV. However, it is more common for people to develop a brief illness similar to a mild case of influenza. Symptoms may include a low-grade fever, headache, sore throat, or a tired feeling. The symptoms usually occur between two and six weeks of initial infection. However, since the symptoms are so similar to other viral illnesses, and usually do not last very long, many people are not aware they have been infected. It is important to note that once the person has become infected with HIV, he or she can transmit the infection.

Transmission from person to person

HIV is a bloodborne virus and is transmitted only through contact with body fluids containing the virus or infected cells. The virus can appear in almost any body fluid, but is more concentrated in blood, semen, vaginal secretions, and breast milk. Transmission is much more likely through contact with more concentrated body fluids. HIV is transmitted in the following ways:

»Injection or infusion of contaminated blood

- Because the American supply of blood and blood products is tested for HIV, infection resulting from transfusions is extremely small.
- Sharing of needles among injecting drug users remains a problem. If a person injects drugs with a needle previously used by an HIV-infected person, there is a great likelihood of infection.

- Accidental needle pricks from HIV-contaminated needles is a risk among healthcare workers and caregivers. A healthcare worker who is accidentally pricked with an HIV-contaminated needle has about a 1 in 300 chance of becoming infected with HIV. Taking a combination of drugs soon after exposure reduces the person's risk.
 - Contaminated tattoo needles can transmit HIV to a person obtaining a tattoo.
- » Sexual activity with an HIV-infected person in which the mucous membranes of the mouth, vagina, penis, or rectum are exposed to body fluids
 - Unprotected sexual intercourse is the primary method by which HIV is transmitted from one person to another. While less common, HIV can also be transmitted during oral sex.
- » Contact with contaminated body fluids through broken skin
 - HIV transmission can occur when there is a rash, cut, abrasion, or any open area on the skin (especially the hands) if there is contact with contaminated body fluids of an HIV-infected person.
- » Transfer of the virus from an HIV-infected mother to a baby before or during birth or after birth through breast milk
 - » Splashing of contaminated fluids into the mouth or eyes
 - The risk of transmission by splashing of contaminated body fluids is much less than the risk of transmission following a needlestick. There is less than a 1 in 1,000 chance of transmission.
- » Organ or tissue transplants
 - This is very rare in the United States since all donated organs and tissue are now tested for HIV prior to transplanting them.

Hospitals, clinics, and other health care facilities do not isolate patients who have HIV infection. HIV is not transmitted through the air or by casual contact. The virus does not survive outside the body, and contaminated equipment can easily be disinfected.

However, all health care workers who may come in contact with blood or other body fluids must strictly follow standard precautions. The precautions apply to every single patient, not just those patients known to have HIV infection, because 1.) many HIV-infected people do not know they are infected, 2.) some of them may know but do not disclose the information, and 3.) there are other viruses that can be transmitted by blood and body fluids.

HIV is not known to be transmitted:

- by casual contact at work, school, or home, or even close, non-sexual contact such as hugging and light kissing
- by mosquito or other insect bites
- by the coughing or sneezing of an infected person, or
- by contact with tears of an infected person.

TREATMENT FOR HIV INFECTION

There is no known cure for HIV infection, and no vaccine available to prevent it. However, there are about 20 medications now available that may help keep an HIV-infected person healthy by suppressing the virus. Not every person with HIV infection will be taking the medications. The person and physician may decide not to start treatment if the person's overall health is good, the person's immune system is working, and the person has a relatively low amount of virus in his or her blood. There are several other reasons why an infected person and his or her physician may decide to delay starting the treatment. Those reasons include:

- » The medications are very expensive.
- » Most individuals will need to take a combination of three or more of the medications. Compliance with the treatment usually means the person must make significant adjustments to his or her lifestyle.

- » Some of the medications must be taken several times during the day and night at very specific times in order to be effective. Some are taken with food and others are taken on an empty stomach, so the person may have to significantly change meals and mealtimes.
- » The medications all have negative side effects, some of which may be very serious.
- » Once the person decides to begin treatment, he or she will need to take the medications for the rest of his or her life.
- » If the virus is not fully suppressed, drug resistance can develop. This may result in an HIV infection that cannot be controlled with certain medications.

