

LESSON PLAN – HIV/AIDS

Method of Instruction: Lecture, discussion

Time Frame: One Hour

Performance Objectives:

To make the trainees (both inmates and staff) aware of HIV/AIDS, its causes, symptoms, treatment and preventive techniques.

LESSON OBJECTIVE: At the end of this session, each trainee will be able to :

1. Understand what HIV/AIDS is and how it is and is not spread.
2. Identify the symptoms of HIV/AIDS.
3. Know how to treat a person with HIV/AIDS symptoms.
4. Understand how to prevent getting AIDS.

Training Aids Required: Blackboard or flip chart

Resource Information: The information in this lesson plan came from several sources, including the San Francisco AIDS Foundation; however, one of the best was “Where There Is No Doctor” by David Werner and published by the Hesperian Foundation. This is a publication that is recommended for every prison and detention center, especially those with limited professional medical staff. It has been translated into more than 80 languages and information on where to obtain it can be found on the Internet at: www.hesperian.org.

INSTRUCTOR’S NOTES: *This lesson is given the same way to all audiences including staff, inmates and visitors. Where possible, obtain and pass out informative material from local, national or international health agencies.*

INTRODUCTION

AIDS is a dangerous disease spread from person to person through the HIV virus. It is now found in most countries around the world, and in many has become a leading cause of death.

HIV are the initials for “Human Immunodeficiency Virus” and AIDS are initials for “Acquired Immune Deficiency Syndrome”. To help understand the disease, we can explain it by its initials:

H – Human – because this virus can only infect human beings.

I – Immuno-deficiency – because the effect of the virus is to create a deficiency, a failure to work properly, within the body’s immune system.

V – Virus – because this organism is a virus, which means one of its characteristics is that it is incapable of reproducing by itself. It reproduces by taking over the machinery of the human cell.

A – Acquired – because it’s a condition one must acquire or get infected with, not something transmitted through the genes.

I – Immune – because it affects the body’s immune system, the part of the body that usually works to fight off germs such as bacteria and viruses.

D – Deficiency – because it makes the immune system deficient (makes it not work properly).

S – Syndrome – because someone with AIDS may experience a wide range of different diseases and opportunistic infections.

HIV/AIDS reduces the body’s ability to fight disease. A person with HIV/AIDS can get sick very easily – from many different illnesses such as diarrhea, pneumonia, tuberculosis or a serious type of skin cancer. Most persons with AIDS die from diseases their bodies are no longer strong enough to fight.

HIV/AIDS is spread when blood, semen (sperm) or vaginal juice of someone with the HIV virus enters the body of another person. It can be spread through:

1. Sex with someone who has the HIV virus. That means that a person who has sex with more than one person has a higher risk of getting HIV/AIDS.
2. Using the same needle or syringe or any instrument that cuts the skin without sterilizing it. Drug users and others who share needles have a very high risk. People who use another person’s razor or who use the same needle as someone else for body piercing or tattooing also have a very high risk of getting HIV/AIDS.
3. About one third of babies of mothers with the HIV virus will get HIV/AIDS.

It is important to understand that you can get HIV/AIDS from someone who looks completely healthy. Often, it takes months or years after the virus enters the body for the first signs to appear – **but the person can still spread HIV/AIDS to others through sex or sharing needles.**

HIV is not spread through everyday contact such as shaking hands, or living, playing or eating together. Also, it is not spread by food, water, insects, toilet seats or communion cups.

DISCUSSION GUIDE:

Divide the class into groups of no more than six. Give each group a sheet of paper and ask them to list the ways in which HIV can be spread on one side of the paper and list the ways it cannot be spread on the other side. Give the group ten minutes to discuss this and then call them back together.

INSTRUCTOR’S NOTES:

The purpose of the above exercise is to make sure all trainees personally understand that HIV/AIDS is spread through specific types of personal contact that they can generally control. It is also important to eliminate unfounded fear they might have because they are forced to live and work close to others who might already be infected with the HIV virus.

REQUIREMENTS FOR HIV TO BE SPREAD

Three conditions must be met for HIV transmission from one person to another to occur:

- **HIV must be present;**

Infection can only happen if one of the persons involved is infected with HIV. Some people assume that certain behaviors (such as anal sex) cause AIDS, even if HIV is not present. This is not true.

- **In sufficient quantity;**

The concentration of HIV determines whether infection may happen. In blood, for example, the virus is very concentrated. A small amount of blood is enough to infect someone. A much larger amount of other fluids would be needed for HIV transmission.

- **And it must get into the bloodstream.**

It is not enough to be in contact with an infected fluid to become infected. Healthy, unbroken skin does not allow HIV to get into the body; it is an excellent barrier to HIV infection. HIV can only enter through an open cut or sore, or through contact with the mucous membranes in the anus and rectum, the genitals, the mouth and the eyes.