HIV INFECTION AND AIDS

AIDS is the most severe form of HIV infection and occurs when the virus increasingly attacks the immune system to the point that it can no longer protect against many types of infection. AIDS is diagnosed when an HIV-infected person has at least one complicating illness because of a weakened immune system and by a critical drop in the number of certain blood cells.

No one is certain why some people develop AIDS much more quickly than others do. Within 10 to 11 years of becoming infected, half the people with HIV who have not received treatment will develop AIDS. A few people have stayed well without treatment for as long as 15 years.

With effective treatment, HIV-infected people are living longer and longer without developing AIDS. In some cases the virus is so well suppressed it cannot be detected with current tests. However, the virus is still present and can be transmitted to other people.

STRATEGIES TO PREVENT HIV TRANSMISSION IN HOMECARE

1. Assume that the blood and body fluids of every patient can possibly be infected with HIV.
2. Use personal protective equipment (PPE) when you anticipate possible contact with blood and body fluids.
3. Remove gloves carefully, and thoroughly wash your hands immediately after removing the gloves.
5. Use caution when handling and disposing of sharp instruments or needles used by patients.
6. Attend your agency's annual bloodborne pathogens in-service program.
7. Learn and follow your agency's infection control policies.
7. Immediately inform the appropriate person at your agency if you are directly exposed to a patient's blood or body fluids.

KEY POINTS FOR HOME HEALTH AIDES

- » About a fourth of the people with HIV infections do not know they are infected. Many of the people who do know do not tell the homecare nurse or home health aide.
- » Most HIV-infected patients are receiving homecare for reasons other than the HIV infection except for patients with AIDS, or HIV-infected patients requiring medication assistance.
- » It is always important to follow the instructions carefully when you are assigned to assist patients with medications. Timing is especially critical for HIV-infected patients.
- » Not every person known to be HIV infected will be taking anti-HIV medications.
- » Following standard precautions with every patient during every visit is the best protection against becoming HIV infected in the workplace.

CASE STUDY

Roxanne is a home health aide who makes intermittent visits and also does private duty. She's been working at the same agency since 1980. Because of her experience, she is often asked to take newly hired aides on joint visits during their orientation. Today Juan is accompanying Roxanne. Juan has never worked in health care.

The first visit is to Mr. Sinclair who lives in an exclusive gated community. As they are driving to the visit, Roxanne tells Juan about Mr. Sinclair, a widower who lives alone in a very large home. "He's loaded," says Roxanne, "but he's very nice." When they reach the house, Juan reaches for Roxanne's supply bag. Roxanne tells him there's no need to bring it in because Mr. Sinclair has soap and paper towels for her. When Juan asks about gloves, Roxanne replies, "Oh, he hates for me to wear gloves. He says it makes him feel dirty."

"We just learned about bloodborne pathogens like HIV," says Juan. "Aren't you concerned about them?" Roxanne responds, "Juan, when you've been around as long as I have, you will learn that the rules don't always apply. Mr. Sinclair is rich and even has a maid and a cook. There's no way he could have HIV or any of those other things."

Juan is rather surprised by Roxanne's statement. He asks, "But how can you tell? Aren't you always supposed to use proper protective equipment?"

"Oh, that's what they tell you in class," says Roxanne. "This is the real world. Now, if I were going to the inner city, you can bet I'd wear gloves. But these rich folks don't want you to wear them. I'm not going to give up a good case over something like that."

Roxanne continued, "They also tell you not to do anything that's not on the assignment sheet, too. But what you really need to do is follow what the patient wants. And don't even think of calling the nurse if the patient refuses something on the assignment. That will get you in trouble with the patient every time."