HOW HIV IS PASSED FROM ONE PERSON TO ANOTHER

Sexual Activity

- **Sexual intercourse (vaginal and anal):** In the genitals and the rectum, HIV may infect the mucous membranes directly or through cuts and sores caused during intercourse (many of which would be unnoticed).
- **Oral sex (mouth-penis, mouth-vagina):** The mouth is an inhospitable environment for HIV (in semen, vaginal fluid or blood), meaning the risk of HIV transmission through the throat, gums and oral membranes is lower than through vaginal or anal membranes. There are, however, documented cases where HIV was transmitted orally, so we can't say that getting HIV-infected semen, vaginal fluid or blood in the mouth is without risk.

Non-Sexual Activity

- **Sharing injection needles:** An injection needle can pass blood directly from one person's bloodstream to another. It is a very efficient way to transmit a blood-borne virus.
- **Needle sticks:** A study of over 2,000 health care workers has been underway for several years to assess the risk of their exposure to people with AIDS. Over 1,000 of these workers had a needle stick accident with a needle that had been used on a person living with AIDS. The rest had some sort of mucous membrane exposure, such as being splashed in the face with blood or vomit.

Of all these people, only 21 show signs of being infected with HIV (as determined by the antibody test). One of these people was a nurse who had multiple needle stick accidents, another was a lab worker who was working with a test tube of infected blood that broke and cut his finger, exposing the infected blood to his bloodstream. This study shows that AIDS is a difficult disease to get, and even the intimate exposure of these health care workers was not enough to infect them, except in the most extreme cases.

- **Blood transfusions:** Since the mid-1980's much of the blood used for transfusions has been screened with the HIV antibody test. This practice has almost eliminated the risk of getting HIV through blood transfusions. However, people become HIV+ through blood products every year. The numbers are small, but it is still a problem.
- **Hemophilia treatments:** Hemophilia is a genetic disease in which people (almost all men) lack the ability to clot blood. To control the condition, hemophiliacs take Factor VIII, a clotting factor. Each dose of Factor VIII comes from the pooled blood of many donors. Though previously the use of contaminated Factor VIII infected many hemophiliacs with HIV, currently Factor VIII is heat-treated to kill the virus and new, synthetic products have been developed that do not pose any risk for HIV and that accomplish the same function.
- **Other blood products:** Besides whole blood, platelets (red blood cells) have transmitted the virus. Current blood screening, however, should prevent all but a very few cases. No other blood products are suspected of transmitting HIV. Gamma globulin or hepatitis B vaccine does not transmit HIV.
- **Mother to child:** It is possible for an HIV-infected mother to pass the virus directly before or during birth, or through breast milk.
- **Donor insemination:** Donor semen is checked for HIV antibodies when the semen is collected. The semen is then frozen. The donor is required to come back after six months for a second HIV test to confirm the initial HIV screening. The semen is not used before the procedure is completed.

DISCUSSION GUIDE:

Have each group indicate what they wrote down about how HIV can be spread and using the blackboard or flip chart write down what each group says.

As each one is called out, explain how it fits or does not fit the criteria discussed above.

HIV IS NOT TRANSMITTED BY:

- **Insect bites:** HIV is not transmitted by mosquitoes, flies, ticks, fleas, bees or wasps. If a bloodsucking insect bites someone with HIV, the virus dies almost instantly in the insect's stomach (as it digests the blood). HIV can only live in human cells.
- **Casual contact/sharing dishes or food:** HIV is not transmitted through casual, every-day contact. Since HIV is not transmitted by saliva, it is impossible to get it through sharing a glass, a fork, a sandwich or fruit.

Three studies of household contacts, in the U.S., Europe and Africa, have shown that AIDS is not casually transmitted by normal activities, even when people are in close living arrangements. All the studies examined households where someone had AIDS to see if any of the other members in that household had become infected (sexual contact was excluded). Many of these households included a small child as the one who has AIDS. These children continued to play with siblings in the manner that children play: wrestling, fighting, spitting, sharing food and clothes, and many other activities. No other member of any of the households shows any sign of being infected. This study shows that AIDS is a difficult disease to get, and that even the intimate exposure common among small children living together is not sufficient to transmit the virus.

- **Donating blood:** Sterilized needles are always used in taking blood from donors, so HIV is not spread in this manner.
- **Animals:** Humans are the **only** animals that can harbor HIV.
- **Contact with saliva, tears, sweat, feces or urine:** Transmission can only occur when a sufficient amount of HIV enters the bloodstream, through cuts or mucous membranes. These “bodily fluids” either contain no HIV or it exists in a quantity too small to result in transmission.

HIV is **not** transmitted by saliva. There is a great deal of evidence to support this fact. In spite of the countless numbers of people who have had saliva contact with people with AIDS – including kissing, sharing food, sharing “joints”, and many other means – there is no evidence that these activities have transmitted the virus even a single time.

DISCUSSION GUIDE:

Have each group indicate what they wrote down about how HIV is not spread and using the blackboard or flip chart write down what each group says.

As each one is called out, explain how it fits or does not fit the criteria discussed above.

SIGNS OF AIDS

The signs of AIDS are different in different persons. Often they are the typical signs of other common illnesses, but are more severe and last longer.

If a combination of these three signs appear and the person gets sick more and more often, he or she **may** have AIDS (but you cannot be sure without a HIV test to detect the virus):

- Gradual weight loss. The person becomes thinner and thinner.
- Diarrhea for more than one month.
- A fever for more than one month, sometimes with chills or soaking night sweats.

The person may also have one or more of these signs:

- A bad cough that lasts for more than one month.

- Yeast infection in the mouth ('thrush' – small white patches on the inside of the mouth and tongue that look like milk curds stuck to raw meat).
- Swollen lymph nodes anywhere in the body (lymph nodes, often called "glands", are little traps for germs that form small lumps under the skin when they get infected).
- Rashes or painless dark patches on the skin.
- Warts or sores that keep growing and do not go away with treatment, especially around the genital area and buttocks.
- Feels tired all the time.

TREATMENT

If available, competent medical personnel should handle all treatment. If they are not, the following is provided.

There is still no medicine to cure AIDS, but because people with AIDS have difficulty fighting infections, the following treatments should be used:

- For diarrhea, give Rehydration Drink. Two of the ways to make this are:
 - In one liter of clean water put half a level teaspoon of salt and 8 level teaspoons of sugar or
 - In one liter of clean water put half a teaspoon of salt and 8 heaping teaspoons (or 2 handfuls) of powdered cereal (powdered rice is best, but could be finely ground maize, white flour, sorghum or cooked and mashed potatoes). Boil for 5 to 7 minutes to form a liquid gruel or watery porridge. Cool the drink quickly and give to the dehydrated person.
 - In some countries packets of Oral Rehydration Salts (ORS) are available for mixing with water.
- For thrush, use gentian violet, nystatin, or miconazole (chewing garlic or eating yogurt may also help).
- For warts, use bichloroacetic acid or trichloroacetic acid or podophyllin.
- For fever give lots of fluids, aspirin and lower high fever with a cool bath.
- Treat cough and pneumonia with antibiotics. If cough and fever last long (a month), try to take a TB test. Seek local advice about TB prevention and treatment for people with the HIV virus.
- For itchy skin, give antihistamines and treat any infection.

Persons with AIDS who have a lot of fever, diarrhea or pain need special care. This can usually be done without risk. But to prevent spreading the virus, some things should be remembered:

- Blood, open sores, bloody diarrhea or bloody vomit can spread the virus. To prevent touching these, if possible, wear rubber latex or plastic gloves or plastic bags on your hands. Wash your hands often.
- Soiled or bloody clothes, bedding or towels should be handled with care. Wash them in hot soapy water, or add some chlorine bleach.

Though all people should eat well and stay clean, this is especially important for people with the HIV virus. They should stay as healthy as possible by eating well balanced and nutritious meals; wash often; avoid tobacco (smoking and chewing) and alcohol; get enough rest and sleep; and use a condom when having sex.

New medicines called “anti-retrovirals” (ARVs, such as zidovudine (AZT), nevirapine and “triple therapy” combination drugs can help people with HIV/AIDS stay healthy and live longer. They do not kill HIV or cure AIDS, but they make the sickness easier to live with. Unfortunately, these medicines are often expensive and difficult to get.

There is no need for people with HIV/AIDS to live or sleep alone. Their skin or breathing does not spread the infection.

PREVENTION OF AIDS

- Have sex only with one faithful partner.
- Use a condom if you or your partner have had other sexual partners. **Using a condom reduces the risk of getting or giving HIV/AIDS.**
- Do not have sex with persons who have many sex partners or with persons who inject illegal drugs.
- Treat sexually transmitted infections early – especially those that cause sores.
- Do not have an injection unless you are sure the instruments are sterilized first. **Health workers should NEVER re-use a needle or syringe without sterilizing it first.** Some of the ways to sterilize equipment include:
 - Boil for 20 minutes. (if you do not have a clock, add 1 or 2 grains of rice to the water. When the rice is cooked, the equipment will be sterile).
 - Or steam for 15 minutes in a special pot called a pressure cooker (or autoclave).
 - Or soak for 20 minutes in a solution of 1 part chlorine bleach to 7 parts water, or in a solution of 70% ethanol alcohol. If possible prepare these solutions fresh each day because they lose their strength. (Be sure to sterilize the inside of a syringe by pulling some solution inside and then squirting it out).
- Do not inject illegal drugs. If you do, do not share the same needle or syringe with someone else unless it is first sterilized with bleach or boiled for 20 minutes.
- Make sure instruments for ear or body piercing, acupuncture or traditional practices such as scarring, are boiled.
- If possible, do not accept a transfusion of blood that has not first been tested. Avoid transfusions except when absolutely necessary.
- The chances of becoming infected with HIV by handling a body fluid are extremely small, because that fluid will rarely have access to a person’s bloodstream. However, anyone handling blood, semen or vaginal fluids should be careful to avoid touching them with broken skin or getting them into mucous membranes (such as those around the eye). Spills of blood should be mopped up, cleaned with soap and water, then cleaned with