THINK ABOUT IT

- » Does living in a grand home mean a person doesn't have an HIV infection?
- » Do you think that Roxanne may be putting herself at risk by not using appropriate personal protective equipment on all of her patients?
- » Have you ever failed to wear gloves when you really should have? What were the circumstances? Is there anything different you might have done?
- » How do you respond to patients who don't want you to wear gloves?
- » What are some very wrong things Juan might learn from Roxanne?

DIRECTIONS: READ EACH QUESTION CAREFULLY. THEN, DETERMINE THE BEST ANSWER. CHECK THE CORRESPONDING BOX ON YOUR ANSWER SHEET. DO NOT WRITE ON THIS POST-TEST.

1. Which of the following statements best describes the early symptoms of HIV infection?
 - a. They are similar to symptoms of multiple sclerosis.
 - b. They are similar to symptoms of severe arthritis.
 - c. They are similar to symptoms of food poisoning.
 - d. They are similar to a mild case of flu.

2. Which of the following is not known to be a method of HIV transmission?
 - a. Casual contact with an HIV-infected person
 - b. Needle pricks from an HIV-contaminated needle
 - c. Sexual intercourse with an HIV-infected person
 - d. Contact with HIV-infected body fluids through open skin

3. The early symptoms of HIV infection are so severe that people who have HIV infections will know they have it.
 - a. True
 - b. False

4. When was HIV infection first recognized in the United States?
 - a. The 1940s
 - b. The 1990s
 - c. The 1980s
 - d. The 1970s

5. Will home health aides always know which patients are infected with HIV?
 - a. Yes, it will always be on the assignment sheet.
 - b. Yes, patients with HIV infection will always take lots of pills frequently.
 - c. No, it's against HIPAA regulations for home health aides to know.
 - d. No, about one-fourth of the HIV-infected patients themselves don't know they are infected.

6. Which of the following is true about HIV infection?
 - a. A virus causes it.
 - b. It is a bacterial infection.
 - c. It is transmitted through the air.
 - d. The cause is unknown.

7. Following standard precautions with every patient during every visit is the best protection against becoming HIV infected in the workplace.
 - a. True
 - b. False

8. Early symptoms of HIV infection commonly include:
 - a. Nausea and vomiting
 - b. Headache and tired feeling
 - c. Bruising and bleeding
 - d. Numbness and tingling

9. Which of the following is true about HIV transmission?

- a. It is transmitted through contact with HIV-contaminated body fluids.
- b. It is transmitted by mosquitoes.
- c. It is transmitted by coughing and sneezing.
- d. It is transmitted by South African birds.

10. Which of the following is not a true statement about HIV infection?

- a. AIDS is the most severe form of HIV infection.
- b. There is no known cure for HIV infection.
- c. Not every patient with HIV infection will be taking medications to suppress the HIV.
- d. There is a vaccine that will prevent HIV infection.

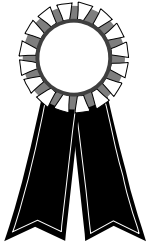
DIRECTIONS: READ EACH QUESTION IN THE POST-TEST CAREFULLY. THEN, DETERMINE THE BEST ANSWER. CHECK THE CORRESPONDING BOX ON THIS ANSWER SHEET. DO NOT WRITE ON THE POST-TEST.

MULTIPLE CHOICE ANSWER SHEET

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|-----|--------------------------|---|--------------------------|---|--------------------------|---|--------------------------|---|
| 1. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d |
| 2. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d |
| 3. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | | | | |
| 4. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d |
| 5. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d |
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| 10. | <input type="checkbox"/> | a | <input type="checkbox"/> | b | <input type="checkbox"/> | c | <input type="checkbox"/> | d |

INSTRUCTOR'S COMMENTS/SIGNATURE

Signature _____ RN Date _____



Certificate of Achievement

Awarded to: _____

**For Completing the One-Hour Course Entitled
"HIV Infection Control: Standard and Additional Precautions"**

Date of Course: _____

Facility: _____

Presented by: _____

(Signature of presenter, or write "self-study")