bleach. For maximum safety, the person cleaning the spill should also wear latex gloves or plastic bags over his/her hands, and should wash their hands thoroughly after the cleanup.

- Look for ways to educate colleagues and others, especially drug users, sex workers and others at “high risk” about how not to get or to give HIV/AIDS.

INSTRUCTOR’S NOTES:

When this section is finished, ask for questions or comments. Make sure the trainees have a full understanding of the various preventive techniques.

CONCLUSION

HIV/AIDS is a dangerous disease, but is much harder to get than most people think. You cannot get the HIV virus from casual contact with people who are infected. You can only get infected one of five ways: 1. By having unprotected sex with someone who has the virus; 2. By using a syringe and needle that is not sterilized; 3. By having your skin pierced with an unsterilized instrument that was used on a person with the virus; 4. By receiving a transfusion from contaminated blood; and 5. an AIDS carrier mother can pass the virus on to her unborn baby.

QUIZ

1. Name two ways to sterilize needles or other instruments used to penetrate the skin.
2. Explain how HIV/AIDS is spread. Give five examples of how this might occur.
3. Answer “yes” or “no” to the following:
 - a. If someone throws feces or urine on you and you have an open sore, can you be infected with the HIV virus?
 - b. If you clean up spilled blood and have an open sore on your hand can you be infected with the HIV virus?
 - c. If someone spits on you and some of their saliva gets in your mouth or eyes can you be infected with the HIV virus?
4. List three main ways to protect yourself from being exposed to the HIV virus
5. Should people who are known to be infected with the HIV virus be separated from others? Explain your answer.

Answers to Quiz

1. Any two of the following three:
 - Boil for 20 minutes. (if you do not have a clock, add 1 or 2 grains of rice to the water. When the rice is cooked, the equipment will be sterile).
 - Or steam for 15 minutes in a special pot called a pressure cooker (or autoclave).
 - Or soak for 20 minutes in a solution of 1 part chlorine bleach to 7 parts water, or in a solution of 70% ethanol alcohol. If possible prepare these solutions fresh each day because they lose their strength. (Be sure to sterilize the inside of a syringe by pulling some solution inside and then squirting it out).
2. HIV/AIDS is spread when blood, semen (sperm) or vaginal juice of someone with the HIV virus enters the body of another person. Five ways this can happen are:
 - a. Having unprotected sex
 - b. Using an unsterilized needle or syringe
 - c. Using an unsterilized instrument to puncture the skin
 - d. Receiving a blood transfusion from contaminated blood
 - e. Having the virus passed on to an unborn child by an infected mother
3.
 - a. No
 - b. Yes
 - c. No
4. Any three of the following:
 - Have sex only with one faithful partner.
 - Use a condom if you or your partner have had other sexual partners. **Using a condom reduces the risk of getting or giving HIV/AIDS.**
 - Do not have sex with persons who have many sex partners or with persons who inject illegal drugs.
 - Treat sexually transmitted infections early – especially those that cause sores.

- Do not have an injection unless you are sure the instruments are sterilized first. **Health workers should NEVER re-use a needle or syringe without sterilizing it first.** Some of the ways to sterilize equipment include:
 - Boil for 20 minutes. (if you do not have a clock, add 1 or 2 grains of rice to the water. When the rice is cooked, the equipment will be sterile).
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 - Do not inject illegal drugs. If you do, do not share the same needle or syringe with someone else unless it is first sterilized with bleach or boiled for 20 minutes.
 - Make sure instruments for ear or body piercing, acupuncture or traditional practices such as scarring, are boiled.
 - If possible, do not accept a transfusion of blood that has not first been tested. Avoid transfusions except when absolutely necessary.
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 - Look for ways to educate colleagues and others, especially drug users, sex workers and others at "high risk" about how not to get or to give HIV/AIDS.
5. No. The spread of HIV/AIDS does not occur from casual, even close personal contact. It is not spread through everyday contact such as shaking hands, or living, playing or eating together. It is not spread by sharing cups or even food.